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ALTERNATE PROPOSED PROGRAM - BUDGET 1967 - 1968



San, José' Costa Rica - January 1967

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PROPOSED ALTERNATE PROGRAM-BUDGET
1967-1968



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MESSAGE FROM THE DIRECTOR GENERAL

It is my pleasure to present to the Board of Directors, the Proposed Program-Budget for the period beginning July 1, 1967 and ending June 30, 1968, which will be discussed at the Sixth Annual Meeting of the Board of Directors, to be held in Rio de Janeiro, Brazil, on April 9 through 16, 1967.

1. In 1961, encouraged and supported by this Board of Directors, we initiated a process of expansion and of improvement in the structure of IICA and its programs, for the purpose of attaining its basic objectives in a more adequate and efficient manner. This process is known to all of you as the New Dimension.

Upon submitting the 7th. Report on this process, we pointed out last year that its very speed, together with the geographic dispersion of its operations and the difficulty in obtaining the necessary human resources, made it difficult to keep this growth within entirely coherent lines, involving the risk of a dispersion of effort.

We announced then that in order to forestall this risk and in order to delve deeper into the policy approved by the Board of Directors, an "Impact Committee" had been formed, its purpose being to propose specific ideas on how to make a greater impact on the Member Countries with available resources.

The work of this Committee and the many internal meetings held subsequently convinced us that, in order to attain the objectives more adequately and to fulfill its functions more efficiently, IICA must, before undertaking any new action, adjust its organization and its operative systems. The analysis and discussion of these ideas - a job that involved practically all of the specialists in the organization - led to a restatement of the general program wherein the six Central Lines of Work that used to contain our tasks, and the 22 Technical Programs that used to constitute them, have been merged into three Basic Programs that orient and define with precision the road that has repeatedly been pointed out to us by the Board of Directors, which programs are the logical result of the process initiated in 1961.

This means substantially changing the structure and the presentation of the Program-Budget. While we understand that in so doing, we are following suggestions originating in the Board of Directors itself, which have taken shape, for example, in Resolution IICA/JD-565-19, we feel that this calls for specific authority from the Board of Directors. To request this authority and subsequently carry out the changes in structure would imply, however, to postpone the application of ideas which we consider extremely useful, until the following period, to begin in July, 1968.

For this reason, and believing that it is very probable that the Board of Directors will approve the new structure of the programs - which originate in their own suggestions - it is my pleasure to submit to the Board of Directors two versions of the Proposed Program-Budget for the period beginning July 1, 1967: the first, following the guidelines observed by the Board over the last few years; the second, in conformity with the new ideas I have just described, which we have called Proposed Alternative Budget-Program.

By studying these documents, the members of the Board will be in a position to decide if they want us to take the next step in IICA's development right away or if they would rather have us study the new ideas deeper, for another year, and to present them once more at the next Annual Meeting.

At this point, I must admit that the Alternative Program-Budget is not perfect yet. However, I feel that it has been thought out well enough to justify putting it to the test of actual practice without delay, thereby gaining one year that is very valuable under the present circumstances. I also feel that this document reflects the most effective planning in order to carry out, to the best advantage, our services to the countries. The concepts and the philosophy behind it are those of the New Dimension that the Board of Directors has supported. For these reasons, I would like to recommend the approval of these documents as it is, or with such changes as the Board may deem wise to incorporate into it.

Level and Distribution of the Program-Budget (Regular)

2. In drawing up the Proposed Program-Budget for 1967-1968 I have taken into account the Resolutions and Recommendations approved by the Board of Directors at its Fifth Annual Meeting (Bogotá, Colombia; April, 1965); as well as the recommendations of the Special Committee set up by the Board of Directors at its Second Annual Meeting (Lima, Perú; May, 1963), in accordance with Resolutions JD-362 and JD-372, which was held in San José, Costa Rica, in September, 1963.
3. The total net expenditures budgeted for the period 1967-1968 is \$3,127,616. In keeping with the Recommendation of the Special Committee, to hold the increase in expenditures within a rate acceptable to the Governments of the Member States, I have basically limited the programs to the budget level recommended by said Committee, with the adjustments made when Brazil was admitted.
4. With the explanations given further ahead regarding the Turrialba Center, I have adopted the proportional expansion of the various IICA units recommended by the Special Committee because I consider it appropriate. The proposed distribution of funds from quotas in 1967-1968, compared with 1966-1967, is as follows:

	<u>1966-1967</u>	<u>1967-1968</u>
Regional Office for the Andean Zone	434,860	531,000
Regional Office for the Northern Zone	359,028	441,000
Regional Office for the Southern Zone	516,650	625,000
Research and Training Center (Turrialba)	983,234	1,095,616
Executive Offices and Administration	<u>420,000</u>	<u>435,000</u>
Total	<u>\$2,713,772</u>	<u>\$3,127,616</u>

5. The budget of the quotas to be received from the Member States represents 54.81% of all of the programs operated by IICA. The graphic distribution of the total is shown on page 13. It shows the percentages that correspond to each one of the three Regional Offices, to the Turrialba Center and to the

Executive Offices. Because the charts shown on pages 11 through 29 of Part I show the total of all IICA programs combined, they give a better idea of the real situation than the charts appearing on pages 31 through 43 of Part I, which only reflect the percentages corresponding to quota funds.

Programs

The structure and philosophy behind the new Basic Programs, founded on the concept that IICA must assume as its main responsibility the increase of knowledge available (research); its dissemination (teaching); and its application to the solution of development problems (Rural Development and Land Reform), are fully explained further ahead in this document and in the 8th Report on progress of the "New Dimension".

It is proper, then, that I cover here the aspects more closely concerned with the budget, to explain the structure of the new presentation and the advantages it offers for its analysis by the Board of Directors.

The fundamental idea is that the Basic Programs tackles problems that, although they have different facets and shades, are present in, and are of interest to all of the countries in the continent.

Consequently, their scope is continental and require the participation of each and every one of the administrative units of IICA.

This concept and this structural set-up give unity to the Programs, and this is also accomplished by two supplementary means: the community of objectives and the system of coordination.

The dispersion of operation over a vast area, however, makes it necessary to maintain administrative decentralization for most efficient results.

It is not our intention, consequently, to change the system of Regional Offices already established. On the contrary, we plan to make progress in that respect as available resources permit and circumstances warrant it, just as we are now doing by opening up new offices in Ecuador and in the Dominican Republic.

The allocation of resources by Regional Offices, required by administrative decentralization, requires at the same time a subdivision of the Programs into action units which must be complete in order to be able to distribute in the same manner the responsibility for their execution. The means chosen for this is the drawing up of Projects which, for administrative reasons, cannot exceed the limit of action corresponding to one Regional Office; which are complete in that they have means for action, objectives and goals of their own; which maintain and assure the unity of the Basic Program through the coordination of objectives and goals as common aims and through mutual support activities agreed upon through the planning system.

The annual cost of each Project, which is the unit basis of the new budget system, is a function of the activities to be carried out, within the project, during the fiscal period involved.

In this manner it is relatively easy, in case a change, an expansion or a reduction of the proposed activities is decided upon, to make a quick -

estimate of the changes this would imply in the financial allocations, and make the corresponding adjustments.

But it must be kept in mind that not all the costs of a Project can be changed as easily. The expenses contemplated for a trip, or to give a scholarship to a student, or for printing and distributing a publication can be eliminated with an effect that is directly proportional to the overall amount of the budget. The same does not occur, for example with personnel expenses that depend on the integration of a relatively stable plant the change of which requires decisions at another level.

For this reason, the budget for each Project has been subdivided into two parts: a) Personnel Costs, and b) Other Costs of the Project.

The latter are the direct result of the activities contemplated and, of course, can be eliminated together with them.

The personnel costs, on the other hand, depend on the quantity and category of the personnel assigned to the Project and the relative time they spend on it. The elimination of the activities does not necessarily and directly imply the elimination of the personnel and its costs.

In addition to the above, the total cost of the different items within each project, which appears in the "Proposed" column, has been divided into two auxiliary columns to show Expenditures Committed and Expenditures Reserved.

The reason for this lies in the delay that normally occurs in the receipt of the total amount of the quotas subscribed to by the Member States.

This implies that IICA must operate at a budget level slightly lower than that approved by the Board, in order not to find itself faced with a lack of financial resources at the end of the period. This method of operating, which is administratively sound and has been approved by the Board of directors, must be maintained at least until the General Working Fund has the necessary financial resources to compensate the delays referred to, in the receipt of quotas.

In the past, the procedure adopted to solve this situation was to authorize, with the acquiescence of the Board of Directors, the inclusion in the Plan of Expenses, only 90% of the amount approved by the Board.

The resulting reduction, applied to overall amounts, had a much more marked effect on funds allocated to operating expenses or to programs not yet started. This has, in some cases, caused a reduction in the activities of some programs to limits hardly compatible with their efficiency, or a delay in starting new activities approved by the Board.

With the new system we try to obviate this problem by anticipating the resources for the necessary reductions in case the income of the Institute is less than the amount budgeted.

In the "Expenditures Committed" column are shown the amounts we consider essential so that each project can carry out its activities with reasonable efficiency. The total of these expenditures amounts very close to 90% of the total budget. In the "Expenditures Reserved" column are shown the amounts that would be allocated to the program, expanding and supplementing its activities, in case the income coincides with the allocations.

In other words, by approving without any changes the budget for a given Project, the Board would be authorizing us to spend on it the amounts appearing in the "Expenditures Committed" column, and to spend additional amounts up to the total Reserved, in the event that the overall income coincides with the total budget.

Of course, the Board could also reduce the Reserved Expenditures of one or more Projects, and allocate them to new activities. In that case, the Board would have to bear in mind that we would not be in a position to start them unless the receipts from quotas exceeds 90% of the total budgeted.

To be more explicit, I would like to state that if the Board should decide, as it has full right to do, that during the next fiscal period we must definitely start activities not contemplated in the proposed Program-Budget, it will have the option of financing them either by an increase in the overall budget total or by the elimination of projects representing expenses equivalent to those required to develop the new activities. Furthermore, having a budget for a given project lower than the levels contemplated in the proposed Program-Budget, it will have the option of financing them either by an increase in the overall budget total or by the elimination of projects representing expenses equivalent to those required to develop the new activities. Furthermore, having a budget for a given project lower than the levels contemplated under Expenditures Committed would mean, in our opinion, the impossibility of operating efficiently and it would be wiser to eliminate it outright.

We believe that this new budget structure at Project level, by showing more clearly the interplay of figures and the implications of any modification it may be planned to make in them, would make it easier for the Board to make its decisions and orient the program of the Institute in the manner desired and most useful for the countries.

Since this way of presenting the budget differs from the way it has been presented in the past, it is not possible to show comparative, the actual expenditures approved in the preceding two years, as has been done with the Regular Program Budget. However, I will submit to the Board of Directors supplementary information on the corresponding figures for purpose of comparison, as accurately as possible.

The consolidation at Regional and Center Level is, insofar as regards Programs, merely arithmetic. In addition, there appear, at this level, the necessary expenditures to direct, administer and supply a logistic basis for the Projects. The same occurs in the case of the Executive Offices, with the addition of the functions of these Offices.

The allocation of funds from Quotas, in the Program-Budget, by Basic Programs, Other Activities, Direction, Administration, General Services and General Costs, appear in Chart No. 7, page 33 of Part I, and may be summarized as follows:

Basic Program No.1	822.000
Basic Program No.2	597.000
Basic Program No.3	<u>370.000</u>

Sub-Total

1,789.000

Other Activities	81.000
Direction, Administration and General Services	1,002.000
General Costs and Provisions	<u>256.000</u>
Total	3,128.000

That same allocation, based on IICA's total resources, appears in Chart No. 4
23 page .

It goes without saying that we have diligently strived to keep these expenditures at a minimum level compatible with sound administration.

We believe reducing them would affect the efficiency of the entire set-up at the corresponding level.

This, however, does not mean denying the Board the possibility of changing the figures shown. We do want to point out, though, that any reduction requires, in any case, a very careful study, for which all of the Directors present, headed by the Director General, are ready to give the Board whatever additional information it may wish to have.

Under this new distribution, the advantages of which I think I have brought out sufficiently clear, the overall figures by Regional Office and Center are identical and the program of activities is very similar to those appearing in the Proposed Program-Budget we have prepared following the traditional pattern.

This was inevitable, on the one hand because of the need to observe the projections set forth by the Board of Directors on other occasions, and on the other, because this is the first step in a transition that cannot be too abrupt, both because the action under way should not be descolated and because the general objectives, the functions and the organization of the Institute continue to be the same, in harmony with the policy of the New Di men si on that the Board has been pleased to support firmly.

I have no doubt that, as of this new stage, we will be able - slowly and surely - as the analysis and diagnosis of the problems we face progresses, to present to the consideration of the Board of Directors, programs more elaborate, more precise and more effective. By this I do not mean to disagree with the programs we have thus far developed, but to stress the fact that we have not lost the fundamental dissatisfaction that induces one to look for something better, starting from something that is good, thus being the source and motive of all progress.

In this regard, I wish to point out that in the task of rearranging the pro grams, which we have carried out in the year just elapsed, it has been possible for us to change and reorient with somewhat greater depth, the tasks of the Regional Offices, than those of the Research and Training Center.

This is due to three reasons:

The first has been the need to devote more attention, during this first year, to the internal readjustment of the Center to adapt it better to the functions that have repeatedly been pointed out by the Board of Directors and that the Board has urged in Resolution IICA/JD-565-8. The complexity and importance of the Center within the Institute are such that the new Dean and Director has had to devote to this task most of his energy, which certainly is far from lacking.

The second reason is that the Center, created to support the tasks of the Regional Offices and entrusted with a task that is much deeper and widespread, depends more than the Regional Offices on an adequate diagnosis that will prevent mistakes in orientation that are more difficult to correct in this case.

The third, possibly the most important and for which I request special attention by the Board, is the stringency of the budget with which the Research and Training Center at Turrialba has had to operate during the last few years.

It is well known that the Special Committee that, in 1963, sketched out the first projection for the expansion of the Institute, with sound judgment that we all approve, contemplated a much slower expansion for the Research and Training Center at Turrialba than for the Regional Offices.

Its forecasts, which would probably have resulted exact if the conditions prevailing at the time the Social Committee carried out its assignment, had continued, could not, however, contemplate the increase in general costs and in salaries that we have had to face over the past few years.

For this reason, the annual increases have enabled the Regional Office to comfortably absorb the increased costs, while at the same time expanding its programs starting new activities.

In the case of the Turrialba Center, on the other hand, the budget increases provided have been insufficient to absorb the vegetative increase in expenses and have not made it possible to expand any of the activities under way and much less, of course, to start new activities.

This situation has already been posed to the Board at its previous meeting held in Bogotá. On that occasion, the understanding attitude of the Members made it possible to increase, from US\$926,000 to US\$985,772, the CEI budget with a corresponding increase in the overall budget of the Institute.

This year, merely to cover increased costs and salary adjustments that are general throughout the Institute, and without starting any new activity nor taking care of other urgent needs, we have had to increase the budget of the Turrialba Center by US\$109,844 over and above the level of the previous year, bringing it up to US\$1,095,616.

Once more I have confidence in the understanding of the Board, and that it will approve this figure, which exceeds the estimate of the Special Committee by US\$69,844, that is 7.2%, and the budget level of the previous year by 11.1%. This per cent increase is considerably lower, also, than the increase in the budgets of the Regional Offices, which amount to 21.8%, 22.5% and 20.7%, respectively, for the Andean Zone, the Northern Zone and the Southern Zone.

I also wish to point out the fact that, even with this increased figure, the Turrialba Center will not be in a position to reduce its expenditures by 10% of the total, to make up for any delay in receiving the quotas, as previously explained.

To prepare for this situation, the budget of the Turrialba Center, and consequently the budget of the Institute, should be increased by US\$100,000 more, which would enable us to assure an adequate, liquid financial situation for the entire fiscal year.

I realize, of course, that there is a limit to the contributions from the countries, for which reason we will try to correct this situation gradually, in the course of the next two or three years.

Projects of the Technical Cooperation Program of the OAS

7. As announced in the Message of the previous year, Project 39 of the technical Cooperation Program of the OAS concluded its activities on June 30 1966.

The activities of that Project were absorbed by programs of IICA during the period from January 1, 1963 to June 30, 1966, as follows:

Year 1963	\$ 113,429
Year 1964	133,070
Year 1965	138,078
Year 1966	<u>176,385</u>
Total	<u>\$ 560,962</u>

8. In keeping with the decision of the Inter-American Committee for Alliance for Progress (CIAP), at the end of 1966 orders were given to suspend all activities under Project 201, Training and Studies in Agricultural Credit, as of December 31, 1966. Part of the activities of project 201 and those of Project 206, Training and Studies in Land Reform, will be consolidated as of July 1, 1967, into a new Project that is now being studied by CIAP. Consequently, the Center for Training and Studies in Agricultural Credit of Mexico was eliminated as well as the Office for Project 201 mentioned under point 24 of the Message by the Director last year.
9. Project 206, Training and Study in Land Reform, will, as of July 1, 1967, become the new Project entitled "Inter-American Program for Rural Development and Land Reform" for which CIAP is considering a budget for \$557,300 for the period from July 1, 1967 through June 30, 1968. This change the present organization of said Program, which will continue to be managed directly by a Director, since it is a center with hemispheric scope serving the three Regional Offices.
10. I must relate to the Board of Directors the situation that confronts IICA in regard to the level of its salary scale, the effect that this situation has been having, and the corrective measures I feel must necessarily be taken in order to solve it.

In recent years, IICA has paid considerable attention to its policy in regard to personnel administration, believing that the personnel makes the Institution. As part of the salary classification and adjustment program, we have this year completed another study of the scales themselves, comparing them with scales of other international organizations and of local organizations in the case of Assistant Personnel.

11. During the 1965-1966 fiscal period, the United Nations Organization for Food and Agriculture (FAO), the Pan-American Union and other international organizations have made important increases in the level of their salary scales. As a result, IICA has been relegated to a disadvantageous position in competing for its special staff. It might be stated that even before the above increases took place, IICA's salary scale was somewhat lower than that of other comparable international organizations.
12. This situation obviously causes dissatisfaction among the Professional Staff and has a definitely adverse effect on their morale. Recent cases have occurred of members of the staff who have resigned their position in IICA to accept employment in other organizations with higher salaries. Recently, also, several offers for employment made by IICA have been turned down because the candidates got better offers from other international organizations.
13. For this reason, IICA finds itself compelled to increase the present level of its salary scale, which was developed in 1962-1963, with the cooperation of the consultants in administration of Ernst & Ernst, of the United States. Due to the increases referred to, made by other international organizations, the level of the salary scale for IICA International Staff is totally divorced from prevailing conditions for the hiring of International Staff personnel.
14. For the above reasons, I have preceeded to revise the salary scale of IICA's Regulations and with instructions from the Board of Directors contained in Resolution JD-367, of May, 1963, as follows.
15. A detailed and extensive study of IICA's salary scale, compared with those of other international organizations, has led to the conclusion that it is 24% lower on an average. However, due to the limited resources IICA has not been in a position to adjust its salary scale by one immediate adjustment. For this reason IICA corrected the level of its salary scale for International Professional Staff for the 1966-1967 period, only 12% in general over the previous level, instead of the increase of one step that is granted each year to personnel whose services are satisfactory. Since one step in the scale is equivalent to a 4% increase, the resulting net increase for adjusting the scale is 8%. This adjustment does not change the basic classification by classes and steps that has been in use since 1962-1963. It was possible to finance this adjustment under the Budget approved by the Board of Directors for the 1966-1967 fiscal period.
16. In order to complete the final adjustment to bring its salary scale into line with other international organization, IICA will make a second increase of 12% over the salary scale level in effect as of June 30, 1966, which increase will go into effect as of July 1, 1967. This results in a total adjustment of 24% over the level of the original scale and a net increase of 20% on said scale because the normal 4% increase was not given on July 1, 1966.
17. This second adjustment has been shown in the costs of Professional Staff in the budgets for the 1967-1968 period for the Regional Offices and the Turrialba Research and Training Center.

18. In order that the budget for the Executive Offices would come within the limits of the projection by the Special Committee that we have used as a guide over the last few years, we were unable to show the adjustment in the costs of Professional Staff in said Executive Offices, due to the fact that its budget is made up almost entirely by personnel costs and the projection referred to has not contemplated any unusual adjustments.
19. While it was possible in 1966-1967 to absorb the first adjustment in the salary scale in the Executive Offices because the post of Director General was vacant due to temporary absence of the incumbent, it is not possible to absorb it in 1967-1968 because it is expected that the Director General will resume his duties at the beginning of said fiscal period. At the same time, it would not be possible to justify giving the benefit of the adjustment to one part of the Professional Staff while another part does not receive such benefits. Consequently, the adjustment in salaries of the Professional Staff of the Executive Offices will be financed by using unspent balances and the item for unforeseen expenditures, without increasing the total budgeted. The level of the Proposed Budget for the Executive Offices in 1967-1968 will be enough to cover this salary adjustment almost entirely.

Budget Transfers

20. In the 1965-1966 fiscal year it became necessary to make some budget transfers, which were carried out within the 10% authorized by the Board of Directors. These transfers are detailed under the Summary of the Implementation of the 1965-1966 Budget (Part I, page 2).

General Working Fund

21. I have followed the practice started in the 1962-1963 period, intended to continue strengthening the General Working Fund and to increase the cash resources. Under said plan, funds from the following sources are reserved.
 - a) One annual item in the amount of \$65,000 included in the Program-Budget.
 - b) Income from the sale of goods and services, up to \$10,000.
 - c) Income received in the way of reimbursement of indirect expenses under contracts with the Agency for International Development and the Atomic Energy Commission of the United States.
22. As a result of this fiscal policy, the General Working Fund, which on June 30, 1962 only amounted to \$18,317, reached the sum of \$1,034,033 as of June 30, 1966.
23. I must bring out again the fact that, while the General Working Fund has been strengthened, it is made up mostly of "unpaid quotas" and for this reason it does not have the necessary liquidity to cover the delay in receiving the quotas from the Member States, which occurs mainly as a result of the difference, in most of the Member States, between their fiscal year and the fiscal year of IICA. This policy has made it possible to ease the effect of temporary delays in receiving the quotas, but it has not made it possible to create a cash reserve adequate for the purpose.

24. In order to prevent the delay in receiving the quotas from adversely affecting the normal development of the programs authorized by the Board of Directors, I believe it is essential to continue that policy and maintain the financial austerity observed so far. For this reason, the Regional Offices and the Turrialba Center will continue to be authorized, as far as possible, to include in the Plan of Expenses activities for only 90% of the Program-Budget approved by the Board of Directors. As I have already explained, it is impossible to effect the 10% reduction in the Plan of Expenses of the Turrialba Center at this time without affecting its basic program.

Inter-American Service for Introduction and Domestication of Plants and Animals

25. This service was proposed in 1966-1967 as an additional program but it could not be approved for lack of funds. For this same reason it was not possible to include it in the budget for 1967-1968. In 1966-1967, under document IICA/JD-544, a first study of this program was presented; it refers to the first stage, which comprises the United States, Puerto Rico, Haiti, Santo Domingo, Jamaica and Trinidad: as well as the second study, which comprises Colombia, Ecuador, Peru, Bolivia, Chile, Argentina, Uruguay, Paraguay, Brasil and Venezuela.

Separately, under document IICA/JD-593, the supplementary report is submitted, comprising México, Guatemala, El Salvador, Honduras, Costa Rica and Panamá, for study by the Board of Directors.

Committee for the Preliminary Study of the Proposed Program-Budget for 1967-1968

26. At its Fifth Meeting, in Bogotá, Colombia, in April, 1966, the Board of Directors Created a Committee that will meet in the Executive Offices in San José, Costa Rica, before the Sixth Meeting, in order to make a preliminary study of the Proposed Program-Budget for 1967-1968. The recommendations and conclusions of this Committee will be submitted separately under document IICA/JD-592.

Study on the Allocation of Funds for the "Graduate School" and "Other Programs"

27. As mentioned in the Proposed Program-Budget for 1966-1967, I shall submit to the Board of Directors my suggestions on the projection of the Program Budget for the next five years, together with my recommendations on the allocation of IICA resources for the "Graduate School" and "Other Programs", which was originally recommended by the Special Committee in its report of September, 1962.

Twenty-fifth Anniversary of IICA

28. As explained to the Board of Directors in the Message of the Program-Budget, 1966-1967, IICA will complete twenty-five years of service on October 7, 1967. The Program planned to celebrate this anniversary was drawn up on the basis of a budget of \$38,000. Since there were no funds for this program within the limitation of the Program-Budget Approved for 1966-1967, the Board of Directors, under Resolution JD-565-28, authorized financing it with savings that might be effected in other IICA programs. Unfortunately, on one hand it has been difficult to effect such savings due to the priority assigned by us to the programs approved; and on the other, the

Board of Directors in Washington has deemed it advisable to maintain a policy of austerity in this matter. For this reason, the program of activities for the celebration of the 25th Anniversary of the founding of IICA has been cut down to those acts which do not imply extraordinary expenses and the cost of which can be financed within the normal operations of the Institute and with contributions from institutions of the Member States and contributions from other international organizations.

Information requested in other Resolutions approved at the Fifth Annual Meeting

29. At its Fifth Annual Meeting in April, 1966, the Board of directors approved a number of resolutions requesting certain additional information. Complying with said resolutions, the following has been done:

a) Information on contracts and agreements.

Complying with Resolution JD-565-6, I shall submit a summarized list of each one of the contracts and agreements that IICA has in effect.

The Office of Official Relations of IICA has been issuing a series of publications entitled "Resolutions, Agreements and Contracts" which, as the title indicates, contain the complete text of the agreements and contracts entered into by IICA. Said Office is sending, under separate cover, a copy of the issues published, to the members of the Board of Directors, to supplement the summarized list mentioned above.

b) Resolution on the contributions from host countries.

Complying with Resolution JD-565-11, I shall submit to the Board of Directors a report showing the special contributions made by host countries in the operations of IICA.

c) Resolution on a summary of Technical Programs.

Complying with Resolution JD-565-19, I have included in the document covering the Program-Budget, chart No. 4, page 20 a, which contain a summary of the distribution of funds assigned to the Technical Programs, without taking into consideration their geographical location nor the origin of the financing.

d) Resolution on strengthening of programs of the Northern Zone.

In compliance with Resolution JD/565-36, the following has been done:

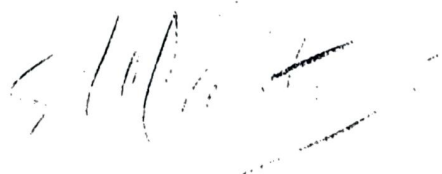
1. A little over 50% of the scholarships in the Turrialba 1966-1967 Budget was destined to students of the countries in the Northern Zone.
2. No less than 50% of the funds from the item for Services and consultation in the Turrialba budget was assigned to furnish assistance to countries in the Northern Zone.
3. Steps are being taken to offer a course in communication for personnel from extension Services in México, which will be given in 1967.

4. The Program for the Antilles, in the Northern Zone has been strengthened. This Program will have its headquarters in the Dominican Republic.
- e) Resolution JD/565, Point 4.
In compliance with point 4 of Resolution JD/565-36, a new projection of IICA's Program Budget for the five-year period beginning July 1, 1968 will be submitted; it will contain suggestions on basic concepts for the preparation of the budgets.

Calculation of Quotas

30. I would like to explain to the Board of Directors that the method used for calculating the quotas is the same used by the Pan-American Union for figuring out the quotas to be paid by the Member States of the Organization of American States. This system was adopted by the Board of Directors in Washington in May, 1962. For this reason, the percentages used in this budget to figure the quotas for each country are the percentages sent to IICA by the Treasurer of the Pan-American Union. The calculation must be based on 100% of the countries and must consequently include the quota for Cuba, even though the sum corresponding to that country is not taken into account for budget expenditures, as shown under the Proposed Resolution of Programs and Allocations.

The percentages used in the Proposed resolution are the most recent available and were obtained from the Treasurer of the Pan American Union on the date when this Proposed Program-budget was prepared, that is, more than sixty days prior to the Annual Meeting of the Board of Directors. It is possible that within that sixty-day period other percentages may be adopted, based on more recent information obtained by the council of the Organization of American States. If this happened, it would be compulsory for IICA to use the new percentages in calculating the quotas that are to be approved in its final resolution by the Board of Directors at their Meeting in Rio de Janeiro. Consequently, the quota for each country could vary in comparison with those shown on the Proposed Resolution appearing in the present document. Usually, this variation is slight.



PROPOSED RESOLUTION ON QUOTAS

THE BOARD OF DIRECTORS OF THE INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES OF THE CAS

RESOLVES:

1. That the expenditures for the fiscal year ending June 30, 1968, be covered with the quotas which the Governments of the Member States are to contribute toward supporting the Inter-American Institute of Agricultural Sciences to be calculated as follows:

<u>Country</u>	<u>Percentage</u>	<u>Amount</u>
Argentina	7.10	225,534
Bolivia	.31	9,847
Brazil	7.33	232,840
Chile	2.08	66,072
Colombia	1.77	56,225
Costa Rica	.31	9,847
Cuba	1.54	48,919
Dominican Republic	.31	9,847
Ecuador	.38	12,071
El Salvador	.31	9,847
Guatemala	.31	9,847
Haiti	.31	9,847
Honduras	.31	9,847
Mexico	6.25	198,534
Nicaragua	.31	9,847
Panama	.31	9,847
Paraguay	.31	9,847
Peru	.69	21,918
United States	66.00	2,096,513
Uruguay	.77	24,460
Venezuela	2.99	94,979
Total	100.00	\$ 3,176,535
	=====	=====

2. That any amount in excess of the amount approved as the total budget of expenditures be transferred to the General Working Fund. Likewise, the unexpended balances of any allotment that are not obligated for some other purpose, also be transferred to the General Working Fund.

PROPOSED RESOLUTION
ON PROGRAMS AND ASSIGNATIONS

THE BOARD OF DIRECTORS OF THE INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES OF THE OAS:

WHEREAS:

1. The Alternate Program-Budget presented by the Acting Director General, taking into consideration the budgetary level recommended by the Special Committee, is for a total of US\$ 3,127,616, which upon adding the Cuban Quota would have an over-all of US\$ 3,176,535.
2. In preparing the Alternate Program-Budget for fiscal year 1967-1968 the Acting Director General has followed and has adopted the recommendations contained in the following documents:
 - a) Report of the Ad-Hoc Committee established by the Board of Directors in its Fourth Meeting (Antigua, Guatemala, March 1965), for the study of the future development of the Turrialba Center;
 - b) Plan for the future development of the Turrialba Center presented to the Board of Directors at its Fifth Annual Meeting (Bogotá, April, 1966) by the Director General and the new Director for the Turrialba Center;
 - c) Report from the Impact Committee established by the Director General in September 1965;
 - d) Resolutions approved by the Board of Directors in its previous meetings and in the Bogotá Meeting.
3. As a result of the Sixth Internal Meeting of the IICA Directors, held at Suescún, Colombia, April 25 to 29, important recommendations were made in regard to the immediate objectives of IICA; the re-grouping of programs in order to obtain a higher impact; the re-structure of the Turrialba Center programs and its operation in close collaboration with the Regional Offices; the programming systems; the criteria for the evaluation of new projects and the bases to initiate, experimentally, a system for the evaluation of the staff performance.
4. That for attaining these objectives the Acting Director General proposes to re-group the lines of action of IICA in three basic programs of hemispheric projection which will operate in the Teaching and Research Center at Turrialba as well as in the Regional Offices and which are:

Agricultural Education
Agricultural Research
Rural Development and Land Reform

THEREFORE RESOLVES:

1. To approve, in accordance with the above considerations, the re-grouping of the lines of action of IICA in the three basic programs described, as proposed by the Acting Director General in the Proposed Alternate Program-Budget submitted for the consideration of this Board of Directors.
2. To approve the program of activities presented by the Acting Director General in said Proposed Alternate Program-Budget for the fiscal year ending June 30, 1968, as follows:

Item	Amount
<u>REGIONAL OFFICE FOR THE ANDEAN ZONE</u>	
1. Basic Programs	340,620
2. Other Activities	37,905
3. Direction, Administration and General Services General Costs and Provisions (See Items 14 to 17)	101,475
<u>REGIONAL OFFICE FOR THE NORTHERN ZONE</u>	
4. Basic Programs	316,090
5. Other Activities	16,000
6. Direction, Administration and General Services General Costs and Provisions (See Items 14 to 17)	77,510
<u>REGIONAL OFFICE FOR THE SOUTHERN ZONE</u>	
7. Basic Programs	443,500
8. Other Activities	27,400
9. Direction, Administration and General Services General Costs and Provisions (See Items 14 to 17)	93,500
<u>TRAINING AND RESEARCH CENTER - Turrialba</u>	
10. Basic Programs	687,864
11. Direction, Administration and General Services General Costs and Provisions (See Items 14 to 17)	294,752
<u>EXECUTIVE OFFICES AND ADMINISTRATION</u>	
12. Executive Offices	308,207
13. Administration and General Services	126,793
<u>GENERAL COSTS AND PROVISIONS</u>	
14. General Costs	88,000
15. Contingencies	30,000
16. Contribution to the United Nations Development Program	73,000
17. General Working Fund	65,000
Sub-Total	<u>3,127,616</u>
18. Amount of the Cuban Quota	48,919
Total	<u>\$ 3,176,535</u>

2. When the quota from the Government of Cuba is received, it shall be transferred to the General Working Fund of the Institute. The use of this quota must be approved by the Board of Directors; to this effect, the Director General will submit a budget based on the amount received. The Director General is not authorized to make expenditures against Item 18, until that budget is approved.
3. To authorize the Director General of the Institute to make transfers between the Items, except Items 16 and 17, amounting to as much as 10% of the total of the smaller Item.
4. To authorize the Director General to make transfers between Projects and Basic Programs that have been approved, always provided that the purpose and use of the funds is in line with the objectives of the approved Programs.

PROPOSED RESOLUTION ON SPECIAL CONTRIBUTIONS

THE BOARD OF DIRECTORS OF THE INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES OF THE OAS:

RESOLVES:

1. That the following special contributions which, as reported by the Director General, will probably be received during fiscal year 1967-1968, be used for the specific purposes agreed upon:

- a) Renewal of previous contributions and grants:

American Cocoa Research Institute (ACRI)	
Cacao Program - Turrialba	84,000
Cacao Program - Brazil	25,000
Other Cacao Programs	6,000
The Rockefeller Foundation	
Permanent Secretariat of the Latin American Plant Sciences Association (ALAF)	12,000
Secretariat of the Inter-American Association of Agricultural Librarians and Documentation	7,500
Development of Agricultural Libraries in Brazil	15,000
The Kellogg Foundation	
Publication of Textbooks and Training Materials	4,000
Joseph Campbell Company	
Research on "Naranjilla" Production	16,000
Kennecott Cooper Corporation	
Cacao Research	7,000
Dutch Government	1,000

- b) New or additional contributions which may be expected in 1967-1968

20,000

Total

\$ 197,500

2. That the funds obtained through the following contracts or agreements be utilized for the specific purposes and in the form agreed upon:

United States Agency for International Development (AID)	473,000
United States Atomic Energy Commission	160,000
Technical Cooperation Program of the OAS	557,000
Comissao Executiva do Plano da Recuperacao Economico-Rural de Lavoura Cacaueira (CEPLAC)	39,000
Government of the Republic of Chile, Area of Maipú, Chile	20,000
Consejo Superior de Fomento Agropecuario (CONSFA)	20,000
National Institute of Agraria Reform and Promotion (IRPA) Perú	112,000
Colombian Institute of Land Reform (INCORA)	23,000

Ecuadorian Institute of Land Reform and Colonization (IERAC), Ecuador	63,000
Government of Brazil, Ministry of Agriculture	14,000
Government of Venezuela, Ministry of Agriculture Area of Yaracuy	<u>36,000</u>
Total	\$ 1,517,000 =====

3. Allocation of the United Nations Development Program in the form of experts, study, grants, equipment, supplies and services and miscellaneous expenditures, through FAO, estimated at

	<u>874,000</u>
Grand Total	\$ 2,588,500 =====

4. That any unexpended balance from special contributions and contracts or agreements during fiscal year 1967-1968, be kept separated from the Institute General Working Fund and be used in accordance with the conditions of the contributions, contracts or agreements.

PART I

GENERAL EXPLANATION TO THE BUDGET PRESENTATIONS

SUMMARY OF THE EXECUTION OF THE BUDGET 1965-1966

CHARTS AND GRAPHS

GENERAL EXPLANATION TO THE ALTERNATE PROGRAM-BUDGET

The Alternate Program-Budget has been prepared in accordance with the general explanation given in the Acting Director General's Message and it is based on three basic programs which are:

1. Agricultural Education
2. Agricultural Research
3. Rural Development and Land Reform

The basic programs, in turn, contain projects and sub-projects. In order to facilitate the identification of the basic programs, of the projects and of the sub-projects and their geographical location, a numerical code of various cyphers has been adopted as follows:

- First cypher: Refers to the Basic Program: 1 for Agricultural Education; 2 for Agricultural Research; 3 for Rural Development and Land Reform.
- Second cypher: Refers to the Regional Office or Center: 1 for the Regional Office of the Andean Zone; 2 for the Regional Office of the Northern Zone; 3 for the Regional Office of the Southern Zone; 4 for the Training and Research Center at Turrialba.
- Third cypher: Refers to the Projects contained in each program; these projects will be numbered consecutively.
- Fourth cypher: Refers to the sub-projects of the projects contained in the Basic Programs. They will also be numbered consecutively.

As an example, the Basic Program of Agricultural Education (1), of the Andean Zone (1), with a Project (1), from which a sub-project (1) depends, will be codified as follows:

1.1.1.1.

Another example: the Program of Agricultural Research (2) of the Southern Zone (3) with a Project (1) and a sub-project (2), is codified as follows:

2.3.1.2.

The main difference in the presentation of the Alternate Program-Budget adopted for 1967-1968, as compared with the presentation used formerly, consists in the fact that the description of the Basic Programs has been concentrated in Part II. In that part, after an explanation of the "Antecedents of the Alternate Program-Budget" there is a description of the Basic Programs and of their long range objectives. The description followed by an explanation of its application and development in each Regional Office and the Turrialba Center.

The budgets of the Regional Offices and of the Turrialba Center are presented in Parts III to VI, with an explanation of the specific objectives for 1967-1968. The new presentation by Basic Programs, in many cases, requires a distribution of the Professional and Auxiliary Personnel time between Programs and Projects. In the presentation of the budget at the projects level, the percentage of the time distribution is shown.

The information on Other Programs budget, on the Executive Offices on the General Costs and Provisions budgets and finally the Appendixes are shown in the following Parts.

The Index heading the documents containing the Alternate Program-Budget reflects its organization.

SUMMARY OF THE EXECUTION OF THE BUDGET

Fiscal Year 1965-1966

CHAPTERS	R U D G E T				EXPENDITURES	UNDER OR (OVER) EXPENDED
	APPROVED RES. JD-565-33	INCREASE	TRANSFERS DEDUCTION	ADJUSTED		
<u>REGIONAL DIRECTION FOR THE ANDEAN ZONE</u>						
1 TECHNICAL PROGRAMS	\$ 210,700			200,600	199,799	801
2 TRAINING AND SERVICES	24,010		10,100	24,010	19,251	4,759
3 DIRECTION, ADMIN. AND GEN. SERVICES	61,270	6,100		67,370	67,189	181
<u>REGIONAL DIRECTION FOR THE NORTHERN ZONE</u>						
4 TECHNICAL PROGRAMS	191,343		12,600	178,743	150,624	28,119
5 TRAINING AND SERVICES	17,000			17,000	14,281	2,719
6 DIRECTION, ADMIN. AND GEN. SERVICES	50,650	4,500		55,150	55,131	19
<u>REGIONAL DIRECTION FOR THE SOUTHERN ZONE</u>						
7 TECHNICAL PROGRAMS	275,617		18,550	257,067	242,826	14,241
8 TRAINING AND SERVICES	18,850			18,850	18,411	439
9 DIRECTION, ADMIN. AND GEN. SERVICES	65,500	6,450		71,950	71,511	439
<u>TEACHING AND RESEARCH CENTER</u>						
10 TECHNICAL PROGRAMS	529,314		18,800	510,514	498,477	12,037
11 TRAINING AND SERVICES	35,000			35,000	25,660	9,331
12 DIRECTION, ADMIN. AND GEN. SERVICES	188,646	18,800		207,446	207,171	271
<u>EXECUTIVE OFFICES</u>						
13 EXECUTIVE OFFICES	281,180	5,600		286,780	286,748	32
14 ADMINISTRATION AND GENERAL SERVICES	85,820	8,400		94,220	94,182	38
<u>GENERAL COSTS AND PROVISIONS</u>						
15 GENERAL COSTS	77,100	7,700		84,800	83,708	1,092
16 CONTINGENCIES	25,000	2,500		27,500	26,694	806
17 DEBT SERVICE	12,000			12,000	11,979	21
18 CONTRIBUTION TO UNDP	94,000			94,000	94,000	-
19 GENERAL WORKING FUND	65,000			65,000	65,000	-
SUB-TOTAL	2,308,000			2,308,000	2,232,651	75,349
<u>OTHERS</u>						
20 CUBAN QUOTA	38,244			38,244		38,244
TOTAL	\$ 2,346,244	60,050	60,050	2,346,244	2,232,651	113,593

ORGANIZATION CHART OF THE

INTER-AMERICAN INSTITUTE OF AGRICULTURAL SCIENCES OF THE O.A.S.

EXPLANATORY NOTES TO THE FUNCTIONAL ORGANIZATION GRAPH

Executive Offices - The Executive Offices include the following:

- a) Director General
- b) Deputy Director
- c) Technical Affairs
- d) Planning
- e) Administrative and Financial Affairs
- f) Official Relations
- g) Official Representative in the United States (Pan American Union)

Deputy Director - He coordinates all IICA operations and is directly responsible for the general supervision of Project 206 (Land Reform), of the Technical Cooperation Program of the OAS, sponsored and financed by the IA-ECOSOC and administered by the IICA. He also substitutes for the Director General during his temporary absences.

Technical Affairs - The Head of the Technical Affairs Office depends from the Deputy Director and collaborates with him in the supervision and periodical analysis of technical activities in order to ascertain that these are carried over in accordance with the budgets approved by the Board of Directors. He also collaborates with the Planning Office of the Direction General in order to maintain a constant contact and relationship between programs planning and their operation. Furthermore, he tends to matters related with the participation of IICA in the Inter-American committee for Agricultural Development (CIDA) and he acts as IICA substitute representative in the permanent Supervisory Commission.

Planning - This office is under the responsibility of the Director of Planning and is in charge of analyzing and projecting the Institute programs in accordance with the present needs of the rural development in Latin America, taking into consideration the functions, resources and the modus operandi of the Institute. In the performance of its functions, it works in coordination with other Institute offices.

Administrative and Financial Affairs - The responsibilities of this office, includes the following: (1) financial administration of the IICA, including the preparation and control of the execution of budgets; general accounting and internal auditing; (2) the overall administration of contracts, subsidies, grants, etc.; (3) the preparation and application of personnel policy, including the programs of classification and evaluation of jobs; and (4) the general administration of the auxiliary services adscribed to the Executive Offices. Furthermore, the Head of the Administrative and Financial Affairs is also the Treasurer of the Institute.

Official Relations - Under the direction of the Head of Official Relations, this Office is responsible for all matters related to the Agricultural and Foreign Relations Ministries, and matters of the Board of Directors and the Advisory Technical Committee through the Official Representative of the Institute in the United States. Furthermore, official matters related to the various departments of the Pan American Union, to the specialized agencies of the OAS and other international organizations are handled by this office. It also manages the program of Information for the Press, the editing of the Annual Technical Report, the General Report, booklets, announcements and general information for the Institute personnel.

Official Representative in the United States - The Official Representative represents the Director General in connection with the Institute's affairs with the Board of Directors in Washington. He is the Secretary of the Board of Directors. He represents the Director General on the Inter-American Committee for Agricultural Development (CIDA). Furthermore, he is the official contact with organizations, foundations and universities which collaborate with the Institute.

Direction - Land Reform - T.C.P. Project 206 - This Office is part of the Direction General and depends directly from the Director General through the Deputy Director. It is financed with funds from the Technical Cooperation Program. It is under the responsibility of Project 206 Director, who supervises the technical and administrative activities of the Project as well as the direct operation of the Inter-American Land Reform Center in Bogotá, Colombia. Furthermore, he has the responsibility of coordinating, technically, all the Land Reform programs operated by IICA through its Regional Offices.

Regional Offices - Since 1961, when the new structure of the IICA went into effect, the Regional Offices are directly responsible, both technically and administratively, for all the IICA units whose headquarters are in the Member States included under the Regional Office's territory, regardless of the source of financing. The Regional Offices administer not only regional programs for their own Zones, but also programs of continental scope.

Regional Office for the Andean Zone - It presently operates the following IICA Units:

- a) Units of the Regular program in La Molina, Perú, as detailed in the Program Budget.
 - b) Regional Unit of Project 206 of the Inter-American Land Reform Center in La Molina, Perú.
 - c) Program for advanced Training in Agricultural Engineering (United Nations Development Program, in La Molina, Perú).
 - d) Communications Program in Higher Agricultural Education (AID Contract) and SIC Communications Unit, La Molina, Perú.
 - e) Home Economics Unit (AID Contract), La Molina, Perú.
 - f) National Center for Training and Studies in Land Reform, in Lima, Perú.
 - g) National Center for Research and Teaching in Land Reform (CIERA) in Quito, Ecuador.
 - h) Program for Rural Development in Yaracuy, Venezuela
- In the near future it will operate:

- i) Regional Coffee Program in Medellín, Colombia
- j) Tropical Food Crops Program in Ecuador

Regional Office for the Northern Zone - Presently operates the following IICA Units:

- a) Units of the Regular program, in Guatemala City, as detailed in the Program Budget.
- b) Regional Unit of Project 206 of the Inter-American Land Reform Center, in Guatemala City.
- c) Horticulture Unit in Mexico City.
- d) Higher Agricultural Education Unit in Guatemala
- e) Program for the Antilles in the Dominican Republic.

Regional Office for the Southern Zone - Presently operates the following IICA Units:

- a) Units of the Regular program in La Estanzuela, Uruguay; Castelar, Argentina; and Piracicaba, Brazil; as described in the Program-Budget.
- b) Regional Units of Project 206 of the Inter-American Land Reform Center in Santiago Chile and Brazil.
- c) Technical Advisory Unit for CEPLAC on Cacao Research, in Itabuna, Brazil.
- d) Development Area (Project 206, in Mallorquín, Paraguay).

- e) Development Area, Maipú, Chile
- f) Units of the United Nations Development Program
- g) Office and Development Area in Brazil

Training and Research Center, Turrialba - Is the headquarter for the IICA Graduate School and presently operates the following units in Turrialba, Costa Rica:

- a) Units of the Regular program, as described in the Program-Budget
- b) Cacao Program with financial and technical cooperation of ACRI and the University of Wisconsin.
- c) Nuclear Energy Program (Contract with the United States Atomic Energy Commission).
- d) Units of the AID Contract
- e) Units of the United Nations Development Program.
- f) Scientific Communications Unit of SIC.

Graduate School - Is in charge of training at the graduate level and operates in Turrialba, where its main headquarters are, and in the Regional Offices. Its form of operation is unique, as it does not have a physical base of its own, but is made up of facilities, personnel and resources from all the operating units of the IICA.

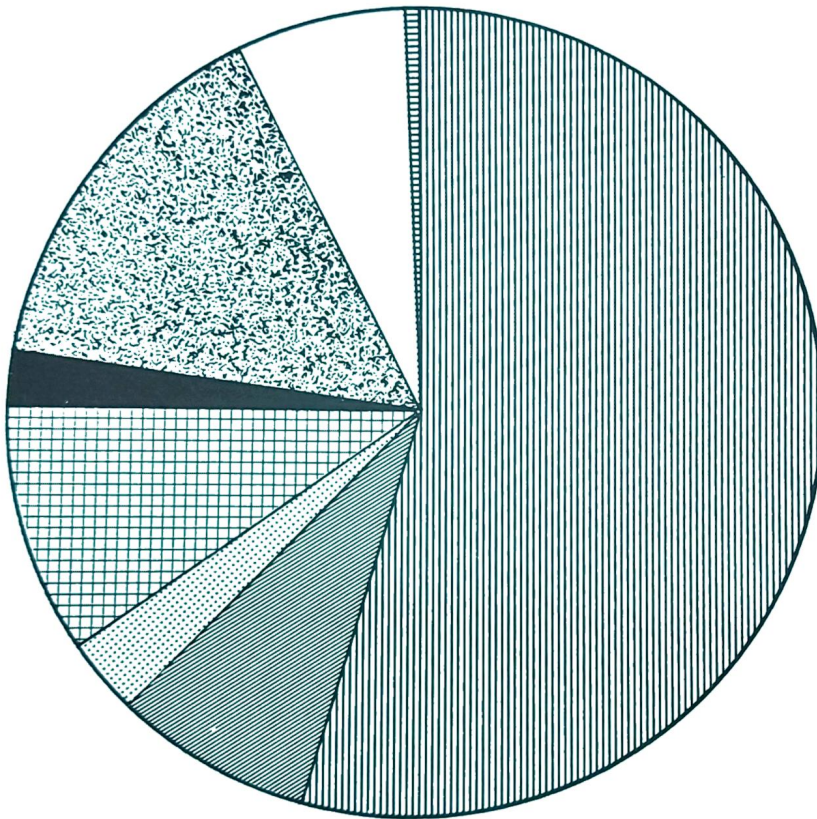
TOTAL RESOURCES OF THE INSTITUTE

The following information relates to the total resources of the Institute. It includes not only the income from quotas contributed by the Member States, but also other resources contributed by countries, institutions or organizations which collaborate with the Institute.

Graph N°1

TOTAL INSTITUTE RESOURCES

General distribution according to the source of funds
Fiscal Year 1967-1968



QUOTAS 54.81%



ACRI 2.02%



AID 8.29%



UNDP 15.31%



AEC 2.80%



GRANTS AND
CONTRIBUTIONS 6.83%



P. 206 9.76%



MISCELLANEOUS 0.18%

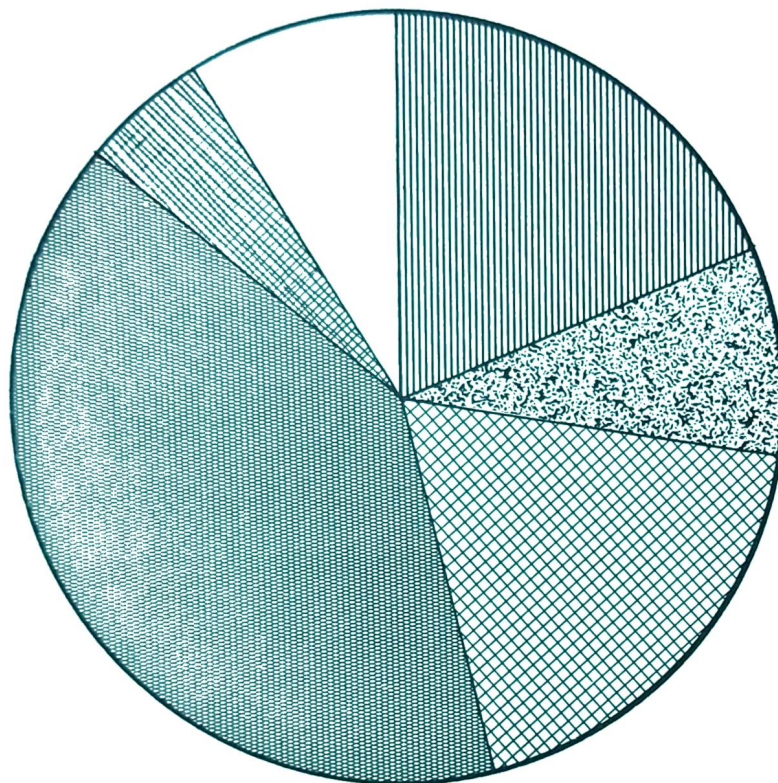
CHART N°1
 TOTAL INSTITUTE RESOURCES
 Fiscal Year 1967-1968
 (in thousands of dollars)

QUOTAS FROM MEMBER STATES		\$ 3,128
AGENCY FOR INTERNATIONAL DEVELOPMENT		473
ATOMIC ENERGY COMMISSION (AEC)		160
TECHNICAL COOPERATION PROGRAM OF THE OAS (TCP)		557
AMERICAN COCOA RESEARCH INSTITUTE (ACRI)		115
UNITED NATIONS DEVELOPMENT PROGRAM (UNDP)		874
OTHERS		390
INSTITUTO COLOMBIANO DE REFORMA AGRARIA (INCORA)	\$ 23	
INSTITUTO DE REFORMA Y PROMOCION AGRARIA, PERU (IRPA)	112	
CHILEAN GOVERNMENT AND CONSFA	40	
BRAZIL GOVERNMENT	14	
CEPLAC	39	
KELLOGG FOUNDATION	4	
THE ROCKEFELLER FOUNDATION	35	
KENNECOTT COOPER CORP.	7	
HOLLAND GOVERNMENT	1	
JOSEPH CAMPBELL CO.	16	
INSTITUTO ECUATORIANO DE REFORMA AGRARIA Y COLONIZACION (IERAC)	63	
MINISTERIO DE AGRICULTURA Y CRIA, VENEZUELA	36	
MISCELLANEOUS INCOME		10
TOTAL		\$ 5,707

Graph N°2

TOTAL INSTITUTE RESOURCES

Overall distribution between Regional Offices, Teaching and Research Center at Turrialba and Executive Offices
Fiscal Year 1967-1968



REGIONAL OFFICE FOR THE ANDEAN ZONE

18.42%



REGIONAL OFFICE FOR THE NORTHERN ZONE

8.80%



REGIONAL OFFICE FOR THE SOUTHERN ZONE

18.64%



TRAINING AND RESEARCH CENTER, TURRIALBA

40.00%



INTER-AMERICAN LAND REFORM CENTER (CIRA)

5.53%



EXECUTIVE OFFICES

8.61%

TOTAL INSTITUTE RESOURCES

Detailed distribution between Regional Offices, Centers and Executive Offices
Fiscal Year 1967-1968

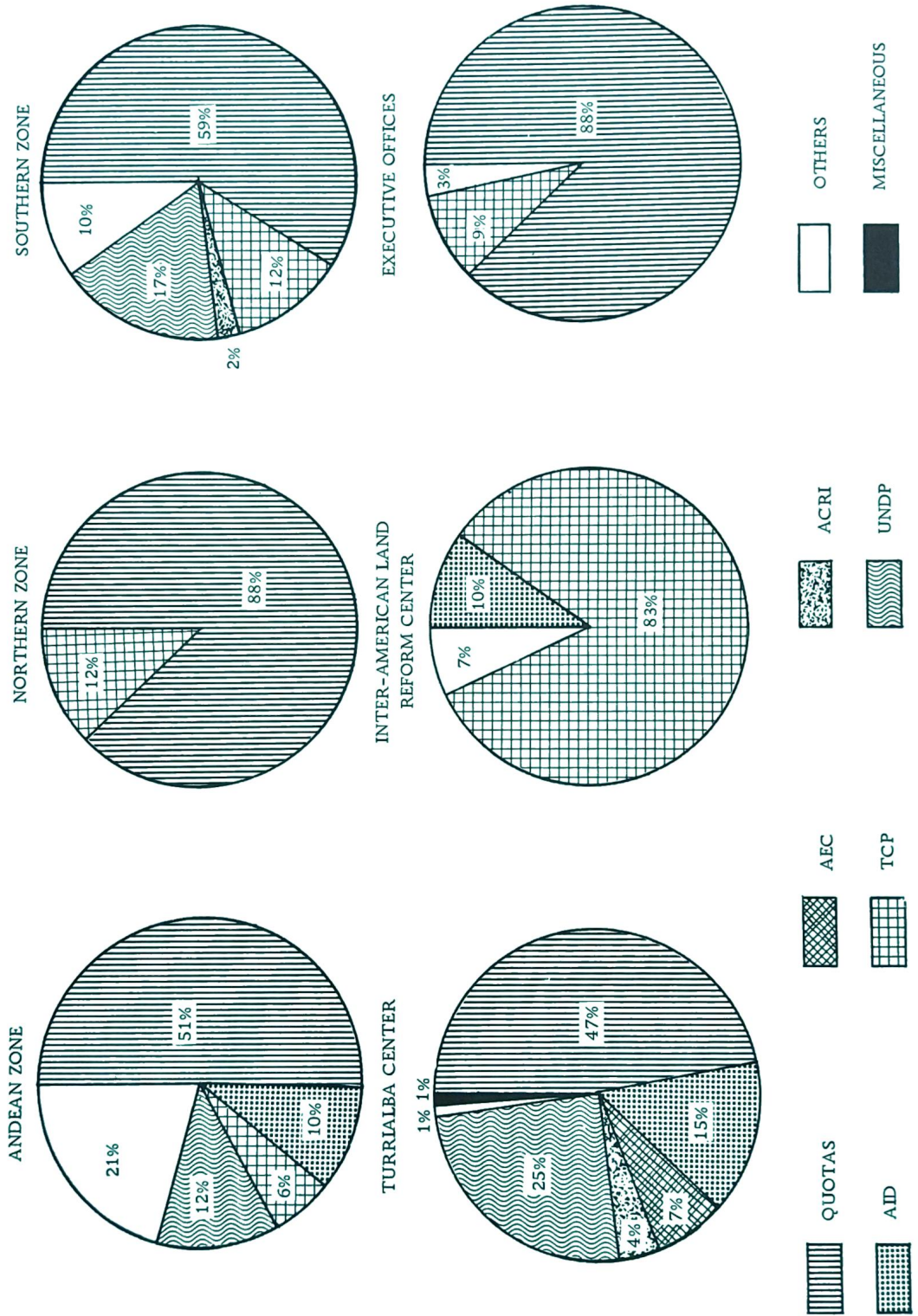


CHART N° 2

TOTAL INSTITUTE RESOURCES

General Distribution According to the Source of Funds
Fiscal Year 1967-1968
(in thousands of dollars)

	TOTAL	IICA	AID	AEC	TCP	ACRI	UNDP	GRANTS AND CONTRIBUTIONS	MISCELLA- NEOUS
<u>BASIC PROGRAMS</u>									
1. AGRICULTURAL EDUCATION	\$ 1,686	823	230	16		9	600	8	
2. AGRICULTURAL RESEARCH	1,224	596	142	144		106	165	71	
3. RURAL DEVELOPMENT AND LAND REFORM	1,176	370	78		515			231	
<u>OTHER ACTIVITIES</u>	97						16		
<u>OTHER EXPENDITURES</u>									
DIRECTION, ADMINISTRATION, PLANNING									
OFFICE AND GENERAL SERVICES	1,268	1,002	23		42		93	98	10
GENERAL COSTS AND PROVISIONS	118	118							
UNITED NATIONS DEVELOPMENT PROGRAM	73	73							
GENERAL WORKING FUND	65	65							
TOTAL	\$ 5,707	3,128	473	160	557	115	874	390	10

Graph N°4

TOTAL INSTITUTE RESOURCES

*Distribution by Basic Programs, other Activities and Direction,
Administration, General Services and Costs
Fiscal Year 1967-1968*

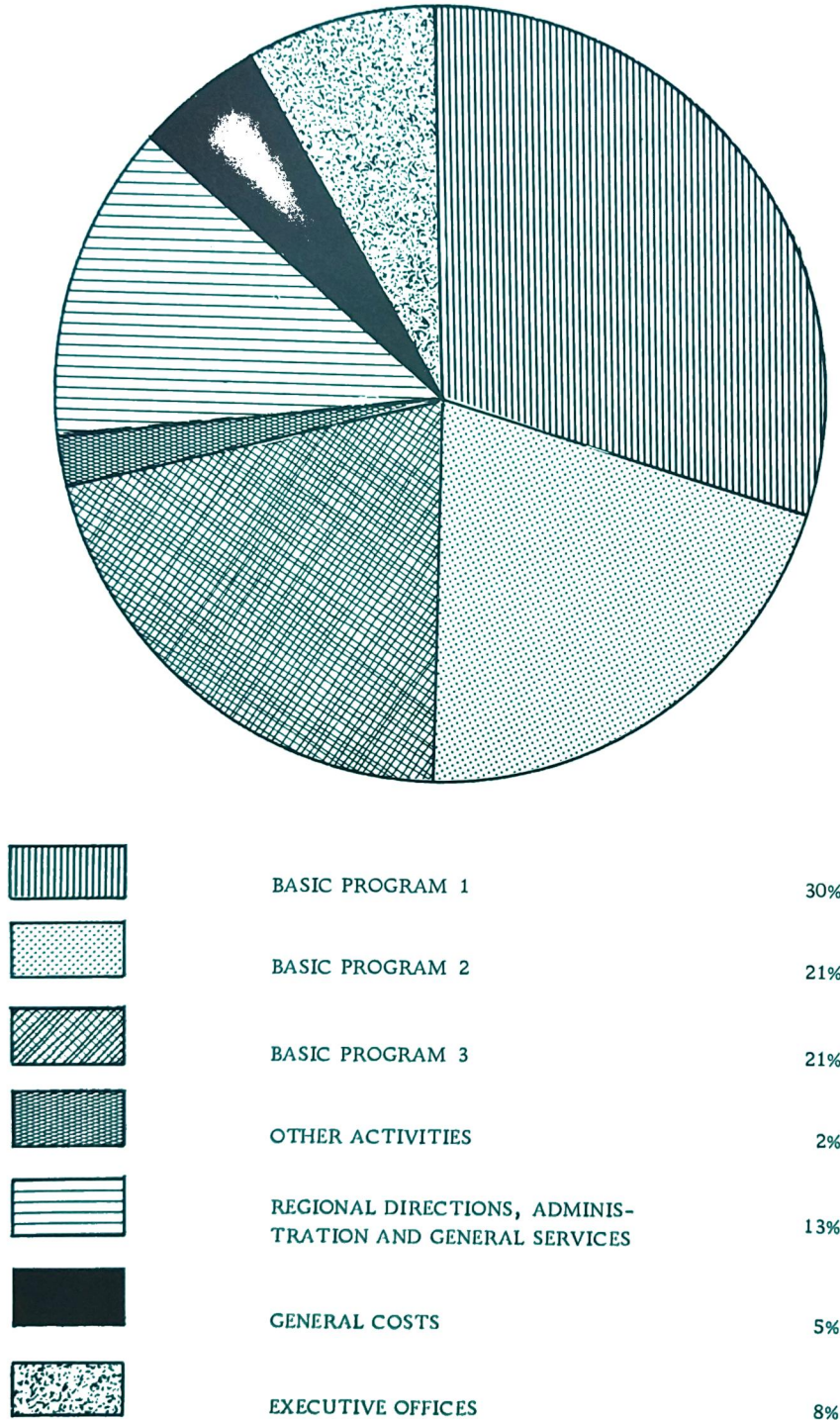


CHART N°3

TOTAL INSTITUTE RESOURCES

Distribution by Regional Offices, Centers and Executive Offices
Fiscal Year 1967-1968
(in thousands of dollars)

	TOTAL	ICA	AID	AFC	TEP	ACPE	UNEP	GRANTS AND CONTRIBUTIONS	MISCELLANEOUS
CADIAN ZONE									
BASIC PROGRAMS									
1.1 - AGRICULTURAL EDUCATION	82	144	104				190	4	
2.1 - AGRICULTURAL RESEARCH	120	120							
3.1 - RURAL DEVELOPMENT AND LAND REFORM	311	26			62			173	
SUB-TOTAL	513	360	104		62		190	177	
OTHER ACTIVITIES									
DIRECTION AND ADMINISTRATION									
DIRECTION	44	44						19	
ADMINISTRATION	59	40						26	
GENERAL SERVICES	44	18							
SUB-TOTAL	147	102						45	
TOTAL	660	462	104		62		190	222	
GENERAL COSTS AND PROVISIONS (Proportions)									
	51	51							
GRAND TOTAL	1,049	513	104		62		190	222	
NORTHERN ZONE									
BASIC PROGRAMS									
1.1 - AGRICULTURAL EDUCATION	86	86							
2.1 - AGRICULTURAL RESEARCH	120	120							
3.1 - RURAL DEVELOPMENT AND LAND REFORM	173	111			62				
SUB-TOTAL	379	317			62				
OTHER ACTIVITIES									
TECHNICAL ADMINISTRATION									
TECHNICAL	41	41							
EQUIPMENT	23	23							
GENERAL SERVICES	13	13							
SUB-TOTAL	77	77							
TOTAL	472	410			62				
GENERAL COSTS AND PROVISIONS (Proportions)									
	31	31							
GRAND TOTAL	501	441			62				
SOUTH AMERICAN									
BASIC PROGRAMS									
1.1 - AGRICULTURAL EDUCATION	284	284							
2.1 - AGRICULTURAL RESEARCH	283	44				25	165	49	
3.1 - RURAL DEVELOPMENT AND LAND REFORM	283	115			128			40	
SUB-TOTAL	850	443			128	25	165	89	
OTHER ACTIVITIES									
TECHNICAL ADMINISTRATION									
TECHNICAL	43	27					16		
EQUIPMENT	32	32							
ADMINISTRATION	41	41							
GENERAL SERVICES	36	21						13	
SUB-TOTAL	152	96					15		
TOTAL	1,002	566			128	25	181	104	
GENERAL COSTS AND PROVISIONS (Proportions)									
	81	81							
GRAND TOTAL	1,083	620			128	25	196	104	
SEASIDE AND RESEARCH CENTER									
BASIC PROGRAMS									
1.1 - AGRICULTURAL EDUCATION	94	88	120	16			470	4	
2.1 - AGRICULTURAL RESEARCH	70	61	144	144			61	22	
3.1 - RURAL DEVELOPMENT AND LAND REFORM	118	30	30						
SUB-TOTAL	282	179	294	160			531	26	
OTHER ACTIVITIES									
TECHNICAL ADMINISTRATION									
TECHNICAL	65	37					26		
EQUIPMENT	127	80	47				16		
ADMINISTRATION	75	75							
GENERAL SERVICES	122	79						10	
SUB-TOTAL	394	271	47				58	10	
TOTAL	676	450	341	160			589	36	
GENERAL COSTS AND PROVISIONS (Proportions)									
	112	112							
GRAND TOTAL	1,359	1,020	341	160			647	72	
SEASIDE AND RESEARCH CENTER									
BASIC PROGRAMS									
1.1 - AGRICULTURAL EDUCATION	89		89						
2.1 - AGRICULTURAL RESEARCH	22							11	
SUB-TOTAL	111		89					11	
OTHER ACTIVITIES									
TECHNICAL ADMINISTRATION									
TECHNICAL	80	80							
EQUIPMENT	86	86			62			15	
ADMINISTRATION	86	86							
GENERAL SERVICES	86	86							
SUB-TOTAL	338	338			62			15	
TOTAL	449	338			62			26	
GENERAL COSTS AND PROVISIONS (Proportions)									
	6,207	1,120	674	160	307	115	974	300	10

Graph N°5

TOTAL INSTITUTE RESOURCES

*Distribution by Regional Offices and Centers, by Basic Programs, other Activities and Direction, Administration, General Services and Costs
Fiscal Year 1967-1968*

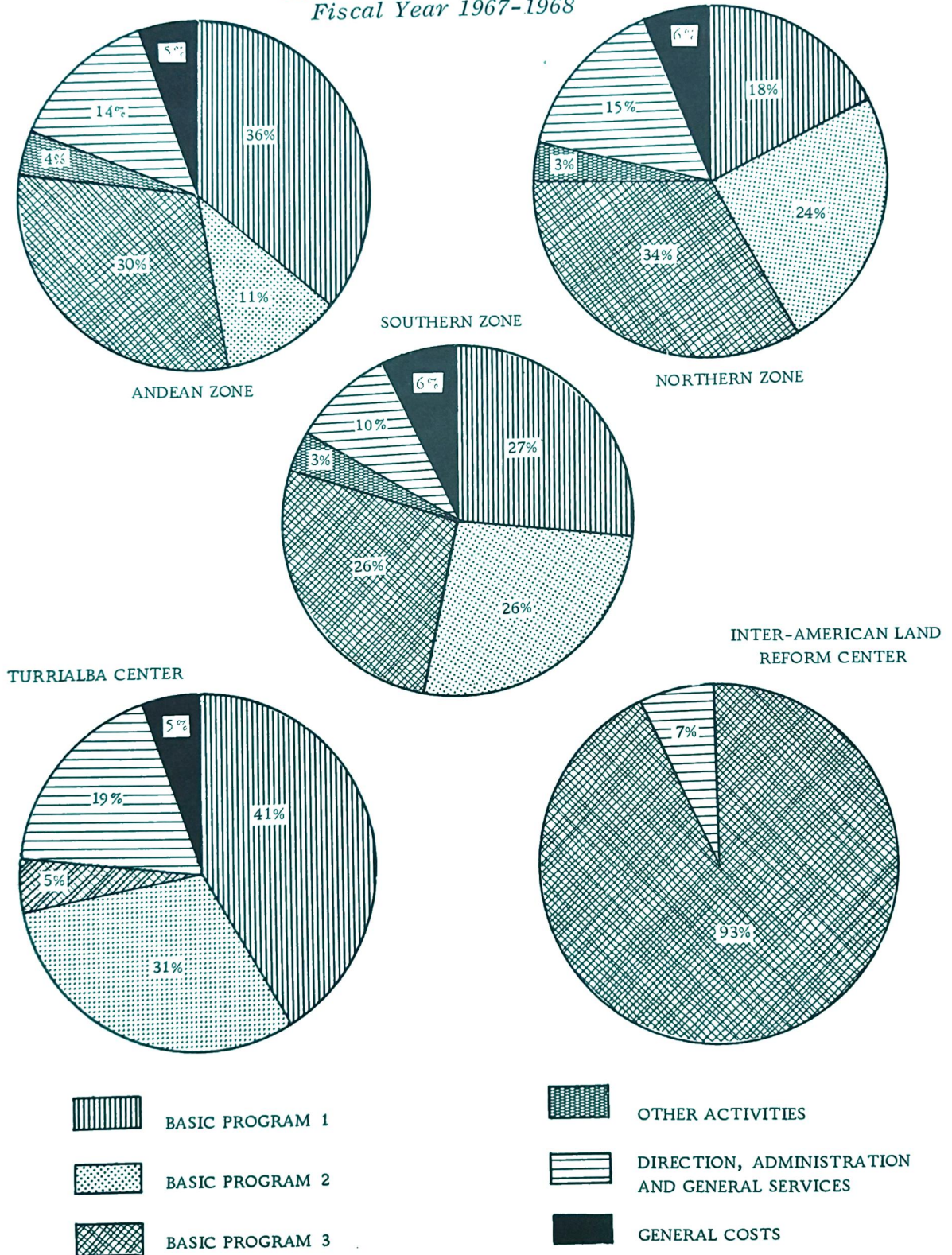


CHART N°4

TOTAL INSTITUTE RESOURCES

*Distribution by Basic Programs, Other Activities, Direction, Administration,
General Services and Costs, by Zones, Centers and Executive Offices
Fiscal Year 1967-1968
(in thousands of dollars)*

	TOTAL	IICA	AID	AEC	TCP	ACRI	UNDP	GRANTS AND CONTRIBUTIONS	MISCELLA- NEOUS
<u>BASIC PROGRAM 1</u>									
<u>AGRICULTURAL EDUCATION</u>									
ANDEAN ZONE	\$ 382	144	104				130	4	
NORTHERN ZONE	86	86							
SOUTHERN ZONE	284	284							
TEACHING AND RESEARCH CENTER	934	309	126	16		9	470	4	
SUB-TOTAL	1,686	823	230	16		9	600	8	
<u>BASIC PROGRAM 2</u>									
<u>AGRICULTURAL RESEARCH</u>									
ANDEAN ZONE	120	120							
NORTHERN ZONE	120	120							
SOUTHERN ZONE	283	44				25	165	49	
TEACHING AND RESEARCH CENTER	701	312	142	144		81		22	
SUB-TOTAL	1,224	596	142	144		106	165	71	
<u>BASIC PROGRAM 3</u>									
<u>RURAL DEVELOPMENT AND LAND REFORM</u>									
ANDEAN ZONE	311	76			62			173	
NORTHERN ZONE	173	111			62				
SOUTHERN ZONE	283	115			128			40	
TEACHING AND RESEARCH CENTER	116	68	48						
INTER-AMERICAN LAND REFORM CENTER	293		30		263				
SUB-TOTAL	1,176	370	78		515			213	
PROGRAMS TOTAL	4,086	1,789	450	160	515	115	765	292	
<u>OTHER ACTIVITIES</u>									
ANDEAN ZONE	38	38							
NORTHERN ZONE	16	16							
SOUTHERN ZONE	43	27					16		
SUB-TOTAL	97	81					16		
<u>DIRECTION</u>									
ANDEAN ZONE	44	44							
NORTHERN ZONE	41	41							
SOUTHERN ZONE	32	32							
TEACHING AND RESEARCH CENTER	85	57					28		
EXECUTIVE OFFICES	366	309			42			15	
SUB-TOTAL	568	483			42		28	15	
<u>ADMINISTRATION</u>									
ANDEAN ZONE	59	40						19	
NORTHERN ZONE	23	23							
SOUTHERN ZONE	41	41							
TEACHING AND RESEARCH CENTER	127	88	23				16		
INTER-AMERICAN LAND REFORM CENTER	23							23	
EXECUTIVE OFFICES	84	84							
SUB-TOTAL	357	276	23				16	42	
<u>GENERAL SERVICES</u>									
ANDEAN ZONE	44	18						26	
NORTHERN ZONE	13	13							
SOUTHERN ZONE	36	21						15	
TEACHING AND RESEARCH CENTER	208	149					49		10
EXECUTIVE OFFICES	42	42							
SUB-TOTAL	343	243					49	41	10
<u>GENERAL COSTS AND PROVISIONS</u>									
ANDEAN ZONE	51	51							
NORTHERN ZONE	31	31							
SOUTHERN ZONE	61	61							
TEACHING AND RESEARCH CENTER	113	113							
SUB-TOTAL	256	256							
GRAND TOTAL	\$ 5,707	3,128	473	160	557	115	874	390	10

TOTAL INSTITUTE RESOURCES

Distribution by Basic Programs, by Personnel Cost and Other Expenses
 Fiscal Year 1967-1968
 (in thousands of dollars)

	TOTAL	IICA	AID	AEC	TCP	ACRI	UNDP	GRANTS AND CONTRIBUTIONS	MISCELLA- NEOUS
<u>BASIC PROGRAM 1</u>									
<u>AGRICULTURAL EDUCATION</u>									
PERSONNEL COSTS	\$ 1,027	455	154	10		6	402		
OTHER EXPENSES	659	368	76	6		3	198	8	
SUB-TOTAL	1,686	823	230	16		9	600	8	
<u>BASIC PROGRAM 2</u>									
<u>AGRICULTURAL RESEARCH</u>									
PERSONNEL COSTS	736	355	95	86		48	111	41	
OTHER EXPENSES	488	241	47	58		58	54	30	
SUB-TOTAL	1,224	596	142	144		106	165	71	
<u>BASIC PROGRAM 3</u>									
<u>RURAL DEVELOPMENT AND LAND REFORM</u>									
PERSONNEL COSTS	755	286	50		309			110	
OTHER EXPENSES	421	84	28		206			103	
SUB-TOTAL	1,176	370	78		515			213	
PROGRAMS TOTAL	4,086	1,789	450	160	515	115	765	292	
<u>OTHER ACTIVITIES, REGIONAL DIRECTIONS, ADMINISTRATION, GENERAL COSTS AND EXECUTIVE OFFICES</u>	1,621	1,339	23		42		109	98	10
GRAND TOTAL	\$ 5,707	473	160	557	115	874	390	10	

CHART N°6

TOTAL INSTITUTE RESOURCES

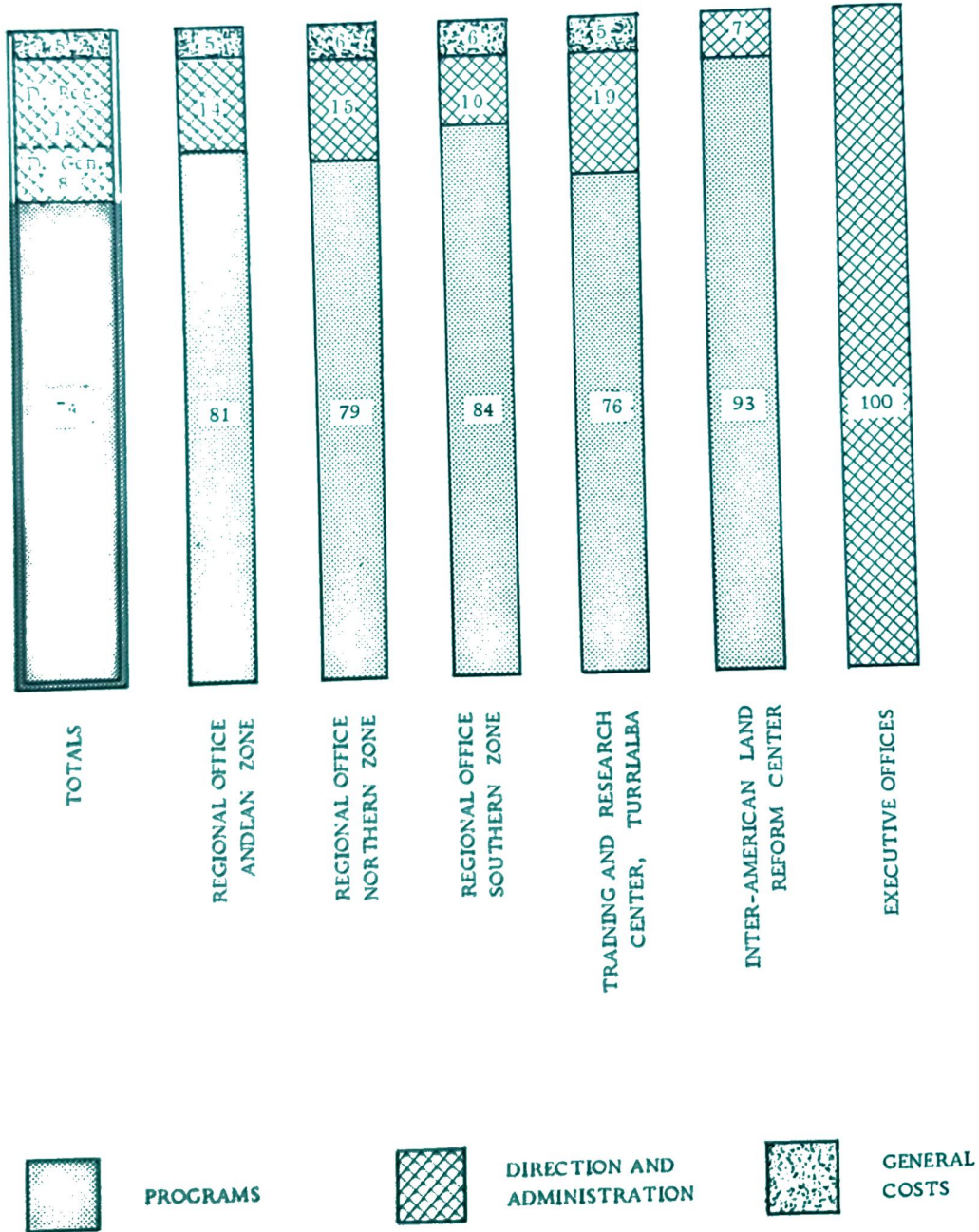
Detailed Distribution by Basic Programs, by Personnel Costs and Other Expenses,
by Regional Directions and Centers
Fiscal Year 1967-1968
(in thousands of dollars)

	TOTAL	IICA	AID	AEC	TCP	ACRI	UNDP	GRANTS AND CONTRIBUTIONS	MISCELLA- NEOUS
<u>BASIC PROGRAM 1</u>									
<u>AGRICULTURAL EDUCATION</u>									
ANDEAN ZONE									
PERSONNEL COSTS	\$ 263	106	70				87		
OTHER EXPENSES	119	38	34				43	4	
NORTHERN ZONE									
PERSONNEL COSTS	66	66							
OTHER EXPENSES	20	20							
SOUTHERN ZONE									
PERSONNEL COSTS	103	103							
OTHER EXPENSES	181	181							
TURRIALBA CENTER									
PERSONNEL COSTS	595	180	84	10		6	315		
OTHER EXPENSES	339	129	42	6		3	155	4	
SUB-TOTAL	1,686	823	230	16		9	600	8	
<u>BASIC PROGRAM 2</u>									
<u>AGRICULTURAL RESEARCH</u>									
ANDEAN ZONE									
PERSONNEL COSTS	79	79							
OTHER EXPENSES	41	41							
NORTHERN ZONE									
PERSONNEL COSTS	79	79							
OTHER EXPENSES	41	41							
SOUTHERN ZONE									
PERSONNEL COSTS	178	28				13	111	26	
OTHER EXPENSES	105	16				12	54	23	
TURRIALBA CENTER									
PERSONNEL COSTS	400	169	95	86		35		15	
OTHER EXPENSES	301	143	47	58		46		7	
SUB-TOTAL	1,224	596	142	144		106	165	71	
<u>BASIC PROGRAM 3</u>									
<u>RURAL DEVELOPMENT AND LAND REFORM</u>									
ANDEAN ZONE									
PERSONNEL COSTS	206	65			37			104	
OTHER EXPENSES	105	11			25			69	
NORTHERN ZONE									
PERSONNEL COSTS	120	83			37				
OTHER EXPENSES	53	28			25				
SOUTHERN ZONE									
PERSONNEL COSTS	176	93			77			6	
OTHER EXPENSES	107	22			51			34	
TURRIALBA CENTER									
PERSONNEL COSTS	77	45	32						
OTHER EXPENSES	39	23	16						
INTER-AMERICAN LAND REFORM CENTER									
PERSONNEL COSTS	176		18		158				
OTHER EXPENSES	117		12		105				
SUB-TOTAL	1,176	370	78		515			213	
PROGRAMS TOTAL	4,086	1,789	450	160	515	115	765	292	
OTHER ACTIVITIES	97	81					16		
REGIONAL DIRECTIONS, ADMINISTRATION AND GENERAL SERVICES	776	567	23				93	83	10
GENERAL COSTS AND PROVISIONS	256	256							
EXECUTIVE OFFICES	492	435			42			15	
GRAND TOTAL	\$ 5,707	3,128	473	160	557	115	874	390	10

Graph N°6

TOTAL INSTITUTE RESOURCES

Proportional distribution by Programs, Direction and Administration and General Costs
Fiscal Year 1967-68



INSTITUTE BUDGET

FINANCED BY QUOTAS FROM CONTRACTING STATES

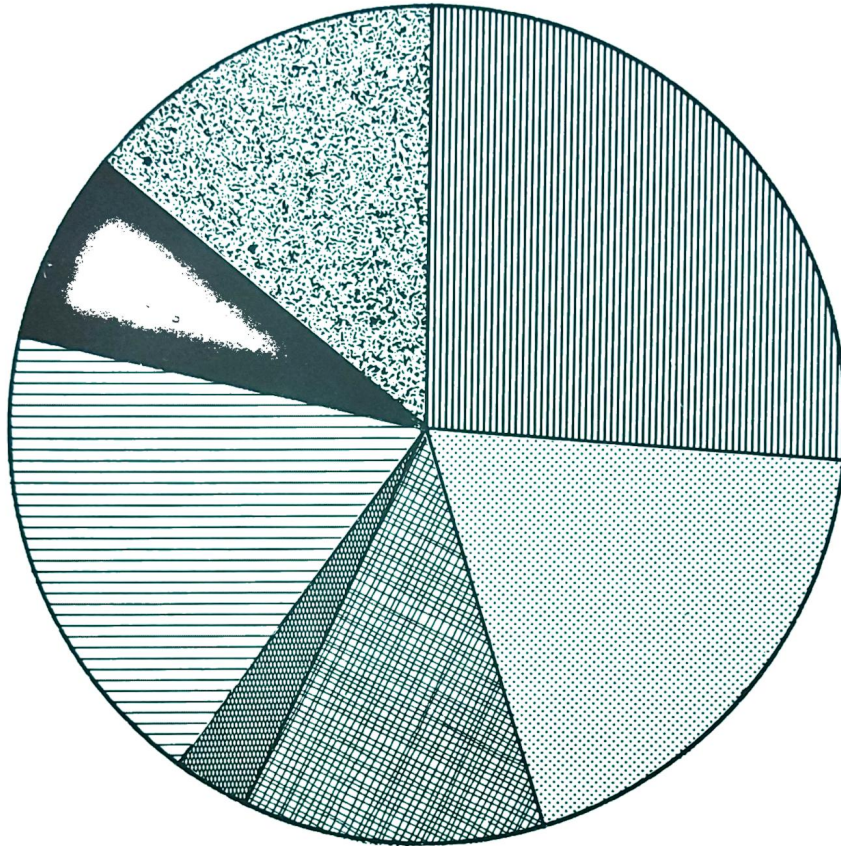
This part includes exclusively information related to Institute resources originating from Member States Quotas. Accordingly, no other resources received for its support are included.






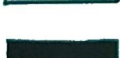

The following figures and graphs refers to the amount of resources originating from quotas.

Graph N°7

*INSTITUTE BUDGET
FINANCED BY QUOTAS FROM MEMBER STATES*

*Distribution by Basic Programs, other Activities and Direction,
Administration, General Services and General Costs
Fiscal Year 1967-1968*



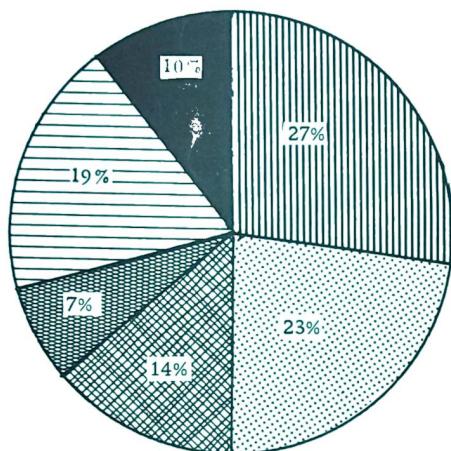
	BASIC PROGRAM 1	26%
	BASIC PROGRAM 2	19%
	BASIC PROGRAM 3	12%
	OTHER ACTIVITIES	3%
	REGIONAL DIRECTIONS, ADMINISTRATION AND GENERAL SERVICES	18%
	GENERAL COSTS	8%
	EXECUTIVE OFFICES	14%

Graph N°8

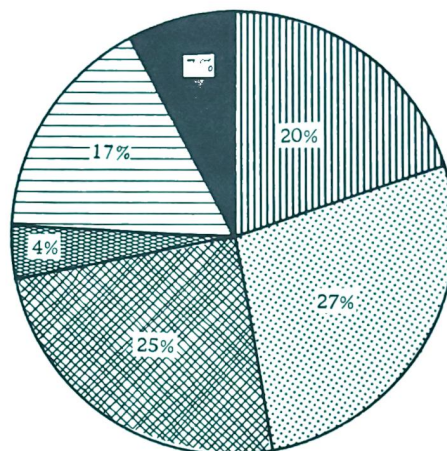
INSTITUTE BUDGET
FINANCED BY QUOTAS FROM MEMBER STATES

*Distribution by Regional Directions and Turrialba Center,
by Basic Programs, other Activities and Direction,
Administration, General Services and Costs
Fiscal Year 1967-1968*

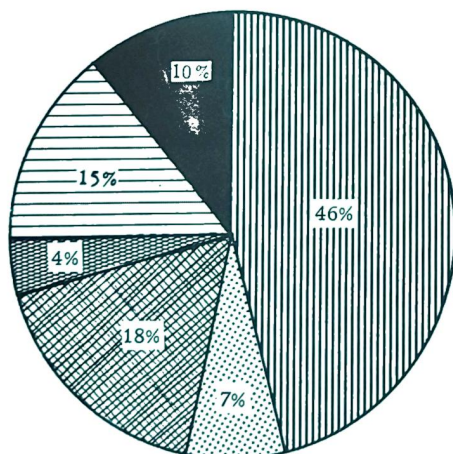
ANDEAN ZONE



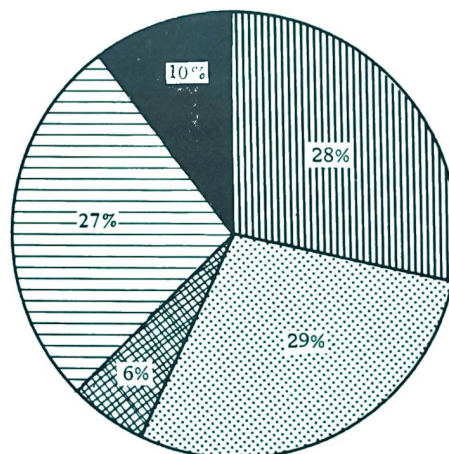
NORTHERN ZONE



SOUTHERN ZONE



TURRIALBA CENTER



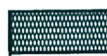
BASIC PROGRAM 1



BASIC PROGRAM 2



BASIC PROGRAM 3



OTHER ACTIVITIES

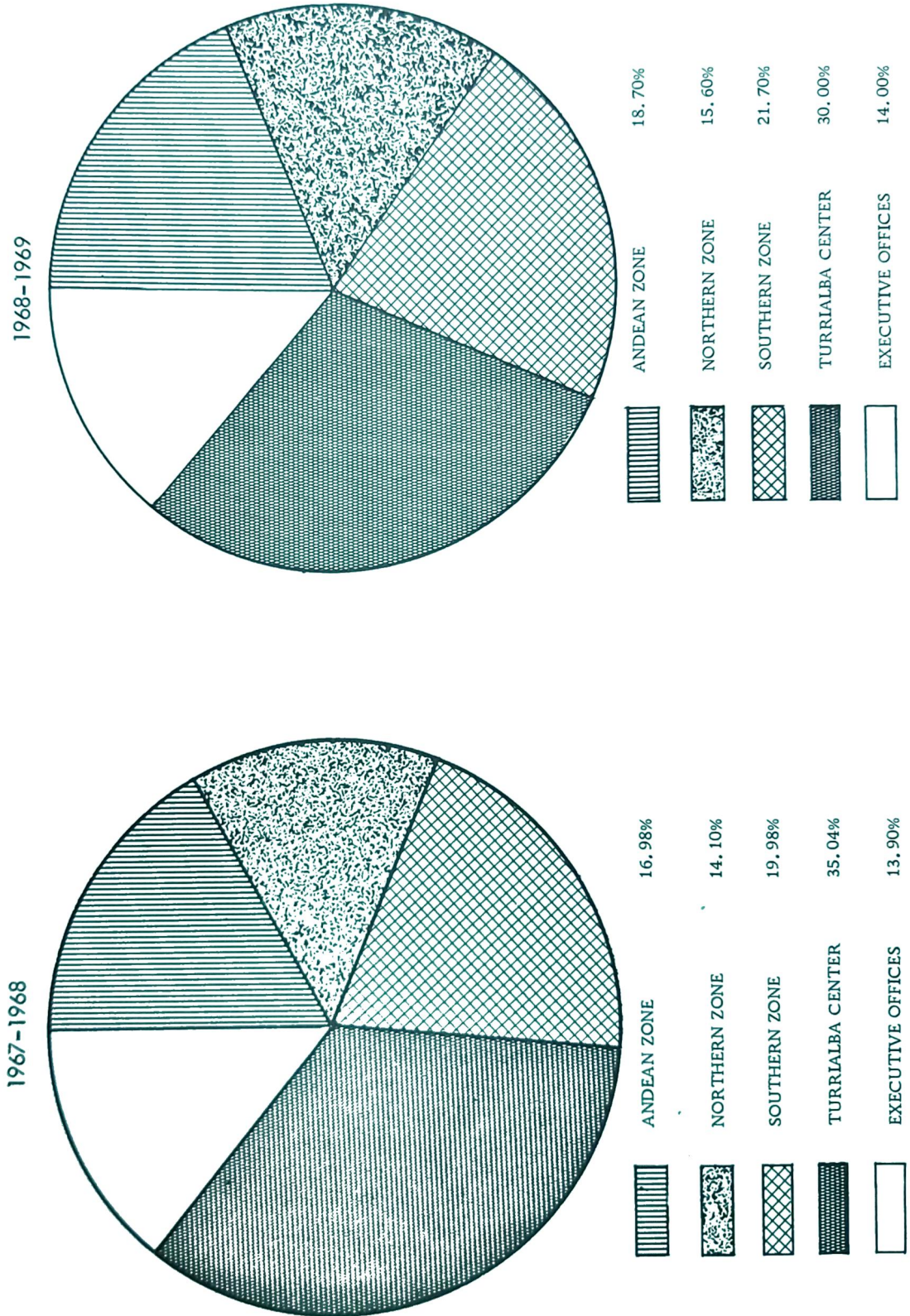
DIRECTION, ADMINISTRATION,
GENERAL SERVICES

GENERAL COSTS

INSTITUTE BUDGET
FINANCED BY QUOTAS FROM MEMBER STATES

Distribution by Regional Offices, Turrialba Center and Executive Offices

Years 1967-1968 and 1968-1969

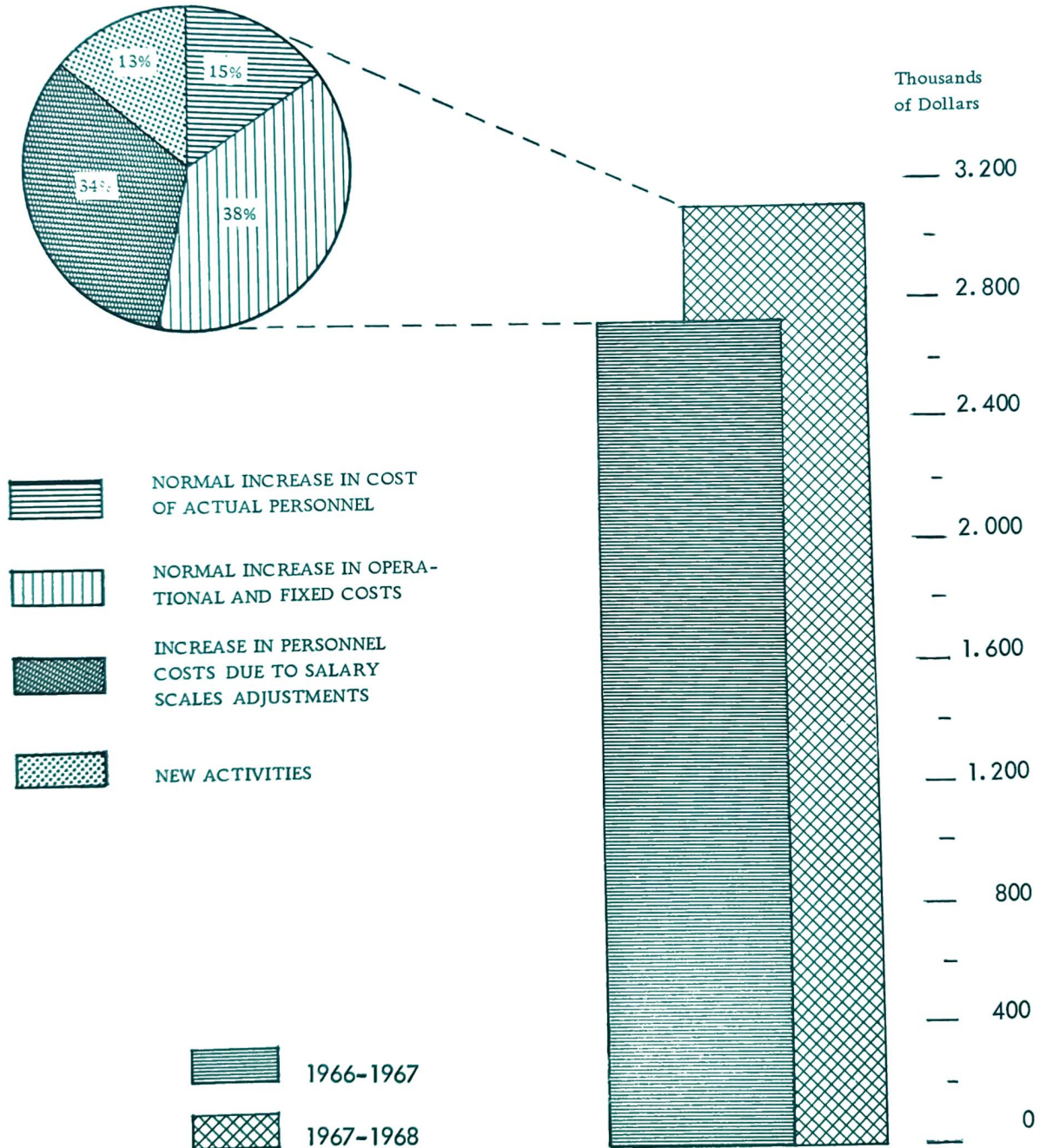


Graph N°10

INSTITUTE BUDGET
FINANCED BY QUOTAS FROM MEMBER STATES

Annual Budget Increase and Analysis of Increase Items

Years 1966-1967 and 1967-1968

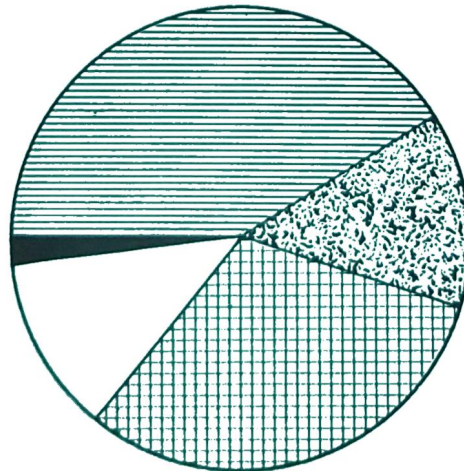


INSTITUTE BUDGET
FINANCED BY QUOTAS FROM MEMBER STATES

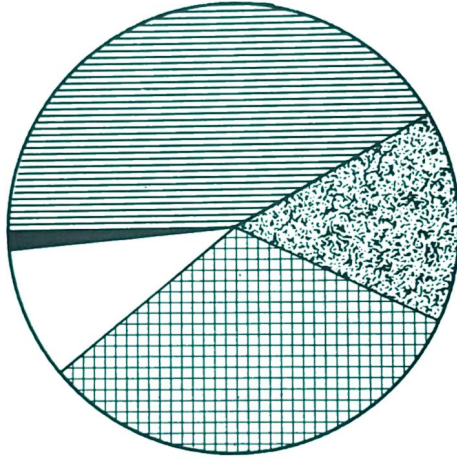
Distribution by Salaries, Allowances and other Personnel Costs,
Operational Costs, Fixed Costs and Capital Expenditures

Years 1965-1966, 1966-1967 and 1967-1968

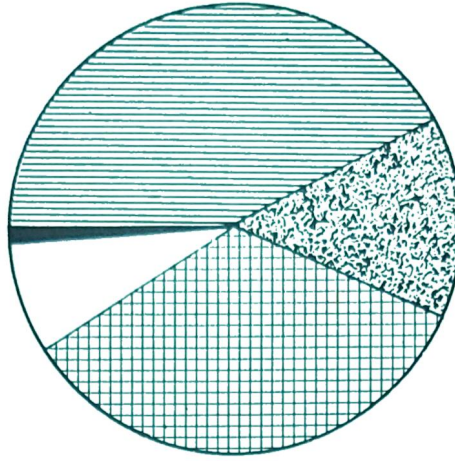
ACTUAL EXPENDITURES
Year 1965-1966



APROVED BUDGET
Year 1966-1967



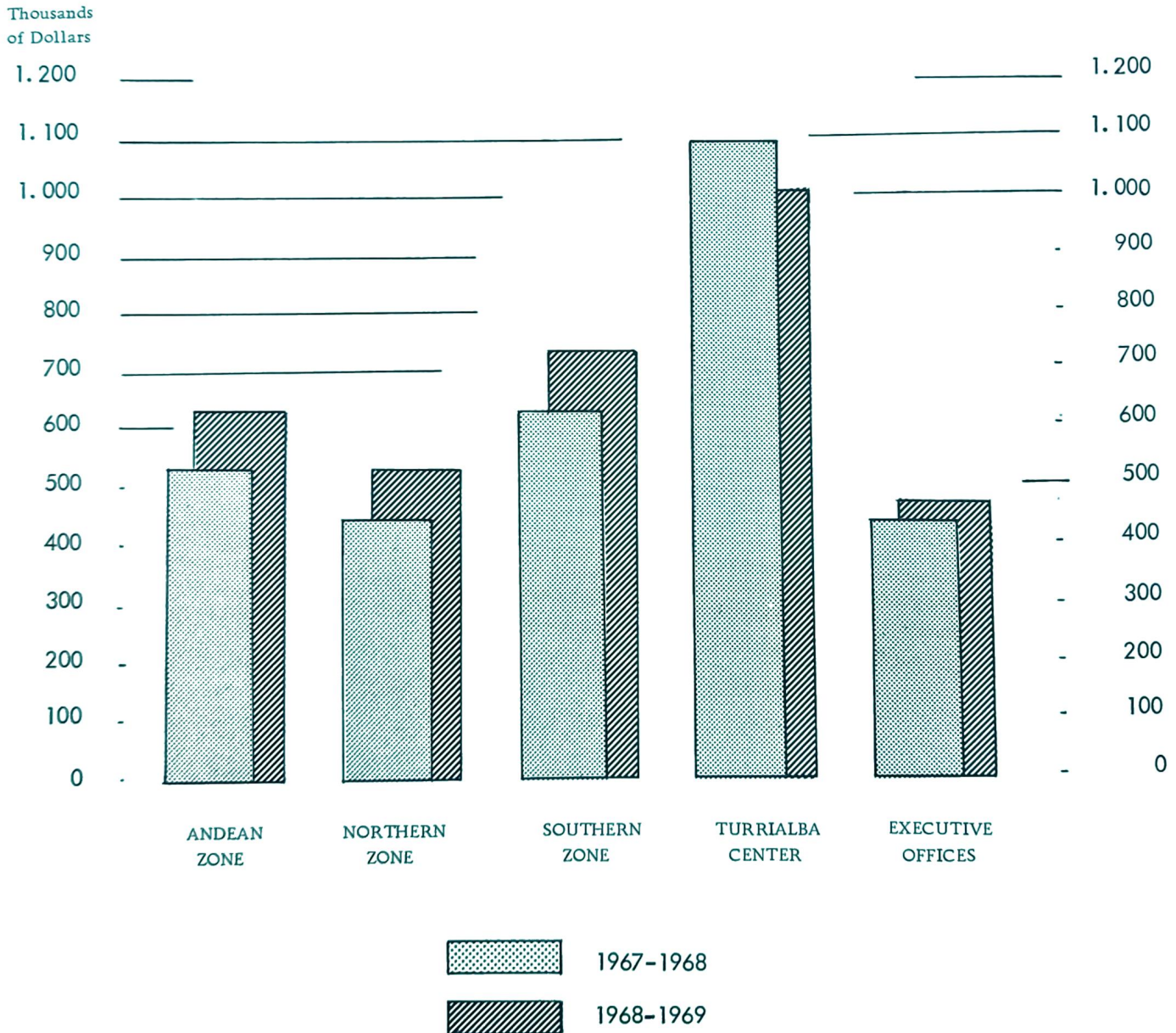
PROPOSED BUDGET
Year 1967-1968



Graph N°12

**INSTITUTE BUDGET
FINANCED BY QUOTAS FROM MEMBER STATES**

*Detailed Budget projection for the next two years showing increases by
Regional Offices, Turrialba Center and Executive Offices*



PART II

P R O G R A M S

BACKGROUND OF THE ALTERNATIVE PROGRAM-BUDGET 1967-1968

One of the aims of the New Dimension, besides expanding the activities of IICA, is to increase the efficiency and impact of those activities. The fundamental purpose of the alternative method herein submitted is to make further headway in this process.

In 1962, IICA put into practice its operating method based on programs. This initial method, still in use, consists of six Lines of Work and within these lines are developed a varied number of programs (at present totalling 22).

It is obvious that this method, through experience acquired in actual operation, has proved to be very useful. Besides enabling the Board of Directors to examine in detail the past and future activities of IICA and to set up priorities, it provides the Directors of IICA with an excellent administrative tool to plan and implement the activities contemplated.

From 1965 on, it became increasingly evident that, by making certain changes and improvements in the method, it could become a more efficient tool. This fact was mentioned several times in meetings and documents, the most important of which are the following:

1. The Report of the "Ad Hoc" Committee set up by the Board of Directors at its Fourth Annual Meeting (Antigua, Guatemala, March, 1965).
2. The Plan for the Future Development of the Turrialba Center, submitted to the Board of Directors at its Fifth Annual Meeting (Bogotá, April, 1966), by the Director General and the new Director of the Turrialba Center.
3. The Report of the Impact Committee set up by the Director General in September, 1965.
4. The Resolutions voted by the Board of Directors at previous meetings and at the Meeting in Bogotá.
5. The Discussions and Recommendations of the Sixth Meeting of Directors (Suescún, Colombia, April, 1966).

Summarizing, stress was placed on the following points as limiting factors of the present program system:

1. OBJECTIVES

At present, IICA has a very general objective which was set forth under its Constituent Act. There exists, consequently, the need to define in greater detail the objectives laid out by IICA for the immediate future.

2. PROGRAMS, THEIR NATURE AND NUMBER

- The programs being developed are quite heterogeneous. Some of them, are based on geographical areas; on specific crops; others are based on groups of given institutions and still others on specific functions or disciplines.
- All programs are for an indefinite length of time.
- At present there are 22 programs and their number tends to increase faster than the overall budget itself. The result has been a gradual reduction in the average budget per program--an increase in the dispersion of the limited resources of IICA.

3. PROJECTS

Under the present system, the concept and mechanism of projects (very specific objectives to be implemented over a specified period of time, usually from three to five years), have not been put into practice. The annual activities proposed are directed and can only be evaluated in terms of general long-term objectives under the program in which they are developed.

4. CRITERIA

Very few objective criteria are available for deciding which, of the manifold activities to which IICA could devote itself, must be given priority. The Board of Directors, however, has set forth very effective general guidelines, particularly at its Meeting in Bogotá in 1966.

5. TURRIALBA

While the concept of Turrialba as an integral and integrated part of the New Dimension has continued for some time, such integration has not been effective due to the lack of adequate mechanisms.

6. ARTICULATION

IICA's programs tend to diversify considerably among the Zones. There is no adequate mechanism available for the exchange of effective techniques and methods among the Zones and between the Zones and Turrialba.

The main features of the alternative method proposed are given below.

1. IMMEDIATE OBJECTIVES OF IICA

Promote the improvement of institutions of (1) Higher Agricultural Education, (2) Agricultural Research, and (3) Rural Development in the Member countries as essential instruments for (1) increasing and (2) disseminating knowledge and (3) applying it to speed social and economic development in the Americas.

2. BASIC PROGRAMS

In order to fulfill these objectives, it is proposed to regroup the lines of action of IICA into three basic programs having a hemispheric scope that both the Turrialba Training and Research Center and the three Regional Offices will carry out, thus:

- I Agricultural Education
- II Agricultural Research
- III Rural Development and Land Reform

Any future activity of IICA's regular program must come under one of these three Basic Programs. The basic criterion for choosing the activities shall be their efficiency in promoting the improvement of institutions in the Member States.

3. PROJECTS

Action for the Basic Programs shall be laid out in Projects, which shall have fixed goals for the stipulated period of duration of the Project (normally from two to five years), and a given cost. It is felt that in this manner, the activities of IICA can be aimed more precisely toward the solution of specific aspects in general problem areas.

The projects will be carried out through training, research, advisory service to national institutions and communication activities.

3.1 Criteria - Upon studying new projects proposed and giving them priority, the following criteria shall be taken into account:

1. Resolutions voted by the Board of Directors.
2. The relative cost of the project and the availability of material and human resources.
3. Its propagative value.
4. Effective liaison between the Regional Offices and the Turrialba Center.
5. Needs and interests of the Member States.
6. Activities developed by other organizations.
7. Minimum and maximum concentration of specialists, and balance between the biological and social sciences.
8. Balance between immediate, medium-term and long-term impact activities, and relation with the image of IICA and the policy of the New Dimension.

9. Relation between the problem to be solved and the capacity of the program to solve it within the specified length of time; nature of the general plan proposed for the project; activities proposed to solve the problem contemplated under the project.

3.2 Diagnosis - In order to make possible the identification of institutional problems that should be given priority and the drawing up of effective projects to solve them, a broad and deep initial analysis of national institutions that it is planned to help with the three Basic Programs is required, and a systematic and continuous contact is required subsequently.

4. OPERATION OF TURRIALBA UNDER THE SYSTEM PROPOSED

Both the activities of the Zones and those of Turrialba will be held in line with the most urgent needs for improving the national institutions, under the three Basic Programs of IICA. These activities of Turrialba will serve to support and supplement the projects of the Zones.

- Turrialba projects will be drawn up in coordination with the activities of the Regional Offices.
- In order to determine the subjects to be offered at the Turrialba Center in each of the fields of education, there will be obtained the cooperation of groups of qualified specialists of the national institutions of higher agricultural education and the cooperation of research centers in contributing their ideas and suggestions in this connection.
- The choice of students for taking advanced training at the IICA Graduate School shall be made preferably in connection with projects integrated into the Zones, and tending to strengthen rapidly the national institutions of the agricultural sector.
- As soon as possible, work done by students on their theses for the Graduate School shall be done in national institutions, preferably in those that are being strengthened, or at other IICA's centers, nuclei or branches.
- In order to facilitate the activities of the Turrialba Center and to strengthen its ties with other branches of IICA and with national institutions of the Member States, plans will be drawn up and carried out for the exchange of professors by the Center, the Regional Offices and national institutions.
- Research activities carried out by Turrialba Center specialists in support of training programs will be directed, as far as possible, toward solving problems of great importance in the development of Latin America. They will be carried out in close relationship with research activities for projects of the three Basic Programs within the Zones.

- Regional Offices will promote, within their respective Zones, the organization of regional cooperative programs for agricultural research in which national institutions will also participate. They will set up, under their annual work plans, machinery to coordinate with the Turrialba Center, which will include the participation of Center specialists.
- Inasmuch as the three Basic Programs proposed will operate both in the Turrialba Center and in the three Regional Offices, the professors and specialists of the Center will draw up their annual work plans to include activities aimed at strengthening the projects that the Regional Offices carry out under such Basic Programs.
- The Regional Offices and the Turrialba Center will draw up integrated action plans which will include the participation of Center specialists. These plans must be directed toward strengthening national institutions.

5. PROGRAMMING SYSTEM

Programming IICA's activities will continue to have as its source the members of the staff and the work units. For greater impact, a vertical^{1/} articulation system will be set up joining each basic program for the Regional Offices to the Turrialba Center; and a horizontal articulation system joining the three Basic Programs under each Regional Office and under the Turrialba Center. Each Regional Office and the Turrialba Center will have an Advisor for each Basic Program, that is, the Agricultural Education Program, the Agricultural Research Program and the Rural Development and Land Reform Program.

5.1 Horizontal Articulation - The three Advisors will form a Programming Advisory Committee for the corresponding Regional Director or for the Director of the Turrialba Center.

Each Advisor will meet with the professional staff assigned to that Basic Program in the Zone, to cooperate with them in drawing up their projects and work plans.

The projects thus agreed on will be studied and approved by the corresponding Regional Director or by the Director of the Turrialba Center. They will then send them to the Assistant Director General, who will send them to the Director of the Planning Office for study. After being approved by the Director General, they will be written into the Central Register for Annual Projects and Activities (formerly, the Central Register for Technical Activities), kept by the Planning Office.

5.2 Vertical Articulation - In July each year, a Programming Meeting will be held in the Executive Offices, under the chairmanship of the Director of the Planning Office. This meeting will be attended by the Advisors to the three Basic Programs of each of the Regional Offices and of the Turrialba Center, in addition to any special advisors the Director General may consider necessary.

^{1/} See attached chart.

ARTICULATION SYSTEM

	Agricultural Education Program	Agricultural Research Program	Rural Development and Land Reform Program
Executive Offices --	Advisor	Advisor	Advisor
Planning Office	Advisor	Advisor	Advisor
Turrialba Center	Advisor	Advisor	Advisor
Regional Office Andean Zone	Advisor	Advisor	Advisor
Regional Office Northern Zone	Advisor	Advisor	Advisor
Regional Office Southern Zone	Advisor	Advisor	Advisor

Horizontal Articulation

Vertical Articulation

Annual Programming Meeting at the Executive Offices

Periodic meetings at Regional Offices and the Turrialba Center

At this annual meeting will be studied the activities proposed; the Basic Programs entrusted to the three Regional Offices and the Turrialba Center will be articulated; and the general lines that will serve as a basis for the Proposed Program-Budget will be recommended.

5.3 Proposed Program-Budget - The Basic Programs articulated horizontally with each other at Regional Office and Turrialba Center level; and articulated vertically within each other at the Annual Programming Meeting, will be the basis for the Proposed Program-Budget that the Director General will submit to the attention of the Board of Directors. The Proposed Program-Budget will be adjusted to its final form at a meeting to be held at the Executive Offices in September each year, attended by the Regional Directors, the Turrialba Director and the other directors that the General Director may deem advisable.

5.4 Functions of the Planning Office - The main function of the Planning Office under the new system will be the drawing up of the norms and procedures to set up the programming system described above.

The Planning Office will continue to operate as a team, but each of its specialists will give special attention to one of the Basic Programs and to one of the three Regional Offices.

6. ALTERNATIVE PROGRAM-BUDGET, 1967-68; TRANSITION STAGE

Before going into effect, the new system must be approved by the Board of Directors. Furthermore, changing from the present to the proposed system implies a transition of at least one year. On the basis of a deep study of national agricultural institutions and of a carefully weighed diagnosis, a decision will have to be reached on which of the activities being carried out under the present 22 programs lend themselves better to the new institutional approach and are to be continued and strengthened; which are of lesser importance and must be terminated as soon as possible without damage to the national institutions involved; which are the new projects having a high priority which the diagnosis indicates are to be started.

If the process is started after approval by the Board of Directors at its 1967 Meeting, the first transition year would be 1968-1969 and the new system would go into full effect in 1969-70.

Hence, an Alternative Program-Budget is being submitted to the Board of Directors. If the new system is approved by the Board, this will make it possible to start the process during 1967-68.

Upon presenting the Alternative Program-Budget, the following points must be brought up:

1. The diagnosis appearing below is, for the most part, very general and incomplete. It will be necessary to make a great effort during the coming year to become more thoroughly acquainted with the national institutions and identify the priority problems on which future projects of IICA, under its three Basic Programs, must concentrate.

2. In the transition Program-Budget submitted, the activities at present under way have been grouped into Projects even though most of them do not conform to this concept under the new system (clear-cut goals; specific objectives; fixed duration of two to five years; estimate of total cost).

This procedure has served to acquaint specialists and advisors with the new system. Furthermore, it has brought forth the urgent need to become more thoroughly acquainted with the individual situation of the national institutions and to more adequately direct IICA's activities toward the needs of such institutions.

Next year, once the diagnosis has been made, it will be possible to submit a program-budget based on high-priority projects.

3. For this reason, the projects appearing in this Transitional Program-Budget is not submitted for final approval, but rather represents machinery making it possible to wait during the transition period. It is expected to submit, next year, more definite projects together with estimates of their duration and total cost.
4. Most of the activities of the Turrialba Center, concentrated mainly on the Graduate School, will give support and collaboration to the new system. That is, in the various courses and related actions there will be specialists being trained to strengthen national institutions included in any of the three Basic Programs in any of the Zones and in any of the various projects that are being carried out or are taking shape in the countries. For this reason, these activities are presented as an organic whole.

With more precise diagnoses and specific projects under way in the Zones, it will be possible to point out in a precise manner the contribution of Turrialba to the success of the specific projects.

BASIC PROGRAM 1: AGRICULTURAL EDUCATION

I. AGRICULTURAL EDUCATION IN LATIN AMERICA

A. Objective of the Program

Strengthen institutions of agricultural education with a view to improving educational programs in agricultural sciences.

B. Fundamentals

1. Present Status

The present status of institutions of agricultural education in Latin America is out of proportion with the needs of the countries and with the technical development attained by the agricultural sciences. The situation is worsened by the fact that there is a glaring disparity between the degree of development attained by these institutions and the facilities and resources they have available.

While the population in Latin America has been growing explosively (it is estimated that the rate is 3% a year), agricultural production grows at a slower rate. It is impossible to solve this problem if there are not enough professionals properly trained.

"The Food and Agriculture Organization of the United States (FAO) has estimated that, in order to provide an adequate level of food supply for the entire population of the world, there would have to be an annual increase in food production equivalent to 2.25 per cent over and above the rate of growth of the population. In other words, it would be necessary to increase food production by 4 to 5 per cent a year in order to properly feed not only the 1,500 to 2,000 million hungry human beings there exist at present, but also the hundreds of millions of persons that will be born in the course of a few years".*

"In 1960, the number of students registered in the disciplines considered traditional, represented approximately 61 per cent

* Harrar, J. George. *Fitotecnica Latinoamericana. La Competencia entre la Procreación y la Producción de Alimentos.* January-June, 1966. 16 p.

"In 1960, the number of students registered in the disciplines considered traditional, represented approximately 61 per cent of the total university population: Law and Medicine were 41 per cent; Pedagogy was 15 per cent; Fine Arts was 3 per cent; and the Humanities, 2 per cent. Approximately 39 per cent pursued studies considered 'modern': Engineering, 17; Social Sciences, 16; Natural and Exact Sciences, 4 per cent; and Agriculture, 2 per cent.

The disparity between this distribution of student population and the social and economic needs of Latin America is evident, considering that the rural population is equivalent to 54 per cent of total population and that there is only one student of agriculture for every 10,500 inhabitants". * This situation is so glaring that no further information or reasoning is necessary. A list of the most frequent problems would be enough to prove this point:

- a. Deficient institutional development.
- b. Lack of coordination among educational institutions, and between such institutions and research, extension and the community.
- c. Lack of enough qualified to satisfy the needs of the countries, in order to solve their agricultural problems.
- d. Lack of incentives for agronomical studies.
- e. Lack of programs with proper incentives for preparing and improving professors.
- f. Inadequate administrative organization of the schools, and lack of facilities for teaching and research.
- g. Scarcity of textbooks and teaching materials, as well as of library service.

2. Background

- a. Ever since it was created, IICA has been aware of the fundamental importance of Agricultural Education problems in Latin America and have placed special stress on it, to the point of classifying it as top priority in the policy of the New Dimension. Precisely for this reason it started its activities by setting up regional programs for promoting development and improving basic professional training, in addition to establishing the very important Turrialba Graduate School to train specialists in higher education, research and specialized services given to countries in the area.

The Agricultural Education Basic Program group is also aware of the need for supplementary studies for improving researchers, extensionists and other specialists whenever they are necessary for improving professional action.

- b. Some international institutions, such as the Rockefeller, Hellog and Ford Foundations, as well as the Agency for International Development (AID), the United Nations Development Fund (UNDF), BID and others, have contributed to the study and solution of problems affecting agricultural education. Lately, AIDA, with the participation of IICA and FIC, has been and is carrying out studies for evaluating teaching, research and extension in some countries in Latin America. Those studies will serve the countries as a basis for their institutional development programs and the possibility of getting financial assistance from institutional organizations.

3. Action Proposed

- a. The action objectives of the Education Program will be:

- 1) Institutional improvement:

Analyzing and planning institutions

Institutional relations and regional cooperation and meetings of deans and directors.

Library and documentation.

Textbooks and teaching material.

- 2) Professional improvement:

Problems at faculty or department level

Graduate courses

II. AGRICULTURAL EDUCATION IN THE ZONES

A. ANDEAN ZONE (1)

1. Present Status

Under pressure from population growth, economic development and the democratization of the university, the number of institutions of higher agricultural education in the countries in the Andean Zone has greatly increased over the last few years. The need for increasing agricultural production for satisfying the needs of the people and improve living conditions in the rural areas has brought out the urgent need for improving agricultural training programs and strengthening the institutions that offer it.

a. What is known

1. Recent studies carried out by an Ad Hoc Committee on the status of agricultural education in the countries in the Andean Zone, have revealed the need to concentrate efforts on the solution of problems connected with the training of professors, the production of textbooks and adequate teaching material, and the projection of the institutions into the life of the community.
2. Similarly, from successive meetings of deans has arisen a marked interest in establishing or developing new fields of discipline that are important to the agricultural development of the countries.

Among such new fields may be mentioned: Land Reform, Communication, the Methodology of Teaching, Home Economics and Agricultural Engineering.

3. In the field of Communication, a survey made by the Andean Zone in the five countries included in its jurisdiction, revealed a significant interest on the part of the institutions interviewed (a total of 18) in the establishment of this discipline as an optional or regular course for all of their students. The main problem is the lack of qualified professors in this subject, as well as of adequate textbooks for teaching Communication at university level. Similar interest was shown in the survey regarding the offering of courses in Methodology of Teaching, for professors.
4. Notwithstanding the need felt by all countries for professionals in the field of Home Economics, only two institutions conduct programs in this field, and under deficient conditions as regards human, economic and physical resources.

b. What is still to be learned

While the academic aspects of the institutions have been the subject of special attention in the activities of IICA, it is still to be learned what beneficial changes might occur in the institutions through certain modifications in their administrative procedures. Many of them still lack closer ties with the community and a more active and influential participation in studying national agrarian problems; they also lack a greater studying of problems connected with the student population.

c. What the countries want

Among institutions of Higher Agricultural Education of the Andean Zone there are great differences in the degree of development attained in their academic organization and in the facilities at their disposal to fulfill the objectives they plan. While some of these institutions lack the most essential resources to offer a training program in line with the needs of the country, others offer, or are preparing to offer, programs for advanced study that can still not be offered by other departments of the same university having greater scope and experience.

But irrespective of the degree of development attained by their institutions, the countries in the Andean Zone strive for the continued improvement of same and the progressive training of a greater number of higher quality professionals who will be entrusted with the direction and implementation of national programs for agricultural improvement. Training professors for agricultural teaching at the proper levels is the immediate concern of the countries.

2. Background

a. What IICA has done

IICA has played, and continues to play, in the countries in the Andean Zone, a very important role in the development of the educational programs of their institutions of Higher Agricultural Education. It has exerted its influence on the direction of programs and courses, in the opening and consolidation of areas of study, in the training of professors, in the improvement of libraries and in the projection of institutions into rural areas. For this purpose, it has promoted meetings of deans and seminars and lectures for professors; it has given advisory service in analyzing curricula and given professors an opportunity for additional training at its Graduate School, or through short courses and in-service training. It has also furthered coordination of the institutions on a national level and sought closer ties among them, on a regional level.

b. What others have done

The Rockefeller, Kellogg and Ford Foundations have given their support to a good number of institutions of Agricultural Education in the Andean Zone, granting scholarships for training of professors, or donating funds for improving libraries and laboratories. The United Nations, through FAO, has set up agreements for improving schools of agronomy in various countries, some of which are operating or are to be started in a short time.

Other institutions have received assistance from BID for the development of their plans for physical expansion, while AID has provided scholarships for professors or has encouraged the development of cooperative programs with national or international entities.

Lately, CIDA, with the cooperation of FAO and IICA, has made studies on the status of education, research and agricultural extension in Ecuador and Peru, in order to be able to offer the Governments a basis for improving the institutions through local action or with international financial assistance.

3. Action proposed

a. What IICA must do in the Zone

The most immediate action for IICA is to maintain and expand its ties with institutions of the Andean Zone, and this contact must be permanent, discreet and effective; the success of this cooperation rests on the confidence and reliance the institutions place on IICA and the interest they take in the activities of the Program for Agricultural Education.

The Committee of Deans of Institutions of Higher Agricultural Education, meeting recently in Bogotá under the sponsorship of the Program for Higher Agricultural Education (June 29 - July 2, 1966) studied the most pressing needs of the institutions of their respective countries and resolved to further in such institutions, among other activities, the following which are aimed at attaining improvement:

1. Study the organization of national associations for Higher Agricultural Education.
2. Encourage a study of the personnel needs of each country, in the various fields and specializations of the agricultural sciences.
3. Encourage the creation of a Regional Council for Teaching at a postgraduate level, entrusted with studying the needs of this teaching and further the regional cooperation for the best development of postgraduate courses.

4. Further the implementation of agreements between schools of Higher Agricultural Education and official agencies and private entities that will make it possible to project the institution toward the community, while strengthening their educational and research programs.
5. Encourage the teaching career, creating the necessary motivations and conditions.
6. Promote the production of teaching textbooks through regional cooperation.
7. Study the advisability of adopting a system of self-evaluation and periodic visits as a means of arriving at institutional accreditation.
8. Encourage and further improvement of teaching staff as a means for increasing the effectiveness and respectability of the educational program.
9. Encourage the organization of associations of ex-students who will cooperate in improving the various schools of the universities in every sense.
10. Further the incorporation of courses connected with Land Reform, Communication and the Methodology of Teaching, into the curriculum.

IICA can effectively cooperate in the development of these activities, catalyzing the action through the planning and execution of meetings of deans, the encouragement of national associations of schools of agronomy, and the planning of activities on a regional level through the Regional Committee of Deans, created through the initiative of the Education Program, in the Andean Zone.

In solving problems connected with improving the professoriate, it is essential to have meetings on important disciplinary fields; to encourage specialization by professors at the IICA Graduate School; to give in-service training under the direction of the specialists of the various programs of IICA, and to conduct special courses on topics of decided importance.

b. What others must be made to do

The most positive aspect of the tying-in of the Education Program in the institutions is to arouse in them the necessary interest in taking on the execution of the activities recommended by the Program for accomplishing the strengthening the institution. It is necessary to develop a concept of self-evaluation and self-improvement for the purposes sought and the reasons therefor. Within this framework must be put in motion the specific activities of the program.

4. Activities for the next few years.

a. Factors favoring action

There is, in the countries, marked interest in Higher Agricultural Education, which is heightened by the progress being made by the corresponding institutions and the proof of the importance of its professionals in the economic development of the countries. The institutions of Agricultural Education, in turn, seek cooperation in order to progress they feel stimulated when they come in contact with IICA.

b. Factors hampering it

The effective action of the program of Education is generally felt after a long term, and the cooperative nature of the activities of the program and the lack of financial resources for the proper fulfillment make difficult a pace of action in keeping with the urgent need of the changes desired to be made.

c. Objectives and goals

Improve teaching and communication at the university, make beneficial changes in the orientation of academic programs; strengthen the institutions in their development as an organization for cultural and social changes in the rural areas; these are the immediate objectives and goals of the program.

d. Projects and other activities

There are in the Education Program, projects for professional and institutional improvement, such as the incorporation of the science and art of communication into the curriculum of the university; the production of textbooks and teaching materials adequate for the needs of Agricultural Education in Latin America; the promotion of training professionals in the field of Home Economics and of specialists in fields of Agricultural Engineering and others. These projects also include various activities intended to speed up the improvement of schools of Higher Agricultural Education and their ties with the society in which they operate and which they expect to serve.

e. Other activities - 1967-1968

In addition to the activities contemplated in the projects for Education, Research and Extension in the Andean Zone, other activities of considerable importance are carried out in the Zone which, aside from the direct benefits they bring to the countries and institutions, serve to maintain direct and permanent ties with those institutions and countries. These activities are:

Graduate Assistants for the Fiscal Year 1967-1968.

The improvement of teaching at schools of Agricultural Education through specialization by the professors is one of the most important aspects under the Education programs. Most of the institutions are interested in sending their professors to the Turrialba Graduate School or to the other centers of same.

Service Travel

The Regional Office receives applications for collaboration by regular or temporary specialists whose expenses are covered under the item for service travel. Inasmuch as the institutions are increasingly requesting these services, it will be necessary to provide, in the near future, the necessary increase in the budget to cover these requests.

Special Services

Governments and national institutions sometimes urgently request certain services from IICA specialists, that have to be taken care of because of the importance to the applicants and because they fit into the functions of the Andean Zone.

PROJECTS:

Project 1.1.1. Improvement of Institutional Functions

Fundamentals:

A. Present Status

1. What is known

Since most of the institutions of Higher Agricultural Education of the Andean Zone were only recently formed, they lack experience in institutional organization and, as a general rule, human, physical and financial resources. A large number of educational principles which have become obsolete, and academic and administrative errors have been inherited by the institutions and the need is thus foreseen to further an improvement of institutions that will pave the way for academic and administrative structural changes to place the institutions on a level in keeping with the pace of the requirements of modern life and the progress attained by science or technology.

2. What is still to be learned

It is necessary to determine, through periodic visits or specific surveys or other means, the qualitative and quantitative needs of the institutions, and analyze and evaluate the actual conditions under which they operate, and set up educational guidelines so that educational centers will gradually adapt to the interests of the community and will project themselves into it.

3. What the countries wish

At the meeting of Deans of the Schools of Agronomy of the Andean Zone, held in Lima (1965) under the sponsorship of IICA, the Deans expressed their desire for a change toward improving the institutions, and recommended, among other things, promoting the revaluation of Higher Agricultural Education; the integration of agricultural teaching at its different levels; disseminate and fix among the students an orderly concept of the University, establish ties with rural areas and project itself into the community; further national associations and sponsor the creation of a Latin American association of Higher Agricultural Education, through which a system of evaluation and accrediting of the institutions will eventually be set up, to encourage their improvement.

The III Latin American Conference on Higher Agricultural Education (Piracicaba, 1966) has, at the same time, recommended the formation of national associations, committees of deans, the organization of symposiums for professors, regional meetings for the purpose of integrating activities, etc.

All of these recommendations show clearly the interest of the countries in developing and strengthening agricultural education and placing it on higher levels of action, in keeping with national needs.

B. Background

4. What IICA has done

Institutional improvement has been and will continue to be one of the main objectives of IICA. For this purpose, it has developed a series of activities that have been grouped under the Program for Agricultural Education and that lead to giving the institutions, through their deans and directors, an opportunity to get better acquainted among themselves, and participate in innovations and changes that are beneficial to the work, entrusted to them.

IICA has furthered international and regional meetings of deans of agronomy, has sponsored improvement of agricultural libraries, promoted the establishment of national associations, served as consultants to the institutions in studying the problems affecting the development of schools, and sought solutions to those problems. The Higher Agricultural Education Program is, in itself, the contribution of IICA to the improvement of institutions of Higher Agricultural Education.

5. What others have done

The Kellogg, Rockefeller, and other foundations, as well as AID and the United Nations Development Program, operating through FAO, have been supporting cooperative programs tending to improve libraries, increase physical facilities; study trips for deans to observe the operation of advanced institutions, etc.

C. Action Proposed

6. What IICA must do

On the basis of existing needs, IICA must continue sponsoring and encouraging all those activities that tend to convey to the directors of the institutions, new orientations, and arousing in them the need to tie in the progress of the schools to the progress of agricultural sciences and the needs of the respective countries. The activities that are deemed important to foster and sponsor are:

- a. The creation and strengthening of national associations of schools of agronomy.
- b. The creation of a regional council for teaching, at a post-graduate level in the Andean Zone, to study the needs for this kind of teaching and foster regional collaboration.
- c. Promoting among the deans and professors of Higher Agricultural Education the system of self-evaluation and periodic visits as a basis for setting up a system of institutional accreditation.

- d. Meeting of the deans of agronomy of the Andean Zone, for analyzing the problems faced by the schools, and discussing the possible solutions to same.
- e. Meeting of the Committee of Deans of the Andean Zone, created by the Deans at the Meeting in Lima and entrusted with permanently promoting cooperation and coordination of schools of agronomy of the Zone.

7. What must others be made to do

The Committee of Deans of Agronomy of the Andean Zone, acting by mutual agreement and with the collaboration of the Higher Agricultural Education Program of IICA, must foster in their respective institutions and attempt to have them fostered in the others, all those activities that will tend to strengthen institutional development or improve their orientation and their ties with the community in which they are operating.

8. Goals

In two years:

- a. Convey to the schools of agronomy and other similar ones, the concept of self-study and the system of accreditation as a means for institutional improvement for future adoption by those schools.
- b. Develop among the schools, through meetings of deans and of the regional committee of same, closer relations for purposes of cooperation among themselves and with the Higher Agricultural Education Program of IICA.
- c. Promote the establishment of national associations of institutions of Higher Agricultural Education and the establishment of a Regional Council for the Andean Zone that will encourage and coordinate postgraduate studies in the countries of the Zone.

9. Future action

Efforts will be continued to bring closer together the ties between institutions of Higher Agricultural Education and the Higher Agricultural Education Program of IICA, particularly through the Committee of Deans of the Andean Zone. Efforts will be intensified to produce greater appreciation of the value of self-study and the system of periodic visits in improving the schools through the accreditation.

Project 1.1.2. Professional Training

Sub-Project 1.1.2.1. Improving the Contents of Teaching

Fundamentals:

A. Present Status

1. What is known

There are, in the Andean Zone, some 35 schools of Higher Agricultural Education, most of them established in the last five years. Their degree of development is very different one from the other and their facilities for teaching at a professional level is glaringly deficient in many and fairly acceptable in the others. Only the Agrarian University at La Molina, Peru, and a few other schools such as the school of Agronomy of Medellín, Colombia, and of Maracay, Venezuela, etc., show an institutional development and an academic orientation that may be considered good, even though not to the same extent. However, it is the deficiency in teaching, due, among other causes, to the lack of qualified instructors, to the inadequate academic level of the professoriate and the scarcity of professors at the institutions, that constitutes the common and refraining factor that is holding back progress at all these schools.

2. What is still to be learned

Within the situation described, the details still to be learned are concerned with other conditions peculiar to the institutions and the priority that each institution would give to the different fields of teaching to better prepare their professors in these fields. But regardless of what these may be, it is necessary to study a number of situations where teaching is falling into a rut, and open to the professors opportunities for discussion, for analyzing the situation and bringing forth recommendations well structured on the basis of these exchanges of experience, and directed toward improvement in teaching.

3. What the countries want

The yearning of the countries in the Andean Zone, expressed through Higher Agricultural Education, is to further improvement of their professoriate in the shortest possible time, as a basis for improving teaching itself, and also professional curriculum. This is an ambition that is under way, and a goal for self-improvement set by the institutions, who feel that their ambition is deterred and that they are held away from their self-improvement goal by financial difficulties, teaching commitments, and the apathy of the professoriate due to a lack of incentives and opportunities for improving their present situation.

B. Background

4. What IICA has done

Collaborating with the institutions in the solution of agricultural problems, IICA has set up and developed programs for improving and training professional personnel, the results of which have been quite gratifying. Even though these programs have not been planned specifically for solving the crisis in teaching but for professional improvement in general, under such programs there have been opportunities for professors of agronomy and similar schools to take postgraduate courses or to receive in-service training for the purpose of improving teaching at their school. Of late, however, increasing attention has been given to the problem of teaching, and the need has been stressed to set up specific programs for the above purpose. IICA has also organized seminars for professors of given disciplines, particularly in the social sciences.

5. What others have done

The United Nations Development Program, operating through FAO, has set up programs for improving the schools of Agricultural Education which include scholarships for postgraduate study by the teaching staff. Similar programs operated by AID through American universities are also under way in La Molina.

C. Action proposed

6. What IICA must do

In keeping with the needs and desires of the countries, briefly stated, IICA must organize activities tending to:

- a. Stimulate and foster improvement in the professoriate of the institutions of Higher Agricultural Education, through postgraduate study, symposiums, lectures, special courses in given disciplines, in-service training, etc., all of which activities tend to raise the academic capacity of the professors.
- b. Introduce into the university, courses in the methodology of teaching and in communication so as to improve the capability of transmitting knowledge to the students and acquire greater ability for using available teaching resources.

7. What others must be made to do

The interest of deans of schools of Higher Agricultural Education must be aroused, insofar as fostering and encouraging an improvement in the professoriate, while offering them incentives to make pleasant and useful their efforts in academic and teaching improvement.

Get the cooperation of universities and schools of agronomy to carry out the activities planned for the above purposes.

8. Goals

In two years: Promote improvement in personnel, giving the professors opportunities in the way of scholarships for specialized studies, in-service training, specific short courses, seminars and symposiums on teaching problems of given disciplines and methods for improving teaching.

In five years: Obtain the specialization of 50 professors of agronomy at IICA Graduate School, through scholarships granted by the Andean Zone.

9. Future action

Ties of the Program with the institutions will continue to be strengthened and the academic and pedagogic improvement of the professoriate will continue to be encouraged by all available means.

Sub-Project 1.1.2.2. Improvement in the Methodology of University Teaching

Fundamentals:

A. Present Status

1. What is known

- a. Deficient pedagogic training of professors of schools of agronomy, forestry, animal breeding, veterinary, home economics and other departments or higher schools connected with agriculture and rural life.
- b. Lack of professionals with adequate training, who can satisfy the needs of schools of agronomy and related disciplines, as regards instructors and who, besides knowing certain agronomical disciplines, can fill the educational needs for more efficient teaching and learning.
- c. Lack of adequate educational programs that will make it possible to train college professors in agriculture, through systematic courses in the methodology of teaching.
- d. Apparent lack of motivation or interest on the part of college students to pursue studies considered "modern", among which are agriculture and the social sciences.
- e. Lack of motivation, interest or adequate training of students who work in agriculture or related social sciences, to fill the needs of the society to which they belong.

2. What is still to be learned

- a. What are the features of the present teaching methods, used by professors of the schools of agronomy and related higher schools.
 - b. Which are the modern didactic principles and the most adequate methods for promoting the learning of new knowledge, skills, abilities, attitudes and understanding of modern agriculture, under Latin American cultural conditions.
 - c. Which changes will induce the development of a curriculum, the best utilization of professors, extension of class schedules and degree of flexibility; way of grouping students for purposes of instruction; increased use of technological resources to promote learning; systematic programs for professional in-service training, for improving teachers; individual training programs for unusually qualified students, and adequate programs for the guidance of students in the fields of agricultural sciences and related sciences.
3. Which are the existing voids between what professors do and what they should do to better train their students; between what present students are and what they should be; how much students learn and why; and, in general, what are the expectations of society and its specialized organizations, regarding what they expect from future professionals in agriculture and related sciences.

3. What the countries want

There is an awareness in the countries, and particularly in the schools of agronomy, of the need to improve teaching methods, to train their professors, so that they can better accomplish their teachings tasks. The Agrarian University at La Molina, for example, requested of the unit of Methodology of Teaching in Higher Agricultural Education, a course for training in these areas.

The same University is harboring hopes of increasing this action by setting up a regular educational program for its teaching staff, particularly for professors who are starting out and for those who have greater responsibilities in educational matters.

Needs similar to those described have been constantly expressed in resolutions and recommendations issued by different national and international meetings. In 1955, Chaparro * found that a large number of schools of agronomy would be pleased to see that the cooperation of international organizations would be brought about in the field of "training the professoriate".

* Chaparro, Alvaro. A study of Higher Agricultural Education in Latin America, Rome, FAO, 1959.

The First Latin American Conference on Higher Agricultural Education held in Santiago de Chile in May, 1958, for its part, gave top priority to measures intended to encourage improvement of teaching staff. One of the recommendations of said Conference states verbatim: "Adopt a policy that will enable professors to carry out regular studies for self-improvement". One way or another, stress has repeatedly been made on the advisability of having teaching consist not merely in transmitting knowledge, but in having professors qualified and able to offer opportunities for creative work and for the integral and harmonious development of the minds of students*.

The Committee for Higher Agricultural Education appointed by the National University of Colombia and sponsored by the Kellogg Foundation stated in April, 1961: "An improvement must be made in the academic training of students (of agronomy) who wish to devote themselves to teaching".

The Second Latin American Conference on Higher Agricultural Education, meeting in Medellín, Colombia, in May 1962, on referring to the internal organization of academic departments, admitted the need to have some mechanism that would improve the operation of schools of agronomy, meeting minimum standards of quality in teaching. The same meeting, by unanimous vote, proposed stabilizing and improving the professoriate of the schools of agronomy.**

The First Meeting of Deans of Agronomy of the Andean Zone held in Lima in March, 1960, in turn, realizing that one of the critical problems of the institutions of Higher Agricultural Education in Latin America was the inadequacy of qualified teaching staff; realizing that the human element was the main factor in any properly organized institution and that there was a constant increase in the number of persons devoting themselves to agriculture as a profession, which made it increasingly necessary to have available enough highly-qualified university professors, resolved to recommend to institutions of Higher Agricultural Education to put forth all possible efforts to improve their respective teaching staffs, their main institutional foundation. Finally, the Third Latin American Conference on Higher Agricultural Education, held in Piracicaba, Sao Paulo, Brazil, once more took up several topics specifically related to the Methodology of University Teaching and pointed out its importance in the strengthening of Agricultural Education at a higher level.

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- * Report on the First Latin American Conference on Higher Agricultural Education, FAO-IICA, Santiago, Chile, March, 1958.
 - ** Report on the Second Latin American Conference on Higher Agricultural Education, IICA, Medellín, Colombia, May, 1962.

B. Background

4. What IICA has done

Under its Communication program in institutions of Higher Agricultural Education, IICA has created the Unit for Methodology of Teaching, thanks to the bi-lateral Agreement entered into with AID. This unit is made up of two experts: one in charge of all problems inherent to the Methodology of Teaching and the other one, particularly devoted to all those educational activities connected with the preparation, production and consultation in the field of educational material known as audiovisual aids.

Among the many activities planned or carried out, there is a survey on "The status of Communication in Institutions of Higher Agricultural Education in the Andean Zone*", including a study of attitudes, resources and needs. This study revealed that the institutions visited (schools of social sciences, home economics, agronomy, veterinary and forestry) showed a favorable attitude toward the establishment of training programs, with emphasis on the methodology of university teaching. One of the most evident needs of those institutions was to solve problems arising from the inadequacy of traditional and passive methods of oral teaching.

IICA had the opportunity of rendering the service of its specialists for a short course in the methodology of teaching, offered to professors of the School of Home Economics of the city of Manizales.

The Unit of Methodology of Teaching Higher Agriculture has just completed a similar assignment at the Agrarian University of La Molina, Perú. The impact of this course has given rise to requests for other, similar courses at the various schools of the same institution.

5. What others have done

In the light of the requests from these university organizations and of other national institutions, FAO started a program of Agricultural Education as a result of the provisions of the VII Meeting of the United Nations Organization Conference for Food and Agriculture, held in 1955.

At about the same time, or a little before, the Inter-American Institute of Agricultural Sciences of the OAS, located at Turrialba, Costa Rica, and its Project 39 of the Technical Cooperation Program of the Organization of American States started formal

* Beltrán, Luis Ramiro and Sánchez Narváez, Enrique. "The Status of Communication in Institutions of Higher Agricultural Education in the Andean Zone - Attitudes, Resources, Needs", Andean Zone, Lima, May, 1965. 82 pp.

studies intended to discover the status of agricultural education and the social sciences applied thereto, at university level. The concurrence of objectives resulted in the drawing up of a joint FAO-IICA program for studying the problem and finding points of reference that could help channel action for the benefit of Higher Agricultural Education. As a result of this action, a study was made, entitled "A study of Agricultural Education at Universities in Latin America"* on the basis of which it became possible:

- To explore the possibilities for schools of agronomy to meet the demand and relieve the scarcity of technical personnel at university level, and
- Determine the main problems facing the schools of agronomy and affecting the proper fulfillment of their functions.

As regards the needs for professional training of the professoriate, the study revealed that most of the people teaching at universities had gotten their title of agronomist, chemist, economist, veterinarian or other similar titles, but that in no case had such personnel had the opportunity of receiving formal training for the specific functions of teaching.

C. Action proposed

6. What IICA must do

It is important to gather information on:

- a. The Methodology of Teaching used by Schools of Agronomy.
- b. Factors influencing teaching and learning at universities.
- c. Factors that might bring about the change in curriculum.
- d. Possible organization of teams of professors for teaching.
- e. Possible organization of homogeneous groups for instruction.
- f. Weak areas that must be strengthened for proper training of college professors.
- g. Effect of present class schedules on student learning.
- h. Study habits and their significance on learning.
- i. Student anxiety and its positive and negative effects on teaching.
- j. Which might be the most advisable methods to use in teaching and learning at universities.

* Chaparro, op. cit.

- k. How the present administrative system influences the fulfillment of educational tasks.
- l. Equipment and educational material at present available at schools of agronomy and related sciences.
- m. What professors of agronomy do and what they should do to further the proper training of professionals.
- n. What are the expectations of society and its specialized organizations regarding future professionals.

7. What others must be made to do

Specialized organizations of the United Nations, such as UNESCO and FAO, must be made to enter into arrangements with IICA (represented by its program for Higher Agricultural Education), for studying, preparing and offering Member Countries of the OAS, short courses in the Methodology of Teaching, aimed at training professors of agronomy and other similar disciplines, at university level.

Such courses should place particular stress on aspects connected with:

- a. Aims and objectives of educational Methodology at university level.
- b. Aspects related to the philosophy of Higher Education.
- c. Educational psychology.
- d. Educational methodology.
- e. Communication in Education.
- f. Planning in Education.
- g. Evaluation of Teaching and Learning.

8. Goals

In two years:

- a. Train at least 120 college professors of the Andean Zone in the Methodology of University Teaching and in other educational resources that will speed the process of learning by students.
- b. Have available basic information on college teaching at Schools of Agronomy in the Andean Zone in connection with didactic methods used by professors, and comparative studies on the Methodology of Teaching for the proper orientation of training programs organized by IICA's project for professional training.

- c. Have available basic information on the learning process of college students at the Schools of Agronomy of the Andean Zone, particularly data regarding reading habits and other pertinent variables, in order to promote the setting up of orientation and counsellor service for students in those Schools.
- d. Arrange for professors of the Schools of Agronomy of the Andean Zone to have available up-to-date information on specialized areas, with the Methodology of Higher Education.

In five years:

- a. Train at least 300 college professors of the Andean Zone in college Didactic Methodology and in other educational resources of value in the processes of teaching and learning.
- b. Have up-to-date information on Teaching and Learning at Schools of Agronomy in the Andean Zone, for the purpose of improving advisory service to the schools, of preparing teaching manuals and guides at the university.
- c. Get schools of agronomy to adopt changes in the curriculum, give thought to the best utilization of professors and the proper use of educational materials, in accordance with possible measures suggested by the findings of research done under the sub-project of Methodology of University Training in the Andean Zone.
- d. Set up and test didactic equipment and educational material that can be used in general in the schools of agronomy, in conformity with their resources and the needs of Teaching.
- e. Have available a specialized bibliography on Education, for the use of college professors of the schools of agronomy.
- f. Have the schools of agronomy organize permanent services for the pedagogic training of their professors, and production units for didactic material.

Sub-Project 1.1.2.3. Teaching Communication at Institutions of Higher Agricultural Education

Fundamentals:

A. Present Status

1. What is known

Even though a few institutions of Higher Agricultural Education in Latin America offer courses in Technical Writing and one of them, La Molina, offers courses in Theory and Practice of Communication to Agricultural Specialists, this has up to now been concentrated on departments of IICA. Since 1948, in fact, IICA has offered a number of short courses, seminars, consultation services, publications, etc., in this discipline, to serve all Latin American countries.

Agricultural Communicators existing in Latin America have been made, then, either through the short courses of IICA, or adapting to their new work the capabilities acquired in professions such as Newspaper work, teaching, agricultural extension and others. A few Latin Americans have acquired the specialty of Communication in the United States, through scholarships from AID or the Rockefeller Foundation. The list (perhaps incompleted) of Communicators with advanced degrees in this discipline, is the following:

With a Master (or in the process of getting it)

Alfonso Ortega	Mexico	Jaime Gutiérrez	Colombia
Jesús Martínez Reding	"	Vicente Alba	"
Abdo Magdub	"	Susana Amaya	"
Gil Olmos	"	Eduardo Ramos	"
Alfonso Ruanova	"	Elsie de Ramos	"
Alberto Ramírez (no thesis)	Paraguay	César Portocarrero	Peru
Carlos Fletschner	"	José González S.	Pto. Rico
Zacarías Ortiza Aquino	"	Rolf Pulschen	Brazil*
Ramiro Samaniego	Ecuador	Luis R. Beltrán	Bolivia*

With a Doctorate (or in the process of getting it)

Otis Oliver	Puerto Rico
Juan Díaz Bordenave	Paraguay (IICA)
Luiz Fonseca	Brazil (IICA)
Gregorio Martínez	Mexico (completing thesis)
Leonardo Jiménez	Mexico (completing thesis)
Delbert T. Myren	Mexico (Rockefeller Foundation)
Fernando Monge	Ecuador (IICA) (Lacking the thesis)
Tomas Loch	Argentina (IICA)

The utilization of Communicators by the national institutions varies from very deficient to relatively proper. While in certain institutions, the Communicator hardly does Public Relations work and in others he is nothing more than a personnel in charge of the production of informative material, in some others the Communicator participates in the planning and programming of the general activities of the institution, in addition to directing the activities of his own field.

Examples of the adequate use of the Communicator are:

The Mexican Institute for Agricultural Research (INIA)
INCORA, in Colombia
ABCAR, in Brazil, and particularly their affiliates: ACAR, in Minas Gerais and ANCARPE, in Pernambuco

One thing is clear and that is, that the more or less important role of the Communicator in national institutions depends to a great extent on the degree of his training. This is the case in institutions mentioned.

* Lacking more courses and thesis

Now, it is evident that if an institution is to invest its money in paying a well-trained Communicator, it is essential that the directors understand the importance of Communication. This is not the general rule in Latin America. J. Díaz Bordenave studied, in Recife, Pernambuco, how 33 government institutions use Communication, and discovered that only 3 of them had the more or less adequate personnel and organization to do an effective job in Communication. On the other hand, in Bolivia, the Ministry of Agriculture, that during the life of SAI (Inter-American Agricultural Service) had a good information office, has just appointed a librarian head of a non-existent information office, while the only surviving specialist in Communication from SAI, was entrusted with the direction of the 4-S Club program.

2. What is still to be learned

Even though IICA is in possession of a number of suggestions on the advisability of preparing personnel specialized in Communication, there is no information on the exact extent of need and of interest the national institutions might have, as to the use of professional Communicators. That is, there is no adequate idea of the present and future market for these professionals. Also, there is no information on the attitudes and plans of most of the institutions of Higher Agricultural Education regarding the offering of regular or optional courses in Communication. These activities have been investigated only in a select sample of 18 institutions in the Andean Zone. (See "What the countries want").

There is no clear idea as to the kind of professional training that Agricultural Communicators should receive in order to meet the needs of the present and future market in Latin America, within the framework of its agricultural and rural development.

3. What the countries want

Partly due to the influence of Cooperative Agricultural Services created by Point Four in Latin America ever since 1943, and partly due to the efforts of IICA, there seems to be in Latin America a certain awareness of the need for specialists to communicate better.

In addition to the national institutions mentioned as adequately using the services of the Communicator (INIA, INCORA, ABCAR), IICA constantly receives requests for advisory service from other national associations. Typical is the case of the Andean Mission of Ecuador, which is interested in having all of its technical personnel and field personnel learn to communicate better with the farmers. The Land Reform Institute (IERAC) of that same country is another example of decided support of Communication, having already requested advisory service on three occasions from IICA.

Regarding what the institutions of Higher Agricultural Education in Latin America want, the Andean Zone has made a survey based on a sample of 18 schools located in this region. Most of the college deans were in favor of eventually setting up courses in Communication, as well as trying to find ways of training specialized professors. Also, one of the recommendations of the III Latin American Conference on Higher Agricultural Education (Piracicaba, July 1966) urges the schools to study the establishing of courses in Communication and the training of specialized personnel for teaching same.

As a result of the work presented by J. Díaz Bordenave at the III Conference in Piracicaba, the specialist mentioned received invitations from the Deans of the following Schools, to conduct courses on this specialty in the near future.

Rural University of Brazil, Km. 47
Rural University of the State of Minas Gerais
School of Agronomy of the Federal University of Santa María,
R.G. do Sul

Furthermore, IICA has received a number of individual requests from "empirical" Communicators who would like to take up advanced studies. The following persons have shown interest in participating as students in the postgraduate courses that IICA is attempting to establish in collaboration with the Agrarian University of La Molina:

Engineer Hugo Alvarez	La Paz, Bolivia
Yolanda Naranjo	Magazine "Tu", Colombia
Lic. Lincoln Larrea	Head of Official Relations IERAC - Ecuador
Prof. Hugo Hidalgo	Public Relations - Sanitation Corporation of Arequipa, Peru
Mr. Benjamín Montalvo N.	Bogotá, Colombia
Mr. Carlos Cordero	Ministry of Agriculture, Costa Rica

Finally, the Agrarian University of Peru has accepted the collaboration of IICA, of the American International Association (AIA) and of the group of Universities of the Mid-West, to offer, as soon as possible, a degree of Master in Communication.

B. Background

4. What IICA has done

There is no need to detail the various contributions that IICA has made since 1948 to the development of Communication, through its Scientific Exchange Service (SIC) subsequently named Inter-American Communication Service. There remains only to add, modesty aside, that IICA has led the development of Communication in Latin America, having trained over 300 specialists in the art of Communication at different levels. In 1964, IICA decentralized its strong nucleus located in Turrialba and placed Communication units with certain technical programs. Thus were born the units:

Scientific Communication and Documentation	Turrialba
Communication in Extension	Turrialba
Communication in Land Reform	Bogotá
Communication in Higher Agricultural Education	Lima

These units have so far developed a number of activities in teaching, research, advisory service, exchange and publications, notwithstanding not having so far been able to complete its personnel contemplated, due to the scarcity of Communicators with adequate training.

5. What others have done

Various international organizations have carried out activities in the field of Agricultural Communication in Latin America, though none of them as systematically and profusely as IICA. For example, AID has offered a number of International Audio-Visual Seminars, where hundred of specialists are trained. Under its contract with IICA, it advanced activities on a large scale. FAO has held several international meetings on agricultural information in some countries. The Rockefeller Foundation not only helped establish one of the best Agricultural Communication programs on the Continent (in Mexico, Colombia and Chile) but particularly in Mexico, but it also granted scholarships to numerous Communicators, both for its Program in Mexico and for IICA's program (Díaz Bordeave, Fonseca and Monge were granted a scholarship by them). The University of Wisconsin has sent to Latin America several of its Communicators (Lloys Bostian, John Fett to Brazil; Marion Brown, William Thiesenhusen, to Chile; Herman Felsthausen to Colombia, etc.) for the purpose of doing research and of teaching. Michigan State University has a nucleus in Belo Horizonte (Cordon Whitting and William Herzog) entrusted with doing research on dissemination of agricultural innovations.

The "Agricultural Development Council", of New York, presided over by Arthur Mosher, has taken interest in Communication in Latin America, and has sponsored a symposium on research in dissemination in connection with agricultural development (Mexico, October, 1964), which marked an important milestone in the growth and maturity of this discipline on our Continent.

We must set out in a separate paragraph, the work done by the "American International Association" (AIA), which created in San José, Costa Rica, the Inter-American Program for Popular Information (PIIP). PIIP, in collaboration with SIC, or in collaboration with Michigan State University and UNESCO, has carried out important teaching and research tasks. In this latter field it is, without a doubt, the institution that has contributed the most to the development of communication. It keeps in Montevideo a regional office that publishes "COMUNIQUEMOS" (Let's Communicate), the only organ for Latin American Communicators at present being published periodically, and it finances visits of Communicators from one country to another, sponsors meetings, gives consultant service, etc.

The work of CIESPAL (Centro Internacional de Estudios Superiores en Periodismo para América Latina) (International Center for Higher Studies in Newspaper Work for Latin America) also deserves a separate paragraph. CIESPAL is an organization sponsored by UNESCO, located in Quito, Ecuador. CIESPAL conducts three-month courses for journalists, it brings authorities on Communication from Latin America, United States and Europe, it publishes works, sponsors international meetings of experts, and through high-level and very effective political action it is contributing to the improvement of schools of journalism throughout Latin America. CIESPAL has invited J. Díaz Bordenave on two occasions to deliver lectures at international meetings, and has expressed keen interest in the development of Rural Communication.

C. Action Proposed

6. What IICA must do

- a. Clearly define its philosophy and its general institutional policy regarding the importance, the role and the prospects of Communication, as an art, as a science, and as a specialized profession, in the light of the agricultural development of the Member Countries. This definition calls for a more complete study of the needs and possibilities of the countries, as well as of the possible application of Communication (a) as one more subject to which agricultural specialists should be exposed during their academic training; (b) as a strategic function within the institutions of rural action; (c) as a specialized profession to be given prestige and to be developed.

This definition is essential so that IICA can decide what resources -- human and financial -- must be invested in Communication to achieve a significant impact.

- b. Of absolute priority in this field is the training of high-caliber personnel, whether to join the ranks of IICA itself, to work as professors in the schools, or to work as professionals in the rural action institutions. In turn, this formative priority requires the following steps:
 - 1) Set up a sound postgraduate training program.
 - 2) Produce the necessary textbooks and teaching material for such training.
 - 3) Do research work as part of training, on problems of Communication for rural development.
- c. While the high-level personnel is being trained, and to insure its proper utilization in the future, IICA must carry out intensive promotion work on the use of Communication for development. This promotion work can include the following kinds of activities:

- 1) Setting up a program of allowances for students of agronomy who wish to do field study as a basis for their professional theses, on Communication problems.
 - 2) Production of Moving pictures and other material that can serve for discussion in the countries.
 - 3) Offer short courses in Communication in the countries, trying to have national universities participate in them so that a permanent tie will be gradually established between the universities and rural action institutions, and to have the universities contribute to such institutions their cooperation in advisory service, research and personnel training.
 - 4) Production of brief but sound publications on Communication, and the distribution of same in a well-planned manner, to national leaders.
 - 5) Sponsor some international meetings on key matters of Communication in regard to agricultural and rural development.
 - 6) Offering advisory service to national institutions, constantly striving to channel their needs toward national universities so that they will start to prepare themselves to satisfy them in the future.
 - 7) Collaborate with the bulletin "Comuniquemos", for the purpose of raising the technical level of its contents so that it will serve not only as a tie between Communicators, bus as a vehicle for their personal improvement.
 - 8) Encourage the creation of national associations of educational Communicators, for the purpose of eventually forming a Pan-American association.
7. What others must be made to do

As previously stated, institutions of Higher Agricultural Education, possibly with the help of other schools, must be made to offer courses in Communication and in due course also offer opportunities for specialization to those specialists who wish to become Agricultural Communicators.

IICA must also get rural action institutions of the countries to become interested in utilizing the services of Communicators at a more suitable professional level, giving them the necessary importance and logistic support for them to do their job well. Finally, IICA must get rural action institutions to demand from institutions of higher Agricultural Education of their countries, opportunities for training personnel in Communication, as well as advisory service and research in this area.

As to international institutions, IICA must get them to facilitate the training of professionals in Communication, of high caliber, specifically granting scholarships for postgraduate courses at La Molina. Also that such organizations coordinate their efforts with those of IICA to avoid rivalry and duplication that would be wasteful.

8. Goals

In two years:

- a. To have under way the program for postgraduate research studies directed toward the granting of a Master's degree at the Agrarian University in Peru, with students from the five countries in the Andean Zone, that will be future professors at their respective institutions of Higher Agricultural Education.
- b. Produce at least three textbooks on Communication at university level, on the following topics:
 - 1) Introduction to Communication for Development
 - 2) Techniques of Written, Oral and Audio-Visual Communication, applied to agriculture.
 - 3) Research methods in Educational Agricultural Communication.
- c. Improve the department of Communication at undergraduate level in La Molina.
- d. Discover the needs of rural action institutions of the countries as regards the use of Communication and professional Communicators.
- e. Do 4 or 5 important research assignments and publish them.
- f. Produce, as promotion material, one film and some 12 publications.
- g. Offer some 6 or 8 short national courses.
- h. Give some 6 or 8 advisory service.
- i. Grant allowances to 10 students for them to prepare their thesis on Communication problems with the advisory service from IICA. Publish the best 6.
- j. Build up an adequate library on the Art and the Science of Communication, with some 500 volumes.

In five years:

- a. Have the main rural action institutions in the Andean Zone equipped with information offices directed by Communicators trained to a Master's level.
- b. Have the main institutions of Higher Agricultural Education in the Andean Zone offer regular courses in Communication.
- c. For IICA to have produced, or helped to produce, adequate literature at college level, on Communication, to make possible the integral training of Latin American Communicators.
- d. To have the number of annual projects for research on Communication increase progressively, for a total, in five years, of about 20 important projects in the entire Andean Zone.
- e. For IICA to have sponsored two important international meetings in the field of Communication, one on the Teaching of Communication to form strategists of the rural change, and the other on Research in Communication.

Sub-project 1.1.2.4. Increase in the Exchange of Information between Agricultural Scientists

Fundamentals

A. Present Status

1. What is known

The impression exists -- by comparison with other Continents -- that the agricultural scientists in Latin America do not produce enough scientific literature, and of the desired quality, so that the experience and the findings of research may be known by more people and more opportunities may be available to the other scientists.

Even though according to Engineer Adalberto Gorbitz ^{*}, "an improvement is evident in the scientific level, presentation, regularity and distribution of Latin American agronomic magazines, it is also evident that they must put forth considerable effort to obtain highcaliber contributions.

* Present Status of Latin American Agricultural Science Magazines".
Miscellaneous Publication No. 18, IICA, May 1964.

2. What is still to be learned

It is necessary to determine, through systematic studies, what factors must be put in motion to obtain an increase in the productivity of literature on the part of scientists, as well as an improvement in the quality of same. It must also be found out what institutions of Higher Agricultural Education offer courses in Technical Writing to their students, who are future technicians. Lastly, new methods or means must be tested to disseminate scientific information to other researchers, other agricultural scientists and the public in general.

3. What the countries want

Surveys made by IICA ^{**} in the countries reveal a marked interest on the part of agricultural specialists and institutions of Higher Agricultural Education in courses in Technical Writing, as well as in studies that will make it possible to find more efficient channels of dissemination of the findings of research.

B. Background

4. What IICA has done

Since the creation of the Scientific Exchange Service by Armando Samper in 1948, and up to this date, IICA has taken pains to increase contact among scientists, exchange of information and materials and their training in the principles and techniques of Communication. Bibliographic service, supplying photocopies, providing compendia, publication of technical articles in the magazine entitled "Turrialba" and in the series of Technical Bulletins, courses in Technical Writing, are samples of the work done by IICA in this field. At present, IICA has a unit of Scientific Communication in Turrialba, with two Specialists. It also has a Specialist in Scientific Communication in each one of the Zones.

5. What others have done

There exist in Latin America several documentation centers devoted to certain phases of Scientific Communication. UNESCO is also active in this field, promoting seminars and national and international meetings, issuing publications, etc. None of those organizations have specialists devoted to teaching, research and direct advisory service to the countries.

** Beltrán, Luis Ramiro and Sánchez Narváez, Enrique. Report on the Status of Communication in Institutions of Higher Agricultural Education in the Andean Zone, May, 1965.

C. Action Proposed

6. What IICA must do

IICA must develop activities in investigating those factors that may facilitate or hamper the flow of Scientific Communication, as well as the search of new channels of dissemination adequate for the increasing volume of available information and the need for agricultural development of the countries. Activities must also be developed in teaching for the purpose of getting the institutions to put forth its efforts to produce textbooks on Scientific Communication that may be used both for courses on the subject and for general readers who may be interested in the topic. Lastly, it will be necessary to work with scientific agricultural magazines and editorial departments of research centers in general in order to improve the quality of specialized publications, to convey information to agricultural specialists of different levels.

7. What others must be made to do

- a. To have institutions of Higher Agricultural Education offer courses in Scientific Communication (Technical Writing) and do research on the matter.
- b. To have experimental stations obtain qualified editors and that their researchers be qualified to produce scientific literature in sufficient volume and of adequate quality.
- c. To have scientists in similar specialties keep in touch and exchange experience and material.
- d. To have new channels and manners for disseminating scientific information adopted.
- e. To have agricultural magazines improve their content and presentation.

8. Goals

In two years:

- a. That at least one important school in the Andean Zone offers regular courses in Scientific Communication to its students.
- b. That at least one short course be offered in each country in the Andean Zone, for agricultural researchers.
- c. That at least one research assignment be carried out in each country in the Andean Zone, in connection with problems of the flow of Scientific Communication.
- d. That a textbook at college level on Scientific Communication be produced.

Sub-project 1.1.2.5. Development of Professional Training in Home Economics

Fundamentals:

A. Present Status

1. What is known

Opportunities for specializing in Home Economics at college level in the countries in the Andean Zone are very limited. This does not mean that there is no need to train Home Economics at this level. In fact, the need for trained personnel in this discipline increases with time and there is an awareness of this need, even if it is to a small extent, particularly since the programs for Extension, Land Reform, Community Development and others have been created in these countries.

It is claimed that these programs tend to raise the standard of living of the people by changing the structure of land tenure, increasing production and productivity, redistributing income and conserving human resources. The human factor must not be disregarded in these programs if satisfactory results are to be obtained. Efforts for economic progress must be aimed at the development of the family as a vital unit of society, whose many and complex functions directly and indirectly affect the community.

Home Economists can undertake tasks of great magnitude in the self-improvement of families in all these aspects.

In order for the active role the Home Economist must play to be carried out efficiently, she needs adequate training in keeping with the techniques and methods of modern science and in accordance with realities of our countries. This training and vision of the problems can only be attained by college studies. Hence, the need to urgently push the development of teaching of Home Economics at a higher level.

At present, very few countries have included Home Economics in their Higher Education programs. Among them are Colombia, the School of Home Economics, Caldas University, Manizales; the Department of Home Economics of the School of Social Sciences of the Agrarian University at La Molina, Peru; in Brazil, the Higher School of Home Economics of Viçosa, Minas Gerais, the one at Pelotas in Rio Grande do Sul, the one at Geara, Piracicaba, in Sao Paulo, in the Agrarian University of Rio de Janeiro (Km.47); in Chile, at the University of Chile, Catholic University, and Technical University of the State, all of which train professionals in Home Economics at college level.

Regarding the countries in the Zone, the School of the University of Caldas, Colombia, and the Department of Home Economics of La Molina Agrarian University, Lima, Peru, are having serious trouble. The lack of specialized professors, of laboratories, teaching material, scholarships, are problems requiring urgent help. The Department at La Molina adds to this, the limited number of students attending. It is felt that this is partly due to the severity of the entry examination, and partly to the lack of prospects offered by the Department at present. The School in Caldas has already survived the first 4 years of problems, and in 1966 will graduate the first 20 Home Economists.

Due to the emergencies experienced through the improvisation of professors, it is felt that the first four groups of graduates will need supplementary training before offering their collaboration in the Schools or any other program. This can later be overcome by special postgraduate studies in other universities in Latin America, United States or Puerto Rico, through a program of scholarships or a period of in-service training in the Andean Zone.

Venezuela has put forth efforts to create a university school in the School of Agronomy of the Maracay Central University.

In Ecuador, the National Social Service School in Quito, under the Ministry of Social Welfare and Labor, has included subjects connected with education of the family, nutrition, sanitation and dress. The School of Veterinary and Agronomy is also interested in creating a school at college level, under this same School.

2. What is still to be learned

The real attitude of the Universities, of the Public Administration and directors of Private and International Institutions on the acceptance of the profession, is not known. It would seem that there is no clear and definite philosophy on Home Economics and there is no definite conviction as to the role of Home Economics in the integration of programs of education and development.

There is no clear idea as to the kind of professional training that Home Economists must have, and it would appear in many cases that the improvised training relied on at the beginning of the programs satisfies most of the directors of same.

3. What the countries want

Technical assistance service and cooperation for developing their programs, and a greater increase in their personnel.

Thanks to the efforts of IICA and other international organizations, the training of personnel has improved through national and international courses, seminars, etc. Acknowledgment is made to the Zone for these services, and they are requested from the Zone.

According to the survey made by Mrs. Inés de Ramsay, Program Head of Project 39, the expectations of the countries in the Zone regarding the Home Economics Program are the following:

a. Home Economics Services

- 1) Organization of national courses
- 2) Offering international courses planned in consultation with representatives of some of the countries.
- 3) Advisory service for drawing up personnel training programs.
- 4) Information on the latest discoveries or developments in the field of Home Economics.
- 5) Cooperation to facilitate exchange of information among technical personnel of the various countries.
- 6) Production of teaching material and advisory service to prepare this material in each country.
- 7) Information on sources of new knowledge and skills and of features put into effect recently in order countries.
- 8) Organization of the International Association of Home Economists.
- 9) Fostering exchange of technical personnel among countries.
- 10) Granting of scholarships for advanced studies.
- 11) Organization of international meetings.

This help is needed in all areas of work and in particular, the people surveyed chose the areas of hygiene, small industries, planning, evaluation and research techniques.

b. College training

- 1) Continue to arouse interest in establishing university schools of Home Economics in the countries where they do not exist.
- 2) Advisory service for drawing up the curriculum and the programs for the courses.

- 3) Help in offering some courses by those who have professors available.
- 4) Training professors through scholarships for in-service training.
- 5) Training professors in techniques of research and of preparing theses.
- 6) Facilities for doing postgraduate study.

B. Background

4. What IICA has done

For over 10 years, Home Economics as part of Project 39, offered a program of advisory service, training and cooperation, mainly to programs of Agricultural Extension and other programs related to rural development. According to the Evaluation Report presented by Mrs. Ramsay, Head of this Program, the training offered by the program during a period of 13 years can be summarized as follows:

Number of national courses	9
Number of international courses	15
Total number of participants to the courses	481
Total number of participants to the national courses	334
Total number of participants to the international courses	147

Under the new organization of the Andean Zone, the Home Economics Program became part of the Program for Higher Agricultural Education. The main objective of the latter has been to strengthen the theoretical and practical teaching of Home Economics at a professional level at the Institutions of Higher Education, in order to attain the training of technical personnel in this discipline. At the same time, the group of professionals that are working on extension programs and other development programs continue to be attended to.

Intensive advisory service has been offered to the School and Department of Home Economics of Caldas, Manizales, Colombia, and the one in Peru. The main activities have been the study of the curriculum, planning laboratories, equipment, teaching material. Also, promoting and developing a program of scholarships to complete studies in, or attend a university to learn Home Economics.

Scholarship grantees from countries in the Zone, financed by AID and the Andean Zone, have been sent to the University of Viçosa, in Brazil.

Similarly, the first graduate from the University of Caldas, Manizales, was sent to the IICA Graduate School in Turrialba, to take up postgraduate studies in Extension and obtain her Master.

5. What others have done

The Department of Home Economics of the School of Social Sciences of La Molina Agrarian University has requested intense advisory service to reorganize, develop and operate the Department.

The Department of Home Economics of the Agrarian University at La Molina has requested the services of a Home Economist to serve as professor for a Course in Administration and one in Family Finances.

The Extension services of Ecuador and Colombia have requested advisory services to organize and conduct courses for training in home industries for the group of home improvers of these programs.

The University of Caldas, through its advisor from FAO, has requested the participation of the Home Economist in organizing and developing the Seminar on the Methodology of Teaching for the group of professors of that University.

The School of Agronomy of the Central University of Venezuela and the School of Veterinary and Agronomy of the Central University of Ecuador have requested advisory service to start plans for the possible setting up of a Higher School of Home Economics in those Schools.

C. Action Proposed

6. What IICA must do

In accordance with the objectives of the Higher Agricultural Education Program and the Hemispheric Home Economics Plan of IICA, the available resources must continue to be devoted mainly to strengthen the educational institutions that train professionals in Home Economics and motivate those that still do not visualize the need for this. Also, time must be devoted to fulfilling the need to train personnel for rural development programs, even though an effort should be made to have the national universities gradually take over this work. In order to fulfill its objectives, IICA must:

1. In the countries in the Zone where Home Economics is taught at a higher level:
 - a) Provide opportunities for professional training and self-improvement through courses, seminars, in-service training;
 - b) Provide tutorial advisory service to professors of certain subjects connected with Home Economics;
 - c) Encourage the exchange of teaching material among professors of Home Economics;
 - d) Cooperate with Schools or Departments of Home Economics in developing and improving curriculum, course programs, teaching methods used in these centers;
 - e) Choose Home Economics books that can serve as reference in teaching this discipline;
 - f) Develop research in Home Economics as part of a plan coordinated with IICA, Turrialba

2. In countries where there is no college program for Home Economics:
 - a) Promote the teaching of Home Economics among the university staff;
 - b) Help train non-university personnel;
 - c) Promote the creation of professional self-improvement opportunities by working together with the universities.

3. What others must be made to do

That institutions of higher learning give priority to the training of personnel in Home Economics at college level.

That directors of programs and national leaders analyze the possibility of taking advantage of those universities that have Schools of Home Economics in their own country or in another country in Latin America, preferably, for the training of its professional personnel.

That they allocate funds for scholarships, study allowances and plans coordinated with other organizations to take up university studies in Home Economics.

That they improve curricula, course programs and methods used in teaching Home Economics at college level and otherwise.

8. Goals

In two years:

Determine priority of needs of the schools or departments of Home Economics that are operating at present.

Improve curriculum, class programs, teaching methods used in the schools or departments of Home Economics.

Obtain that schools or departments of Home Economics set up or continue to offer courses in Home Administration, Family Finances, and the Family in Latin America.

Obtain the inclusion of Home Economics in the curricula of agrarian universities.

Obtain the creation or continuation of scholarship plans for studying Home Economics.

Offer an in-service training program for graduate students of Home Economics.

Give at least one advisory service to each one of the countries in the Zone.

Coordinate work programs with other national and international organizations.

In five years:

That each one of the countries in the Andean Zone will have trained at least one professional graduate in Home Economics.

That the countries in the Andean Zone interested in developing Home Economics at college level have available the basic information for the establishment of schools at this level.

That there be at least 60 Home improvers for the programs of Extension, Land Reform and others.

That the schools or Departments of Home Economics of universities in the Andean Zone offer, as part of their curriculum, regular courses in Home Management, Family Finances and the Family in Latin America.

That at least one course be conducted in Methodology of Teaching and program content for professors of Home Economics at high school and college level.

That five graduates in Home Economics be trained.

Sub-project 1.1.2.6. Improving Teaching of Agricultural Engineering

Fundamentals:

A. Present Status

1. What is known

Latin America has a limited number of professionals and specialists in the fields of Agricultural Engineering. The agricultural development of a country can hardly be expected without the contribution made by these specialists.

In all of Latin America there is only one School of Agricultural Engineering, recently created at La Molina Agrarian University, Peru. The School at La Molina has fine facilities and excellent professors, many of whom took postgraduate specialization courses in American and European universities. After solving the problems involved in forming the School, and with the experience it has acquired, it is interested in starting postgraduate specialization courses and in promoting research programs, for which it has available an adequate group of specialized professors. The School is divided into 5 departments: Irrigation, Agricultural Process Engineering, Agricultural Mechanization, Rural Planning and Works, and Soil Conservation.

At first, the Specialists from the Andean Zone must work together with the School of Agricultural Engineering of La Molina Agrarian University, in order to create incentives for the postgraduate courses and give greater emphasis to research work. In this manner, the experience thus obtained will be utilized by the other countries in the Andean Zone who are interested in including Agricultural Engineering in their universities. Postgraduate specialization courses take on great significance inasmuch as, through them, it is possible to train professionals of the Andean Zone and of all Latin America, so that their universities and schools or departments can have available the necessary personnel to start, in each such school or university, the research work that is required to attain a higher level in the teaching of this important subject which definitely contributes to the increase in output of the agricultural production factors.

The Medellín School of Agronomy has a Special Program for training professionals in Agricultural Engineering and the Schools of Agronomy of Maracay and of Bogotá are getting ready to offer this professional career.

2. What is still to be learned

The following is still to be done: contact other institutions of higher learning in the countries in the Andean Zone and learn what their needs are, get to know the professors and researchers, become acquainted with the programs for Agricultural Engineering courses, learn what they have done and what it is possible to do in collaboration with the OAS.

3. What the countries want

There is no doubt that there are few Agricultural Engineers in Latin America, which results in very little research being done in almost all of its fields. Many problems of agriculture could be properly solved if these countries could have qualified specialists, or if they could get proper advisory service from international organizations. The interest of the countries is expressed precisely in this respect, in preparing national specialists and in getting technical assistance for research programs in this field. The results they expect from these two actions will lead to the creation of new schools or departments of the universities of the countries in the Andean Zone.

The School of Agricultural Engineering of La Molina Agrarian University can give this initial push, together with the OAS specialists, to carry out both the professional training programs at postgraduate level and the research programs. As a first step, the curriculum of the schools of agronomy must be revised, and recommendations made to better orient the department of Agricultural Engineering, as a prior step to the application of the above mentioned measures.

B. Background

4. What IICA has done

IICA, through Engineer Enrique Blair, expert in Irrigation and Drainage, has been cooperating with the countries in the Andean Zone for the last 10 years, in problems of research and consultation. He has done a fine job in dissemination, through courses and research work, and the contribution of his experience in the Agrarian University has taken shape in his work entitled "Irrigation and Drainage", which is consulted by professors and students.

Since February of the current year, with the incorporation of Engineer Hernán Barreto Boggio to the Agricultural Education Program technical assistance has been given to the Department of Process Engineering, School of Agricultural Engineering of the Agrarian University, in the development of its training and research programs. This work has been expanded to include the Department of Irrigation of said School, with the arrival of Engineer Alberto Daker in July, this year.

C. Action Proposed

5. What IICA must do

Strengthen the institutions of higher learning in the field of Agricultural Engineering in conformity with the needs, requirements and extent of development of said institutions, in the countries in the Andean Zone.

Conduct basic studies, research and give advisory service in the different fields of Agricultural Engineering, in regard to the best management, utilization and conservation of soils, water, crops and agricultural products.

Cooperate with the Agrarian University of Peru in the development of the Graduate Training Program that this institution is planning to advance, in the field of Agricultural Engineering.

6. What others must be made to do

Schools and departments of universities of other countries must be made to take interest in the Agricultural Engineering program, to ask for technical assistance, courses to strengthen higher learning in their schools of agronomy, research plans and a periodic attendance by professors and specialists to postgraduate courses in Agricultural Engineering, offered by Latin American countries.

7. Goals

In two years:

- a. Cooperate with the Agrarian University of Peru in starting postgraduate courses in Agricultural Engineering.
- b. Work together with the United Nations Development Program (UNDP) in Project 80, pursuant to the agreement entered into with IICA.
- c. Give advisory service to the countries in the Andean Zone in problems of training and research.
- d. Foster the improvement of laboratories, equipment, teaching and research material of the School of Agricultural Engineering in La Molina.
- e. Facilitate travel by professors and specialists of the countries in the Andean Zone so that they will attend postgraduate courses in La Molina.
- f. Prepare training manuals and textbooks.

In five years:

- a. Strengthen and broaden the postgraduate courses in Agricultural Engineering in La Molina for the purpose of having at least 20 students per year obtain in their M.S., and improve training in the Departments.
- b. Strengthen and broaden the departments and institutes of Agricultural Engineering of the schools of agronomy in the countries in the Andean Zone.
- c. Contribute toward the creation of Schools of Agricultural Engineering in the countries in the Andean Zone.
- d. Contribute toward the inclusion of postgraduate courses in those schools.
- e. Do scientific research in the field of Agricultural Engineer, of interest to the countries in the Andean Zone.
- f. Produce articles and scientific publications, as a result of the research work done.

8. Future Action

Courses in Thermodynamics and Processes, in Irrigation and Drainage and others in the future, will be continued every year.

The work of giving advisory service, training, research and publication will be continued.

Project 1.1.3. Production of Textbooks and Teaching Material

Fundamentals

A. Present Status

1. What is known

A survey on Agricultural Education in Latin America and a study on its library resources revealed that training at the Schools of Agronomy is affected, among other factors, by the lack of textbooks and teaching material in Spanish. Most of these institutions use conventional methods, based primarily on a few textbooks and lectures. The limited use of methods requiring the active participation of the student and of the use of a variety of textbooks and other teaching material substantially reduce the results of the educational effort.

2. What is still to be learned

It is felt that, in spite of the present scarcity of textbooks in Spanish, there are professors in different Schools and Departments who have some classroom notes which could become books with a final effort. It is also felt that there is a considerable number of books written in other languages, particularly in English, that, if translated into Spanish, would be of extreme usefulness in the Schools of Agronomy. It would be advisable, consequently, to determine which are those books to study the possibility of publishing them in Spanish.

3. What the countries want

There is a general awareness of the need to publish textbooks and manuals in Spanish and offer them at inexpensive prices, to fill local needs.

B. Background

4. What IICA has done

The Institute obtained, in 1958, a donation from the Kellogg Foundation amounting to US\$ 8,000 a year, to help professors put their classroom notes into textbook or manual form. When this donation is exhausted on March 31, 1969, IICA will undertake the continuation of this Project.

A loan of US\$ 20,000 was also obtained from the Kellogg Foundation to start the production of books under this Project, and a grant of US\$ 5,000 to make a study of Latin American Schools of Agronomy on the most urgent needs as to textbooks and manuals, for their immediate publication.

IICA has made surveys in the Schools of Agronomy to determine the interests of the professors and the material that exists for publication.

It has tried to encourage professors, by offering grants up to US\$ 4,000, to prepare or complete works of Inter-American interest, that could be adopted as textbooks or manuals in the Schools of Agronomy.

5. What others have done

FAO, Editorial Eudeba, from Buenos Aires, RCTAC of Mexico and some universities, for example, the Agrarian University of La Molina (Peru) and the University of Costa Rica, that have their own department of publications, contribute to increase the stock of teaching material in Spanish.

C. Action Proposed

6. What IICA must do

IICA must study the advisability of regionalizing the production of textbooks, as cheaply as possible, for which the following is suggested:

- a. Make a study of the area of need at each of the schools included in the different Zones.
- b. Coordinate the drawing up of Course Programs, at a national level, planned by the professors of the School or Departments of each area chosen, or by an Ad-Hoc Committee.
- c. Study curricula submitted by the interested group, for the purpose of unifying them at a regional level.
- d. Offer the interested parties such remarks as may be deemed pertinent and recommend the professors who must produce the next.
- e. Serve as a medium in the preparation of the original and publish inexpensive editions (US\$ 1.50 to US\$ 3.00 maximum), either mimeographed or by some other similar method of reproduction, so that the works can be revised every two or three years, with the collaboration of several professors who are experts on the subject, without adding too much to the cost.

To carry out the plan proposed, the following criteria must be observed:

- a. Lack of adequate textbooks.
- b. Textbooks that are not adapted to regional or national conditions.
- c. Importance of the area; priority given to the field of application.
- d. Availability of specialists in the area of the discipline.

7. What others must be made to do

Professors must be made to collaborate fully, both in preparing the textbooks and in using them in their classes and, as a result, in selling them.

Try to have the Schools of Agronomy request from the Foundations or other organizations with which they may be connected, donations of funds for purchasing books from the Program, intended for libraries or for donating to students, etc.

8. Goals

In two years:

- a. Determine if the contribution to be made in the publication of textbooks at a regional level is the most adequate.
- b. Awaken the interest of the professors in the activities of this Project.
- c. Offer greater incentives and facilities for professors to participate in the Project.
- d. Publish nine books.

9. Future Action

Works on essential subjects will continue to be published. Contacts with authors and Schools of Agronomy will be strengthened, for a better development of the activities of the Program. The distribution and dissemination of books published will be broadened.

B. NORTHERN ZONE

1. Present Status

a. What is known

As regards Agricultural Education in the Northern Zone, three groups of countries stand out. The first one is made up of the Central American countries and Panama, the second one is Mexico and the third one is made up of the countries of the West Indies (Haiti, Dominican Republic and Puerto Rico).

Each of these groups has problems of its own and the solutions that may be offered must also be different.

Fairly detailed studies have already been made on the real situation of higher agricultural education in these countries. Thus, for the Central American Isthmus there are two studies, one made by the Regional Office for the Northern Zone, entitled: "Study of the Present Situation of the Schools of Agronomy of Central America", and the other one was made by CIDA on Education, Extension and Research in Central America, with the active collaboration of the Northern Zone.

On Mexico there is a fairly complete study made in 1964 by the National Association of Directors of Higher Schools of Agriculture. This study has been published under the name of: "Education, Research and Agricultural Extension in Mexico", and it gives fairly complete information on the academic and administrative organization of Departments and Schools of Agriculture in Mexico.

In the month of February of the current year, Dr. Heraclio A. Lombardo and Engineer Javier Becerra made a trip to the West Indies and gather fairly useful, though incomplete, information on the status of agricultural education in those countries. A few weeks before, an evaluation had been made for the Higher Institute of Agriculture of Santiago de los Caballeros in Dominican Republic, by a work group of which the Chief Educator for the Northern Zone formed part.

b. What is still to be learned

All of the information mentioned above make it possible for us to state that the problem is fairly well known and that, in fact, very little additional information would be needed to advance a program on a sound basis.

c. What the countries want

The countries of the area have been working very actively on improving agricultural education. As a result, in October, 1965, the II Round Table Meeting of Central American Schools of Agronomy was held in Managua, Nicaragua. Very important resolutions were voted at this meeting, among them, the creation of the Permanent Committee for Higher Agricultural Education. This committee is made up of the Deans of the Schools of Agronomy of Central America. The Chief Educator for the Northern Zone acts as delegate of the General Secretariat of CSUCA and Advisor to the Committee.

The Committee meets three times a year and makes possible the exchange of ideas and a very close coordination of training plans and programs. In this manner, a curriculum common to all Schools of the area has been achieved, and progress in this direction has been carried to the point of revising and approving the synthetic programs of the courses.

This way, the meetings of the Permanent Committee make possible continued action of great importance since through these meetings the needs of the countries and the way better technical assistance could be given to them is known.

2. Background

a. What IICA has done

Since the Agricultural Education program was started in April, 1965, IICA has made an evaluation of the Schools of Agronomy in the area which has made it possible to draw up a program of activities that is very specific and precise. The Plan of Action for Improving the Professoriate of Central America Schools of Agronomy, which contemplates the organization of Seminars for Professors, Short Courses, Specialization Scholarships, etc., has also been drawn up. Two Seminars for Professors have already been held, one for professors of Agricultural Economics, which was held in San Salvador from May 8 through 13, 1966, and the other one for professors of Animal Breeding, held in San José, Costa Rica, from September 4 through 9, of the same year.

These Seminars have made possible a deeper coordination of teaching, inasmuch as curricula have been revised, synthetic programs of the courses have been revised, etc., and analytic programs of the courses for these disciplines have been drawn up.

In this manner, the process of integrating higher agricultural education in Central America and Panama is taking very positive and significant steps forward.

In order to arouse the interest of the professors in new teaching methods that will increase the efficiency of the process of conveying knowledge, lectures have been delivered at each one of the Seminars, on communication and the use of audio-visual aids. At the request of these same countries, the Assistant Communicator has conducted courses in Technical Writing at the National School of Agriculture and Livestock of Managua, Nicaragua, and has actively participated in National and International Courses in Agricultural Extension in Costa Rica, Guatemala and El Salvador.

b. What others have done

The Inter-American Committee for Agricultural Development (CIDA) has done very important work in connection with agricultural teaching, education and research in Central America. This document is undergoing final revision and will serve as a valuable source of information for planning the future activities of the Regional Office for the Northern Zone of IICA.

UNESCO has made studies on education in general in El Salvador, Guatemala and Nicaragua. In these studies, it viewed agricultural education at vocational level and intermediate level. The Chief Educator for the Northern Zone took part in the studies of Guatemala and El Salvador, both.

3. Action Proposed

a. What IICA must do in the Zone

It is evident that IICA has taken the leadership in improving higher agricultural education in the Northern Zone and already has specific plans for accomplishing this objective.

Fundamentally, it is essential to continue with the Seminar and Short Courses for professors, expanding and improving the program of scholarships, collaborating with the Schools of Agronomy in the periodic revision of their curricula, and occasionally make available to them the services of specialized professors who could be furnished by the Turrialba Training and Research Center.

In the field of communication, the objective of IICA will be to promote the creation of the Department of Communication in the Schools of Agronomy, as a regular course. For this purpose, it is essential to continue for some years preparing the future professors in this subject, both through short courses and through scholarships for studying during longer periods.

b. What others must be made to do

The Agricultural Education Program of the Northern Zone has drawn up the Plan of Action for Improving the Professoriate, and it has been submitted to the consideration of the General Secretariat of CSUCA, who has officially submitted to the Ford Foundation, for the purpose of obtaining the necessary funds.

Both the Ford Foundation and the Rockefeller Foundation are actively working in the Zone and it is expected that in the near future they will renew their donations to agricultural education institutions so that they can better equip their laboratories and libraries.

Similarly, the Inter-American Development Bank is interested in financing projects for enlarging and constructing buildings and laboratories for institutions of agricultural education. It is certain that in the next few years, this action will take shape, as soon as the countries can present more detailed and properly drawn up plans.

In this respect, both Guatemala and Nicaragua are preparing preliminary projects with the consultant service of the Agricultural Education Program of the Northern Zone.

4. Activities for the next few years

a. Factors favoring action

In the Northern Zone there operates the Higher University Council of Central America (CSUCA), which groups the five Central American universities, plus that of Panama (this latter university joined CSUCA in mid-July of the current year). CSUCA operates through its General Secretariat and through its Special Committees. One of them is the Permanent Committee for Higher Agricultural Education, which evidently makes it much easier to carry out any project that is presented in the field of Higher Agricultural Education.

Aside from this, the process of Central America integration is well on its way and the spirit of integration has permeated the four corners. Consequently, in the field of Higher Agricultural Education there is fertile soil for achieving close coordination among the institutions, which are practically becoming integrated through a gradual but very intense process of coordination.

b. Factors that hamper action

The most critical factor in higher agricultural education in Central America and Panama is the lack of properly qualified professors. The number of professionals in Agricultural Sciences is really very low, with the sole exception of Costa Rica. Furthermore, the salaries paid offer no incentive to achieve stability in the professoriate.

The situation becomes more involved if we take into account the fact that most of the professors work part-time, that is, they have other occupations besides teaching.

It bears mentioning that some Schools, like the one in El Salvador, are taking considerable pains to improve this situation, paying higher salaries and hiring a larger number of full-time professors, but there is still a great deal to be done in this respect.

The fact that professors do not work full time is also a drawback to improving the professoriate, because very often they are unable to get leave of absence to take up postgraduate studies that will enable them to prepare themselves better for the difficult task of higher teaching.

The organization of "general studies" or "basic studies" in all of the universities in the area also constitutes a problem that is hard to solve. In some cases, like Costa Rica, this crisis has been overcome, but in others, like Guatemala, the problem is very acute. All students who enter the university must take up and pass a group of basic studies covering two years. These basic studies strongly stress Mathematics, Biology, Philosophy and Culture.

At the end of that time, they can freely choose the Department where they will continue their studies. In the two years that this system has been operating in Guatemala, students registering at the School of Agronomy has been dropping ostensibly, so much so that in 1966 only seven have registered, and only two in Veterinary. It goes without saying that if this system continues in effect, it is quite possible that the most acute problem in the future will be the scarcity of students.

Another very important problem is the lack of field practice and of agricultural research, both for students and for professors. This is due to the fact that most of the Schools of Agronomy do not have experimental stations and if they do, they are very far from the place where the school operates.

It must also be mentioned that in some schools, students do not attend full time for reasons that need not be mentioned. But it is clear that this is not advisable and unnecessarily prolongs the stay of the students in the University.

Also, it is necessary to bring out as a serious problem the lack of a properly regulated teaching career, that will offer financial incentives to the professors in order to draw them toward the institution.

All these problems have already been discussed and analyzed at the periodic meetings of the Permanent Committee, there is a full awareness of them and the necessary steps are being taken to solve them but, of course, this is a long-term process difficult to solve.

c. Objectives and goals

The main objective of the Agricultural Education Program is to improve the institutions of higher agricultural education in the countries making up the Northern Zone. In general, the goals of the program are: obtain a substantial improvement in the professoriate and in the programs of the Schools of Agronomy; achieve the integration of teaching and the establishment of semi-specialization at a regional level in Central America; promote the improvement of agriculture teaching in the West Indies and encourage the setting up of postgraduate training in some specific fields.

PROJECT 1.2.1. Improving Institutions of Professional Education
Fundamentals

A. Present Status

1. What is known

In a recent study on agricultural education, research and extension in Central America, made by the Inter-American Committee for Agricultural Development (CIDA), which is still in its stage of revision, the following tabulation bears mentioning:

Number of Rural Families, of Farms and of Graduates from Schools of Agronomy in Central America

Countries	No. of Rural Families	No. of Farms	No. of Grads. Schools of Agr. 1964 *	Agr. Eng. Grad. in Extens. **	Rur. Fam. per Agr. Eng.	Total Agr. Eng.	Farms per Agr. eng.
Costa Rica	97,250	47,280	540	25	172	565	83
El Salvador	201,910	174,210	31	40	2,810	71	2,465
Guatemala	417,390	348,690	47	15	6,732	62	5,634
Honduras	216,700	156,140		92	2,354	92	1,697
Nicaragua	123,640	51,570	78	12	1,373	90	573
Totals	1,056,890	777,890	696	184	13,441	880	10,452

On studying the above tabulation we realize the seriousness of the situation. With the sole exception of Costa Rica, there are not enough professionals in Agricultural Sciences in the Central American countries to implement the development plans for agriculture and livestock being planned both by the governments, individually, and regionally, by the Joint Mission for Planning.

If we refer only to regional agricultural development programs, there are two of them that are far under way. One refers to the increase in cattle production and the other one, to the increase in production of basic food crops, particularly corn, beans and rice. These are longterm programs and they represent an investment of several hundred million dollars. But if they are to be implemented, they must have available the professionals and specialists, of intermediate level, that are needed to implement those programs of agricultural development.

* Close to 50 per cent of which have not graduate yet.

** Included are all professionals in Agricultural Sciences, with degrees of B.S., Agronomists, Master of Science or Ph.D.

It is very hard to determine the number of professionals in agronomy that each country needs. However, allow us to state that Costa Rica, with 1,250,000 inhabitants, has 540 Agronomists and still it feels that there is still room for more professionals in this field. The other countries in the area suffer an acute shortage of agronomists and veterinarians, and if agriculture is to be put on a technical basis in such a way as to pass over from subsistence agriculture to market agriculture, it is essential that the greatest possible effort be made toward gradually reducing this shortage and consequently, all Schools of Agronomy, perhaps with the sole exception of Costa Rica, should set out immediately on an emergency program in order to train the professionals that these countries need. For this purpose, the first step is clearly to assure a steady professoriate, properly qualified and with enough incentives, financial and professional, for them to remain in the faculty as full-time professor.

Besides this study by CIDA, several others on this area have been made. A Study of the Present Status of Schools of Agronomy in Central America was made in 1965 by the Regional Office for the Northern Zone and another one was made on agricultural education, research and extension in Mexico, in 1964, by the National Association of Directors of Higher Schools of Agriculture of that country.

In all of the studies made, the problem reported to be the most acute and common to all institutions of higher agricultural education is the lack of academically trained professors enjoying stability guaranteed by a salary that is adequate for their needs.

Another of the needs observed in the majority of schools of agronomy in the area is to establish a Department offering the student broad knowledge of the use of communication. This refers to the basic knowledge of the process of communication and to the efficient use of the means of communication to groups, and mass communication.

Within this Department should be included, as an aspect of great importance, knowledge on scientific communication: writing the Thesis, preparing articles on scientific subjects for popular magazines, etc.

2. What remains to be learned

While fairly complete information is available on Central America and Panama, and to a certain extent on Mexico, the information available on the countries in the West Indies is very deficient.

At the same time, there is not as yet enough information on teaching methods used and on the quality of research done by schools of agronomy.

3. What the countries want

Both at periodic meetings of the Permanent Committee of Higher Agricultural Education of CSUCA, which groups together all the Deans of the Schools of Agronomy in Central American and Panama, and in Round Table Meetings of the Schools of Agronomy held every two years in the area, the unanimous desire has repeatedly been expressed to take part in a process of academic and administrative improvement of the institutions of higher agricultural education, which at present have serious defects in their organization, and fundamentally lack the necessary physical facilities, such as well-equipped laboratories agricultural land for field practice and research, herds of dairy and beef cattle, as well as poultry farms and other facilities that would make it possible to offer a more practical, dynamic and efficient training.

It can be truthfully stated that there is, in the countries in the area, full awareness of the deficiencies and the problems that hamper the improvement of higher agricultural education.

B. Background

4. What IICA has done

This point has been adequately explained in the description of the Higher Agricultural Education Program, in the section that refers to the Background. However, we would like to summarize it as follows:

Evaluation of the Schools of Agronomy in the area, that has served as a basis for collaboration of the program of activities.

A plan of action for the improvement of the professoriate of the Schools of Agronomy in Central America.

Various seminars for professors of Schools of Agronomy.

Participation in Courses in Technical Writing.

5. What others have done

This has also been explained before. In brief, we might mention the study by CIDA on Agricultural Extension, Research and Education in Central America, and the studies by UNESCO on education in general in El Salvador, Nicaragua and Guatemala.

Action Proposed:

6. What IICA must do

Continue the Program started with such success, which has awakened real interest among the professors and deans of the Schools of Agronomy, in the General Secretariat of CSUCA and among all persons connected with higher agricultural education in the area.

As far as possible, an effort should be made to intensify the training of professors either through short courses and seminars or, better yet, using the facilities offered by the Turrialba Training and Research Center so that they can obtain a Master's degree in their specialty.

7. What others must be made to do

The countries of Central America and Panama have made considerable progress in the process of integrating higher agricultural education and will soon reach definitive decisions on regionalization.

For this process of integration and specialization it is essential to have the advisory service of the professional staff of the Turrialba Training and Research Center.

Also, it is quite possible that close coordination may be achieved with the Ford Foundation, with the Inter-American Development Bank and with UNESCO.

8. Goals

In two years:

- a. Obtain the integration of higher agricultural education in Central America and Panama.
- b. Set up regional semi-specialization in well-defined and important areas of the agricultural sciences.
- c. Offer scholarships to study in Turrialba to at least fifteen professors of the Schools of Agronomy of the Central American Isthmus.
- d. Offer in-service training and short courses in communication as a first step to the establishment of the department of communication of the Schools of Agronomy in the area.

In five years:

- a. Establish specialization at regional level in the Central American Isthmus, in the following disciplines:

- Vegetable Parasitology
- Animal Breeding
- Agricultural Economics
- Agricultural Engineering
- Ecology and Soils

- b. Set up postgraduate courses in those areas that have qualified professors. The areas could include:

- Vegetable Parasitology, and
- Agricultural Communication

- c. Organize visual aid departments in the Schools of Agronomy for preparing didactic material, and for teaching the use of these materials to future graduates.

9. Future Action

Future action depends on the achievements obtained in these next five years and the needs of the countries in a future that is quite difficult to predict in an area that is subject to political, economic and social changes.

C. SOUTHERN ZONE

1. Present Status

The information on the present status of the teaching of agronomy, at college and high school level, is still unsatisfactory. In regard to training for graduates, the information is much more complete, once all the institutions interested in this level of teaching have been contacted.

The most important deficiencies, however, are found at the level of basic professional training, where it is easy to reach the conclusion that there are many structural problems, operating problems, particularly those that refer to curriculum and its proper implementation. At the same time, the deficiencies in libraries and textbooks make themselves felt in this Zone.

2. Background

a. What IICA has done

IICA has worked, in the Southern Zone, along three main roads in the matter of teaching:

- 1) The educational programs set up by the Zone itself. Among them is the Regional Cooperative Program for Graduates, set up in March, 1963 by the Board of Directors. This program started its activities toward the end of 1963 and operates on the basis of three Advisory Committees, made up of representatives of regional institutions and of IICA; in addition, there exists the Academic Council, which meets at least once a year to discuss top matters of the program. So far, the program has put in operation, under local institutions, courses for graduates in Plant Pathology (La Plata), Plant Genetics and Improvements, Soils, Plant Nutrition, Statistics and Experimentation, Agricultural Mechanics, Machinery and Motors, Animal Nutrition and Pastures, and Economics and Social Sciences (Piracicaba).

A short course has also been offered on "Teaching Methods in the University" at the School of Agronomy in Montevideo.

- 2) The contribution of the Graduate School of IICA, through its courses in Animal Production and Pastures, set up in the Agricultural Research Station in La Estanzuela, Uruguay.
- 3) Courses of a special nature, connected with specialists from the Southern Zone. For example, in Farm Management and Economics, in Extension, in Home Economics, Sociology, Communication and others. Other IICA specialists have also participated in courses offered by the Southern Zone.

b. What others have done

Some international institutions have also contributed and participated in common activities with IICA in the Southern Zone. Examples: Universities, Schools, Rockefeller and Ford Foundations, British Council, United Nations Special Fund, INTA, Ministries of Agriculture, etc. Sometimes the contribution has been direct, but in other cases it was offered to national institutions which, in turn, became associated with IICA.

3. Action Proposed

a. What IICA must do

IICA has a broad scope for the expansion of its activities in the Southern Zone. The main areas of higher agricultural education where these activities can be expanded, are the following:

1) Graduate Training

Contribution for the establishment of that level of training in the Zone, and institutional consolidation of courses in: Extension (Argentina), Plant Genetics and Improvement (University of Chile), Extension (Viçosa), Animal Production and Pastures (Viçosa - Belo Horizonte) and Animal Pathology (Belo Horizonte).

2) Training at College Level

Activities in this area are practically non-existent. It would be advisable to establish programs in all of the countries in the Zone, but the contribution would be particularly important to the less developed areas.

3) Library Improvement

This refers to deficiencies in organization, financing capacity and quality, which are to be found in most of the Schools. The importance of libraries for Graduate Courses need not be discussed.

4) Improvement in Teaching Methods

With obvious results for the professors themselves. This point can be tackled through courses in "Teaching Methods in the University" or through special courses and seminars organized by friends of study or main subjects.

5) Incentive for Textbook Program

Within the Zone there are at least 32 Schools of Agronomy. The lack of textbooks and teaching material is glaring.

6) Communication Programs

There is a great need for these programs, regarding communication for its own sake, or because of its relation with teaching, scientific communication, services, etc.

7) Short Specialization Courses

Also included here are seminars and symposiums, as activities that are necessary to meet specific purposes, required by their timeliness or momentary regional need.

8) Supplementing with Research and Extension

In their formal educational aspects. Also, intensification of the relations among those three sectors, as well as with educational activities of the other Zones and the Turrialba Center.

9) Equipment and Textbooks

Supplementing with equipment is rather exceptional and somewhat limited, being offered only in some cases of Graduate Courses that could not be started without that help. The same applies in the case of scientific periodicals and textbooks. At College level, the deficiency of textbooks in some fields is glaring.

b. What others must be made to do

It has already been stated that one of the best ways of acting in this sector is through Regional Cooperative Programs. The main point of these programs must rest on the motivation of the institutions participating in them. At the same time, the main actions are a responsibility of the institutions, as well as a large part of the material, financial, technical and scientific effort. A large share of IICA's functions consist of balance promotion, advisory service and small financial contributions to supplement professors, scholarships and some teaching materials.

Project 1.3.1. Graduate Training

Fundamentals:

A. Present Status

1. What is known

At the present time there are 26 institutions formally interested in starting courses for graduates in agronomical subjects in Latin America. Of these institutions, 14 have definitely started their courses, and 2 more are ready to start them at the beginning of 1967.

In the countries in the Southern Zone, the situation is as follows:

Argentina

a) Courses:

Courses in Genetics and Plant Improvement, Vegetable Physiology and Animal Pathology are under way.

A course in Extension is being planned, based on INTA and with the collaboration of professors from the Southern Zone and the Turrialba Center.

The Advisory Committee has been informed of the desire to repeat the Course in Plant Pathology for Graduates, without setting the date for it as yet.

b) Degree

This matter has not been decided definitely. The National Universities of Buenos Aires and of La Plata have formally considered this matter. In both cases, the matter has come back to its starting point, for reasons entirely alien to the matter itself.

In the case of the Course in Plant Pathology, the Council of Teaching of the Southern Zone decided, with the collaboration of the Director General, to grant the corresponding degree. For courses under way, Genetics and Vegetable Physiology and Animal Pathology, the students were informed of the steps being taken with the respective Universities for the granting of the Magister Scientiae degree.

c) Institutions

Because of the matter of the "degree" it is evident that the final institutionalization of the courses for graduates has not materialized as yet in Argentina. Whatever exists, corresponds to decisions at the level of the inner circles of Faculties and their Committees.

The National Institute for Agricultural and Livestock Technology (INTA), is an active promoter of graduate courses in Argentina, which has been associated with the programming and initiation of all of the courses so far.

Various Argentinian authorities have taken different viewpoints on the need to institutionalize this kind of training. In addition to other alternatives, the following possibilities have been mentioned: 1) an independent solution by each University; 2) Common and coordinated solution for Argentinian Universities; 3) Setting up a Center for Postgraduate Studies located in INTA, intended for the entire country and in coordination with the Universities.

The School of Agrarian Sciences of the National University of Cuyo is also an active member of the Advisory Committee for the Southern Andean Area. It would not be surprising to see this School become the first Argentinian School formally organized for this kind of training.

Brazil

a) Courses:

The courses in Rural Social Sciences, Statistics and Experimentation, Plant Pathology, Genetics and Plant Improvement, Agricultural Mechanics, Motors and Machinery, Animal Nutrition and Pastures, Soils and Plant Nutrition, are under way in Piracicaba. Courses have been proposed and programmed in: Extension, in Viçosa; Animal Pathology, in the Escola Superior de Veterinaria, in Belo Horizonte; Animal Production and Pastures, with the cooperation of Viçosa and Belo Horizonte.

b) Degree:

This aspect is definitively decided in Brazil in the cases of Piracicaba, Viçosa, Km. 47, Porto Alegre and Pelotas. The respective Universities have already assumed responsibility for same.

c) The Rural University at Km. 47 started its postgraduate courses during the time when the relative positions of CICATI (the Coordinating Committee for Postgraduate Teaching Matters, of the Ministry of Agriculture) and of the Advisory Committee to the Sub-Tropical Region, which was already established and operating, were being clarified.

The Escola Superior de Veterinaria in Belo Horizonte proposed its admission into the Brazilian Advisory Committee. Having been approved by this Committee, it is now up to the Council of Teaching.

The Eliseu Maciel Higher School of Agriculture (Pelotas), also applied for admission into this Committee, with the additional possibility of coordinating with certain courses of the Plata Region, in special cases connected with agriculture and livestock raising in that region. Resolution awaiting decision of the Council of Teaching of the Southern Zone.

The Institute of Economic Studies and Surveys of the University of Rio Grande do Sul has applied for admission into the Advisory Committee of this Region, in connection with the offering of a course in Rural Economics.

The School of Agronomy and Veterinary of the University of Rio Grande do Sul has started courses for graduates in Soils and Production and Improvement of Pastures, with the participation of the University of Wisconsin, AID Contract. These courses are not associated with the IICA Regional Cooperative Program, Southern Zone.

Chile

a) Courses:

A course in Genetics and Plant Improvement is programmed to be started in April, 1967, at the University of Chile and with the collaboration of the Catholic University and of the La Plata Experimental Station.

A course in Rural Economics is being programmed for La Escolatina, with the collaboration of the Sector of Economics of IICA, Southern Zone.

A course in Food Technology is being studied, with the participation of the Schools of Agronomy of Mendoza, and the University of Chile, and the Institute of Technology of the University of Chile.

Preliminary consideration has been given to a course in Soils and Irrigation, to be offered in Mendoza with the participation of Chilean Universities.

b) Degree:

The University Council of the University of Chile has approved the granting of the Magister degree to those who graduate in Genetics and Plant Improvement.

La Escolatina is getting ready to make a similar request for approval to grant that degree in its course in Rural Economics.

Steps are being taken in the School of Agronomy of the Catholic University, before its University Council, for that purpose.

c) Institutions:

The National Research Center of La Plata has participated in the planning of the course in Genetics and Plant Improvement, and it is expected that it will actively contribute in its offering, in whatever pertains to it.

The Catholic University of Chile has also made an important contribution.

Uruguay

a) Courses:

The third course in Animal Production and Pastures is underway, located in La Estanzuela. This course is part of IICA's Graduate School.

The fourth course in Animal Production and Pastures is supposed to start on September 5, 1966.

b) Degree:

Insofar as the courses offered in La Estanzuela are concerned, the degree is granted by IICA's Graduate School.

c) Institutions:

The School of Agronomy of the University of the Republic is a visiting member of the Advisory Committee of the Plata Region.

At the present time, an effort is being made to intensify its relations with the courses in La Estanzuela.

The sectors that most probably will develop are: Livestock and Pastures, in connection with La Estanzuela; Rural Economics, together with IICA, Southern Zone, La Estanzuela and Argentina; Soils, together with Argentina and La Estanzuela.

The courses for graduates offered in La Estanzuela have been coordinated with the Regional Cooperative Program, by decision of the Board of Directors of IICA, on April 22, 1966.

Paraguay

a) Courses, Degrees and Institutions:

So far, consideration has not been given to this matter in Paraguay.

B. Background

What IICA has done

IICA is closely connected with the initiation of formal graduate courses in Latin America, since it organized and put under way the first courses of this kind in its Turrialba Center in 1946-1947.

On May 27, 1963, the Board of Directors of IICA approved the creation of a Regional Cooperative Program for Graduate Training, to be established in the Southern Zone, located in Montevideo. The preliminary work of studying the situation and putting the Program into operation were entrusted to a Planning Committee that rendered its Report in March, 1963. The first activities under the Program were started in November that same year. The Southern Zone of IICA was divided into three Regions for that purpose.

In compliance with the above report, a Council of Teaching was set up for the entire Zone and Advisory Committees were set up for each of the Regions.

The dates for the Advisory Committees were: March 30, 1964, Plata Region; August 25, 1964, Sub-Tropical Regions; and October 28, 1964, Southern Andean Region. The Council of Teaching was installed on November 19, that same year.

The graduate course in Plant Pathology, offered at the School of Agronomy of the National University of La Plata, started on April 1, 1964, was the first academic activity under the Program.

The next step was to become associated with the "Luiz de Queiroz" Higher School of Agriculture, of Sao Paulo, in order to offer graduate courses as of September 15, 1964. During that first cycle, courses were offered in six fields of specialization: Experimentation and Statistics, Plant Pathology, Genetics, Agricultural Mechanics, Motors and Machinery, Vegetable Nutrition and Soils - to which were added Rural Social Sciences and Animal Nutrition and Pastures during the second cycle, started on April 11, 1966.

In 1961-62, IICA started important activities at the Training and Research Center for the Temperate Zone, at La Estanzuela, Uruguay. In 1962 there arrived a group of professors and students from the Turrialba Graduate School, to carry out research work at La Estanzuela. In 1963, it was resolved to recognize La Estanzuela as a branch of IICA's Graduate School, entirely in the Southern Zone. The first quarter of that course was offered at the National Institute for Agricultural and Livestock Technology, in Castelar, Argentina.

In 1966, the entire course is transferred to La Estanzuela, to be offered there with the cooperation of specialists from FENU 80 and FENU 121, of FAO, and also with the cooperation of Uruguayan professors from the University of the Republic and of Estanzuela itself.

In 1965, the Board of Directors of IICA voted a resolution to the effect that those courses be coordinated with the Regional Cooperative Training Program for Graduates.

3. What others have done

The next institution, after IICA, to offer graduate courses and the corresponding degree was the University of Puerto Rico, in 1947. In that same year, the La Molina Agrarian University was starting its postgraduate courses, but the first degrees were conferred in 1962. The National University of Chapingo started its Postgraduate College in 1959. In 1960, the Technological Institute of Monterrey and the Rural University of the State of Minas Gerais, in Viçosa, Brazil were starting their first formal postgraduate courses.

Several schools report having started their courses for graduates, on dates prior to 1960, and even prior to 1940. But in reality, those courses were not organized according to the formal requisites corresponding to the "Magister Scientiae" or "Master of Science" level.

The work of institutions associated to IICA, which have made possible the Regional Cooperative Training Program for Graduates was brought out in the previous point.

Action Proposed

4. What IICA must do

The general objectives of this Project are set forth in a series of IICA documents, among which are the following:

- a. New structure for the Institute Programs for the 1960-1970 decade. 15/10/61.
- b. "A New Dimension". Report No. 3, March, 1962.
- c. "A New Dimension". Report No. 4, September, 1963.
- d. "A New Dimension". Report No. 5, May, 1964.
- e. "A New Dimension". Report No. 6, April, 1965.
- f. "Policy and Proceedings". No. 2 (Ref.), 15/4/61.
- g. "Policy and Proceedings", No. 5, 7/1/62.
- h. "Report of the Planning Committee for the Graduate Training Program for the Southern Zone". Santiago, Chile, March, 1963.
- i. "Resolution on Graduate Training Program for the Southern Zone". Board of Directors. 27/5/63.

To summarize the comments on this point, it will suffice to transcribe the following paragraphs:

"We assign the following basic priorities to the activities of the Institute over the next five years:

First: Training of professional staff at the level of postgraduate". As part of the basic priorities voted as a result of the revision of the Expanded program, the Institute will put into practice the fundamental changes in its structure and programs that will enable it to:

- a. Considerably increase its teaching capacity at postgraduate level and offer high-quality training, both through its own centers, and on the basis of technical nuclei set up in institutions of the Member Countries. Training at postgraduate level will get top priority, particularly in connection with the training of professors for the universities.
- b. Effectively help the Latin American universities to progress gradually toward the goal of offering training at postgraduate level, starting by an intermediate system of in-service training at a higher or postgraduate level, that will make it possible for them to connect research to training and transform their training methods bridge the gap between professional training and postgraduate specialization.

- c. Promote in Latin American institutions an effective liaison between research, training, extension and communication, and encourage working in teams with interdisciplinary approaches to make public institutions serving agriculture, effective action tools.

5. What others must be made to do

The general responsibility of this Project is in the hands of the Advisor to the Basic Program for Agricultural Education. However, the Project is divided into material sectors, easily identifiable in conformity with the established structure. On the one hand, the Regional Cooperative Program is divided into three Regionas, in addition to the coordinating site located in Montevideo; on the other, are the Graduate courses established in the Center at La Estanzuela. Each one of these "sectors", in turn, is under the more specific responsibility of the following persons: Southern Andean Regiona, Hiram Grove; Plata Region, Angel Marzocca; Sub-Tropical Regiona, Eurípides Malavolta; La Estanzuela Program, Osvaldo Paladines. In addition, there are persons who are responsible for Activities or Individual Actions mentioned in the corresponding points of the Project.

6. Goals

In addition to an evident continuity between the goals mentioned below, two preliminary remarks must be made on them: on the one hand, those goals are conditioned by budget availabilities, and on the other, there exists the desire to anticipate them as far as possible, without adhering to the periods mentioned.

a. In two years:

1) Present Courses

These courses must always be continuous, in spite of the fact that three situations might arise. In some cases, a new cycle is started each year (Estanzuela, for example); in others, the new cycle is started only when the previous one is completed (Piracicaba); and in others, the repetition of courses can be effected with a time lapse between one and the other (Plant Pathology, La Plata).

2) New Courses

The possibility is contemplated of offering courses in Extension and Plant Pathology (Argentina); Extension, Rural Economics and Animal Pathology (Brazil); Food Technology and Soils and Irrigation (Chile - Mendoza).

3) A solution will be sought to the granting of the degree of Magister Scientiae, in institutions of Argentina and in the Catholic University of Chile.

4) Institutional Strengthening

This refers both to material aspects that will guarantee a satisfactory operation of the courses, and particularly, to the training of professors to substitute visiting professors that are necessary to supplement and put under way some of the courses.

The courses that are being developed in La Estanzuela, with the cooperation of the staff of IICA, of FENU-80 and FENU-121, are a good example for the above remark.

b. In five years:

1) Previous goals:

Will be continued in those cases where they have not been completed in two years:

2) Courses:

Consolidation of existing courses. The possibility of offering courses in new areas for the Program can also easily be admitted, both as regards the disciplines and as regards accepting new institutions.

3) Institutionalization of graduate training:

Ways must be sought by which those institutions which have started courses for graduates on special commissions for each course, can establish them formally through Departments for the purpose.

In some cases, the clearest road seems to be a forma association of institutions at a national level.

In the case of Uruguay, an effort must be made to set up an increasing coordination of the courses offered at La Estanzuela with those that may be developed at the School of Agronomy.

Regarding the Graduate School located in Turrialba, an effort must be made to attain greater coordination with the courses in the Southern Zone, and even the possibility of integration for offering certain courses. For example, in the general area of Sociology and Extension.

4) Association for accrediting institutions.

This, in the long run, seems to be the general direction of the Regional Cooperative Program for Graduate Training. It must be up to regional institutions to identify and set up criteria for guaranteeing the quality of training and to accept or turn down new institutions who may wish to join a common Association.

IICA should have a permanent position of guide and advisor, but it would hardly be in a position to interfere with the wishes of national institutions starting out in Graduate Training. This could best be done through an Association, as suggested, controlled by the regional institutions themselves.

7. Structure of the Project

Sub-Projects:

In order to facilitate the Project's progress, it has been divided into 5 Sub-Projects:

- 1.3.1.1. General Coordination, in Montevideo
- 1.3.1.2. Southern Andean Region
- 1.3.1.3. Plata Region
- 1.3.1.4. Sub-Tropical Region
- 1.3.1.5 Courses at La Estanzuela

8. Activities and Actions

An effort has been made to describe the Activities that correspond to each Sub-Project, as well as the main Actions that correspond to each "activity".

The pertinent information is contained in Attached Schedules. Through them it is possible to get an indication, for example, of the most likely "action" periods, the participation of other institutions, people in charge, or relations with other projects.

Project 1.3.2. Training at Department Level, and Communication at the University.

Fundamentals:

A. Present Status

1. What is know, what remains to be learned and what the countries want

a. Training at Department Level

The countries in the Southern Zone have at least 32 schools of Agronomy distributed as follows: 8 in Argentina, 17 in Brazil, 5 in Chile, 1 in Paraguay and 1 in Uruguay. The importance of those countries and of their agriculture need no comment.

The Southern Zone has discreetly participated in certain regional activities of IICA intended to improve Higher Agronomical Learning.

Individually, the specialists of the Southern Zone have been contributing to the improvement of specific aspects, particularly in the areas of Cattle Production, Pastures, Soils, Economics, Extension and Sociology.

The Regional Cooperative Program for Graduate Training has also contributed indirectly to that improvement, as regards the revision of programs, improving physical aspects and training methods. Its main contribution lies in training professors to give them a higher level of knowledge and greater capability for the research work that must go with teaching.

Furthermore, there are regions in the Southern Zone of IICA where the great problems of agronomical training are clearly connected with greater efficiency on the part of Schools that are still struggling to become reasonably established.

b. Organization and Development of Libraries

In many of the 32 schools of Agronomy existing in the Southern Zone, it would seem that the role of the library is not clearly defined. They are not getting adequate support, their collections are meager, the personnel is not qualified to organize the collection and give efficient service; and in most cases, the libraries operate in inadequate locations. In some institutions, because they are unable to overcome the problems, they even prefer to close down the libraries. This means paralyzing a vital part of an institution of agricultural education.

There are, of course, worthy exceptions like, for example, the Library of the School of Agronomy and Veterinary of the University of Buenos Aires. This Library is even in a position to give a regional assistance in regard to documentation service.

c. Improvement of Higher Education

This problem has been a source of concern to all of the Schools of Agronomy.

As a result of the short course in "Teaching Methods at the University", offered in March 1966 in Montevideo, the Schools of Agronomy of the University of Chile, La Plata and Piracicaba, have expressly indicated their interest in repeating that course under the auspices of IICA- Southern Zone.

The eight graduate courses being offered in Piracicaba have included an optional subject on "Methodology of Teaching", intended for students who are teaching or are planning to teach.

Other activities, originating in other Zones of IICA but also contributing to the improvement of teaching in the Southern Zone, are a meeting on Genetics, to be held in Piracicaba, at the end of November, 1966 (Program of the Andean Zone) and a seminar on Vegetable Physiology (in Turrialba, in January-February, 1967).

d. Textbooks and Teaching Material

Since there is no project at present in the Southern Zone, that will promote and coordinate this Program, the position of the professors of the Schools of Agronomy as regards the production of textbooks and teaching materials is not known.

The Southern Zone at present is cooperating in the same of publications of this Program, but it needs to supplement this action with coordination, production and consultation.

3. Communication in the University

In the Schools of Agronomy of the Zone where there are Communication services, they function more like publication services than Communication as such. That is, these specialists do not conduct courses nor do any research work.

In May this year, the "Luiz de Queiroz" Higher School of Agriculture (ESALQ), in Piracicaba, included in its professional staff a Communicator with an M.S. whereby this School is planning to set up a Communication activity to include teaching, research and publications. Since we have working contract with ESALQ, we expect to cooperate with this Communication Unit and to try to get other schools to adopt a similar plan.

At present, the Deans of the Schools of Agronomy of the Southern Zone have a clear picture of what Communication is, and of its importance within the University.

B. Background

1. What IICA has done and what others have done

a. Training at Department Level

The Southern Zone has not developed any regular activities on "Training at Department Level" as part of a special program for that purpose.

This kind of activity has been developing in the Andean and Northern Zone, where the Higher Agricultural Education Program has been regularly included in the Program-Budget of the Institute. In the Northern Zone, these activities have also been associated with CSUCA, a regional association of Central American Universities. In the Andean Zone, the Program has been active at a regional level and at a level of institutions and their problems. In this latter case is included the organization of 3 Latin American Conferences on Higher Agricultural Education.

In the Southern Zone, the activities intended to push the development of the Schools have been limited to individual action by the specialists in Rural Economics, Rural Extension, Pastures, Soils and Communication.

b. Organization and Development of Libraries

IICA was the first institution to become interested in agricultural libraries in Latin America. Thus it was that in 1952, a study was prepared on the facilities for scientific exchange, where stress is laid on the situation of the agricultural libraries in Latin America.

As part of its work of giving technical assistance to agricultural libraries, IICA has contributed to the holding of a Latin American Meeting of Agricultural Libraries, which took place in Turrialba in 1952. It also serves as General Secretariat, located in Turrialba, for the Inter-American Association of Agricultural Librarians and Document Specialists (AIBDA). It is fitting to mention here that the Associate Communicator of the Southern Zone has been appointed Official Representative of AIBDA in Uruguay.

The Inter-American Institute of Agricultural Sciences is giving assistance to agricultural libraries in its Member Countries, through librarian training courses and related services. It has been giving this assistance almost from its inception.

Recently, the Chief Librarian of the Library and Documentation Service, in Buenos Aires in December, 1965, in a pondered work, presented an analysis of the present status of the Agricultural Libraries in the Southern Zone. This study has brought out the urgent need there is for advisory service to these libraries.

In addition, at the three Latin American Conferences on Higher Agricultural Education, held in Santiago (Chile), Medellín (Colombia), and Piracicaba (Brazil), the importance of the agricultural libraries in every program of agricultural education and research was brought to the fore, and IICA was entrusted to give advisory service.

c. Improvement of Higher Education

Very little has been done in the Southern Zone in this respect.

In March, 1966, a course was offered in "Teaching Techniques at the University" at the School of Agronomy of the University of the Republic in Montevideo.

IICA has also concerned itself with this problem in its Andean, Northern Zone and the Turrialba Center. The main activities have been connected with meetings of Deans and of continental professors, the latter grouped according to subjects, such as Plant Pathology, Economics, Vegetable Physiology and Genetics.

The Latin American Conferences on Higher Agricultural Education sponsored by IICA in Santiago, Bogotá and Piracicaba studied the problem thoroughly and have classified it among those that should have top priority.

d. Textbooks and Teaching Material

IICA's Textbook and Teaching Material Program, of hemispheric scope, located in Lima, Perú, has been operating for some years. During the course of its development, the need for the different Zones of IICA to give greater attention to coordination, production, advisory service and information under this Program has become evident.

In harmony with this feeling, the First International Meeting on Scientific Communication and Documentation, held in Buenos Aires in December, 1965, recommended that the Southern Zone stimulate the production of textbooks and manuals, and promote the dissemination of the textbooks edited under said Program.

e. Communication in the University

Within IICA, the courses in Agricultural Scientific Communication were the first to be conducted in Latin America. In 1962, the Associate Communicator of the Southern Zone was invited to conduct in Lima, Peru, a course in this specialty, so that the Communicator of the Andean Zone, at a later date, would offer courses of this kind. With the appointment of a Communicator in the Northern Zone, these courses have begun to be offered in this Zone also.

This kind of activity is among those that have priority in IICA's general program. Also, the 26th. General Conference of the International Federation of Scientific Documentation, which met in Lima in September, 1962, recommended the organization of these courses in institutions of higher education, under a program of initiation to documentation.

The International Meeting on Scientific Communication and Documentation, which met in December, 1965, in Buenos Aires, with the attendance of Deans of the Schools of Agronomy of the Southern Zone, also approved a resolution in that respect.

Action Proposed:

3. What IICA must do and what others must be made to do

The field of teaching at University College level poses a variety of problems to be solved in the Southern Zone. This remark is easily justified also by the fact that a large number of Colleges have not developed uniformly, which is readily admitted.

The most common, and possibly the most important, problems are listed below, in line with the main sub-projects of this Project:

a. Training at Department Level

In Addition to the general institutional problems, the following more specific problems can be mentioned:

Improvement in the training of professors

Full-time professors.

Professors associated with research.

Exchange of professors to environment outside of their institutions.

Improvement in teaching.

Improvement of Libraries.

Production of better textbooks and teaching material.

Promotion of better motivation, incentives and facilities for producing more efficient study plans.

Problems connected with a better school organization: operation and/or structure.

Exchange of relations with environment, experimental stations, colleges and other institutions.

Specific problems of different kinds.

b. Organization and Development of Libraries

Professional Improvement of Librarians

Increasing present collections, of both magazines and books.

Set up or intensify reference services.

Introduce into Colleges of Agronomy, seminars on the use of the Library.

Promote inter-library lending.

c. Improvement of Higher Education.

Problems connected with the improvement in Higher Education can be grouped into five main points that are hard to isolate from each other, because there exists an obvious continuity between them. Improvement is suggested in connection with:

Methodology of Teaching

Training of Professors

Textbooks and Teaching Materials

Infrastructure of Teaching

Physical facilities.

d. Textbooks and Teaching Material.

Divulge the Program to all Colleges of Agronomy of the Southern Zone. Foster the improvement in the presentation of the Textbooks and Teaching Material, as to purpose, organization and style.

Have up-to-date information on works being prepared at the various Colleges of the Southern Zone in connection with teaching. Coordinate activities with the Textbook and Teaching Materials Program, located in Lima, Peru.

e. Communication in the University.

1) In the Graduate courses

Present to the professors of Schools of Agronomy, the methodology to be kept in mind in preparing agricultural scientific works.

Scientific works must follow a logical structure. In addition, the presentation of the information to be included must adhere to certain mechanics of construction that will insure proper interpretation and uniform style. Agricultural Scientific Communication is not something that must be considered alien to any profession. Thus, an agronomist or a veterinarian, when he learns the standards for preparing scientific works, he also learns to think and express himself in an orderly manner.

2) In Special Seminars

Arouse the interest of university authorities in faithfully interpreting the role of Communication in the University.

Interest Schools and Colleges in organizing Seminars on Communication during the last undergraduate year.

3) Publications

Standardize the production of bulletins, magazines, theses, monographs, etc.

Set guidelines for the creation and operation of Publication Committees.

4) Advisory Service

Give advisory service to Schools of Agronomy in organizing communication services.

Where such services exist, try to have the teaching staff informed about the priority it should have.

4. Goals

In two years:

a) Teaching at Department Level

- 1) Appointing an Assistant Educator during the first six months of 1967-1968.
- 2) Carry out the initial organization of the Project and put it under way.
- 3) Promote small region meetings of Deans.
- 4) Identification of common objectives in order to organize them, in accordance with priorities, in terms of two-years and five-year plans.
- 5) Organize a system of recording the main data and features of the institutions in the Zone.
- 6) Choose one School or College per country in the Zone, to receive first, the benefits that IICA is able to offer them.
- 7) Promotion of seminars on special matters or most urgent matters.

b. Organization and Development of Libraries.

- 1) Promotion of regional meetings of agricultural librarians.
- 2) Promote the preparation of a collective catalogue of periodical publications, by the Agricultural Libraries of the Universities.
- 3) Give a six-month course on Libraries in a country in the Zone.
- 4) Set up in each country, an Agricultural Library that will be a repository, at the national level, of the theses presented at the various colleges of Agronomy.
- 5) Encourage the exchange of theses among the institutions offering graduate training.

c. Improvement in Higher Education.

- 1) Diagnosis of the situation and promotion of greater interest in the Colleges in the improvement of their professors and teaching methods.
- 2) Promote the organization and offering of courses in teaching methods intended for improvement of professors that are already teaching. One course per country in the Zone.

- 3) Promote the organization and offering of the subject "Teaching Methods", together with specialization courses at the level of Magister.
- 4) Promote the study of measures intended to improve the teaching career, on every possible occasion:

Periodic examinations for promotion, stressing technical criteria, professional background and research.

Incentive for full-time work.

Increasing research and the publication and distribution of scientific works, and works intended for dissemination of findings.

Expand scientific exchange with other colleagues.

Greater acquaintance with problems alien to academic life, intensifying action within them.

- 5) Promote the inclusion of topics related to improvement of professors and higher education at all meetings of Deans.
- d. Textbooks and Teaching Material
- 1) Organize this Sub-Project of the Project and start it going.
 - 2) Set up a record of works being produced, including approximate dates of completion.
 - 3) Increase the present production of Textbooks and Teaching material in Schools of Agronomy.
 - 4) Cooperate in the final presentation of works being produced.
 - 5) Set up such machinery as will insure adequate coordination with Official Representatives of IICA in the countries in the Zone.
- e. Communication in the University.
- 1) Foster the organization of Courses in Communication and Information Services, at least in 4 Colleges of Agronomy.
 - 2) Organize the II International Meeting on Scientific Communication and Documentation.
 - 3) Promote research in the field of Agricultural Scientific Communication, which is still not being done in Latin America.
 - 4) Further regional meetings of people in charge of University Communication services.
 - 5) Concentrate efforts on Schools of Agronomy with the least possibility of including Communication in their courses for their own account.

In five years:

It is considerably harder to foresee the goals for five years with reasonable certainty. On the one hand, it is desirable that the goals for two years will have been completed. On the other hand, it must be reasoned that there should be a certain continuity between the two-year and the five-year goals. Furthermore, it is likely that the two-year goals will not be uniformly completed in all areas or countries. Finally, it seems acceptable to admit that the general objectives must also be considered as compass points for Project 1.3.2., as a supplement to the effort presented, of identification of goals over a longer term.

a. Training at Department Level

Theoretical possibility of expanding assistance to new institutions and/or new specific areas or disciplines.

b. Organization and Development of Libraries.

Maintain a permanent advisory service to university agricultural libraries, through specialists assigned to the Southern Zone.

c. Improvement of Higher Education.

In addition to the points mentioned for two years, increase the publication of material on "Teaching Methods" based on the experience obtained.

d. Textbooks and Teaching Material.

1) Eventually appoint exclusive distributors for the Textbooks and Teaching Material put out by IICA in the five countries in the Southern Zone.

2) Publish textbooks and teaching material produced by IICA, Southern Zone.

3. Communication in the University.

1) Foster among the professors of the Schools of Agronomy, the greatest use of documentation service existing within and outside of the country.

2) Publish the findings of research in the field of Agricultural Scientific Communication.

5. Structure of the Project.

This Project has been subdivided into the following 5 Sub-Projects for the purpose of facilitating their progress:

- 1.3.2.1. Training at Department Level
- 1.3.2.2. Organization and Development of Libraries
- 1.3.2.3. Improvement of Higher Education
- 1.3.2.4. Textbooks and Teaching Material
- 1.3.2.5. Communication in the University

6. Activities and Action

The attached sheets contain a descriptive schedule of the "Activities" and "Actions" proposed for each Sub-Project of this Project.

PROGRAM I. AGRICULTURAL EDUCATION

PROJECT 1 - GRADUATE SCHOOL

Background

IICA's Graduate School has done pioneering work in the field of agricultural education at the postgraduate level. It started its activities officially on the 8th of January, 1946 and expanded them in 1963 by starting teaching at La Estanzuela (Uruguay) and by establishing the Regional Cooperative Program for the Southern Zone, in which outstanding universities in Argentina, Brazil, Chile and Uruguay take part.

The long experience of this School has served to promote and inspire the establishment of postgraduate studies in several of the universities in Latin America.

So far, 268 professionals have graduated from this School, of which 227 received the "Magister's degree".

About 40% of the professionals who have earned their specialization in Turrialba are now holding teaching positions in universities connected with Agriculture in Latin America and they are exerting considerable and multiplying influence on their teachings.

Another large group, 45% of the graduates, is working on scientific research. Almost all of the others are working on agricultural extension (14%).

The Graduate School is at present offering about a hundred courses to a number of students that has tripled in the last five years, but that cannot continue to grow because of limitation of scholarships and of physical plant.

Future Prospects

The scarcity of qualified personnel continues to be one of the most serious limitations to agricultural development and constitutes one of the greatest obstacles to achieving the goals contemplated in the Alliance for Progress. No matter how conservative the estimate of the need for specialists trained at the level of "Master" or "Magister", it is no less than one-thousand professionals per year for Latin America. In the light of this demand, the number of graduates contributed by the seven schools that exist at present in these countries is clearly inadequate.

Turrialba, with a staff of 73 specialists, has a training potential to handle efficiently no less than 300 students, but it lacks the physical facilities and the scholarships to materialize this potential. In fact, since 1961, active efforts have been made to get financing to build the essential facilities. After long and burdensome efforts with the Agency for International Development (AID), which were made with the Inter-American Development Bank (IDB) and there they lie, awaiting an uncertain fate. In the meantime, the presence of the specialists assigned to Turrialba by the United Nations is being partly wasted. In addition to this, almost 80% of qualifying applicants do not get the scholarships that would enable them to finance their studies at the Turrialba Center.

Insofar as its academic aspects, the School is being vigorously oriented toward training for agricultural development of Latin America. Within this general approach, subjects are being added that will make possible the application of specialized knowledge to university teaching, agricultural research, extension and other activities carried out by national agricultural institutions. The adaptation of biological principles to the tropical environment and the interpretation of economic and social phenomena in terms of the present culture of Latin America are being fully incorporated into the studies. This training, having a broad interdisciplinary basis and being given entirely in Spanish, tends to prepare specialists in certain critical fields, such as: tropical soils, plant health, food crops, forest management, tropical cattle raising, rural economics, agricultural extension, inventory and evaluation of natural resources. Thus it differs substantially from national institutions of learning.

Less than one third of the personnel and the resources employed by the Graduate School is financed with funds from quotas paid in by the Member States. As a result, the Institution is highly vulnerable to fluctuations in outside support and it is hard to achieve internal coherence, coordinating contributions made by entities whose objectives are often dissimilar. It is expected to be able to gradually correct this structural deficiency during the course of the next years, so that in 1970 there will be available a nucleus of specialists representing those subjects that are most sorely needed to train specialists required by the countries.

Below is given a detail of the specific work that will be developed by each Department in the field of graduate training.

A. Department of Economics and Social Sciences

a. Regular Quota Funds

1. The following courses will be offered: Farm Management; Administration and Supervision in Extension; Cultural Anthropology; Oral and Written Communication; Credit and Cooperatives; Economic Development; Economics; Land Economics; Extension as a Basis for Development; Agrarian Geography; the Family in Latin America; Leadership; Marketing; Statistical Methods; Extension Methods; Economic Research Methods; Agrarian Policy; Rural Sociology; Land Potential.
2. As in previous years, a regular course will be offered for Training Agricultural Librarians, which is attended by officials of many institutions. The Chief Librarian will direct the course, which will last three months, and the other Library specialists will participate as instructors. As in previous years, a course in the Use of the Library will be offered to Institute graduate students this fiscal year. The possibility of getting in-service training will also be offered to one or more agricultural libraries of the Member Countries.

3. Courses in Technical Writing will be offered at the Graduate School and advisory service will be given to graduate students in preparing their theses.

b. AID Contract Funds

1. Four Chief Specialists and four Professional Assistants, in addition to Consultants, have been assigned to the Department. Those specialists conduct regular courses in their respective disciplines, and also offer special courses on the application of their specialty to problems of analysis, evaluation and use of resources for development. All of them supervise the studies and the research done by the students.

c. United Nations Development Program, managed by FAO

1. Three Economists who strengthen teaching and research in natural resources, and their utilization for development, have been assigned.

B. Department of Forestry

a. Regular Quota Funds

1. Both Agricultural Engineers and Forestry Engineers will be accepted as candidates to earn the degree of "Master Scientiae". The first group will take general courses and then take a specialization; the Forestry Engineers will immediately go into the specialization, and at the same time supplement such deficiencies as might exist in their academic training.
2. The regular courses that will be offered at the Graduate School will be the following: Aerial Photogrammetry; Anatomy and Technology of Wood; Forest Surveys; Dendrology; Ecology; Forest Economics; Forest Operation; Managing Pristine Areas; Forest Arrangement; Forest Management and Policy; Forest Protection; Silviculture; Utilization of Forest Products.
3. In addition, it is planned to increase in-service training for special students.

b. United Nations Development Program, managed by FAO

1. Four Foresters of this Program assigned to the Department will serve to strengthen training and research, particularly in Silviculture and Wood Technology.

C. Department of Plant Science and Soils

a. Regular Quota Funds

1. Courses will be offered in: Agricultural Meteorology and Climatology; Biochemistry, Cartography; Cytogenetics; Pest Control; Basic Ecology; Ecology of Insects; Soil Science; Entomology; Evaluation of Resources; Vegetable Physiology; Phytogeography; Plant Improvement; Plant Pathology; Photogrammetry; Photomicrography; Geology; Hydrology; Inventory of Resources; Statistical Methods; Micology; Micro-Techniques; Pedology; Radio-isotopes; Gathering and Identifying Diseases; Silviculture.

b. United Nations Development Program, managed by FAO

1. Graduate students assigned to the Department will receive training on pest control affecting food crops, specifically beans and yucca.
2. The three Soils Specialists under the United Nations Development Program will devote themselves to strengthen the training in tropical soils offered by the Graduate School, laying stress on problems regarding the relationship between plant, soil and water in the tropics. They will conduct the courses in Soil Science; Fertilizers and the Fertility of Soils; Chemistry of Soils and Physics of Soils. The Climatology Specialist will strengthen training in matters related to the characterization and importance of various climatic factors in vegetable production in the tropics; he will conduct courses in Agricultural Meteorology and Climatology, and Hydrology.

D. Department of Animal Breeding

a. Regular Quota Funds

1. Training of students at the Graduate School will be continued, through courses and supervision of thesis work. During this year, the following courses will be offered: Qualifying Cattle; Animal Breeding with stress on Physiology of Reproduction; Animal Physiology; Cattle Management; Prairie Management; Methods for Measuring Vegetation; Animal Nutrition; Testing Dairy Products.

The students will have the opportunity of specializing in Cattle Raising and Improvement; Pasture Management and Improvement; and Animal Nutrition.

b. United Nations Development Program, managed by FAO

1. The specialists of this Program assigned to the Department strengthen the training activities mentioned before, in addition to allowing specialization in studies on the physiology of animals.

PROJECT 2 - ADVISORY SERVICE FOR AGRICULTURAL EDUCATION

This Project constitutes the direct support given by the Turrialba Center to the activities of strengthening the national agricultural education institutions, carried out by Regional Offices.

It consists essentially of advisory and consultant service, as far as they are compatible with work commitments of the personnel and with the limitations imposed by financial entities.

BASIC PROGRAM 2: AGRICULTURAL RESEARCH

I. AGRICULTURAL RESEARCH IN LATIN AMERICA

A. Objectives of the Program

Improve the training of the personnel of agricultural research institutions.

Promote the development of national agricultural research institutions by collaborating in the planning of adequate agricultural research programs and encouraging their coordination with institutions of higher agricultural education and with extension services. Foster the exchange of information on research work among the countries and strengthen the means for effecting such exchange.

Do research work, in collaboration with national institutions or independently, on specific problems, continental or regional, that have not received enough attention.

B. Fundamentals

1. Present Status

One of the most glaring deficiencies of agricultural research in Latin America is the scarcity of trained specialists for doing the research.

There is a need to standardize, as far as this may be possible, experimental methodology and technique.

In general, there are no directors of research programs.

It is necessary to orient the work of those who act as national directors of research.

There are national research programs that are not oriented toward the solution of the most important problems. This brings as a result an inefficient utilization of the scarce resources available for research.

There is little or no information on the research being done in the different countries.

Research, education and extension institutions do not have, among themselves, the necessary coordination so that each one will fulfill its function in the agricultural development of the countries.

The countries need the human resources available and necessary to carry out the research work. In this respect, it is necessary to accelerate the study of CIDA on Training, Research and Extension. Also, a register of specialists in research could be set up. They have shown interest in new things that could be started and that could make it possible to diversify agriculture.

In high government circles, quick solutions are demanded that will, in a short time, eliminate the problems that might arise.

The above poses the advisability of giving the specialists in research the means and instruments to defend the thesis that not all problems can be solved in a short time.

2. Background

IICA has trained professionals in research, has started training in new fields, such as pastures, soils, animal nutrition, livestock, farm management; has to a certain extent furthered the starting and/or development of research in these fields, in some of the countries in the Southern Zone; has done some research on important problems of Central America, particularly in the biological sciences; has aroused interest in important aspects of the agricultural sciences that have received very little attention; has encouraged national and international coordination of research programs.

Introduction of germ plasm and distribution to Latin American countries, of "pangola" grass to lowlands of Colombia, Ecuador, Peru and Central America; coffee varieties resistant to rust, or higher yield.

Development of superior varieties in vegetables, cereals, coffee and cacao.

Establishment of germ plasm banks of Andean crops, yucca, tropical fruit trees, and development of superior varieties and agronomical practices.

Study and analysis of the present status of research in coffee in American countries.

Invention of a low-cost and efficient parameter.

Application of nuclear energy in problems regarding the use of fertilizers, in obtaining coffee, bean and other mutants, and in the control of pests.

Promoting meetings of researchers in pastures, coffee and bean diseases, soils and conservation, and other topics of continental scope.

Work on the control of cacao diseases, including some unknown diseases, like "buba".

C. Action Proposed

Courses for training researchers.

Include in the curriculum of the Graduate School a course on Planning and Management of Agricultural Research.

Promote national seminars on specific problems, whose nature requires an inter-institutional approach (research, training, extension).

Promote international meetings on specific subjects or general subjects, with a view to attaining the coordinated effort of the institutions in the different countries.

Hold international meetings of directors of research.

Foster the exchange of scientific knowledge and experience by crop or specific disciplines, through ALAF or some similar machinery.

Support the study by CIDA on Training, Research and Extension in Latin America.

Promote the inclusion, by the universities, of research in their training programs.

Try to get schools of agronomy to strengthen their own research activities in order to improve their quality and increase the number of researchers.

Try to have research oriented toward the solution of real problems.

D. Articulation of IICA Departments

The fundamental basis of articulation is the existence of activities converging on one field of interest. In order to attain it, it is essential that there exist related programs and interests between the various departments. Another important aspect of articulation is planning in advance, even though it must be admitted that there can always be unpredictable situations.

II. AGRICULTURAL RESEARCH IN THE ZONES

A. ANDEAN ZONE (1)

General Description

1. Present Status

a) What is known

- i. The outstanding feature of the status of agricultural research in the Andean Zone is the wide difference in development between countries and even between institutions in the same country.

This could be due partly to the heterogeneity of the agricultural environments, but more than anything else it is a reflection of the general differences in development between countries and areas.

- ii. There is a large number of government agencies devoted to research: services, institutions, universities; another feature of the countries in this Zone is the presence of private entities doing agricultural research, some of them very prominent.
- iii. The emphasis of research is concentrated on traditional agricultural products, both as regards food crops and as regards industrial products, or on cattle raising. As a rule, there are no national plans nor priority systems. It often happens that agricultural development is ahead of official research and that promotion programs are not based on research.
- iv. In many cases there is no clear-cut dividing line between promotion and research, and the relationship of research to entities of extension and university education leave much to be desired. There are less than five periodical publications devoted exclusively to publishing the findings of research, but those that do exist are of a highly satisfactory level.
- v. The training of personnel is also very heterogeneous, but efforts are being made in almost every country to improve it.

b) What remains to be learned

- i. In the first place, it is necessary to know the human and material resources devoted to research, the volume, type, and level of agricultural research in the Zone.
- ii. Also, to have a general idea of how the work can best be coordinated, and study the possibility of exchanging personnel, material and specialists.

- iii. To know national plans for training scientific personnel outside of the Zone, and the possibility of developing Zone training centers in leading institutions.
- iv. It is necessary to know the role of research in institutions of learning, and evaluate the tendency of several countries of entrusting national or regional research programs to the universities.

c) What the countries want

- i. The countries want help from international institutions, in the way of personnel, equipment and materials for their own programs.
- ii. They also want support in the training of their scientific and technical personnel.
- iii. Help in specific problems, particularly when they are new or little known.
- iv. Advisory service in organizing laboratories, experimental stations, botanical gardens, research libraries, and in planning and implementing programs.
- v. Promotion of contacts among specialists from the countries in the Zone and outside of the Zone, who are working on common problems.

2. Background

a) What IICA has done

- i. It has trained many people in research through in-service training, graduate studies, short courses.
- ii. It has sent technical personnel to the countries in the Zone to cooperate in specific programs.
- iii. It has helped to organize and evaluate research programs.
- iv. It offers at the only graduate school in the Zone, a Course in Research Methods.
- v. It has cooperated in improving the presentation of the findings of research.
- vi. It has organized short international courses for researchers, in research methods and their relationship with technical communication.

b) What others have done

- i. Some international foundations, particularly the Rockefeller Foundation, have helped to promote regional experimental plans, to train personnel outside of the Zone, and through donations has supported or helped to support specific programs.

They have promoted and have helped to support nuclei that can develop into graduate schools. They have assigned high-level, permanent personnel to national programs. FAO has carried out tasks of this kind, particularly in the development of national projects.

3. Action Proposed

a) What IICA must do in the Zone

- i. Take an inventory of the human and material resources devoted to research, in order to promote a greater exchange between, and closer knowledge of, the countries and to facilitate scientific relations with other areas.
- ii. Train personnel through postgraduate studies, short courses on research methods, in-service training.
- iii. Coordinate regional work and promote meetings of researchers to discuss problems and actions that are of common interest.
- iv. Give advisory service in specific programs, or in the general organization of research entities.
- v. Publish books or articles that will help the research workers, as working guides.

b) What others must be made to do

Work in coordination with national entities and IICA in strengthening the means of training personnel, to implement programs on important aspects to which very little attention has been paid; channel financial support for libraries and laboratories; strengthen the exchange of information and material on a regional scale.

4. Specific cooperation required

a) Cooperation with the Training and Research Center

- i. Graduate Training
 - ii. Technical advisory service
 - iii. Information Service

b) Cooperation from other Zones

i. Technical advisory service, professors for international courses.

ii. Cooperation in common research problems.

c) Cooperation from other IICA services.

Help and cooperation for regional work.

1. Factors Favoring Action

IICA is well known in the Zone, and enjoys the favor of researchers and of officials managing the programs. Its international meetings and courses constitute an excellent way to bring together numerous researchers and put them in contact with common problems. IICA works specialists and follows procedures that are well known in the Zone, and no doubts arise about its intentions.

2. Factors Hampering Action

The material resources available to IICA are totally inadequate, at present, to carry out the action outlined. The heterogenous level of research requires different approaches, and at present there is very little experience in this aspect. National institutions are used to getting direct aid, such as donations for equipment, libraries or laboratories, which IICA cannot give.

3. Objectives and Goals

The general objective will be to improve the present levels of agricultural research in the Andean Zone, particularly in the most critical fields or entities.

The scarcity of resources makes it imperative to define these areas very well and to concentrate all efforts on them. The goals mentioned in the first and second place under "Action Proposed" must be completed with the coming year, if funds are appropriated for their implementation.

4. Projects and other Activities

Future action will mainly be devoted to strengthening national research institutions, through personnel training, coordination and promotion work, international meetings, publication of bibliographic material, development of regional experiments, etc. In the specific field of research, the present activities will be strengthened, and they will be extended to those crops (food or industrial) that offer the greatest promise, or that are most urgent. Studies on problems of soils and their relationship to plants will also be enlarged. The relationships of research in education and extension in the Andean Zone will be studied, in order to achieve greater adjustment between them.

PROJECT 2.1.1. Strengthening of Research Institutions

FUNDAMENTALS

A. Present Status

1. What is known

The status of agricultural research in the Andean Zone is very heterogeneous. There are great differences in intensity and quality of research, even within the countries themselves. It is done by national services, universities and other government agencies; at the same time, an important sector of research is in private hands, particularly foundations and agriculturiers' associations. There has also been intense cooperation on the part of international entities in promoting certain research programs. In some countries there are only partial plans, and in few cases there are priority systems. Very often many agricultural development programs are more advanced than research, and there are important areas that receive absolutely no attention.

2. What remain to be learned

There is no inventory of resources devoted to research, both as regards personnel and as regards material facilities that will make it possible to base regional plans on the promotion of agricultural research.

3. What the countries want

In the first place, direct help in the way of technical assistance, donations for laboratories, libraries and other facilities; in the second place, personnel training; and finally, help in planning and advisory service in specific problems.

B. Background

4. What IICA has done

It has promoted the training of many researchers at the post graduate level. It has participated in the studies by CIDA on the present status of research in the Andean countries. It has promoted postgraduate courses and international courses in research methods.

5. What others have done

Assistance has come mainly from international foundations (Rockefeller, Ford), FAO and from bilateral programs, particularly with European Government, who have assigned specialists and material means for specific jobs.

C. Action Proposed

6. What IICA must do

Take an inventory of the present status of research as regards personnel, physical and other facilities. Promote as far as possible the coordination of international work, trying to standardize procedures and designs. Promote international meetings of directors of research, in order to achieve better coordination of work and foster the exchange of personnel and materials.

7. What others must be made to do

In the schools of agronomy and postgraduate schools: the teaching of courses or seminars on research methods, technical and administrative organization of research and strengthening of the teaching of experimental design. From foundations and other international entities: obtain greater support for planning and improvement of agricultural research at a national level.

8. Goals

In two years: a) Complete an inventory of human and material resources available to research institutions in the Zone.

In five years: a) Attain Regional coordination of the main research programs.

9. Future Action

Detailed studies of the need for agricultural research in keeping with national development plans. Inclusion of teaching of research in Graduate Schools that may be established.

PROJECT 2.1.2. Promotion of research in food crops

Fundamentals

A. Present Status

1. What is known

The countries in the Andean Zone, like most of Latin America, produce less and less food, and the level of such lack of food drops continuously.

Food crops of prime importance and dialy use in the diet, which have not been the subject of serious and continued studies. Among them, are: yucca, plantain, tubers of the highlands, "arracachas", yam and others.

The object of this project is to investigate the variability and cultivation methods and utilization of the most important of these plants, and promote their genetic and agronomic improvement.

This project will serve to train students in the application of scientific and technical principles and to develop in them the capacity for research; to promote, in the universities of the Zone, the teaching of modern courses on these crops; to achieve acquaintance and exchange between persons or institutions devoted to research and to teaching in connection with these crops; and to spread new techniques for the production and utilizations of these plants, through publications, meetings and other means of communication.

2. What remains to be learned

There remains to determine, as regards the crops mentioned, the varieties with the greatest yield and resistance, the obtaining of superior material starting from that base.

There remains to learn the agronomic characteristics of those crops, such as the optimum distance, fertilizer requirements, and soil management.

It is also necessary to study the question of pests, diseases and nutritional deficiencies.

Very little is known about industrial utilization, and about handling and preparing for market.

3. What the countries want

They have expressed interest in working in coordination in order to take advantage of the experience of others and promote a regional action in this field. There is marked interest in the industrial possibilities of these crops, some of which have already become firmly established. There is also interest in utilizing these materials in preparing concentrated food, that will make it possible to correct carbohydrate, protein, mineral and vitamin deficiencies.

B. Background

4. What IICA has done

It has set up work on Andean tubers, "quinua" and yucca. It has published technical bulletins on these crops and formed the most complete germ plasm banks, particularly in smaller tubers and pseudo-cereals.

It has organized international courses on tropical fruits and vegetables.

5. What others have done

Some colleges, particularly in Venezuela and Colombia, maintain active work on tropical fruits and vegetables.

On Andean crops there are international programs in Bolivia (OXFAM), and national work in universities in Perú.

C. Action Proposed

6. What IICA must do

Promote and coordinate work being done in universities and experimental stations in the Zone, through exchange of technical material and information.

Organize meetings of researchers on tropical fruit and vegetables, as well as fruit and vegetables of the highlands, in order to discuss the findings of research, and promote a coordinated action for the future.

Create germ plasm banks with basic collections permanently set up, and extend them through national experimental networks throughout the various countries.

Give international courses on tropical and highland fruit and vegetables.

Offer graduate training to specialize students in the improvement, protection and utilization of tropical and Andean food products.

Maintain permanent means of information, including bibliographies and notes on recent progress in this field.

Cooperate in courses on tropical and Andean fruit and vegetables, in those universities that offer them, and try to set up these courses in those universities that have not set them up yet.

Introduce new varieties of fruit and vegetable for the American tropics.

7. What others must be made to do

Strengthen research on highland and tropical food crops, by agricultural research entities of the various countries.

Seek the cooperation of international foundations and entities for work on these crops, particularly in technology and preparing for market.

8. Goals

In two years: a) Set up germ plasm banks or basic collections of tropical vegetables, Andean tubers, pseudo-cereals and some tropical fruit trees; as well as a regional experimental network with the cooperation of national entities.

b) Start basic research in the improvement and management of those crops; and

c) Promote, among national and international entities, interest in work related to technology and the preparation of products of those crops for market.

In five years:

Achieve the transferring of germ plasm banks to national entities, disseminate the knowledge acquired in the form of manuals of textbooks for teaching and bulletins for agriculturiers.

9. Future Action

It is planned to intensify work on tropical fruit and vegetables, particularly in obtaining varieties with the greatest yield, and regional tests. Of particular importance would be the development of work on potatoes indigenous to the Andes. This group has not received much attention, inasmuch as studies have been aimed at improving tuber-type potatoes. Andigenous potatoes are of superior quality and high nutritional value and enjoy popular acceptance and are the basis of the diet of large sectors of population in the highlands of Colombia and Bolivia.

IICA must promote the study of this crop with the cooperation of national entities in the Andean countries.

PROJECT 2.1.3. Promotion and coordination of research in industrial crops
(coffee)

Fundamentals

A. Present Status

1. What is known

Research in coffee is deficient and inadequate in the Andean countries. As a result, the yield from coffee growing is low, and the costs are high thus leaving a small margin of profit for the producer.

2. What remains to be learned

In order to improve the yield of the coffee industry in the Andean countries, it is essential to intensify research to solve the problems affecting it. New varieties must be experimented within each of the production areas; better fertilizing methods; better management of shade; more adequate separation for the various varieties and production areas; fight diseases and pests more efficiently; etc.

3. What the countries want

Coffee countries in the Andean Zone are extremely interested in improving the efficiency of their coffee growing business; and for this reason would like to receive assistance for research programs, in order to obtain better yield and quality.

B. Background

4. What IICA has done

Due to the extreme importance of coffee growing to many Latin American countries; IICA has done research work; provided training at graduate level; organized short courses and technical meetings to set up programs and foster international cooperation; published technical papers and a specialized magazine; distributed seed of more productive varieties; and prepared bibliographies on coffee growing and milling.

5. What others have done

Of the Andean countries, only Colombia has developed a fairly extensive coffee research program which, nevertheless, must be improved and expanded.

Venezuela is doing good research work in coffee, but on a very small scale and still without any projection on coffee growing in the country. In Ecuador, Peru and Boliva, research in coffee is not yet seriously under way.

C. Action Proposed

6. What IICA must do

In conformity with the recommendations approved at the First Meeting of the Inter-American Technical Coffee Program, the first activity of the Coffee Program will be to take stock of the status of research in coffee in the countries in the Andean Zone, in order to obtain the necessary knowledge on which to plan its future action. Since this work must not be restricted to the Andean Zone, it will be extended to the other coffee areas of the Continent.

Subsequent activity of the project will consist of standardizing and bringing up to date, the research methods, cultivation techniques and milling procedures used in the Andean countries, through a regional experimental network. In addition, it will promote a greater exchange among specialists in coffee, offering regular and special courses, holding technical meetings, giving advisory and consultant services, and regularly publishing papers on coffee growing.

7. What others must be made to do

The countries that will receive the technical help of the Coffee Program must cooperate providing the fields for experiments, the necessary material for installing and maintaining the experiments, and the local personnel that will be in charge.

The host country, which will be Colombia, must, in addition, provide an office, a secretary, hothouse space and local transportation for specialists of the program.

8. Goals

- In two years:
- a) Complete the inventory on the present status of coffee growing and coffee research in the Andean countries.
 - b) Set up an experimental network in all of the Andean countries, for the purpose of solving local problems, for which IICA should have the cooperation of national institutions such as: The Bramón Experimental Station in Venezuela, the National Coffee Federation in Colombia, The Ministry of Agriculture in Ecuador, the Research and Agrarian Promotion Service (SIPA) in Peru, and the Bureau of Agriculture in Bolivia.
 - c) Promote a technical meeting on coffee growing to be held in Medellín, Colombia.
 - e) Take care of consultations and requests for advisory service.
 - f) Publish the corresponding issues of CAFE magazine for the period.
- In five years:
- a) Analyze the first findings of the regional experiments.
 - b) Continue with the activities listed under the goal for two years, sections, c, d, e and f.

9. Future Action

The program planned will be pursued, making whatever adjustments may be necessary in order to achieve the objectives sought.

PROJECT 2.1.5. Mineral Nutrition of Plants

Fundamentals

A. Present Status

1. What is known

The application of the findings of research on mineral nutrition of plants has made it possible to obtain a considerable increase in the yield of a number of crops. Particularly, the application of diagnostic methods have made possible a better detection of deficiencies and toxicities of nutritional elements and a faster correction of such situations for the purpose of obtaining greater yields, better quality and lower production costs.

2. What remains to be learned

Diagnostic methods for a considerable number of crops are known, but their introduction into new conditions or countries requires adjustments in order to determine changes that may be necessary due to local variables. Furthermore, diagnostic and cultivation methods peculiar to Latin America have not been developed.

3. What the countries want

They want to increase production. Fertilizers are one of the most important input elements in achieving this objective. The proper use of fertilizers is of prime economic importance.

B. Background

4. What IICA has done

IICA has done some isolated research on this subject. However, no concerted efforts exist for promoting the best use of diagnostic methods essential to the proper use of fertilizers.

5. What others have done

Preliminary studies in connection with the subject. (Andean Zone).

C. Action Proposed

6. What IICA must do

Assign more material and technical resources to promote a subject that is of prime importance for increasing agricultural production.

7. What others must be made to do

Have them utilize available knowledge on a greater scale through teaching, research and dissemination.

8. Goals

In two years: Teaching: Conduct an annual graduate course on mineral plant nutrition, and take part in courses related to the same subject in order to promote and disseminate theoretical and practical knowledge about it.

Research: Start a survey of the deficiencies in and the excess of nutritional elements in the most important crops of the Andean Zone, using the best diagnostic methods, and promote the standardization of laboratory analysis methods used in the Zone.

Dissemination: Organize a symposium on diagnostic methods of nutrient requirement of plants, and publish technical articles to disseminate information related to the subject.

In five years: Expand, in extent and depth, the foregoing goals.

9. Future Action

The above mentioned activities will be continued.

Note: This Program will be carried out, for the time being, together with 2.1.2.

B. NORTHERN ZONE (2)

General Description

1. Present Status

a) What is known

- i. In the countries in the Northern Zone, the greatest stress has, in general, been placed on research in the traditional export crops such as coffee, sugar cane, cotton and banana, than in basic food crops. However, Mexico has done research in corn, wheat and beans with good results.
- ii. In Central America, food production is not keeping pace with the rapid growth in population. The latter has experienced an annual increase of 3.4% while the production of beans, corn, rice and sorghum has grown at the rate of 2.1% (on the basis of prices prevailing in 1954-1956).

On a per capita basis, food available dropped, to the detriment of the health and well-being of the area.
- iii. The growing demand for meat in world markets has aroused interest in increasing the production of beef cattle in the countries served by the Regional Office for the Northern Zone of IICA. In order to develop beef cattle raising, it is necessary to advance programs for the production of forage and pasture management, animal nutrition, cattle management, breeds, production costs, etc.
- iv. The scarcity of technical personnel to carry out quality research constitutes one of the main obstacles to development of agricultural research in the Northern Zone, particularly in Central America, Haiti and the Dominican Republic. This situation is made worse by the lack of stability of the most qualified personnel, the lack of appropriate resources for research, and administrative problems.
- v. The scant knowledge on the best utilization of the humid tropics is readily apparent.
- vi. Crop diversification is of great importance in all of the countries in the Northern Zone, and implies an improvement in the production of fruit and vegetables. The study of international markets and the marketing of new products for export is also of extreme importance to the economy of those countries.
- vii. The countries in the Central American Isthmus have admitted, through the Joint Meeting of Ministers of Economy and Agriculture held in Puerto Limón, Costa Rica, in October, 1965, the need to coordinate their agricultural research and have also expressed interest in achieving this objective. Mexico has

offered to place at the service of other countries of the Northern Zone, the information obtained and the facilities it has at its disposal in the field of Agricultural Research, and has also expressed interest in coordinating efforts.

- viii. Haiti has requested help for improving research and training personnel in this field. The most serious problem in the Dominican Republic is the scarcity of trained personnel to do research work and it is precisely in this field that the country wants more support.

2. Background

In 1965, IICA's Northern Zone started a regional agricultural research program in Central America.

It has stressed bean research and has started tomato research in the Central American Isthmus. It has laid the groundwork for a program of forage production, pasture management, and animal nutrition.

It has made use of the facilities of the National Institute for Agricultural Research in Mexico, to train personnel of the Central American Ministries of Agriculture in Horticulture, and has obtained collections of beans from this country and from Colombia for use in the Central American bean program.

It has trained personnel devoted to Agricultural Research in the area, both in the Turrialba Training and Research Center and through short international courses and in-service training.

Several diagnostic studies that have been made in the Zone have helped in the orientation of the Agricultural Research Program of the Northern Zone. They are:

- a) Gutiérrez, Mario; Quesada, Alejandro. The Present Status of Agricultural and Livestock Research in Central America, IICA/CEPAL, 1964.
- b) Cardona, Canuto; Agricultural and Livestock Research in Central America - Suggestions for a Plan for Regional Coordination, Cooperation or Integration. IICA/Northern Zone, 1966.
- c) Blydenstein, John; Mata Pacheco, Jorge; Cabezas, Marco Tulio; Jarquín, Roberto; Report on the present status of Research in Pastures and Animal Nutrition. IICA/Northern Zone, 1965.
- d) Report of the First Meeting of Specialists in Pastures and Animal Nutrition, IICA/SIECA/INCAP, 1965.
- e) Extension, Research and Teaching in Central America, CIDA, 1965.

Other international institutions have given their cooperation to countries in the area, for the development of agricultural research. The Rockefeller Foundation has helped to set up the Mexican National Institute for Agricultural Research and the Central American Cooperative Program for the Improvement of Food Crops in Central America. The Agency for International Development of the Government of the United States (AID) and the United Nations Food and Agriculture Organization (FAO), have contributed funds, technical personnel and scholarships to give impetus to Agricultural Research, particularly in Central America and the West Indies.

3. Action Proposed

a) What IICA must do in the Northern Zone

- i. IICA must promote structural changes in the organization of government agencies entrusted with agricultural research, so that the development of well supplied research programs will be feasible, with proper depth and continuity, adjusted to national needs and in conformity with agricultural development programs drawn up in the various countries in the area.
- ii. Attempt to have uniform standards adopted not only in the structures but also in the preparation and evaluation of the research projects.
- iii. Promote regionalization of agricultural research in ecologically important areas, by means of closer contact with organizations devoted to agricultural research, thus avoiding unnecessary duplication and dispersion of the efforts of researchers.
- iv. Promote the setting up of sole research programs on given crops and branches of Animal Breeding, with the decided cooperation of all of the countries in the area, of international agencies interested in their agricultural development, respecting their autonomy and identity.
- v. Try to bring about closer ties between agencies entrusted with research, teaching, extension and agricultural credit.
- vi. Encourage the adoption by agriculturiers, of improved practices for the production of crops and animals, developed by agricultural research services.
- vii. Improve the training of personnel devoted to research and provide stimulus in the development of their activities.

4. Specific Cooperation Required

a) From the Training and Research Center

- i. Cooperation for the development of the Central American cooperative bean project, through technical advisory service, personnel training and supplementary research work to the regional program

ii. Cooperation for the development of the Central American cooperative program for pastures and animal nutrition in the same manner as for the bean program.

b) From other Zones

Cooperation through technical assistance from specialists in fields in which the Regional Office for the Northern Zone does not have and that may be required for the proper development of this program. Similarly, cooperation is expected in propagation materials for research work.

c) From other IICA Services

The Planning Office of the Executive Offices of IICA should participate in the collaboration with and evaluation of the programs under development.

b. Activities for the coming years

a) Factors that favor action

The Central American Isthmus is a geographical unit with similar climate, soils, crops and production patterns. Agricultural Research in the different countries in the area take the same problems, with parallel approaches and finds obstacles of the same kind. The countries in the area have made outstanding progress in their economic integration and they have a long history of cooperation in problems of mutual interest.

There is a recent diagnosis of the status of the agricultural sector and all of the countries in the area have drawn up five-year plans for agricultural development, setting goals to be reached in the production of basic food crops. The Joint Programming Mission for Central America has done similar work on a regional scale.

The Central American Cooperative Program for Improving Food Crops (PCCMCA) groups together the specialists interested in the improvement of corn, beans, rice, sorghum, and has operated continuously since 1953.

The Rockefeller Foundation coordinates the activities devoted to improving corn and the Regional Office for the Northern Zone those that are devoted to bean improvement.

The Universities of the area have created a Higher Council of Universities of Central America and through this Council, they have developed common bases for accreditation, have promoted improvement in their curricula and recognized several Regional Schools that will not be duplicated and will serve all of the Member Countries. This makes possible a more solid training for the professionals that graduate from those training centers and thus, a possible improvement in research.

At the Joint Meeting of Ministers of Economy and Agriculture of Central America, held in Limón, Costa Rica, in October, 1955, the Permanent Committee for Agricultural Research in Central America was created, as an advisory organization to the Central American Economic Council, to coordinate and orient research in agriculture and livestock. The Permanent Committee for Agricultural Research has a Permanent Secretariat which has been entrusted to the Permanent Secretariat of the General Treaty for Central American Economic Integration (SIECA).

In the Greater Antilles, the situation is different from the Central American Isthmus insofar as coordination and integration, but there are advanced research centers in Puerto Rico, that can develop and disseminate knowledge applicable to similar areas in Haiti, Dominican Republic and the other countries of the Antilles.

Mexico is a country where Agricultural Research has advanced a great deal and it serves as a source of improved materials for research (beans, corn, potatoes, wheat, etc.) and for training personnel from the other countries in the field of agricultural research.

b) Factors that hamper action

In Central America, Haiti and the Dominican Republic, the organizations devoted to agricultural research have a somewhat archaic and inflexible structure that constitutes an obstacle to the development of congruent and aggressive research programs. The technical personnel devoted to research is, in many cases, poorly trained and lacks continuity in their work, thus making difficult the development of medium and long-term programs. Research is not always done in the most important areas from the point of view of production, and the results obtained through research find scant dissemination among producers.

The budgets appropriated for agricultural research programs bear no proportion to the magnitude of the problems involved, and sometimes barely covers the salaries of the specialists.

c) Objectives

The following are the objectives of the program:

- a) Strengthen Agricultural Research in the Central American Isthmus and in the West Indies, promoting the introduction of structural changes that may be required in the organizations devoted to this activity, and close cooperation of national and international agencies developing Agricultural Research programs.
- b) Coordinate and promote regional activities aimed at improving the production of basic food items, both of vegetable and of animal origin.

- c) Foster closer ties between organizations devoted to Research, Higher Agricultural Education and Extension.
- d) Improve training of researchers through short courses, in-service training and formal postgraduate training.
- d) Projects and other activities

To help the countries in the solution of the problems sketched out above, the Regional Office for the Northern Zone plans to carry out, in the coming years, the following projects:

- a) Bean improvement in Central America.
- b) Regional Project for pastures and animal nutrition (it will be started in Central America and extended to the Antilles).
- c) Coordination of Research in Central America (it will be started in Central America and later on an effort will be made to coordinate it with Mexico).
- d) Coordination of Research in the Antilles (basic studies must first be made to make it possible to establish bases for coordination).
- e) Improvement in vegetables (tomato and yucca).

PROJECT 2.2.1. Bean improvement in Central America

Fundamentals

A. Present Status

1. What is known

In Central America, total production and unit yield of beans dropped during the 1951/60 decade, in spite of the fact that Guatemala and Honduras, whose production represents more than half of the regional bean production, showed a tendency to increase their production.

Average bean production in the area dropped from 127,000 tons in the first half of the decade being considered to 116,000 tons in the second, which represents an annual drop of 1.4% in production.

During the same period, the average area devoted to the cultivation of bean in the Central American Isthmus increased from 216,000 to 232,000 hectares, that is, an annual increase of 1.2%. Diseases, the moving of cultivation to marginal areas, and the lack of adequate technology in the cultivation of beans, are probably responsible for the decrease in unit yield and total production of this crop. Annual fluctuations in production during the decade mentioned were severe and the drop in total regional production was 3.2% from 1956-1957 to 1957-1958. Considering that beans are the source of proteins for a large sector of population in the Central American area, the drop in the yield and total production is very serious for the nutrition of that sector.

Bean requirements in 1970 in Central America have been estimated at 330,000 metric tons. In order to obtain this volume, it is necessary to increase the area cultivated, at an annual accumulated rate of 2.9%, going from 337,500 hectares in 1965 to 377,500 in 1969, and an annual increase in area cultivated with advanced techniques, of 35,000 hectares a year as of 1966, with a cumulative annual increase in production, of 11.8%. It is estimated that with this production, the per capita consumption would increase from 14.5 kilograms in 1964 to 20.5 kilograms in 1969. Technical cultivation of these areas implies, among other things, the use of seeds of improved varieties. It is estimated that the improved seed required in 1966 will be 1,319 metric tons, having a value of \$349,000 (Central American Pesos) and 9,750 tons in 1969, having a value of \$2,574,000.

2. What remains to be learned

There is a need for disease-resistant varieties, better pest-control methods, developing aggressive programs for multiplying seed, programs for credit and marketing and a close relationship between extension and research in order to get farmers to adopt new production techniques.

3. What the countries want

- a) Central American bean researchers, at the XI Meeting of the Central American Cooperative Program for Improving Food Crops (PCCMCA), held in Panama from March 16 to 19, 1965, resolved: "Entrust the work of coordination in the Central American Cooperative Program for Bean Improvement, to the Regional Office for the Northern Zone of IICA".
- b) At the First Meeting of the Central American Sub-Committee for Agricultural and Economic Development, priority was given to research on basic food crops, and top priority was given to beans.

B. Background

4. What IICA has done

The Regional Office for the Northern Zone, with the collaboration of the Turrialba Training and Research Center, has been carrying out, as of March, 1965, the following activities:

a) Coordination

- i. Assumed the coordination of the Bean Improvement Program in Central America. Organized the sessions devoted to beans in the XII Annual Meeting of PCCMCA and published the Report of the XI Annual Meeting of this group.

- ii. Has prepared and distributed regional experiments with beans planted in Central America in 1965-1966. Prepared a summary of the regional experiments with beans planted in Central America in 1965 and introduced structural changes, such as experiments separated by the color of the bean, experimental 4-row plots, use of four repetitions per locality, and the use of controls, constants, in the experiments planted in 1966. In 1966, a seed plot with 89 entries was also included.

b) Research

With the collaboration of the Research and Control Bureau of Guatemala, evaluation has been made of the adaptation, the agronomical behavior and reaction to diseases for a total of 1,503 bean varieties in 1965, and 1,696 varieties in 1966. The Turrialba Research and Training Center has evaluated in Costa Rica about 1,500 entries.

c) Training

In collaboration with the Turrialba Center, four specialists connected with the Regional Bean Program have been trained and a Short International Course was offered on Scientific Method, Statistical Methods, Design and Analysis of Experiments and Scientific Writing, which was attended by 18 students.

d) Consultant and Advisory Service

Advisory service has been given and consultations answered by mail and by visits of specialists of the Northern Zone and the Turrialba Training and Research Center, to the different countries in the area.

e) Publications

- i. Participation of the Regional Office for the Northern Zone of the Inter-American Institute of Agricultural Sciences of the OAS in the strengthening of agricultural research in Central American Isthmus during 1965.
- ii. Publication of the Report of the XI Meeting of PCCMCA.
- iii. Regional summary of the comparative bean experiment sponsored by the Central American Cooperative Program for Bean Improvement in 1965.

5. What others have done

The Central American countries develop their national programs in this crop and participate in the activities of the regional program. The Department of Agriculture of the United States, through AID, is giving collaboration to El Salvador in its national bean program.

C. Action Proposed

6. What IICA must do

Strengthen bean programs of the countries in the Central American Isthmus by:

- a) Training personnel through short courses and formal postgraduate training.
- b) Giving advisory service to bean improvement programs of the Central American Isthmus.
- c) Develop activities related with research to supplement the work done by the countries so that they, in turn, will serve as a basis for regional coordination activities.

7. What others must be made to do

The Central American countries must strengthen their research programs in general, and particularly their bean research, and they must try to have agriculturiers apply the findings of research. It is necessary that the Training and Research Center continue giving its cooperation to the regional program.

8. Goals

- In two years:
- a) Place at the disposal of experimental stations and other national organizations, high-yield bean variety seed for regional experiments.
 - b) Intensify and consolidate the regional bean program.
 - c) Train about 20 specialists of the area interested in the improvement of food crops.
 - d) Promote the establishment and operation of a germ plasm bank of food crops in Central America.

- In five years:
- a) Obtain lines of beans with high-yield genotypes through mass selection and cross-breeding.
 - b) Offer training to most of the personnel working on research programs in beans, in the Central American countries.
 - c) Place in the hands of the Permanent Committee for Agricultural Research in Central America and the countries in the area, the development of the regional bean program.

9. Future action

Work on bean research and personnel training will be continued. Coordination of activities among the countries will be encouraged and the scope of action will be extended to the Antilles.

PROJECT 2.2.2. Regional Project for Pastures and Animal Nutrition

Fundamentals

A. Present Status

1. What is known

The beef cattle operation offers great prospects for agricultural development in the Central American countries. The area has favorable ecologic conditions for cattle operations.

Favored by circumstances of the international market and by the absence of aphtous fever, the exportation of fresh meat from Central America to the United States has increased from 26 tons in 1965 to 25,000 in 1963. The exportation of meat to other countries has also increased, having reached a total of 5,600 tons in 1963.

All the countries in the area are carrying out programs for increasing beef cattle, financed partly with loans obtained abroad. The beef yield per hectare of pasture continues to be low and the cattle business is an empiric activity, subject to sharp fluctuations related to quantitative and qualitative variations in forage production. Under these circumstances, overall production is limited by the minimum seasonal availabilities, or it must be increased with food supplements that are very costly and affect the operating costs.

2. What remains to be learned

With few exceptions, pasture and animal nutrition studies are relatively recent in this area and still are not widespread. As a result, even in the most familiar aspects, supplementary work is needed in order to make an inventory of the available forage resources and to explore more thoroughly the possibility of introducing new species.

It is of fundamental importance to utilize this knowledge, associated with other pertinent knowledge in the field of ecology, in order to sufficiently characterize the present and potential production areas for the purpose of getting to know, for each area, the production cycle and yield of usable forage plants, and the seasonal variations in their composition and nutritional value.

These elements are essential in order to get stabilize, at a high level, the availability of feed in proportion to the needs of the cattle, thus making possible, through the breaking of the low-availability cycles, a rapid increase in the cattle population, the basis for increased and more efficient production.

Finally, the project would turn toward zone planning in the management of cattle farms economically oriented toward said stabilization, which could be achieved by adequate technological means that would come from the foregoing studies, either the use of species with supplementary cycles, standing grazing reserves, making hay or other ways of conserving forage, etc.

All this work would have as a natural supplement the necessary experiments in feeding in which the final evaluation and the practice of utilization of the available forage resources of the greatest importance would be made.

At the same time it is necessary to continue the studies on the physiology of cattle in tropical regions, orienting them fundamentally toward basic aspects that have a bearing on management, particularly through predisposition to diseases, nutrition and reproduction.

3. What the countries want

Basically, all of them want to take advantage of favorable market conditions to efficiently increase their meat production at reasonable prices for local consumption and increase exportable balances.

There is an awareness of the need to make a broad and coordinated effort in this field, as evidenced at the meeting held in Guatemala with Central American specialists, where the groundwork was laid for the implementation of a regional plan (Report of the First Meeting of Specialists in Pastures and Animal Nutrition, SIECA/IICA, December, 1965).

B. Background

4. What IICA has done

The Regional Office for the Northern Zone appointed a Committee to study the forage production programs, grazing land management and animal nutrition in Central America and Panama. A meeting of specialists in these branches was called and the plan to be followed was approved, but it has not been put in practice yet for the lack of a good specialist in tropical pastures to take charge of the program. The IICA Training and Research Center has kept a garden of pasture introductions, has distributed vegetative material to several countries and trained a limited number of specialists. IICA also keeps a permanent Cattle Raising and Pastures Program under which, besides offering training and making studies of pastures, research is done in nutrition and genetic improvement of animals. It cooperated with the Regional Office for the Northern Zone in making the study on the status of research in forage production, grazing land management and animal nutrition in the Central American Isthmus.

5. What others have done

The United Nations Food and Agriculture Organization (FAO) has encouraged the improvement of research in pastures through seminars and training of specialists.

The Nutrition Institute of Central America and Panama (INCAP) has done some research in animal nutrition and cooperated with the Northern Zone in the study and meeting on Pastures and Animal Nutrition carried out in Central America.

The countries in the Zone have also made introductions and done research in pastures and animal nutrition. However, action in this field has been very limited, measured in terms of the real needs and of production potential.

C. Action Proposed

6. What IICA must do

Through promotion activities (meetings, seminars, direct contacts, etc.) have the research services of the different countries bring together their efforts in a joint and integrated plan for developing in all of the Isthmus, the research arising from point 2. Maintain the leadership and coordinate the implementation of this plan. Do research directly, particularly in CEI, that will contribute to get results. Train technical personnel from each one of the countries in order to have available the necessary human potential for implementation. Keep the research plan oriented toward getting practical results that will enable the countries to achieve their aim in this field.

For this action, there is available the direct collaboration of CEI and of the Nutrition Institute of Central America and Panama (INCAP).

8. What others must be made to do

Research services of the countries must adhere to this Project and properly support the work, giving it the essential economic backing.

Universities in the area must take more interest in the problems of cattle raising and pastures and must, consequently, do research in line with the objects of the Project, while also strengthening and improving the training they offer in this field.

Other organizations, both national and international, operating in the area and interested in this field, must join the project and contribute to its implementation.

9. Goals

- In two years:
- a) Give training to at least one specialist from each of the countries that join the Project.
 - b) Set up, possibly under the scope of Project 2.2.3. a system of joint and coordinated programming of the annual activities of the Project.
 - c) Establish very close relations and definite ties of cooperation with CEI and INCAP.
 - d) Revise, compile and analyze the existing information that may be pertinent to the aims of the Project.
 - e) Geographically define the action areas and start studying them.
- In five years:
- a) Train basic teams to do research in cattle raising and pastures in each one of the countries in the Isthmus.
 - b) Open the field of cooperation to all of the countries of the area encompassed by the Northern Zone.
 - c) Get practical results applicable at least to one geographic area chosen with in each one of the countries in the Isthmus.
 - d) Give a definite orientation to the Project and consolidate it in such a way that eventually, the countries themselves can continue with it for their own account.

PROJECT 2.2.3. Regional Coordination of Agricultural and Livestock Research

Fundamentals

A. Present Status

1. What is known

The six countries of the Central American Isthmus have similar ecological conditions, topography and soils, which makes it possible regionalize agricultural and livestock production.

The countries in the area have a total of 34 experimental stations that do work on basic food crops, vegetables, fruit trees, cattle raising, etc.

Most of these experimental stations have scant technical and physical resources for carrying on their work. In general, research programs run into financial and administrative problems.

There is a marked duplication in research work; for example 14 stations work in rice, 16 in fruit trees, 10 in beef cattle, 10 in sorghum, etc., which constitute a great dispersion of technical personnel and resources (Agricultural and Livestock Research in Central America. Suggestions for a Regional Plan for Cooperation, Coordination and Integration. Canuto Cardona Alvarez, Northern Zone, IICA, August, 1966)

There is a marked scarcity of technical personnel trained for research work. A total of 207 specialists counting Agronomists and Experts, work on national programs; the number of specialists with postgraduate training is limited (Agricultural Education, Research and Extension in Central America, Borrador. CIDA, October, 1965).

Qualified personnel is unstable because of low salaries and the lack of incentive for the development of their work.

Taken as a whole, the overall resources devoted to agricultural research in the area, while not up to an ideal level, do, however, represent a substantial effort. This effort loses a large part of its effectiveness because of the dispersion and inadequate distribution to which it is subject. At the first glance, for example, 34 experimental stations seem more than enough for adequate work. This means that part of the resources needed for the implementation of research are being used to keep unnecessary establishments.

The scarcity of specialists become more evident when their distribution is analyzed by specialties and their basic training is taken into account. The duplication of efforts in certain fields has already been mentioned, while others lie practically forgotten. All this indicates that coordination plus a good technical personnel improvement program could be very effective in increasing the efficiency and usefulness of research services operating in the area. In this manner would be achieved one of the basic conditions to induce the governments to give more generous financial support for these activities.

2 and 3. What remains to be learned and what the countries want

At the first meeting of the Central American Sub-Committee for Agricultural and Economic Development, held in San José, Costa Rica, in November, 1964, the following resolutions were voted:

- a) Give impulse to regional coordination of national and international agricultural research programs, for the purpose of increasing their effectiveness through joint action by Central American countries, and make the best use of available resources.
- b) Single out as main fields of interest, those that refer to research in corn, beans, sorghum, meat, milk, coffee, cotton and sugar cane, and grant top priority to everything connected with basic food.

- c) Taking into account the suggestions contained in the joint report IICA/CEPAL (E/CN. 12/CCE/SC. 6/6), recommended that the work of coordination be done by means of studies; periodic meetings of specialized Central American Officials, mutual cooperation among the technical personnel of the six Member Countries; compilation of catalogs and indexes, and evaluation of the research done in Central America, and the exchange of information, as broad as possible, among agricultural research organizations working at present in the Central American Isthmus.
- d) Ask the Inter-American Institute of Agricultural Sciences:
 - i. To assume, in consultation with, and with the cooperation of SIECA in those aspects related to economic integration, the regional activities for coordination of the national agricultural research programs as regards their technical aspects;
 - ii. To organize the corresponding Project for this purpose, under the program of the Northern Zone, and appropriate, through its Boards of Directors, the necessary resources for proper implementation of same; and
 - iii. To keep the Sub-Committee informed of progress in these tasks, in order to facilitate the gradual establishment of adequate connections with the other economic integration activities in the agricultural sector.
- e) To recommend that, in each country, a public institution specialized in agricultural research be named to establish, insofar as the activities mentioned in the foregoing sections, the necessary liaison between the national organizations and the Inter-American Institute of Agricultural Sciences, and that Central American coordination agreements arrived at in this connection, be incorporated into agricultural development programs to ensure their inclusion in the corresponding national budgets.
- f) At the First Meeting of Ministers of Agriculture and Economy of Central America held in Limón, Costa Rica, in October, 1965, the following points were approved:
 - i. Create the Permanent Committee for Agricultural Research in Central America, as an advisory organization to the Central American Economic Council, to coordinate and orient regional activities in agricultural and livestock research, with a Permanent Technical Secretariat. Ask SIECA to assume the activities of said Secretariat.
 - ii. Ask the Inter-American Institute of Agricultural Sciences of the OAS (IICA) to draw up a coordinated agricultural research program, with the collaboration of the Joint Programming Mission for Central America and taking into account the

need to convey to the farmer the findings of research; and to bring together and increase the efforts at present being made in the area, in this field. In drawing up this program, it is necessary to take into consideration the results of the study by CIDA in Central America on Agricultural Research, Extension and Training.

B. Background

4. What IICA has done

With the cooperation of CEPAL, it made a study of the Present Status of Agricultural Research in Central America, which was submitted to the First Meeting of the Central American Sub-Committee for Agricultural and Economic Development in November, 1964. This work served to orient the experimentation and research program of the Northern Zone and start the work of coordination in Central America.

Complying with the resolution voted at the First Meeting of Ministers of Agriculture and Economy of Central America, Dr. Canuto Cardona Alvarez, Director of Research of the Research Division and of the "Tibaitatá" Agricultural Research Center, of the Colombian Agricultural Institute (ICA), in the capacity of Consultant to the Regional Office for the Northern Zone, made a study and prepared a paper entitled "Agricultural and Livestock Research in Central America. Suggestions for a Regional Plan for Cooperation, Coordination and Integration".

This work will serve as a basis for drawing up the document that will be submitted to the Permanent Committee for Agricultural Research in Central America, that will meet for the first time at the end of 1966 in El Salvador.

5. What others have done

The Ministries of Agriculture of Central America and the Rockefeller Foundation set up, in 1953, the Central American Cooperative Program for Corn Improvement. This program, coordinated by the Rockefeller Foundation, has promoted experiments with varieties and fertilizers in Central America, and annual meetings of Central American specialists interested in the improvement of corn; in addition, the coordinating institutions gave materials to the national programs and offered in-service training to specialists from the area, in its programs in Mexico and Colombia. In 1962, specialists interested in the improvement of beans held a first meeting at the same time as the meeting of improvers of corn. In 1963, the name of the Program was changed to Central American Cooperative Program for Improvement of Food Crops. Improvers of rice and sorghum joined PCCMCA in 1965 and 1966, respectively.

The Rockefeller Foundation coordinates the activities in corn and sorghum of PCCMCA, and the Regional Office for the Northern Zone of IICA those for beans. The rice program does not have any institutional support. A specialist from the Ministry of Agriculture, Commerce and Industries in Panama acts as coordinator.

C. Action Proposed

6. What IICA must do

Give real significance to the coordination or integration of Agricultural Research in Central America.

7. What others must be made to do

National and international organizations must give full support and actively participate in setting up and developing the program for integration or coordination of Agricultural Research in the Central American Isthmus.

8. Goals

In two years: a) Consolidate the organization and operation of the Permanent Committee for Agricultural Research in Central America.

b) Succeed in setting up a structure that will make possible an effective coordination or integration of Agricultural and Livestock Research.

In five years: a) It is expected that the Permanent Committee will be actively working and will have the backing of the Central American Economic Council for its operation.

b) Coordinate efforts with other countries in the Northern Zone, like Mexico.

Achieving the goals in two and five years is subject to the action taken by the countries.

PROJECT 2.2.4. Improving Horticultural Crops

Fundamentals

A. Present Status

1. What is known

In the area of the Central American Isthmus and Mexico, the main horticultural crops (including vegetables such as tomato, yucca, onion, melon, and sweet potato, and fruits trees such as citrus, mango, avocado and pineapple) are part of the diet in the country and in the cities. Horticultural products supplement cereals and grain as sources of carbohydrates, vitamins and minerals that are necessary for a healthy population and prosperous countries.

Because of their special features as diversification crops and because of increasing consumption, fruit and vegetables are in demand in local markets, in export markets within the Central America Common Market and in the United States, and thus substantially contribute to the economy of the producing countries.

Sixty five per cent of the total population of the Central American Isthmus is made up of the rural sector, whose standard of living is at a low, subsistence level but who need to obtain, from an adequate minimum diet, 35% of their daily calories eating fruit and vegetables (including musacea, roots and tubers).^{1/} Consequently, these horticultural products provide one third of the daily calories for a total of 8.7 million people who live in rural areas of the countries in the Central American Isthmus.

The urban population of almost 5 million, depends entirely on the productivity of the farms growing these horticultural products that are so necessary for a balanced diet.

The economic activity involved in the transportation, canning, sale and industrialization of horticultural products requires considerable sums of money in each country and provides employment for thousands of people at times when other widespread products are not in season. Mexico is one of the few countries that has temporarily solved its food problem, but in the rest of Latin America, where the average population increase is 3%, the increase in production is only 2.5%. However, even in Mexico, immediate steps must be taken to increase, at an accelerated pace, the production of food for the future. Just in vegetables and fruit alone, according to a recent study, the local per capita demand for these two groups of products will increase considerably between 1960 and 1975, including the increase in demand due to the growth in urban population. If the prevailing conditions were to continue while the study is being made, there will be production shortages in 1970, and greater one in 1975 (15% and 24% for vegetables, respectively, and from 16 to 25% for fruit).^{2/}

Fruit and vegetable exports from one zone or country to another is increasing as new highways are opened and gradual progress in the technology of production and transportation make possible the exportation of produce by jet planes, as has already been started in some places in Central America and Mexico and which will undoubtedly be more widely used in the near future.

In Mexico, Guatemala, El Salvador and Costa Rica, no less than 12 processing plants for horticultural products have been installed or improved in the last few years, and they sometimes operate under capacity for lack of an adequate supply of quality fruit and vegetables. Due to the considerable lack of fruit and vegetables of acceptable quality, in spite of the fact that there have been increases in total production, it is estimated

^{1/} Ramírez, Marco Antonio, 1966. MINIMUM ADEQUATE DEMAND FOR BASIC FOOD ITEMS IN CENTRAL AMERICA AND PANAMA. Printed matter No. 811. Institute of Economic and Social Research, School of Economic Sciences, San Carlos University, Guatemala. 30. p.

^{2/} PROJECTIONS OF SUPPLY AND DEMAND FOR AGRICULTURAL PRODUCTS IN MEXICO TO 1970 and 1975. Secretariat of Agriculture and Livestock, Secretarias of Finance and Public Credit, Bank of Mexico, S.A., Mexico, D.F., September 1965. 355 p.

that from 30 to 60% of the products harvested are lost or sold at very low prices because of deficiencies in the quality (uniform size, cleanliness, suitable packing).

2. What remains to be learned

There remains to learn the adaptability, the yield and the quality of new varieties and experimental lines of a limited number of vegetables used as basic food items, which appear in the trade of agricultural products (such as tomato, yucca, onion, sweet potato). These crops are already known and grown, but production is inefficient.

Combining the results of regional tests designed to obtain a maximum of information in one or two years, by using more productive varieties and using fertilizers correctly, it will be possible to obtain, in a short time, information on possible production volume of these horticultural food items that are in short supply in Central America and Panama and other parts of the Northern Zone.

3. What the countries want

Official agencies entrusted with research want help in the way of coordination of efforts to advance more rapidly in horticultural production, since there are very similar areas in the Mexico-Central American area where cooperative programs can be advanced. There is marked interest in having tomato and yucca pushed in the region, as in the case of corn and beans.

The countries in the area want technical assistance in drawing up standards of quality so that their horticultural products can find a market in the country and abroad. At the same time, they need personnel trained in this specialty, particularly in the application of standards in a way that will contribute to increase the amount of high-quality products in the markets and not as a general limitation.

They want national courses due to constant personnel turn-over, and they want to have feasibility studies developed regarding production and horticultural diversification in new zones, as is being done in Guatemala and El Salvador, for example, and to substitute other crops in marginal zones. In Mexico, new experimental stations are being opened for the tropics, in Tabasco and Yucatán, where the experience and relations already established by IICA with other similar tropical zones can be utilized to advantage by Mexico.

B. Background

4. What IICA has done

Training

Since 1954, the Northern Zone has trained more than 200 specialists in Horticulture through international courses. This has resulted in the improvement of training in this specialty and the training of a group of qualified specialists in almost all of the countries in the area. The Northern Zone has also given in-service training to 6 Central Americans in Mexico, with the cooperation of the National Research Institute (INIA) of that country.

Research

In 1964, an Agreement was signed with INIA in Mexico to do cooperative research in tomato, and this has extended temporarily to two other countries as the beginning of regional activity. In 1966, research in yucca, which had been started as observation tests in Mexico and other countries in the Zone, was intensified.

Consultant and Advisory Service

Since 1963, advisory service has been given directly to countries that have requested it, within budget limitations.

Consultation by people who visit IICA offices in Mexico, site of the Horticultural Crop Project, is answered personally. This is also done by mail.

Coordination

Assistance has been given for several years to the Tropical Region of the American Society for Horticultural Sciences, through the Secretary-Treasurer, who is the Chief Horticulturist. A quarterly News Letter is published, and a Regional Congress is held each year, with its own financial resources. This professional activity has stimulated development of applied scientific Horticulture in the countries in the area.

Recent Publications

- a) Cásseres, Ernesto. 1966

Vegetable Production. No. 16 of the Series of Training Textbooks and Manuals, Inter-American Institute of Agricultural Sciences, Lima, 280 p. illustrated.

- b) Cásseres, Ernesto. 1966 (Publisher)

Temperate Weather Fruit Trees. First International Technical Meeting on Horticulture (Guatemala) Mexico, D.F. 157 p.

- c) Minimum Quality Standards for Vegetables. Miemograph edition of the II International Technical Meeting on Horticulture, 1965, Mexico. (Printed and illustrated edition on the press).

5. What others have done

Since 1952, Mexico has been developing a program for applied research, mainly in vegetables. Most of the Central American countries have had, in the last few years, one or two professionals working full-time in Horticultural Research or Training. The United States, through AID, has sent out Advisors in Horticulture over the last few years to Costa Rica, El Salvador and Guatemala. FAO is collaborating in the Chapingo Plan in Mexico, with two specialists in fruit trees.

C. Action Proposed

6. What IICA must do

IICA must determine the main problems in Horticulture in the countries where it operates, plan their solution and carry out for the purpose of helping to solve the problems.

For this purpose, the Northern Zone will coordinate the research work of national institutions and will establish relations with international or private entities that may be doing work in this specialty, and will channel into the most suitable means of dissemination the results obtained. Specialists of the Horticulture Project of the Northern Zone will make visits to give advisory service and technical assistance to the countries, as often as necessary.

Since many of the experimental assignments with horticultural plants are of short duration, the problems studied can be solved, in many cases, in relatively short periods. For this reason, problems can and must change in time.

IICA must continue training the personnel that works in Horticulture in the countries, using for the purpose the Turrialba Center or any other institution in the Northern Zone where work on crops of interest to the specialist or professional has reached a high level of technical development as to research and production. After this training or the supplementary studies have been completed, IICA will cooperate closely with the specialist and the program to which such trained personnel belongs.

7. What others must be made to do

Internal coordination of horticultural experimental work within each country and on a region-wide basis, must be encouraged by IICA in order to avoid duplication and waste of time.

IICA must get the countries to organize national courses, whether with the collaboration of technical personnel of the Northern Zone or of other Zones or Centers, as well as of related institutions.

IICA must encourage the countries to improve their own research facilities, sending specialists to receive further training and helping to improve physical facilities.

IICA must insist with national institutions that their technical personnel, trained in Horticulture, work for their country for a minimum of three years.

8. Goals

In two years: Promote increasing vegetables production, by applying proper cultivation techniques.

Training personnel.

Promote improvement in, or organization, of courses in Horticulture at the professional level and at the intermediate level.

In five years: Succeed in achieving a marked improvement in the quality of horticultural products, encouraging the adoption of minimum quality standards and their application within the countries in the Zone, particularly in the Central American market.

Offer a minimum of three international, technical courses or meetings aimed at solving the most pressing problems.

Give technical assistance to national institutions in studying and drawing up projects for new agricultural development areas, that could be used for economic production of certain important fruits and vegetables.

9. Future Action

Introducing new species that could serve as vegetables or as fruit.

Exchange of horticultural products that are known and in demand in some countries, but are unknown in other areas; for example, Andean tubers, with the cooperation of the Andean Zone of IICA.

Program integration of an efficient team of IICA specialists in Horticulture, who can act quickly and efficiently in solving problems as they arise in the future, in research and training in horticultural production.

A. SOUTHERN ZONE

General Description

1. Present Status

a) What is known

i. The organization, level and efficiency of agricultural research varies from one country to the other in the Zone. During the last decade there have been important structural changes in most of the countries. IICA has participated more or less indirectly in the evolution of the research services in some countries, particularly Argentina, Chile, and Uruguay. In these **three** countries, agricultural research develops mainly around national institutions with national scope, such as INTA in Argentina, the Agricultural Research Institute in Chile, and the Agricultural Research Center in La Estanzuela, in Uruguay. In Paraguay, the development of agricultural research is somewhat more incipient than in the rest of the countries in the Zone. In Brazil, the organization is somewhat more complex due to the existence of state and federal services connected with this activity.

ii. Universities in general have lacked the means and programs for research specially drawn up to strengthen teaching and improve the methods and conditions whereby professionals are trained.

In the last few years, however, more interest is evident on the part of Schools of Agronomy in developing research programs, preferably within their own institutions.

iii. In this Zone, as in the rest of the continent, the lack of scientific personnel and of trained specialists for agricultural research constitutes one of the limiting factors for the growth of that activity. This lack is due to the limited number of graduates with adequate training for working in research, but equally important and perhaps more serious is the loss, by national institutions, of competent and experienced personnel.

iv. Even though there is general consensus regarding the advisibility of establishing closer relationships between higher agricultural education and research, it has not been possible as yet, to establish an effective coordination that will satisfy the national objectives in each country.

- v. The ties between research and agricultural extension are more firm than those between research and education. In some institutions, like INTA in Argentina, research and extension are integrated into the same organization. In other countries, both activities are under the same department of the Ministry of Agriculture, and in others, they may be installed in government institutions but under different heads. In any event, the relationship between research and extension, in the sense that both produce a more marked effect in improving agricultural production, poses problems that deserve to be studied carefully.
- vi. During the last five years, economic research has been intensified in almost all of the countries in the Zone, for the purpose of sketching out national plans for economic and social development. If these plans are to be carried out, it will be necessary for the agricultural sector to achieve greater agreement between the plans for agricultural research and the goals and priorities fixed in the development plans. At the present time, this relationship does not appear very clear in actual practice.
- vii. Even though there are, in the Zone, several modern and well-organized institutions, in some countries, deficiencies are evident either in the orientation and planning of the research and in the organization and management of the institutions.
- viii. Also evident is a deficiency in the application, utilization and coordination of technical assistance.

For many institutions, the available financial resources are inadequate to maintain an uptrend in their activities, and in some cases, owing to economic inflation and to inadequate financing of agricultural research, the present level can drop.

a) What remains to be learned

- i. It is necessary to determine more fully and precisely, the status of agricultural research in each country, mainly as regards the following: a) institutional organization at the national level; b) human and material resources available at present, and the resources that it is estimated will be needed in the next few years; c) research programs and projects in force, and the way they are being implemented.

- ii. It is necessary to determine the problems mentioned before, in more precise terms and in reference to each country and each institution. In addition, it is necessary to know the causes that have given rise to the different existing situations. For example, what is it that prevents the establishing of more fruitful ties between teaching and research; why do some technical assistance plans fail; why is it that the work in an experimental station is disconnected from the production problems of the zone or area it is supposed to serve; etc.

c) What the countries want

- i. In general, the countries want, over and above anything else, better integration of agricultural research into economic development plans, that is, they expect from research a more rapid and significant contribution in improving agricultural production.
- ii. Almost every country is willing to improve its research institutions and promote that activity, but since they do not all the human and material resources

2. Background

a) What IICA has done

- i. Fundamentally, IICA's contribution toward improving research in the Southern Zone has been aimed of training and specializing professionals. First, through short courses and later, through postgraduate courses at the Research and Training Center for the Temperate Zone and with the cooperation of several national institutions.
- ii. At the Center for the Temperate Zone, IICA does research in pasture management and forage production, animal nutrition, cattle raising and management, for the purpose of creating or improving, in these fields, new methods and approaches for research, that can be reproduced in the countries in the Temperate Zone.

For the same purpose, it has done research in agricultural economics, mainly in the branch of farm management.
- iii. It has organized a number of technical meetings and seminars to encourage exchange of ideas and information by researchers of the countries in the Zone, mainly in connection with animal breeding and agricultural economics.

b) What others have done

- i. Some Foundations, FAO, AID, The United Nations Development Program, some European governments, have offered to agricultural research institutions in the Zone, different services such as: a) scholarships for training personnel in foreign universities; b) technical assistance, and c) financial aid, mainly in the way of equipment. Some of this assistance has taken shape in projects that are carried out in periods of from three to five years, as in the case of AID and the United Nations Development Program. In other cases, assistance is more integral, and indefinite as to duration, as in the case of the Chilean Agricultural Research Institute, with the support of the Rockefeller Foundation.

3. Action Proposed

a) What IICA must do in the Zone

- i. Study, analyze and diagnose the status of agricultural research in each country.
- ii. Train personnel for research and for directing agricultural research programs and institutions.
- iii. Do research of regional interest, for the dual purpose of specializing technical personnel and get information on adequate experimental methods and techniques for the Zone.
- iv. Bring together agricultural research institutions into cooperative programs in order to do work of common interest, such as to exchange personnel, exchange information and develop regional projects, etc.
- v. Give advisory service to national institutions in organizing and programming research, in evaluating projects and in carrying out specific programs, particularly in the fields in which the Institute has its own projects, such as in cattle raising, plant science and agricultural economics.
- vi. Prepare manuals on different experimental techniques and other topics of interest to researchers.

b) What others must be made to do

- i. Different international organizations that operate in the field of the agricultural sector should coordinate and supplement technical and/or financial aid offered to national institutions.

- ii. IICA should try to get financial aid from some organization like BID to supplement national resources and strengthen the development of agricultural research institutions.

4. Specific Cooperation Required

a) Cooperation from the Turrialba Training and Research Center

- i. The participation of this Center is fundamental to be able to carry out that part of the program affecting tropical areas in the Southern Zone. Particularly important is the cooperation of this Center in Northern Brazil and in the research work IICA is doing in cacao in cooperation with the Government of that country.

Project 2.3.1. REGIONAL COOPERATIVE PROGRAM FOR AGRICULTURAL RESEARCH

Fundamentals

A. Present Status

1. What is known

IICA, after a decade of intense work in the field of agricultural sciences in the countries that make up the Southern Zone, has established good relations with their main research institutions. Much of the technical personnel that works in these institutions has taken part in some of the courses, seminars or symposia that IICA has offered, or has earned advanced degrees at the Graduate School. This has enabled IICA to have a general idea of the status of agricultural research in each of the countries.

IICA is aware of the efforts being made by various institutions in the Zone to create and develop research programs that will effectively contribute to modernize agriculture which, in almost all of these countries, is evidently far behind others that have progressed technologically.

IICA is also aware of the main problems faced by national institutions in order to be able to carry out their respective plans with the urgency dictated by the economic development needs of the countries. The problems considered common -- to a greater or lesser degree -- to national research institutions in the Zone, have to do with some of the following aspects:

- a) Inadequate number of well-trained researchers.
- b) Connection between research and agricultural production and economic development programs.

- c) Orientation and programming of research.
- d) Managing research programs.
- e) Relationship with higher education and with extension.
- f) Inadequate financial resources.

2. What remains to be learned

Of the points mentioned, it would be useful to know with greater accuracy what the real status is in each country and it would be particularly important to know the causes giving rise to such status, for the purpose of being able to better orient the definitive solutions.

3. What the countries want

All of the countries show increasing interest in having research programs that are firmly integrated into their agricultural and economic development plans.

B. Background

4. What IICA has done

IICA fundamentally has tried to improve agricultural research training specialists in different disciplines: first, by short courses, and lately, when the Research and Training Center for the Temperate Zone was created, through postgraduate courses and in-service training.

5. What others have done

Different international organizations have given direct technical assistance and, in some cases, financial aid to open up new fields of research or to improve and strengthen existing fields, but this assistance has, in general, lacked adequate planning taking the country and its institutions as a whole.

C. Action Proposed

6. What IICA must do

In order to be able to apply more effective action in the overall improvement and strengthening of the agricultural research programs and institutions in the countries, IICA has to determine more accurately and as this project develops, the status of this activity in each country; its problems, main limitations and the causes that produce them.

IICA must train researchers and help prepare executives and directors for the programs. It must give advisory service to institutions that need it to improve programs and the implementation of certain research work, and to organize research centers and experimental stations. It must help bring together the agricultural research institutions of the countries in order for them to do work of common interest and to exchange information and experience, both on specific research problems and on matters of orientation, organization and administration.

7. Goals

In two years: Create and put into operation a regional cooperative program for agricultural research. Integration of the Coordinating Committee for the Program. Drawing up a plan of activities and getting them started.

8. Future Action

This Project involves promotion and advisory service. Its purpose is to have the countries, through their directors of research and together with IICA personnel, determine the kind of activity that will be of greatest interest and benefit to agricultural research institutions in the Zone. Consequently, future action will depend on the conclusions arrived at by the Committee, once it is formed, and the interest shown by the Committee in the various fields of action proposed. In any event, it is contemplated that the Institute will have to continue acting as advisor to and organizer of the activities of the program to promote and finance meetings of the Committee, and specific meetings of specialists of the Zone for the purpose of facilitating the exchange of information. IICA will have to help to organize these meetings and strive to have them really bear fruit and attain their objectives. It is probable, also, that IICA will have to sponsor and finance the exchange of personnel among institutions in the Zone, to organize and conduct courses in the methodology of research, organization and planning of agricultural research, etc. It will also have to facilitate (by organizing and financing) meetings to deal with specific problems that affect the institutions' progress or their development. And in some cases, it will have to bring in specialists to act as advisors under this cooperative program in connection with some problems of interest to the institutions of the Zone.

Project 2.3.2. RESEARCH IN ANIMAL AND VEGETABLE PRODUCTION FOR THE
TEMPERATE ZONE

Fundamentals

A. Present Status

1. What is known

Animal production (meat, milk and wool) is vital to almost all of the countries in the Zone. For some countries, like Uruguay, Paraguay and Argentina, it constitutes the source and mainstay of economic development; others like Chile and Brazil need to increase animal production to satisfy the demand of the local market. In all of these countries, livestock research is relatively new. In the past, partial work was done, the fundamental importance of combining several disciplines to approach problems as a whole having been underestimated. For example, research in the botany of herbaceous plants and studies of pasture management and forage production were never adequately connected. Technical improvement of animals in many cases lacked the support of research in animal genetics. And it is also frequent to find a lack of research in animal physiology and nutrition; or when they do exist, they bear no relation to other pertinent fields of animal production.

INTA, in Argentina, the Agricultural Research Institute in Chile, and the Agricultural Research Center in Uruguay have started to develop their livestock research under this new orientation, but a long road must still be travelled before a satisfactory situation is reached regarding the needs and problems posed by livestock industries in the various countries.

Vegetable production has perhaps received more attention in these countries than animal production. However, for many years and in many places, effort has been concentrated on phytogenetic research for the express purpose of creating new varieties of the main crops (cereals, corn, linen (flax) sunflower, sorghum).

2. What remains to be learned

In spite of the efforts put forth and the quality of the research done in this field, not always has this been followed by a substantial and increasing increase in yield. In some cases, progress has remained at a standstill, in others there has been a certain drop. These facts suggest the need for work in phytogenetics to be placed in a much vaster field of activities to include problems in soil management and conservation and the use of fertilizers, weed control and other aspects of crop management related to planting method, cultivation, harvesting and the production of certified seed.

3. What the countries want

Some countries with a more extensive agriculture, like Chile, are at a more advanced stage while the other countries in the Zone started, in the past decade, to approach other aspects of vegetable production besides those that are purely phytogenetic. However, it is necessary to intensify the development of this new orientation because progress made so far is not in proportion to the urgent need for the countries to increase at a faster pace, the yield of their crops without damaging the productive capacity of their natural resources.

B. Background

4. What IICA has done

IICA has created the Research and Training Center for the Temperate Zone precisely for the purpose of encouraging, through its own research and through professional training, the creation and development of research programs in the different countries in the Zone, by which the deficiencies mentioned can be overcome. That is, a Center was set up with particular emphasis on livestock work -- and in second place, on Plant Science and Soils -- where specialists from countries in the Zone could get a better and more complete understanding of the corresponding production and of the complex inter-actions that exist, in the case of animal production, between the soil, the pastures, the weather and animals.

C. Action Proposed

5. What IICA must do

IICA must continue its research and training programs at the Research and Training Center for the Temperate Zone, as a means for helping different national institutions to develop similar programs leading to increasing and improving agricultural and livestock production. This research work is also necessary to keep IICA's own personnel in technical shape and with the necessary experience to enable them to give advisory service to other institutions and professionals in the Zone.

6. Goals

In two years: a) Give advisory service to institutions interested in having integral and interdisciplinary research programs, both as regards animal production and as regards vegetable production.

- b) Start cooperative research work between the Center for the Temperate Zone and the Experimental Stations at Bagé and Pelotas, in Rio Grande do Sul, Brazil.

7) Future Action

Research included in this project will be continued as a basis and support for the Graduate School and as part of the regular activities of the "Alberto Boerger" Agricultural Research Center of the Ministry of Livestock and Agriculture of Uruguay. The specific research projects will periodically be adjusted to local needs.

Project 2.3.3. RESEARCH IN ANIMAL AND VEGETABLE PRODUCTION FOR THE TROPICAL AND SUB-TROPICAL ZONE

Fundamentals

A. Present Status

1. What is known

In the Southern Zone there are several regions, mainly in Brazil but also in Northern Argentina and part of Paraguay, that, while they are very different one from the other, they do have a common characteristic: they are tropical or sub-tropical, which is determined mainly by high temperatures. Rainfall is variable, ranging from very humid to zones with seasonal rainfall and prolonged drought periods.

Rubber, cacao, coffee, sugar cane, yucca, corn, rice and cotton are, among others, crops that prevail in some of the regions, depending on temperature and the distribution of humidity.

Large areas are devoted to a single crop, like cacao, sugar cane, etc., which gives rise to economic and social problems derived from this kind of operation.

B. Background

2. What IICA has done

IICA has created in Turrialba a Tropical Training and Research Center for the purpose of training professionals in different disciplines, crops and kinds of production that have a direct application to the tropics.

Within the Southern Zone, and in accordance with an agreement made with CEPLAC, a cacao research project is being carried out in Itabuna, Bahia, Brazil.

IICA gives advisory service, mainly in research. The IICA Specialist acts as Technical Coordinator for the Cacao Research Center.

Research is done at this Center in cacao, as regards: Botany, Genetics and Improvement, Plant Pathology and Microbiology, Physiology and Vegetable Ecology, Biochemistry, Agricultural Zoology and Entomology and Soil Fertility.

An Agricultural Extension and Development Service is available for cacao, and a specialized Library. CEPEC has a group of 120 specialists and an experimental field with an area of 500 hectares, and research facilities.

The program has been expanded by IICA through the contribution by ACRI amounting to US\$ 25,000, which has made it possible to incorporate into the program a Specialist in Genetics. Steps are being taken to incorporate a Specialist in Agricultural Economics, which would bring IICA personnel up to 3 Specialists.

C. Action Proposed

3. What IICA must do

Form a technical group with the support of the Turrialba Center and the research institutes of the tropical region of the Southern Zone to set up and develop specific research programs similar to those set up for cacao in Brazil.

PROGRAM II. . AGRICULTURAL RESEARCH

PROJECT 1 - EXPERIMENTAL STATION

Under this Project are grouped all of the research activities that are carried out in the various departments of the Turrialba Center, for one or more of the following purposes:

1. Teaching students to do research.
2. Encourage constant improvement of professors.
3. Add new knowledge to the content of courses.
4. Help solve problems of interest to most of the Member States.

Research work was started at the Turrialba Center from the beginning of field operations in 1944. It has been concentrated on the broad areas listed below:

1. Increasing cattle production in the Tropics.
2. Utilization of forest areas in Latin America.
3. Improving food crops.
4. Improving perennial export crops.
5. Utilization of tropical soils.
6. Determining natural, human and economic resources of Latin America.
7. Utilization of nuclear energy in agriculture.

The findings of this research have been appearing regularly in the "Annual Technical Report", in "Turrialba" magazine and in numerous professional publications.

Approximately half of the resources employed in research represent outside contributions and the other half is covered with regular quota funds.

Below is a list of the areas where research will be done in the various Departments, with a breakdown as to work financed out of regular quota funds and work done with outside support.

A. Department of Economics and Social Sciences

a. Regular Quota Funds

1. Research will be continued on the most effective means for fostering scientific exchange and documentation among researchers. For this purpose, work is done in close cooperation with the Library and Documentation Service, particularly as regards bibliographic work.

b. AID Contract Funds

1. Analytic studies (evaluations) will be continued, of the National Agricultural Extension Services, aimed particularly at determining the role of those Services in development programs, both nationwide and of the agricultural sector.
2. Research will be continued on training needs in Economics and Home Economics, by personnel working in Agricultural Extension in the countries.
3. The operation of rural youth programs will continue to be studied, and the role they play in development plans.

B. Forestry Department

a. Regular Quota Funds

The following research work will be continued:

1. Methods and aids for identifying trees in the field.
2. Influence of raininess on the growth rate of tropical trees.
3. Study of forest material according to their environment. Drawing up of ecologic maps to be used in preparing plans for land use.
4. Research in natural forests of different ecologic types of the American Tropics (size, floristic composition, structure).
5. Silvicultural treatment of plantations of different species of trees, their management and the study of their growth.
6. Silvicultural treatment of natural forests, their management, and the study of their growth.
7. Study of water basins, wild life, and use of woodland for recreation.

The following research work will possibly be started in 1967:

8. Introduction of exotic species of the humid tropics, in large lots; study of growth and development of said species.
 9. Studies of forest material and growth of different ecologic types of natural (virgin) forests of the American tropics -- (work already under way).
 10. Genetic studies of certain wood species that are of great economic importance.
 11. Technological studies of Latin American timber.
 12. Economic studies of forest plantations and natural forests.
- b. United Nations Development Program, managed by FAO
1. The four Specialists of this Program assigned to this Department are an integral part of the team entrusted with the development of work plans, and they devote themselves entirely to the activities above mentioned, thus making it possible to offer a balanced training and research program in Forestry.

C. Department of Plant Science and Soils

a. Regular Quota Funds

Research:

1. Continue the study of the mutual relationship between the mineral nutrient content of soils and nutrient absorption by the plant, in humid tropical regions.
2. Study the deficiencies of various nutrients, in soils of Central America and Panama.
3. Maintain world-wide collection of coffee.
4. Comparison of the composition of pigments in the plastids of different species and varieties of coffee.
5. Effect of lixiviation by spraying, on the susceptibility of cultivated tropical plants to attack by fungii.
6. Study of the simbiotic mutual relationship between the host plant and Loranthaceae through photosynthesis with ^{14}C .

7. Influence of mineral deficiencies on the pigment composition in the plastids of coffee leaves.
8. Sulphur deficiency in the coffee tree.
9. Zinc levels in Coffee arabica L. with different degrees of deficiency symptoms.
10. Exploratory study of sulphur deficiency in soils of Central America and Panama.
11. Exploratory study of potassium deficiency in soils of Central America and Panama.
12. Exploratory study of phosphorus deficiency in soils of Central America and Panama.
13. Research on coffee leave samples in connection with mineral nutrient content.
14. Continue work of genetic selection and improvement of beans, for the purpose of obtaining disease-resisting varieties that are affected by certain diseases in the high-temperature and high-rainfall zones, as well as finding methods for fighting those diseases.
15. Continue the program of regional tests and of distribution of improved variety bean seed, with the cooperation of the University of Costa Rica and national institutions of other countries, as part of the Inter-American Bean Program.
16. Main diseases of beans, and reaction of different varieties in different ecologic areas.
17. Colletotrichum Lindemuthianum strain in bean regions in Costa Rica.
18. Bean resistance to Tanatheporus cucumeris.
19. Dissemination by bassidium spores of Tanatheporus.
20. Principal bean diseases in Central America.
21. Evaluation of lines of local and introduced beans.
22. Bean improvement by crossbreeding.
23. Continue long-term research in genetic selection and improvement of cacao, for the purpose of obtaining varieties that will meet certain requisites, that is: resistance to the principal diseases -- particularly to Phytophthora palmivora; high yield; and high quality.

24. Continue cooperating with national institutions in making regional tests with cacao varieties.
 25. Continue studies on physiological aspects of nutrition in cacao, and on the use of fertilizers.
 26. Continue studies on the control of the main cacao diseases, with special emphasis on Phytophthora palmivora.
 27. Methods for fighting Phytophthora palmivora in cacao (with several sub-projects).
 28. Cacao improvement.
 29. Nutrient absorption and fertilizer application in cacao.
 30. Boron and zinc deficiencies in cacao.
 31. "Buba" in cacao and influence of different factors on the disease.
 32. Fermenting and drying cacao.
 33. Cacao cultivation methods.
- b. AID Contract Funds
- Research:
1. Adaptability of various crops for diversifying agriculture.
 2. Ecologic study of Quercus oleoides of Guanacaste.
 3. Patterns in types of vegetation in Latin America.
 4. Methods for determining areas and heights in aerial photographs.
- c. United Nations Development Program, managed by FAO
- Research:
1. Studies of agricultural climatology.
 2. Mineralization of nitrogen in tropical soils.
 3. Retention and transformation of phosphates in soils.
 4. Comparison of different phosphate fertilizers.

5. Characterization of potassium in tropical soils.
 6. Effect of (lime) whitewashing on the availability of trace elements and most important basic properties of American tropical soils.
 7. Continue the study of insects that attack beans and other food crops, and how to fight them, and possible resistance to them.
 8. Resistance of bean varieties to the grasshopper genus Empoasca in Central America.
 9. Fighting the bean leaf weevil with chemicals.
- d. Atomic Energy Commission (of the U.S.A.) Contract Funds
- Research:
1. Continue basic research with a view to obtaining genetic information on bean varieties resistant to diseases that attack this crop in zones with high rainfall and high temperatures.
 2. Fighting the Mediterranean fly by sterilizing the males. Research done in fighting the Mediterranean fly by sterilizing the males has served as a basis for pilot tests of the method in the field, which are being carried out by the International Regional Organization for Agricultural Health (OIRSA). IICA will continue cooperating with OIRSA in this project.
 3. Start basic studies on the biology of the worm Dermatobia hominis L. with a view to eventually fighting it by sterilization.
 4. Continue the studies on the sensibility of tropical species to radiation.
 5. Biochemical and Phytophysiological studies on the relationship between plants and disease agents.
 6. Continue research in soil fertility in the tropics.
 7. Cytogenetic studies on yucca (Manihot utilissima Polh.).
 8. Cytogenetics and mutations induced in beans.
 9. Effect of fertilizers on chemical properties of tropical soils.

10. Inducing mutations by gamma radiations in Neurospora.
 11. Physiology of fungi that produce anthracosis.
- D. Department of Animal Breeding
- a. Regular Quota Funds
Research:
 1. Continue long-term studies on the selection and improvement of native dairy cattle, including comparisons between the half-bred Jersey-native breed and the offspring of thoroughbred parents.
 2. Continue long-term studies on the genetic improvement of beef cattle, including the reproductive efficiency of Native (Romo Sinuano), Brahman, Santa Gertrudis and hybrids.
 3. Continue studies on the climatic effects on cattle.
 4. Studies on animal nutrition.
 5. Studies on tropical pastures.
 - b. United Nations Development Program, managed by FAO
Research:
 1. Continue basic studies on the physiology of adaptation by cattle.

PROJECT 2 - ADVISORY SERVICE TO AGRICULTURAL RESEARCH

The purpose of this Project is to strengthen, by temporary advisory service given by Turrialba specialists, those activities of the Regional Offices whose aim is to help national agricultural research entities.

I. RURAL DEVELOPMENT AND LAND REFORM IN LATIN AMERICA

A. Objectives of the Program

The objective of the Program will be to promote the improvement of Rural Development and Land Reform institutions of the Member States, since they are essential tools to speed the Economic and Social Development of the Americas.

B. Fundamentals

1. Present Status

It may be said that the Economic Outlook for Latin American countries is characterized by stagnation, represented by constant or decreasing per capita income and by its inadequate distribution, which is endemic.

This fact is more obvious when viewing the agricultural sector, which is of particular importance, both because of the large percentage of the population working in it, and because of the fact it is not fulfilling its functions in an economic development process, such as providing food and raw materials, source of foreign exchange, market for secondary and tertiary markets.

In fact, as pointed out by BID, agricultural production keeps on developing in an unsatisfactory manner. In order to meet the relatively modest goals set in Punta del Este, overall agricultural production should be increased at a minimum rate of 4 to 5% a year, and there are very few countries that have attained that figure. * In general, BID estimates that agricultural production seems to be growing at the rate of 2 to 3% a year, while population growth is 3% a year; the situation is even worse as regards the production of food for the local market.

While there is not enough information regarding the causes of this situation, there are grounds to state that institutional and structural aspects are holding back economic growth in the rural sector and, as a result, in the entire economy. Among them are problems regarding land holding, which could be the cause not only of inadequate use of available resources, but of inadequate distribution of the comparatively low income they produce; lack of an adequate implementation of plans, when they exist, with adequate credit policies, prices, taxation, extension service, marketing and research.

* BID. Social Progress Trust Fund. Fifth Annual Report 1965, Washington, D.C. February, 1966.

Agricultural and Food Product Output in Latin America

(Index: 1952-53 to 1956-57 = 100)

<u>Period</u>	<u>Agricultural Production</u>		<u>Food Production</u>	
	<u>Total</u>	<u>Per Capita</u>	<u>Total</u>	<u>Per Capita</u>
1955-56	103	100	100	99
1956-57	107	102	109	103
1957-58	113	104	112	103
1958-59	117	106	116	105
1959-60	121	106	116	102
1960-61	121	103	118	101
1961-62	125	104	121	100
1962-63	127	103	123	100
1963-64	130	102	128	101
1964-65	129	99	130	101
Annual average				
1955-56 to				
1959-60	3,6%	1,2%	2,8%	0,6%
Annual average				
1960-61 to				
1964-65	1,6%	0,8%	2,4%	0

Source

FAO, The State of Food and Agriculture, 1965. In BID op.cit.

When BID brings out the structural problem, it states that "in spite of the high rates of city expansion and of the new industrial and commercial opportunities, the number of families in rural areas is far from decreasing. In Brazil, for example, toward 1970 there will be 11 million more farmers than in 1950. Even in Argentina and Chile, where the percentage of rural population has dropped to almost one-fourth of total population, the number of farmers is on an upswing".*

Greater pressure toward rural areas, mentioned above, will increase the problem and the urgent need to make changes in the structures of land holding, the deficiencies of which have been described in detail by CIDA.

One of the most important of the group of problems that face the Latin American rural sector is the relative scarcity of technical personnel properly qualified to diagnose, program execute, manage and evaluate the steps intended to achieve a balanced and constant economic and social development; and another is the administrative deficiency of institutions and organizations that must participate in the solution of the problems.

It becomes necessary, then, to increase the basic information available (inventories and evaluation of human and natural resources) to facilitate the planning and drawing up of specific projects that will make it possible to approach, with an integrated outlook, the planning and implementation of measures leading to the increase in income and improvement in living standards, particularly in the rural sector.

It is equally important to determine the characteristics of organization and resources, both technical and financial, of all organizations connected with rural development and something that is fundamental: the potential capacity of the countries to produce specialists.

It may be stated, then, that the countries need the methodology, human and capital resources that will make it possible for them to overcome their present problems, and improve and intensify their action in their development programs.

2. Background

During its first stage, IICA channelled its action toward the training of technical personnel, giving advisory service and training in extension, and research and studies, with strong emphasis on solving the problems of tropical zones.

* BID. Fifth Annual Report. Op.cit.

Subsequently, as far as resources permitted, its action was extended to developing Latin American agriculture, increasing its regular budget and looking for foreign financial contributions for specific programs, such as Credit, Land Reform and Resources for Development.

IICA has been very active in studies in Farm Management (at level of farm) and, it bears stating, has been the pioneer in "pilot development area" projects, which make possible inter-disciplinary work by specialists, in the development of the rural sector.

Through the Annual Course of the Inter-American Land Reform Center (IICA-CIRA), the Inter-American Agricultural Credit Center (IICA-CICA), Short International Courses in Land Reform, National Agricultural Extension Courses, Home Economics, Rural Sociology, Agricultural Credit and Land Reform, it has tried to give professional training for attaining Rural Development of the countries.

Other institutions have directed their activities mainly toward consideration of general aspects, at the level of macrodevelopment or information inventory. The following examples might be mentioned: The Inventory of Basic Information for Planning Agricultural Development in Latin America, the Land Holding Studies made by CIDA; the Index of Aerial Photographic Work and Topographic Maps and Maps of Natural Resources, made by OAS. AID has also compiled basic background information of great interest. The Latin-American Institute for Social and Economic Planning (ILPES of CEPAL-BID-Special Fund) has trained personnel in agricultural planning at a national level.

3. Action Proposed

It has been proposed that IICA, through studies aimed at setting up methodology and techniques that will facilitate the planning of development, international and national courses, in-service training, concentrated efforts and advisory service to national institutions, should try to achieve:

- a) The strengthening and development of land reform organizations.
- b) The strengthening and development of agricultural credit organizations.
- c) Continue work of strengthening institutions and organizations that will act in rural development, where the work of the Institute has been fruitful and pioneering, as in the case of extension and technical assistance services.
- d) Determining methodology that will join, at the level of application, the efforts made at the levels of macrodevelopment with those approached from a microdevelopment viewpoint.
- e) Coordinated action of other specialized institutions and organizations that can help in the rural development of Latin America. For example: CINVA (Inter-American Housing and Planning Center), the Pan-American Health Organization, the Inter-American Institute pro Indian Culture, the Pan-American Geographic Institute, Project 213 (Inter-American Center of Utilization of Lands and Waters), Inter-American Geodetic Service, Project 205 of the TCP, Inter-American City and Regional Planning Program (PIAPUR), etc.

- f) Setting up Cooperative Programs for Training both at professional levels and at postgraduate levels, in matters connected with Economic and Social Development.

4. Modes of Action

A few examples will serve to clarify the purpose and scope of the Program. The Program will include the following four modes of action:

- a) Strengthening Institutions: This mode is directed to improving the organization and efficiency of national rural development institutions, the tools available to the countries to achieve this development. It will include not only personnel training and improvement, but also planning and programming of activities, the evaluation of their results, the improvement of the organization and structure of the institution, its coordination with other institutions that pursue similar aims, all of this supported by prior diagnostic studies. ^{1/}
- b) Planning and Implementation of Regional Development Projects: The necessary personnel for the implementation of these projects will be trained in accordance with the needs of the country and as the operation progresses.

They will be carried out jointly with the national institutions themselves, and subject to the support of the corresponding governments. Their purpose is to achieve effective results in the development of selected areas by the combined application of all the factors and elements, such as land reform, credit, community development, farm management, technical assistance, etc., that the prior study of the situation recommends using.

In each case, and in accordance with the specific circumstances, objectives and specific goals will be set (for example: the settlement of a given number of families and raising their standard of living to a given level) which must be achieved in definite time periods that will make possible an objective valuation of the results attained. In most cases, these projects can give rise to investment plans that will be studied and drawn up as part of the project itself, for submitting to international credit and financial aid institutions.

- c) Production Increase Program: Will be directed toward improving production in given areas, of one or more crops integrated into

^{1/} As part of the actions of coordinating and promoting the exchange of experiences, are the "International Meetings of Executives of Land Reform Organizations in Latin America", like the one held in Lima and Bogotá in December, 1965. Among the Resolutions and Recommendations of said Meeting is the one to the effect that Meetings of Executives of Land Reform be considered as an activity regularly promoted by IICA. See Report of the International Meeting of Land Reform Executives and of the Meeting of Evaluation and Planning of Project 206. IICA/CIRA, Bogotá, Colombia, 1966.

an operating system. Basically, attention will be devoted to food crops intended for the local market. Methodology will be centered on the so-called "practice package", in which, around a basic factor that will produce positive effects - such as the use of fertilizers - other contributing factors will be added - such as the use of improved seed, irrigation, pesticides, herbicides, etc. - including social factors (incentives, etc.). The specific objectives and goals will be fixed, in this case, in substantial per cent increases in production within the areas and for the crops chosen.^{2/} These projects will also be carried out jointly with national institutions and with the participation of their personnel, and will also be used for the purpose of training in actual practice, thus assuring their continuity when the foreign aid comes to an end.

- d) Basic Study Programs: These projects will be directed fundamentally to evaluating the results of development projects, particularly, but not only, those included in the Program. They will, in particular, be concentrated on the identification and appraisal of the success factors, for the purpose of developing and drawing up scientific methodology for regional development.

5. Action Levels

The types of action or means pointed out above - training, research, advisory service and communications - are common to all Basic Programs of IICA. In the case of Rural Development and Land Reform, they are carried out through the modes of action, also mentioned above: Strengthening of Institutions, Planning and Implementation of Regional Development Projects, Programs for increasing production, and basic study programs. The level to which the types and modes of action are directed, from the point of view of macro and micro-agrarian economy should also be mentioned.

- a) Development of Social and Economic Unity: The activities whose subject matter is the farm and the individual producer and his family, whose contribution, active participation and benefits are the basic elements of social and economic progress.
- b) Regional Rural Development: Considers the region as a unit for programming development where, taking into consideration the national needs, overall solutions are sought for geographic areas with natural, social and economic characteristics that make possible an integral approach.
- c) Agriculture in the Overall Development: This level answers to the "awareness" of the need to integrate the Agricultural Sector

^{2/} See Echandi, Eddie. Regional Bean Program for Central America. Work presented at the International Seminar on Economic Research and Agricultural Experimentation. Santiago de Chile, July, 1966; and Aguirre, J.A. and Salas, J.A. "Zoning Bean Cultivation in Central America and Panama". Turrialba, Vol. 15 # 4, December, 1966.

into a continuous process of economic growth and social development, and glaring reality of the urgent need for economic integration of the countries, and to the fact that the Agricultural Sector is, as a rule, a restraint for this need. The projects for increasing Central American production could be pointed out as examples, since it is in Central America that the process of integration has made the greatest headway.

6. Articulation of IICA Departments

In planning the specific action of the various departments of IICA, the participation of the Centers (CEI, IICA-CIRA) and of the Zones, will be determined well in advance, by mutual agreement, in Annual Planning Meetings. These must be strictly observed.

The following have been considered Projects of great interest to the Rural Development and Land Reform Program, which could be carried out in the three Zones, with the cooperation of Turrialba:

- a) Training of Technical Personnel in Land Reform.
- b) Training of Personnel in Rural Development (Extension, Home Economics, Regional Programming, etc.)
- c) Research on the Characteristics, Organization and Technical and Financial Resources of Organizations that have a bearing on Rural Development and Land Reform.
- d) Programming of Rural Development at a Regional level in connection with National Plans.
- e) Training and Research in Rural Administration.
- f) Training in Inventories and Evaluation of Resources for Development.
- g) Inventory and Evaluation of Resources in Pilot Development Areas.
- h) Study in the way of Concentrated Effort, in connection with the Programming and Evaluation of Land Reform.

IICA must also try to have institutions and organizations that work in areas connected with Rural Development work with coordination and in accordance with the most modern methodology. The attainment of these objectives can come through a permanent exchange of knowledge and experience, through seminars, meetings, publications, and connecting the specialists of different institutions and countries.

II. RURAL DEVELOPMENT AND LAND REFORM IN THE ZONES

A. ANDEAN ZONE

1. Present Status

a. What is known

Classical and common characteristics that affect the countries that make up the Andean Zone, which we can define as follows:

- 1) Concentration of land ownership in a small percentage of people owning large properties; large percentage of people owning small properties; excessive splitting up of land and dispersion of same, which constitute uneconomical small pieces of farm land, and a very substantial number of farmers without land.
- 2) High percentage of rural population with limited purchasing power for subsistence products, goods and services, due to their low income and poor distribution of same.
- 3) Improper use and poor conservation of resources; abandoned land; extensive operation of only one crop (monoculture); underemployment of labor and low productivity, which gives rise to deficit agricultural production, inadequate to satisfy the needs of the people, and does not make possible an increase in exports to substitute imports.
- 4) Limited increase in production and high rate of population increase.
- 5) Deficient marketing methods and lack of markets; scant credit, incomplete and poorly directed; lack of technical assistance, lack of education and promotion in agricultural cooperatives; slight promotion of farmer organizations and poorly integrated and undeveloped rural communities.
- 6) Depressing conditions in rural environment, which is revealed by high illiteracy rates, high mortality rates, unhealthy housing, and in general, deficient living conditions.
- 7) Inadequate amount of professionals and qualified specialists in the different disciplines involved, and very slight possibility of over-coming this situation in the near future.

b. What remains to be learned

- 1) Determine the characteristics of the institutional structures of the agricultural sector; organization, objectives and technical and financial resources of all of the organizations that, directly or indirectly, have a bearing on rural development and land reform.

- 2) Intesify and complete all of the studies on present land holding and use.
- 3) Study the attitudes and abilities of the rural population in connection with the processes of rural development and land reform.
- 4) Determine the potential capacity of the countries in the Zone to produce a larger number of specialists.

c. What the countries want

- 1) To be able to train the personnel of their technical organizations to assume the responsibilities involved in planning, implementing and managing their programs, through short courses.
- 2) Training personnel in specific subjects, such as: agricultural credit, cooperatives, agricultural extension, farm management, etc., also through short courses.
- 3) Fast and practical evaluation of the programs that are being advanced, in order to be able to make the necessary corrections and adjustments.
- 4) Qualification through in-service training programs and a permanent exchange of specialists, for short periods, which will enable them to learn and utilize the experience of the other countries.

2. Background

a. What IICA has done

- 1) Created International and National Training and Research Centers in Rural Development and Land Reform, such as CIRA in Colombia, CENRA in Peru, and CIERA in Ecuador.
- 2) Organization and holding of meetings and seminars for Land Reform Executives and Specialists.
- 3) International courses for professionals in Land Reform organizations, in planning, implementing and managing Land Reform at the level of projects.
- 4) Short courses in "General Information and Basic Philosophy of Land Reform".
- 5) Short courses in rural development.
- 6) Specific short courses in microplanning, agricultural extension, credit aerial photogrammetry, topography and communications.

- 7) In-service training and exchange of professionals.
- 8) Research and training work furnished by IICA, CIRA and CENRA, through courses and research programs and in-service training.
- 9) Advisory service to development and land reform organizations, regarding operational techniques and methods.

b. What others have done

- 1) National organizations: Efficient cooperation by the ministries of agriculture and rural development and land reform organizations in the countries in the Andean Zone in all training and research activities. Financial contributions for creating national centers. Universities and their research centers have given similar cooperation.
- 2) International organizations: Cooperation in teaching by FAO and AID through professors for developing training activities, and financial aid by the latter, for improving the Ecuador National Center.

3. Action Proposed

a. What IICA must do in the Zone

It must try to materialize its action through specific research programs to determine available resources and the most pressing needs to be met in the countries in the Zone. Similarly, take interest in general and specific training programs through short courses, either national or international; in-service training programs; exchange of professionals; programs applied in "Pilot Development Areas" and full and sustained cooperation with activities of National Centers.

b. What others must be made to do

- 1) National organizations: Obtain from them, and from universities and their centers and other organizations that indirectly take part in the process of development and land reform, their fullest cooperation with the activities proposed.
- 2) International organizations: Try to establish coordination with them by exchanging experience, joint plan actions and contributions and exchange of specialists, as far as possible.

4. Future Activities

a. Factors favoring action

Future activities can be judged by the great concern and interest of the corresponding organizations of the countries in the Zone in seeking the training of their technical personnel through the different teaching activities and training programs. The creation of national centers in three of the countries in the Zone offers permanent and positive foundations that have and will have considerable influence on the development of the different activities.

b. Factors hampering action

The factors that limit IICA action are, fundamentally: programs with limited financing and scant supply of specialists in proportion to the activities that must be developed. In some organizations of the countries in the Zone, certain budget instability that prevents them from turning in the contributions they are supposed to make for the opportune development of courses and other activities.

c. Objectives and Goals

The goals to be attained through the three projects of the program for the Zone would be: *

- 1) Train 20 professional a year, as experts in Programming, Implementation and Evaluation of Rural Development, using the Yaracuy, Venezuela, Pilot Development Area (Project 3.1.1.).
- 2) Do Research in Natural, Human and Financial Resources for the Yaracuy, Venezuela, Development Area (Project 3.1.1.).
- 3) Train professionals in Peru and Ecuador through the National Centers (CENRA and CIERA) operating there (Project 3.1.2.).
- 4) Contribute to the strengthening of Land Reform Institutions in the Andean Zone by advisory service, seminars and high-level meetings, in-service training and courses, particularly in those countries where there are no National Centers (Project 3.1.3.).

5. Projects Andean Zone

* Project 3.1.2. Technical Training in Land Reform through National Courses is divided into two sub-projects which, in the future, could become independent projects.

PROJECT 3.1.1. "YARACUY (VENEZUELA) DEVELOPMENT AREA"

Fundamentals

a. Present Status

1) What is known

The obvious need to train personnel in the techniques and methodology of rural development, utilizing all information coming from a rural area.

2) What remains to be learned

The Yaracuy Area was chosen because of its scant development because of its size, because it was representative and had easy access; because it has a variety of conditions to do research on, to carry out development actions and fix reference points for evaluation. However, it is necessary to have more information on the features of the area and of the conditions under which activities are carried out in it. To discover them, analyze them and make the diagnosis is part of the very objective of this project.

3) What the countries want

On many occasions, the countries in the Andean Zone have expressed their interest in getting international technical assistance to train suitable personnel in the techniques and methods for planning, implementing and evaluating rural development programs. Venezuela, in particular, took pains to have the Development Program take shape in some area within its territory, for the purpose of giving advisory service to all of the countries in the Zone in advanced personnel training, and promoting the effective utilization of the techniques and methodologies for regional rural development.

b. Background

1) What IICA has done

Basic preliminary action for the organization and setting up of the program in Venezuela, signing the corresponding agreements. Chose the area and has taken interest in choosing and appointing the specialists that will act in the initial period. As main activities, it gave technical advisory service to the Foundation for Development of the Mid-Western Region of Venezuela (FUDECO) and has organized an International Course on Regional Rural Development, held in Maracay, from October 24 to December 3, 1966.

2) What others have done

The Government of Venezuela, additional financial contributions to complete the necessary budget, and through the Ministry of Agriculture and other organizations, it has offered and given

its full cooperation. The Central University of Venezuela, in Maracay, has promised the cooperation of its professors for activities of the program in general; it has promised to offer space and give its fullest cooperation.

Among international organizations, AIA has signed an agreement with IICA and will make technical and financial contributions.

c. Action Proposed

1) What IICA must do

Start its activities in the area, as soon as possible, giving training by means of courses and in-service training programs, in techniques for research in resources for development methodology of programming and the plans for achieving it.

2) What others must be made to do

National organizations and regional organizations in the area must make the best and most effective use of the knowledge conveyed to them. Make integral use of the findings and conclusions of research, and assign to the program the greatest number of specialists in the different projects. Keep in close contact and promote constant and well-coordinated communication.

Try to have international organizations cooperate with their specialists, continue exchange of experience and, as far as possible, participate in common actions with the specialists of the program.

3) Goals

- In two years:
1. Research in Natural Resources for Development. Make the inventory of soils of the area, its useful capacity, and determine the techniques for making the best use of it; inventory of hydrologic resources and efficiency in irrigation.
 2. Research of human resources for development. Demographic studies: structural studies and population movement; study of the attitude and ability of the inhabitants of an area toward the policies of change; study of the living conditions of rural families in the area.
 3. Research in economic resources for development. Studies of present holding and use and productivity of land; study of the service structures in the area.

In three years: Train 60 professionals as experts in Planning, Implementing and Evaluation Rural Development (20 per year).

PROJECT 3.1.2. TECHNICAL TRAINING IN LAND REFORM THROUGH NATIONAL CENTERS

a. Present Status

1) What is known

Efforts being made by executive organizations of the countries in the area that are advancing Land Reform programs, find their action hampered because of the lack of suitable personnel well qualified to meet the demands and technical responsibilities required by the planning, implementation and training in Land Reform. This limiting situation is made worse because of the demand for new personnel and because they do not have the necessary conditions and capacity to give, with their own resources, the required training.

2) What remains to be learned

The number, disciplines and technical level of officials working in organizations that directly or indirectly take part in the processes of reform. Future personnel needs and training priorities of same. The potential capacity of the countries to produce more specialists.

3) What the countries want

The countries in the Andean Zone have repeatedly expressed their interest in getting technical assistance from international organizations for training the personnel of the executive organizations. Their concern is to have available highly-qualified personnel at the various levels, in order to be able to meet, effectively and quickly, the objectives entrusted to them by legal provisions and Land Reform regulations. This constant concern led them to request the creation of National Centers.

b. Background

1) What IICA has done

- ° In order to satisfy these just requests, IICA promoted training activities through International Courses, National Courses, high-level Seminars and In-Service Training Programs, to go on to creating the Inter-American Training Center in Land Reform in Bogotá (IICA-CIRA); the National Land Reform Research and Training Center in Ecuador (CIERA) and the National Land Reform Training Center in Peru (CENRA).

2) What others have done

International organizations, such as FAO, AID, BID and others have cooperated fully in the training activity through technical and financial assistance.

c. Action Proposed

1) What IICA must do

Continue taking interest in, and giving support to the work being done by national centers, offering them every means at its command to help them fulfill their aims. Furnish them with more professors and promote action through short courses.

In the countries that do not have this kind of organization, organize a greater number of national short courses, in order to have the largest number of officials trained in the shortest possible time.

Intensify in-service training programs, offering means for greater professional exchange, and organize seminars on specific problems and annual meetings of high-level executives in Land Reform for an exchange of information and experience.

2) What others must be made to do

Countries that still do not have National Training Centers in Land Reform should take steps to achieve this. Executive organizations for Land Reform should facilitate as far as possible their officials' participation in the courses and seminars that are offered, and should contribute financially so that they can attend. They should furnish space, means of transportation, etc.

International organizations should contribute professors and other means and resources at their command.

3) Goals

Cooperate in giving technical advisory service to, and strengthening the Land Reform organizations in Peru and Ecuador, and attempt to achieve the following goals:

In CENRA, give technical training to a total of 750 professionals, at the rate of 250 per year; and in CIERA, train a total of 450 professionals, at the rate of 150 per year.

In order to achieve the three-year goals set for both training centers, CENRA and CIERA, carry out, through annual programs, the following activities:

- a) Eight-week courses for technical training in planning, implementation, management and evaluation of Land Reform programs at the national, regional and specific project level.
- b) Short courses in General Information and Basic Philosophy of Land Reform for personnel at different levels, working for organizations connected with Land Reform programs, as well as for candidates for such jobs.

c) Specific and short courses in the following subjects: valuation, drawing up and managing projects, farm management and planning units, agricultural credit, marketing, cooperatives, community development, education and extension.

d) Research and in-service training programs.

4) Estimated Cost of Project

Sub-Project 3.1.2.1. CENRA - PERU

	<u>1967-1968</u>	<u>1968-1969</u>	<u>1969-1970</u>
IICA	17,748.24	34,500.00	40,000.00
PERU	112,748.76	113,290.00	115,000.00
TOTAL	\$ 129,790.00	\$ 147,790.00	\$ 155,000.00

Sub-Project 3.1.2.2. CIERA - ECUADOR

IICA	33,643.00	30,000.00	35,000.00
ECUADOR	64,183.00	67,826.00	65,000.00
TOTAL	\$ 97,826.00	\$ 97,826.00	\$ 100,000.00

PROJECT 3.1.3. STRENGTHENING LAND REFORM INSTITUTIONS

Fundamentals

a. Present Status

1) What is known

The need to strengthen Land Reform organizations with technical advisory service in training, particularly in the countries that still do not have organized national centers.

2) What remains to be learned

The number and technical level of the professional available to executive organizations at present; the number of specialists and the training level required for the future, and the potential capacity of their universities and technical schools to produce new professionals.

3) What the countries want

On many occasions they have expressed their urgent need to have technical assistance to train their professionals in the techniques and methodology of Land Reform and in all supplementary disciplines.

b. Background

1) What IICA has done

National and international courses, specific courses, seminars at different levels and on specific problems, in-service training, professional exchange and meetings of high-level officials.

2) What others have done

National organizations have cooperated fully with IICA's work, offering professors, spaces, practice fields, leave of absence and other facilities for participants to attend the activities developed, and financial aid.

FAO, AID, AIA and other international organizations have always given the technical and financial assistance that has been requested.

c. Action Proposed

1) What IICA must do

Employ all available means to fill these needs of the countries and particularly of those that do not have national centers. Conduct short national or international courses, seminars, offer in-service training, exchange of professionals and high-level meetings.

2) What others should do

Others should cooperate fully by contributing technical elements, and financial means, working in close coordination with IICA. National organizations should facilitate by all means the participation of their specialists in courses, seminars, training programs, etc.

3) Goals

It is intended to give training to a tentative total of 110 professionals in the Andean Zone through:

1. National Course in Microplanning in Bolivia, to train 30 technical officials from the Ministry of Agriculture, the National Council for Land Reform and the Ministry of Farmer Affairs:
2. National Course for Planning and Managing Land Reform at the Project Level, in Venezuela, to train 30 officials in Land Reform.
3. National Course in Regional Rural Development in Bolivia, for the purpose of giving applied training in the techniques and methods for inventorying resources and for planning and implementing Rural Development Programs, to 30 national officials. Advantage would be taken of this to work particularly in the Chapre area and determine its features for a future "Development Area" program.
4. On the basis of the National Course in Planning and Managing Land Reform at the level of Projects, to be given in Venezuela, work will be continued, as "Concentrated Efforts", on applied programs of technical knowledge through in-service training of inter-disciplinary teams, with the participation of 20 technical officials.

B. NORTHERN ZONE

1. Present Status

a. What is known

- 1) According to the most reliable sources of information, more than 50% of the active population works in agriculture (Social and labor statistics, Pan-American Union, 1961).
- 2) That the population grows at a rate of about 3% a year.
- 3) That the use of land (in relative number) varies from 12.1% for agricultural land, including permanent crops, and 87.9% for forests and other land, in Mexico; to 58.3% and 41.7% respectively, in El Salvador. (FAO 1962 Production Annual).
- 4) Land holding is inadequate and the analysis of statistics regarding distribution of area of cultivated land, by farms of more than 1,000 hectares and of less than 5 hectares, brings out the social and economic problem of the "latifund" and the "minifund" in countries in the Northern Zone.
- 5) The per capita income is exceedingly low, fluctuating from \$ 503.00 in Panama to \$ 67.00 in Haiti, Puerto Rico being an exception with \$736.00.
- 6) In general, agricultural and livestock production is inadequate to fill the needs of the population and its growth (low productivity and improper use of the available resources).
- 7) There are a series of studies that help to direct the Rural Development and Land Reform Program of the Northern, as follows:
 - i. Study of Land Holding in Guatemala, CIDA, 1965.
 - ii. Study of Land Holding in Central America, FAO-CEPAL-OIT group.
 - iii. Study on the present situation of Land Reform institutions of the Central American Isthmus, IICA, with emphasis on the need for personnel and training, Northern Zone, 1966, unpublished.
 - iv. Analytic study of Extension services in Panama, Costa Rica, Honduras and El Salvador, Training and Research Center, Turrialba.
 - v. Program for Fostering the Production of Basic Grain for Central America, Joint Programming Mission for Central America, 1965.

- vi. Various general and partial studies on economic problems of some agricultural products in Central America, SIECA, (cotton, grain, meat, etc.)
- vii. Inventory of Physical Resources of all the countries in Central America, ROCAP.
- viii. Inventory of the resources of Dominican Republic, OAS, 1966.
- ix. Ecologic study of the countries in the Central American Isthmus, Leslie Holdridge.
- x. Study made by the CIDA-CAIS group on land holding and Rural Development in Central America.
- xi. Various studies on human nutrition, Nutrition Institute for Central America and Panama - INCAP.
- xii. Studies of capacity to use the land, C. Vinton Plath.

There are studies at the national level and also at the regional level wherein are presented the plans for economic and social development. These plans include Sectorial Programs and among them, Agricultural Development programs, that even include aspects of Land Reform and Settlement, as an instrument for development.

There are also a series of studies on Land Holding and Land Reform, as shown by the Bibliography prepared by Thomas F. Carroll, of the Bank for International Development, Washington, 1965.

- 8) In all of the countries, in addition to the Ministries of Agriculture, there are specialized organizations in land reform, or rural settlement, social welfare, community development, agricultural credit, institutions of learning, etc.
- 9) There is a scarcity of qualified technical personnel to diagnose, plan, implement, manage and evaluate measures intended to achieve balanced and constant economic and social development. The scarcity of qualified technical personnel is glaring in Land Reform institutions, mainly for the implementation and management of Land Reform and settlement projects, as well as Extension services.
- 10) There are administrative deficiencies in the organizations that have a responsibility in the solution of problems connected with rural development and Land Reform. It is known fact also, that there is little or no effective coordination and cooperation among them.
- 11) That the financial resources available to the countries, and particularly to the organizations connected with rural development and land reform are very meager.

b. What remains to be learned

In all of the fields mentioned and for all of the countries in the Zone there are studies (some in greater detail and more exhaustive than others). Before undertaking any new studies, the material produced should be gone over to determine if it is worth while to start the new ones or if it would be better to adjust or go deeper into the existing material, to have reliable information. Only after this first step will it be possible to really determine what remains to be learned. In this respect, it would be advisable to act with a sort of dynamism that will allow the taking of decisions without delaying too long in trying to attain a fictitious perfection.

c. What the countries want

In general, the wish, or rather, the need expressed over a number of years, is to emerge from the situation of underdevelopment and thus have fair opportunities for employment and the distribution of income.

The countries ask IICA, in particular, for training personnel working in Government agencies, autonomous organizations and other departments connected with rural development and land reform, so that they can better fulfill their responsibilities. Also, they ask for orientation in matters of agricultural policy and advisory service on technical problems they encounter.

2. Background

a. What IICA has done

IICA, in connection with fields related to Rural Development and Land Reform, specifically in Agricultural Extension, Land Reform and Agricultural Credit, has been developing a series of activities in connection with personnel training, mainly through short courses, both international and national; it has held seminars and promoted technical meetings. It has given advisory service to national institutions and has done research work.

In Land Reform it has held, from 1962 to 1966, four international courses, one at the continental level; one seminar on financing Land Reform and three Concentrated Efforts. Approximately 200 specialists have participated in these activities. Many courses, national and international, have been offered in Agricultural Extension, a great many specialists having received training in Extension service.

Also, five six-month courses were offered in Agricultural Credit where specialists from Latin America were given training; and several national courses in El Salvador, Guatemala and Panama.

b. What others have done

The Inter-American Committee for Agricultural Development (CIDA) has made a study of Land Holding in several countries in the Northern Zone and with the cooperation of FAO/CAIS it is making a general study on Central America, in connection with Land Holding and Rural Development. Besides, with the cooperation of the Inter-American Institute of Agricultural Sciences (Northern Zone), made a study of Agricultural Education, Research and Extension in Central America.

FAO has cooperated with the countries in the training of personnel in Agricultural Extension and has held several seminars on the same subject.

AID has cooperated with the governments of the countries in the Northern Zone in the development of Extension Services.

The joint planning mission for Central America has made several studies and drawn up a plan for regional development of the area, and has cooperated with the countries in drawing up national plans in various sectors. SIECA has had a very important share in the development of the Central American Economic Integration Program, as well as CEPAL.

3. Action Proposed

a. What IICA must do

- 1) Continue its efforts to strengthen the institutions that work in fields connected with Rural Development and Land Reform, through the training of personnel, research, advisory service and communications.
- 2) Help the countries to strengthen the coordination of institutions connected with Rural Development and Land Reform, through the study and implementation of rural development projects, using for this purpose pilot development areas.

b. What others should do

An effort must be made to have the countries strengthen their Rural Development and Land Reform institutions and to have them set up closer cooperation among such institutions in the development of national projects.

Greater coordination must be encouraged among the various international organizations giving technical and financial assistance to the countries in the area, in order to achieve more effective results.

Increasing importance should be given to the agricultural sector within the Central American Economic Integration.

Central American countries should give full support to the establishment and development of the Rural Development and Land Reform Center (CEDRA) for the Central American Isthmus.

4. Future Activities

a. Factors favoring action

The efforts made by the countries in developing the Central American Economic Integration and the success achieved, have aroused considerable interest and determination to coordinate the efforts that give impetus to the economic development of the area. This has created favorable atmosphere for developing activities at the regional level that will facilitate the work of IICA.

The increase in general awareness of the need for changes in administrative structures, in land holding, etc., as fundamental factors for economic development, favors action by IICA.

The large amount of material available on problems connected with rural development helps to orient the programs of the Northern Zone better.

b. Factors that hamper it

The scarcity of technical personnel with the necessary training is one of the most limiting factors for carrying out rural development and land reform programs.

The limited resources available to land reform institutions also limit their action leading more quickly to the required changes. Political factors also limit Land Reform action in most of the countries in the Northern Zone.

Deficient administrative organizations constitute another important stumbling block to development of the activities of Rural Development and Land Reform Institutions in many of the countries in the Zone.

c. Objectives and goals

The objectives pursued through the Resources for Development and Land Reform Program in the Northern Zone are, fundamentally:

- 1) Strengthening of institutions connected with Rural Development and Land Reform, and
- 2) Cooperate with national institutions in the studying and implementation of rural development projects that will facilitate cooperation among such institutions and make it possible to train personnel.

d. Projects and other activities

The Rural Development and Land Reform Program of the Northern Zone will carry out its plans through the following projects:

- 3.2.1. Strengthening of Agricultural Extension Institutions
- 3.2.2. Strengthening of Land Reform Institutions
- 3.2.3. Rural Development Projects (New Concept)

PROJECT 3.2.1. STRENGTHENING AGRICULTURAL EXTENSION INSTITUTIONS

Fundamentals

a. Present Status

1) What is known

- a) All of the countries in the Northern Zone have Extension Services initially organized following the pattern of such services in the United States.
- b) Most of the Extension Services are confronted with the problem of lack of properly trained personnel and none of them has a suitable group of specialists.
- c) In most of the Extension Services there is considerable turnover in personnel because of the lack of incentives. It has been observed that good personnel goes over to work for private concerns or autonomous agencies.
- d) There is very little expansion of the Services in proportion to the needs of the countries, due to the fact that in most cases the necessary resources for it is not available. The number of Extension Agencies in all of the countries in the Northern Zone is very limited in proportion to their population.

2) What remains to be learned

- a) The impact produced by Agricultural Extension based on an evaluation.
- b) How Agricultural Extension can be integrated with other rural development programs instead of working independently, which sometimes leads to doubts as to the effectiveness of Agricultural Extension in the social and economic development of all of these countries.
- c) A fast and effective way of getting the subject of Agricultural Extension included as a compulsory subject in all Departments and Schools of Agriculture.

- d) Find the way for more professors to be trained at the postgraduate level so that they will teach Agricultural Extension in Schools or Departments of Agronomy.

- 3) What the countries want

They want Agricultural Extension to be included in the basic development programs (Technical Assistance, Credit Assistance, Land Reform, Cooperatives, Marketing, etc.) through a coordinated effort toward rural development. This would lead to effective results in a short time.

- b. Background

- 1) What IICA has done

- a) Fundamentally, it has been responsible for the professional training of most of the Extensionists working at present. This has been achieved through postgraduate training, short, national and international courses, in-service training, consultant and advisory services.
- b) Sponsored analytical studies of some of the Extension Services in the Northern Zone.
- c) Technical assistance in the organization of Extension Services.

- 2) What others have done

Both national institutions and international organizations (FAO, AID) have cooperated to give impetus to the improvement of Extension Services.

- c. Action Proposed

- 1) What IICA must do

- a) Promote the training of more personnel in Agricultural Extension at all levels, from the postgraduate training of professors to Extension Agents.
- b) Promote the coordination of Extension with other rural development programs to work as teams.

- 2) What others must be made to do

- a) Get the cooperation of national and international institutions, as recommended under section 1.
- b) Recommend to Member Countries that they give more moral and financial support to Extension Services.

3) Goals

- In two years:
- a) Prepare professors for Departments of Agronomy and Schools of Agriculture at Intermediate Level.
 - b) Complete the training of teams of trainers in Agricultural Extension.
 - c) Start teams of trainers working in the different countries.
 - d) Start activities under the Rural Development Project and at the Land Reform and Rural Development Center.
- In five years:
- a) Complete the training of professors for Departments of Agronomy and Schools of Agriculture at Intermediate Level.
 - b) Leave the teams of trainers working properly and, if possible, set up training offices or sections within the Extension Services and/or the Universities.
 - c) Consolidate and expand training and study activities at the Land Reform and Rural Development Center and in the Pilot Development Area.

PROJECT 3.2.2. STRENGTHENING LAND REFORM INSTITUTIONS

Fundamentals

a. Present Status

1) What is known

- a) Most of the countries in the Northern Zone have laws and institutions connected with Land Reform.
- b) A large majority of these institutions are very recent and they encounter serious administrative, financial and political problems, in the development of their activities.
- c) In general, the lack of qualified personnel is one of the limiting factors for Land Reform institutions to carry out their plans.
- d) According to the survey made by the Regional Office for the Northern Zone, under Project 206 of the Technical Cooperation Program for the Central American Isthmus in February/May, 1966, 405 specialists in different fields of specialization and with different training levels work in Land Reform institutions. However, only 101 of them belonged to the field of agriculture.

- e) From 1962 to date, approximately 103 specialists of the Northern Zone have received training from IICA, through national and international courses. 89 of them are from the Central American Isthmus, so there is still quite some personnel to be trained, and this number increases every year by the new personnel that is employed by said institutions.
- f) According to the February/May survey, Land Reform institutions in Central American Isthmus were handling, at that time, a total of 42,957 beneficiaries.

2) What remains to be learned

- a) Try out a method for giving effective and practical training to specialists who would implement and manage rural development projects.
- b) Try out methodologies for the purpose of finding the most practical one to carry out studies and the drawing up of specific projects for areas where it is desired to carry out rural development projects.
- c) A method under which there is more cooperation and a more effective use of resources, among rural development and land reform institutions.

3) What the countries want

At the first Meeting of Executives in Land Reform, held in Lima, Peru, and Bogotá, Colombia, from December 6 to 11, 1965, IICA was asked to study and carry out the necessary steps to set up a Land Reform Center for the countries in the Central American Isthmus.

b. Background

1) What IICA has done

- a) Since 1962, the Northern Zone has offered four short international courses in Land Reform, which have trained 103 specialists from countries in the area.
- b) A seminar on financing land reform was held in Panama in 1964 and a Meeting of Executives in Central America and Panama Land Reform was held in El Salvador in November, 1966.
- c) Three Concentrated Efforts have been carried out, two in Panama and one in El Salvador.
- d) A study has been made on the Personnel and Training Needs of Land Reform Institutions in the Central American Isthmus.
- e) A total of 14 scholarships have been given to study in IICA-CIRA, in Bogotá, Colombia.

2) What others have done

- a) Organizations such as CIDA, FAO and AID have helped Land Reform institutions through studies of the land holding situation and other problems in connection with Land Reform, personnel training and so forth.
- b) National institutions have put forth efforts to put into practice the provisions of Land Reform or Settlement laws in each country and to do an efficient job. However, many obstacles have been encountered by the institutions.

c. Action Proposed

1) What IICA must do

- a) IICA, in order to help Rural Development and Land Reform institutions in the Central American Isthmus, intends to set up a Regional Center in the area. This Center will be financed by the Central American countries and Panama, with the cooperation of IICA, according to the Agreement that may be signed for the purpose. The basis for setting up this Center were submitted to the Land Reform Executives of the Central American Isthmus at the meeting held in El Salvador from November 7 to 11, 1966.
- b) Continue giving training to personnel from Land Reform institutions in the West Indies, through national courses, concentrated efforts and scholarships to study in IICA-CIRA and in the future Regional Center.
- c) Continue giving advisory service to national institutions, mainly in the solution of specific problems, evaluation of their programs and study of projects.

2) What others must be made to do

- a) Countries in the Central American area must give their full support to the establishment and development of the activities of the Center. The action to be taken shall be determined once the corresponding Multinational Agreement has been signed.
- b) Other institutional organizations should give their cooperation in establishing and developing the activities of the Center.

3) Goals

- a) In one year: Determine the host country for the Center and establish it.
Create the Center.
- b) In two years: Train approximately 100 persons in aspects connected with rural development and land reform.
- c) In five years: Training of approximately 500 persons in aspects connected with rural development and land reform.

PROJECT 3.2.3. RURAL DEVELOPMENT PROJECTS (NEW CONCEPT)

Fundamentals

a. Present Status

1) What is known

- a) In the countries in the Northern Zone, mainly in Central America, Panama, Haiti and the Dominican Republic, the need is felt for practical methods for making studies and drawing up projects for rural development, as well as the need for trained personnel to make these studies and implement the projects.
- b) In order to be able to train personnel of these countries in the above activities, it is necessary to have available an area where the necessary practice is made and the effectiveness of the action recommended is shown.
- c) The Agrarian Transformation Institute of Guatemala has requested the cooperation of IICA in setting up a rural development project in the area called "Nueva Concepción", in the municipality of Tiquisate. This area has approximately 38,000 hectares of flat and fertile land. It has features for carrying out a good rural development project.

2) What remains to be learned

- a) It is necessary to make diagnostic, prognostic and specific project studies of development areas and test the methods to be followed, that will serve for future work in the country.
- b) The way of finance the rural development project and the way the implementation of the recommendations will be carried out.

3) What the countries want

To materialize land reform and rural development, approached from an integral viewpoint, where national and international programs and services will cooperate, using methodology in keeping with Central American realities.

b. Background

1) What IICA has done

- a) IICA, in the Northern Zone, has done some work in connection with studies and the drawing up of rural development projects, as in the cases of Panama, El Salvador and Costa Rica, and has trained personnel for the purpose.
- b) However, the Pilón area in El Salvador is the place where action has really gone far in this field.

c) The experience acquired makes it possible to undertake larger projects, like the Nueva Concepción area in Guatemala.

2) What others have done

In some countries rural development projects have been started, based mainly on settlement, but in many cases there have been deficiencies that have prevented achieving the expected success.

c. Action Proposed

1) What IICA must do

- a) The Regional Office for the Northern Zone will offer its cooperation to the Agrarian Transformation Institute of Guatemala, in studying and drawing up specific projects for the Nueva Concepción area.
- b) It will train personnel of said Institute in the studying and drawing up and implementing of projects. It will also take advantage of this experience to train personnel from the countries in the Central American Isthmus.
- c) It will give technical advisory service to INTA of Guatemala in the implementation of the Nueva Concepción Rural Development project.

2) What others must be made to do

It is essential that other international organizations, like BID, cooperate in carrying out this purpose. Similarly, it will be necessary to have the cooperation of national organizations for the study of the area and the drawing up and implementation of the projects.

There must be well-established coordination among national and international organizations so that the plan will succeed.

3) Goals

- In two years:
- a) Make the diagnostic and prognostic studies, draw up the specific projects and start implementation of same.
 - b) Train a team of persons from INTA to continue the studies and the drawing up of projects in other areas in Guatemala.
 - c) Train a group of persons from INTA in the implementation of projects and the management of rural settlements.

- In five years:
- a) To have helped INTA in getting the Nueva Concepción Project into full operation.
 - b) To have trained at least 100 specialists from Guatemala and other Central American countries and Panama, with the cooperation of the Rural Development and Land Reform Center (CEDRA), Project, 3.2.2.

C. SOUTHERN ZONE

1. Present Status

a. What is known

The economic development of the countries in the Southern Zone have certain common features insofar as their agriculture is concerned: a high percentage of the population dependent on agriculture, which is not very generous in its contribution to the National Gross Product.

Low income that means low purchasing power for consumer goods and industrial and service input items.

Deficit agricultural and livestock production which is inadequate to fill the need for food, which, in turn, means inadequate calory and protein intake by some sectors of the population and an increasing proportion of foreign exchange spent in agricultural products for other sectors.

Agriculture represents an overwhelming percentage of the export structure, and this situation is made worse by the monocultural factor.

Unfavorable balance of payments with a negative tendency in terms of money; inevitable reduction of importation of capital and consumer goods.

Variation in the growth rate shown by relative expansion, stagnation and contraction that is added to other causes of economic and social instability.

Disbalance in the distribution of productive resources, wealth and, hence, income and standards of living.

Inadequate use of natural resources.

Deficiencies in the price system. Inefficiency in marketing processes.

Unreliable agricultural credit, as a rule rather scarce unevenly distributed and directed.

Agricultural cooperative movement weak and very often inconsistent with cooperative principles.

Agricultural extension usually the result of adopting philosophies, organizations and procedures alien to the Latin American environment, and with a scarcity of technical personnel at the level of land, and limited material means for action.

Agricultural taxation strongly characterized by immediate objectives for fiscal financing, without any orientation toward development. Lack of an effective policy as regards prices of agricultural and livestock products and input items, directed mainly toward immediate purposes, without any definite long-term tendencies.

Improper population distribution, with coexisting situations of over-populated areas and under-populated or unpopulated areas.

Coexistence of very different levels of development: isolated nuclei of sectors with high indices of productive techniques in a general environment of stagnant agricultural production.

Lack of institutional dynamism for adapting agricultural activity to the rapidly-changing economic conditions and opportunities.

In general, this situation is admitted in the countries in the Zone, and in all of them there are evident, to a greater or lesser extent, efforts aimed at finding a solution. There exists in the countries the institutional machinery for diagnosing the agricultural situation and for action leading to its progress. In all of the countries there are, in addition to institutions devoted to teaching at different levels and to Agricultural Research, Rural Development Institutions, such as Planning Offices, Land Reform Organizations, Credit, Extension, Rural Welfare, Public Works, Cooperatives, Taxation.

It is also admitted that its means are inadequate, its coordination deficient and its technical personnel insufficient, particularly at the upper levels. It is also known that in all of these countries there are high-class technical nuclei. There is information on natural, human, technical and economic resources. There is a situation of inadequacy, but not of total lack.

b. What remains to be learned

It is still to be determined why the existing machinery does not lead to the aims for which it was created, and how to have them become dynamic organizations that will promote development. It is still to be determined what area of knowledge and what tools required for planning, taking decisions, implementation and evaluation, are not being taken care of and what should be done to satisfy such requirements.

c. What the countries want

The countries need the kind of diagnosis mentioned above and they must have the means and the procedures for solving the problems that have been identified.

2. Background

a. What IICA has done

IICA, Southern Zone, has directed its action toward satisfying the "evident needs", in conformity with the means it has had at its disposal, which means have been partially pre-directed in their general approach by the organizations entrusted with the provision of budget funds.

The main emphasis in the Southern Zone, insofar as regards Rural Development, has been placed on the training of technical personnel at the university level by means of Short Specialized Courses, Seminars and other Technical Meetings, In-Service Training, Research and Communication, all of them of national and international scope.

In these activities, preference has been given to the fields of:

- Farm Management
- Agricultural Extension, including Home Economics and Rural Youth Education.
- Agricultural Marketing
- Agricultural Taxation
- Communication

In cooperation with other departments, similar activities in Land Reform and Agricultural Credit have been carried out.

As a result of the foregoing activities, the Southern Zone has issued a number of publications intended not only to give information on its findings and encourage efforts toward improving said disciplines, but also to set forth methodologies, suggest changes and establish the bases for adaptation to similar cases.

The Southern Zone started, and is continuing, efforts toward determining the appropriate methodologies for Regional Agricultural Development and its relationship with National Development Plans. Its starting point for these efforts have been the Pilot Development Areas for Extension. It has been possible to expand the successful experience in San Ramón, Uruguay, and it is being used as a basis for the present Pilot Development Area in Maipú, Chile. Coordination has been achieved in this area, in a joint-action program with universities, Ministries, Land Reform organizations, Credit, Extension and Rural Promotion.

b. What others have done

Other international agencies besides IICA have participated in the field of rural development in the Southern Zone. Among them are FAO and CEPAL, who, in turn, have specialized organizations, BID, CIDA and the Institute of Social and Economic Research. This list is not all-inclusive.

In general, these organizations have acted mainly, but not exclusively, at the macro-development level, in the diagnosis of general problems and in finding long-term solutions. They have given preference to studies at the national level, to advisory service direct to official organizations and to financial aspects of specific projects.

3. Action Proposed

a. What IICA must do

IICA has limited resources and possibilities for direct action in the Rural Development of the countries in the Zone. It should intensify its action toward:

- Strengthening of Rural Development institutions, including Land Reform, Planning, Extension, Credit, Taxation, Marketing, Cooperativism, Sociology and institutions devoted to Technical Training at the level of university professionals and postgraduate level, in the fields of specialization that make up social and economic development.
- Coordinating and planning Rural Development at the regional level, mainly through Regional Rural Development Areas.
- Drawing up methodologies to cover "no man's land" between studies and programs at the national level, and their implementation at regional and local levels, up to explicitly considering the putting into operation at the farm level.

This could be accomplished by means of the activities already mentioned (courses, seminars, advisory service, etc.) keeping the central concept of Training, around which the other activities must be organized.

On a short term, the Short Specialization Courses play a very important role and constitute the accomplishment of an action recognized and required by all the national institutions. Seminars can continue to exert their influence on the exchange and renewal of knowledge, and also as a tool of inter-institutional coordination at the national and international levels.

In activities whose results are expected at medium and long-term, In-Service training has shown its effectiveness in the countries in the Zone and the financial possibilities of offering it should be increased. Postgraduate training in subjects regarding Rural Development should be started and strengthened through Regional Cooperative Programs, whose effectiveness is being demonstrated in Agricultural Training and Research Programs.

The Southern Zone directs its activities at three levels, in each one of which situations are sought, problems are solved, solutions are determined and action leading to the achievement of the objectives of Development is encouraged.

At a first level, the DEVELOPMENT OF THE SOCIAL and ECONOMIC UNIT is sought, through activities directed at the farm and at the individual producer and his family, whose contribution, active participation and benefit are basic elements of economic and social progress.

At a second level, the REGIONAL RURAL DEVELOPMENT is sought, considering the region as a Planning Unit whereby, keeping in mind the national needs, solutions are sought as a whole, for geographical areas having natural, social and/or economic characteristics that make possible an integral approach.

At a third level, AGRICULTURE IN THE OVERALL DEVELOPMENT is approached, in answer to the need for integrating the Agricultural Sector into a sustained process of economic growth and social development, both as to nations and as to Associate of Countries around the idea of the Common Market.

The Southern Zone has organized its Basic Program for Rural Development and Land Reform in three Projects. Two of them are directly connected with the Strengthening of Rural Development and Land Reform Institutions, and a third one is aimed at consolidating and enlarging the experience of the Southern Zone in the management of Pilot Development Areas.

In this manner, Basic Program 3, Southern Zone, is made up of:

- Project 3.3.1. "Strengthening of Rural Development Institutions"
- Project 3.3.2. "Strengthening of Land Reform Institutions"
- Project 3.3.3. "Pilot Development Areas"

All of the activities have been grouped on the basis of these 3 Projects, and an effective liaison is sought among Research, Training and Communication, that will encourage working in teams, overall understanding of the phenomena and integral solutions that can be possible only through an inter-disciplinary approach.

b. What others must be made to do

For the development of the Program sketched out above, it is necessary to achieve coordination of the activities of the different organizations interested in the subjects mentioned, for the purpose of attaining cooperation among institutions, elimination of unnecessary duplication of efforts, and encouragement for those that are inadequately being looked after.

From government organizations is required the determination of national goals, which can be stated in terms of achievements at regional levels, setting of priorities for the objectives and efforts for financing.

PROJECT 3.3.1. Strengthening of Rural Development Institutions

Fundamentals

a. Present Status

1. What is known

The countries in the Southern Zone are conscious of the existence of an unsatisfactory situation in its rural development, since it has not been possible to get the Agricultural Sector to play a predominating role in social and economic progress. It is recognized that until this happens, general development will not be possible and that even the progress temporarily made by other Sectors will be held back by the burden that agriculture represents on the whole. The size of the Agricultural Sector, as to population, contribution to the national income, volume of foreign trade and its projection as purchasing power, will not allow the thought that its improvement could be a result of a process of general growth but that it is a force that impels it.

To make possible government action, there are many specialized agencies that are entrusted with the different functions reserved for the Government in its decisive role for fostering development. In addition to the Public Services, such as internal and external security, public health, justice, education, transportation facilities, etc., there are institutions related to economic and social aspects who are responsible not only for ensuring that there are conditions favorable to development, but also to promote it.

Insofar as regards Rural Development directly, IICA - Southern Zone, is interested in:

- a) Institutions concerned with Training and Research in agricultural matters; Universities (Schools of Agronomy, Veterinary, Forestry, Economics, Home Economics), Research Organizations in Economics, Sociology, Natural Resources (including plants and animals).
- b) Institutions influencing the Disposal and Use of Natural Resources: Organizations for Distributing or Re-Distributing Lands and Waters; Departments for the Conservation of Soils, Waters and Forests.
- c) Institutions that influence the Disposal and Use of Economic Resources: Taxation, Credit, Investment, Monetary Policy.
- d) Institutions that influence the means for stimulating production: prices, subsidies, rural salaries, marketing cooperativism, associations, rural welfare.
- e) Institutions entrusted with studying, proposing, and orienting the activities as a whole: Planning Offices.

Information is at hand on the Institutions of this kind that exist in the countries in the Zone. General information is available on their objectives, human and economic resources, legal resources and internal organization. The overall results of the action of all of them are known, in terms of production, income and standard of living of the Agricultural Sector. It is inferred that there are weak points in the rural development institutions, which must urgently be strengthened so that they can accomplish their objectives.

2) What remains to be learned

It is necessary to identify the weak points of the institutional machinery and point out the causes that produce them. This must be done both as regards the individual organizations and as regards their mutual relations and the functional gearing that impede the accomplishment of their aims. After diagnosing the causes, it is necessary to determine the resources and procedures that would make possible their strengthening.

3) What the countries want

The countries want to fashion their institutions and establish them firmly for the planning and implementation of their aims for economic and social improvement. They require organizations that will meet the circumstances peculiar to each region where they operate, with the necessary flexibility to adapt to changes that must be made in every process under way, and with the necessary continuity and stability that will enable them to maintain policies that will orient, encourage and support the means for accomplishing the objectives proposed.

b. Background

1) What IICA has done

The work of IICA has been mainly directed toward the Technical Training of professionals at university level who work in Rural Development Institutions.

Limited by insufficient financial resources, IICA has concentrated its action on the specialists as the mainstay of institution. Keeping in mind academic training not always adapted to the dynamics of change, IICA has tried to supplement the knowledge of professionals in the countries in the Zone. For this purpose, it has offered Short Courses, Seminars and In-Service Training, backed by Research and disseminated by Technical Publications which, as a whole, have raised the level of some specialties, strengthened others and fostered the starting of others.

The professional improvement of national specialists with experience in their own institutions can represent a more positive strengthening than would be possible by other more direct means of assistance.

The Short Courses have served to attract attention and awaken aspirations toward disciplines inadequately considered in the traditional programs of most of the universities in the Zone. The Seminars have served for an exchange of ideas and experience of specialists in similar functions, whether this be within a country or in international meetings; In-Service Training has been of extraordinary value, mainly in training young professionals in the methodology of research and in the procedures of practical action, relative to different disciplines. Research done by IICA - Southern Zone has been done almost exclusively in connection with Technical Training; but it has also been a contribution toward enlarging existing knowledge.

In aspects connected directly with Rural Development Institutions, the Southern Zone has worked mainly in Farm Management, Agricultural Extension, Home Economics, Land Reform, Marketing, Credit, Agricultural Taxation, Communication and Regional Rural Development.

2) What others have done

The countries in the Zone have promoted their own institutional strengthening through:

- a) Creation of Rural Development Institutions, such as Development Corporations, Ministries for Planning, Marketing Organizations, Extension, Rural Credit.
- b) Legislation for Development, such as Settlement, Agricultural Taxation, Land Reform, Farmer Unions, Cooperatives.
- c) Basic Research, such as the Inventory of Natural Resources, Studies of Farm Management, Land Holding and Use, Research for Animal and Plant Improvement, Legal, Sociological and Economic Studies, Program Evaluation.
- d) Increasing efforts to raise the level of professional training, including incentives for national specialists to continue specialized postgraduate studies.

National Universities have played an important role in this sense, by modernizing their higher education programs, strengthened by research and postgraduate courses in several specialties. Some Universities have been concerned with national development programs and have sponsored special research, courses or seminars and have taken part in specific programs in Pilot Development Areas.

Various international organizations, besides IICA, have shares in this process, by means of direct technical assistance to the national institutions, granting scholarships for higher studies, international technical meetings, cooperation in research programs on resources for development, drawing up laws, pre-invested studies. Other international organizations have participated in financing Development activities either by Geographical Regions or by Economic Sectors (industrial, agricultural, mining or forest).

c. Action Proposed

1) What IICA must do

For better programming of its activities in connection with institutional strengthening, IICA must systematically organize existing information on National Rural Development Institutions as regards: objectives, functions, administrative organization, technical personnel (number, training, and needs), economic resources, legal resources, relations with other organizations and programs and goals, both short and long-term.

An inventory of this kind will make it possible to observe, as regards objectives and functions, the voids and duplications, the contradictions in national policies among state agencies themselves, the possibility of supplementation and mutual support among them. As a result, it will be possible to infer the need for studies at the national level, intended for an Institutional Coordination for Development.

The evaluation of institutions is an essential part of this diagnostic process. So is the holding of Seminars on Rural Development Institutions for the detailed analysis of same, both at the national and the international level, in the latter case to make comparative analyses of similar organizations in different countries.

In line with its premise that Technical Training is the fundamental capital of an Institution, IICA will continue its efforts to improve and expand the knowledge of national specialists connected with development in their countries and will continue giving emphasis to those specialties that most urgently need to be strengthened, mainly Farm Management, Regional Rural Development, Agricultural Credit, Land Reform, Extension and Home Economics, Marketing and Communication, which will be done through its Project for STRENGTHENING RURAL DEVELOPMENT INSTITUTIONS, with activities in:

- a) Technical training in Rural Development.
- b) Research in Rural Development.
- c) Consultant and Advisory Service in Rural Development.
- d) Publications on Rural Development.

2) What others should be made to do

National and international organizations must work together to attain coordination among institutions, joint drawing up of programs, assigning definite goals to be attained in the Development process for each institution, in conformity with the common purposes, bringing the organizations together into a national social and economic policy.

National organizations should be made to carry out periodical evaluations of their institutions, to put into practice the results of the studies and to fix goals backed by definite policies and adequate resources.

3) Goals

In two years, it is expected that IICA will have contributed to the training of about 20 specialists in each one of the specialties mentioned above, and to have made contacts with the main institutions connected with Rural Development to bring them into activities of evaluation, exchange and supplementation.

In approximately five years, IICA will have contributed to the professional improvement of some one-hundred specialists in each of the following specialties: Farm Management, Regional Rural Development, Agricultural Credit, Land Reform, Extension, Home Economics, Marketing and Communication. It is expected that IICA will have created a permanent system of Cooperation among Rural Development Institutions of the countries in the Zone, based on a complete inventory of such institutions and Individual Evaluations of at least two institutions in each country.

It is expected that IICA will have contributed to the overall growth of the Income for the Agricultural Sector, at a rate of not less than 5% per year average, in the countries in the Zone, and to a fairer distribution of this income, compatible with the contribution of the action of each Sector of the population to the production process.

PROJECT 3.3.2. Strengthening of Land Reform Institutions

Fundamentals

a. Present Status

1) What is known

The distribution of productive Natural Resources is the most important factor in the distribution of income in agriculture and exerts a decisive influence on economic and social conditions in the rural environment. At the same time, natural resources are a permanent property of society, which is interested in having the best possible use made of them, compatible with the conservation of their productive capacity.

In simultaneously achieving a better distribution of income and an increased production, while conserving the productivity of the resources, an outstanding role is attributed to land holding, to the extent that it is considered that the improvement of its structures is an essential condition, even though it is not sufficient, for Social and Economic Development.

Land Reform, the process aimed fundamentally toward solving problems caused by inadequate distribution of land and water resources, to a great extent involves a political decision for each country. Land reforms have suffered through lack of adequate legal instruments to make them possible. But even in cases where the decisions have been taken and specialized organizations and appropriate laws exist, serious difficulties have been encountered in carrying them out because of the comparative lack of qualified personnel for diagnosing, planning, implementing and evaluating programs.

It is not to be expected that Universities will train specialized professionals to act directly in Land Reform institutions. Training in specific subjects will always be work to be kept in mind and international organizations can offer an important contribution until national institutions have grown enough in size and experience to have their own training services. It is apparent that this is not feasible at present, because of the lack of economic resources, lack of administrative machinery that will make it possible, or scarcity of specialized professional who can take charge of these training functions.

The work of training inter-disciplinary groups is justified mainly because Land Reform is not limited to a mere redistribution of productive resources, but involves radical transformations in all of the economic, social and juridical structures with a view to dignifying the rural worker and the recognition of his rights as an equal member of society.

2) What remains to be learned

While many studies have been made to carry out land reforms, there is still a great deal to be learned as regards the existence, use and possibilities of natural, economic and human resources, and there is a lack of methodology for comparatively quick action that is necessary to approach processes that are of extreme urgency.

It is necessary to take detailed inventories of technical conditions existing in each land reform organization, as regards the number, training level and facilities for action that they have available for their professional work. Similarly, more information is needed on the real requirements as to type, number and quality of the personnel in these institutions.

It is necessary to have information on the relationship between the number and composition of technical personnel in Land Reform institutions, and the size of the programs measured in terms of families settled and/or geographical areas to be affected.

Similarly, it is necessary to find an economic relationship of efficiency in the use of funds as regards the proportion of the budget devoted to personnel, research, administrative efficiency, infrastructure, credit and assistance, etc.

3) What the countries want

The countries must have available procedures and resources for approaching Land Reform technically conceived, with a reasonable assurance of success over a short time, that will promote development and not lose its merits through disruption of the productive structures of a country. The latter would aggravate the problems that already exist as a result of exclusively political measures, without any economic basis and, consequently, socially negative in the sense that the damage done to a minority until then privileged, would be turned into damages to the economy as a whole, without any permanent advantages to the forgotten minorities that it was desired to benefit. It is necessary to improve the professional training level of the specialists working in Land Reform, at different levels and with varying degrees of urgency, starting with those who are now working and have immediate responsibilities for executive action.

b. Background

1) What IICA has done

IICA - Southern Zone, has mainly acted in the field of technical training, including research, advisory service and publications in connection with Land Reform. It has offered short courses, seminars and in-service training to officials of Land Reform institutions in the countries in the Zone and in some cases has extended its participation into activities of more direct action in the "concentrated efforts".

Ever since it started its activities in the Southern Zone, IICA has contributed to the training of specialists in subjects directly connected with Land Reform, such as Farm Management, Land Holding and Use, Importance of Natural Resources, Credit, Taxation, Sociology and Extension. In-service Training in these subjects has been of unusual importance.

In Brazil, activities have been organized and coordinated in PRALS with a view to the drawing up a pre-investment project that will, at the same time, serve as a means for training national personnel. Research has been started in rural association and other subjects directed toward learning more about the land holding situation and toward the drawing up of simplified, fast action methodology. The coordination of basic research has been started at the national level in "model municipalities".

2) What others have done

National and international organizations have cooperated in carrying out and financing IICA activities in training and research regarding Land Reform. Training and research organizations in Land Reform have been created, and in this work IICA has also had a share. Various institutions, mainly CIDA, have made studies on Land Holding in the countries in the Zone.

c. Action Proposed

1) What IICA must do

It is proposed that IICA set up a Project for Strengthening Land Reform Institutions, directed toward technical training for professionals working in Land Reform organizations with strong support in research. The Project as a whole must contribute to the determination of action methodology in Land Reform, bringing together the microeconomic interests, at the level of the new production units, with the macroeconomic interest of the country or region as a whole. It is expected that the action of IICA will be strengthened and its results multiplied through the coordination of programs and activities of similar institutions in other Member Countries of IICA.

It is felt that IICA can make an important contribution to the countries by detailed studies of national institutions with direct and indirect responsibilities in Land Reform.

Among research assignments to be undertaken, it is important to signal out those that will lead to a better determination of the new operating units as regards size, kind of holding, and other factors that will assure their economic progress.

The fact that not all of the countries in the Southern Zone have organizations specifically for Land Reform, but that in some countries there still exists the traditional approach of settlement as a way to distribute and re-distribute land, makes it necessary for IICA - Southern Zone, to have a clear understanding of this reality and to cooperate with those institutions in

accomplishing the aims that national legislations have set for those settlement organizations. In this respect, IICA - Southern Cone must offer its services under the present circumstances until the countries themselves decide the changes they consider advisable.

The countries that still do not have Land Reform legislation can ask for further cooperation once they decide to draw it up and when they start organizing their specialized institutions. The experience gathered by IICA in the analytic study of institutions that are now operating can be of incalculable value in creating new institutions.

IICA must, insofar as it does not interfere with its main function of training personnel, expand its sphere of action to cooperate with national institutions in obtaining financial resources for carrying out their projects.

As a result of its activities, IICA must undertake an increasing program of publications, mainly regarding research in factors leading to the formulation of policies on Land Reform.

2) What others must be made to do

It is expected that IICA will influence national and international organizations in achieving coordination and supplementation of their technical training programs, as well as in their financing. Efforts will be continued to promote exchange of specialists for the mutual support of national and international organizations, whether as advisors and consultants or as professors for courses sponsored by others or by IICA.

An attempt must be made to have the countries become aware of the need and urgency of raising the levels of technical knowledge reflected in efficient actions supported by high-quality research. For this purpose, they must facilitate the participation of their specialists in courses, seminars, in-service training and technical meetings.

3) Goals

In two years, it is expected to have detailed information on the Land Reform institutions as regards their organization, technical personnel, objectives, accomplishments and projects, in order to define more clearly the kind of activities that IICA could offer. It is expected to have contributed, through research work, toward a fuller cognizance of the social and economic aspects that will be subject to change in the Land Reform processes.

In approximately five years, a National Center for Training in Land Reform will be in full operation in Brazil.

Training will have been given to a minimum of 200 professionals from the Southern Zone, in the specialized techniques of Land Reform.

It is expected that a methodology for Land Reform will have been found, having a fundamental basis applicable to conditions in Latin America, and the adaptability to take into consideration the peculiar features in each country where it is desired to apply it.

It is contemplated that, in each country in the Zone where there are Land Reform institutions, at least one specific project will have been drawn up and implemented at the level of pre-investment studies, that will serve as a basis for activities financed by international lending institutions.

Project 3.3.3. PILOT DEVELOPMENT AREAS

Fundamentals

a) Present Status

2) What is known

Facts known are the difficulty in achieving Economic Development on a "large scale" because of the inadequacy of material resources, the lack of positive methods to cover an entire country, the lack of experience that will make it possible to plan actions to be taken and the lack of trained technical personnel.

In planning Regional Development, problems are known in connection with plans at the local level and their integration into national planning.

There is a need to train professionals for planning, organizing, implementing and evaluating Development in limited Areas, with a view to expanding them geographically in harmony with national development plans.

IICA-Southern Zone has broad experience in the complete process of the Pilot Development Area in Extension in San Ramón, Uruguay, which, while it was not exactly a Pilot Development Area, it is certainly a sound basis that can be used for the benefit of other projects.

Many efforts have gone astray in the countries in the Zone, in attempts at overall planning that have not gone past the stage of basic studies and isolated programs that have not managed to generate a sustained development by the Agricultural Sector as a whole. Comparative success in some programs have been held back by the inertia of others that have not been taken into account or that it has not been possible to stimulate.

It is felt that the setting up of limited Development Areas offers great prospect for technical training in handling the Social and Economic Development process, with integrated and inter-disciplinary approaches and with the added advantage of being able to measure the positive results in a comparatively short time, even with scarce human and financial resources.

2) What remains to be learned

It still remains to determine the causes underlying the meager success attained in areas where some national and/or international organizations have tried to concentrate resources and efforts. There are not available unfailing procedures to promote or accelerate the development of limited areas.

3) What the countries want

The countries need a methodology for Regional Development, and to train technical personnel that can apply it. It is essential to convince politicians and "decision makers" to encourage and channel Rural Development on the bases of experience "tested" in limited areas of their own country's territory, with the direct participation of national specialists. Farmers need convincing examples that will encourage them, and positive action that will move them to produce more and better, as the starting point for their social and economic development. But in order for the process to be sustained, it is essential that there exist the support of rewarding prices, easy marketing, accesible credit, efficient technical assistance, and the existence of markets for consumer goods and production input goods. All of this, theoretically, could be achieved through the free plan of the capitalistic economy of the personal interests of each individual seeking better profits as a force that motivates and arranges economic development. But the slowness of the process and the existence of institutional or material factors that prevent it, make it necessary to resort to planning, where society, represented by its Government organizations, can act for the purpose of speeding and arranging it.

b) Background

1) What IICA has done

IICA-Southern Zone, has ten years' experience in the Development Area in San Ramón, Uruguay. On a group of 1,805 farms, covering an area of 64,263 hectares, located 80 kilometers away from a city with more than one million inhabitants, to which it is joined by good roads, this "small experiment for a large development" was carried out. The stages of Inventory of physical, human and economic resources, Planning Implementation and Evaluation were gone through. In six years (1953-1959), production in the Area had increased 47.26% whereas, in the same period, production in the country had dropped 11.05%. As a result, income in the Area had increased about 32% for the poorest farms. During this period, a return of \$23.00 greater production for each \$1.00 invested in the program was obtained.

In Chile, IICA-Southern Zone started its activities, in 1964, on the Maipú Development Area that is now completing the stage of basic studies and organization, to go into the stage of implementation of a more ambitious program than the one in San Ramón, in the sense that it will not be necessary to limit the work mainly to Extension, but that it has been planned as an experiment in Regional Development with a view to formulating the methodology to which we have previously referred. It is also considered a basic objective to give professional training to national specialists. It is hoped that action in the Maipú Area can be extended until it includes the large Maipó Watershed.

2) What others have done

National institutions, such as Ministries of Agriculture with their many departments, Universities, Credit, Extension and Promotional Organizations, have actively cooperated with IICA - Southern Zone, in the Rural Development experiments successfully carried out in San Ramón, and also in the activities that have been started in Chile and Brazil.

There are important experiences in the Zone in connection with development by programs with participation of specialists and financing by international organizations.

Many efforts have been made to channel Development action into critical regions.

c. Action Proposed

1) What IICA must do

After the Evaluation of the Pilot Development Area in San Ramón, in the 1953-1959 period, the then Agricultural Economist for the Southern Zone, Dr. José Marull, summarized the advantages that can be expected from a well-managed area. He stated that they permit:

1. Effectively attaining the advancement of agriculture in the location.
2. Showing a model of agricultural development on a reduced scale that will serve to educate public opinion.
3. Approaching problems as a whole.
4. Coordinating in the field, the work of various specialists working as a technical team.
5. Providing the various national institutions with a means for cooperation among themselves and with international technical assistance.
6. Utilizing existing local resources.
7. Getting results applicable to a large area.
8. Connecting country people with the specialists and with the organization entrusted with serving agriculture.
9. Lessening the rigidity of the budget, having greater flexibility and efficiency in expenditures.

10. Experimenting with new practices without any heavy financial risks.
11. Training technical personnel through actual work.
12. Inducing in the rural population an attitude of civic responsibility and initiative in solving its own problems without counting so much on the Government.

IICA - Southern Zone proposes to continue operating the Maipú Development Area in order to achieve the above advantages.

With similar objectives, advisory service will begin to be given to the recently proposed Mendoza Development Area with the cooperation of the Cuyo National University, the Mendoza Government and the National Institute for Agricultural Technology (INTA).

In the cases of "Concentrated Efforts", where the action of IICA is intended to be expressed not only in technical training but also in results in terms of numbers of families settled in areas created with the cooperation of the Institute, the possibility will be studied of requesting the cooperation of international lending institutions in order to speed the work of the national organizations directly interested. In Brazil, a Pre-Investment Project will be considered, for submitting to BID, to be carried out in Southern Brazil, as an Integral Regional Development Plan. As in other projects, an effort will be made to effect institutional improvement of national organizations through various forms of training, research, advisory service and publications.

An attempt will be made to form an inter-disciplinary team for planning Regional Development, that will serve as a multiplying agent of national specialists on the subject. It is also expected that the Project will serve as a basis for the creation of a National Center for Training in Regional Rural Development and Land Reform.

These activities in Brazil could be helped by the offering of the First National Course in Regional Rural Development, offered by IICA - Southern Zone, in the State of Rio Grande do Sul.

Whenever possible, it is expected to combine in the same Area, the activities of IICA, Regular Program and the activities of Project 206 through "Concentrated Efforts".

2) What others should be made to do

Efforts should be made toward having national and international organizations recognize, in Development Areas, a living laboratory that offers the greatest prospects for methodological learning, with the valuable by-product of improving the social and economic condition of the towns chosen for this kind of experiment. This understanding will encourage decided and permanent cooperation by other national organizations whose participation is indispensable for the proper operation of the integrated teams.

In many cases, attempts should be made to have national institutions allow exception procedures to facilitate the joint work of several institutions with common objectives. Once the effectiveness of the processes tested has been proved, it is expected that the "cases of exception" will have been understood well enough to bring about conditions that will facilitate institutional reforms that will make it possible to approach Development with a more dynamic and flexible administration than usual.

3) Goals

In approximately two years, it is expected to have completed the research that would serve as background for planning work in the Maipú Development Area, although research could and should continue to be done as a way to give technical training to professionals in agricultural sciences.

In the Maipú area, approximately 20 professionals from Chile will have been trained in planning and implementing Regional Development projects. Direct action plans will be getting under way. In the Mendoza Development Area, the studies for its planning will be reaching completion, including the training of 10 Argentinean specialists.

In two years, the Southern Brazil Development Area will have inventories of natural resources and recommendations for the best utilization of same. Research will have been done on human and economic resources, including studies of land holding and service structures. These studies will bring out information that could be applied both to the work in the Areas themselves and to better planning on a larger scale. They will have permitted the technical training of inter-disciplinary groups of about 10 Brazilian professionals whose work can be multiplied when they cooperate in training other professionals.

In approximately five years it is expected to have drawn up a planning methodology for limited Areas integrated into the objectives and procedures of national development plans. The Maipú Development Area is to be delivered to the national organizations after having trained some one hundred Chilean professionals in the techniques of organization and management of Regional Development Areas. Advisory service will have been given to national organizations for setting up their own Development Areas. It is expected to have produced a complete publication on Development Areas that will constitute an original contribution to the planning, managing and evaluating of such Areas.

In five years it is expected to be in a position to approach regional planning as an integral process by sectors and areas.

PROGRAM III - RURAL DEVELOPMENT AND LAND REFORM

PROJECT 1 - DEVELOPMENT AREA

This Project seeks to really accelerate the development of a clearly defined rural area, close to the Turrialba Center.

Giving technical assistance in the field, to national organizations responsible for stimulating the development of a given geographical sector has the following purposes, from the point of view of IICA:

1. It enables teaching agricultural development.
2. It constitutes a real laboratory for research and teaching agricultural economics, as well as social sciences.
3. It helps keep our teaching staff interested in practical agricultural problems.
4. It promotes inter-disciplinary approaches.
5. It establishes ties with national institutions.
6. It demonstrates development to public opinion.

PROJECT 2 - ADVISORY SERVICE TO RURAL DEVELOPMENT AND LAND REFORM INSTITUTIONS

This Project brings together all the different ways that the Turrialba Center supports the efforts of the Regional Offices toward strengthening national institutions that are entrusted with agricultural development and land reform.

PART III
REGIONAL OFFICE
FOR THE
ANDEAN ZONE

FART III

REGIONAL OFFICE FOR THE ANDEAN ZONE (1)

SUMMARY

	Fiscal Year		
	Obligated	1967 - Deferred	1968 Proposed
<u>Basic Programs</u>			
1.1 Agricultural Education	109,621	24,483	144,104
2.1 Agricultural Research	91,453	28,617	120,070
3.1 Rural Development and Land Reform	<u>76,446</u>	<u> </u>	<u>76,446</u>
Sub-total	<u>287,520</u>	<u>53,100</u>	<u>340,620</u>
 <u>Other Activities</u>			
Training and Services	<u>37,905</u>	<u> </u>	<u>37,905</u>
<u>Direction and Administration</u>			
Office of the Regional Director	44,127		44,127
Administration	39,448		39,448
General services	<u>17,900</u>	<u> </u>	<u>17,900</u>
Sub-total	<u>101,475</u>	<u> </u>	<u>101,475</u>
Total	<u>426,900</u>	<u>53,100</u>	<u>480,000</u>
 <u>General Costs and Provisions</u>			
(Proportion)	<u>51,000</u>	<u> </u>	<u>51,000</u>
Grand Total	\$ 477,900	\$ 53,100	\$ 531,000
	=====	=====	=====

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ANDEAN ZONE

Total Resources in accordance with the source of Funds
by Basic Programs, Other activities, Direction and
Administration and General Costs
(In thousand of Dollars)

TOTAL	IICA	AID	AEC	TCP	ACRI	UNDP	Dona- tions & Contri- butions	Misc. Income
-------	------	-----	-----	-----	------	------	--	-----------------

BASIC PROGRAMS

1.1 Agricultural Education	382	144	104		130	4		
2.1 Agricultural Research	120	120						
3.1 Rural Development and Land	311	76		62		173		
Sub-total	813	340	104	62	130	177		

OTHERS ACTIVITIES

	38	38						
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DIRECTION AND ADMINISTRATION

Direction	44	44				19		
Administration	59	40				26		
General Services	44	18						
Sub-total	147	102				45		

Total	998	480	104	62	130	222		
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GENERAL COSTS AND PROVISIONS

	51	51						
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GRAND TOTAL

	1049	531	104	62	130	222		
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PART III -- ITEM 1

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1. 1. 1. Improvement of the Institutional Function

Budget Summary

Fiscal year 1967-1968
Obligated Deferred Proposed

Personnel Costs

International Professional Personnel	16,224		
Auxiliary Personnel	<u>1,265</u>	_____	_____
Sub-total	<u>17,489</u>	_____	<u>17,489</u>

Project Other Costs

Costs of Operation	2,250		
Meeting of Agronomy Deans	4,445	2,000	
Meeting of the Deans Committee	<u>2,000</u>	<u>1,000</u>	_____
Sub-total	<u>8,695</u>	<u>3,000</u>	<u>11,695</u>
Total	<u>26,184</u>	<u>3,000</u>	<u>29,184</u>
	=====	=====	=====

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Summary of Personnel Assigned of the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Principal Educator	T&R-I	1	50
Associate Educator	T&R-III	<u>1</u>	50
		2	
<u>Auxiliary</u>			
Secretary	A-IV	<u>1</u>	50

=====

Antecedents and Objectives of the Program

(See description of Basic Program, part II)

Project 1.1.1. -- Improvement of the Institutional Function

Description of Activities during the Year 1967 - 1968

Activities

1. Meeting of Deans, Andean Zone, Palmira or Maracay. Second Semester
Concrete Action: Organizing and conducting the meeting.
2. Meeting of the Committee of Deans for the Andean Zone, Quito Maracay.
First Semester 1968.
Concrete Action: Organizing and conducting the meeting.
3. Promotion of selfstudy and the institutional system of accreditation.
Concrete Action Direct contact and by correspondence with the
Governing Boards of the institutions in order that
they be informed about the system and promote its
adoption.
4. Establishment and development of regional associations of Faculties
of Agronomy.
Concrete Action: Direct contact with the institutions and with the
Regional Committee of Deans for the Andean Zone.
5. Consultant services to the institutions for their own development and
improvement.
Concrete Action: Same.

PART III -- ITEM 1

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1.1.2 -- Professional Education

Budget Summary

Fiscal year 1967-1968
 Obligated Deferred Proposed

Personnel Costs

International Professional Personnel	64,139	12,000	
Auxiliary Personnel	<u>1,265</u>	<u> </u>	<u> </u>
Sub-total	<u>65,404</u>	<u>12,000</u>	<u>77,404</u>

Project Other Costs

Basic Costs of Operation	5,580	6,300	
International Seminar of Professors of Plant Sanitary Defense	4,000	2,000	
Symposium of Agriculture and Cattle Sciences	2,064		
Fellowships	<u>3,709</u>	<u>1,183</u>	<u> </u>
Sub-total	<u>15,353</u>	<u>9,483</u>	<u>24,836</u>
Total	<u>80,757</u>	<u>21,483</u>	<u>102,240</u>

=====

Summary of the Personnel Assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Principal Educator	T&R-I	1	50
Associate Educator	T&R-III	1	50
Senior Educator	T&R-II	1	100
Associate Educator	T&R-III	1	100
Associate Technical Editor	T&R-III	1	100
Associate Agricultural Engineer	T&R-III	1	100
Junior Agricultural Engineer	T&R-V	<u>1</u>	100
		<u>7</u>	

Auxiliary

Secretary	A-IV	1	50
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Project 1.1.2 -- Professional Education

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Sub-Project 1.1.2.1. Improvement of Teaching

Activities

1. International Seminar of Professors of Plant Sanitary Defense, (Plant Pathology, Entomology and Control of Diseases and Pests) from Higher Educational Institutions.
Concrete Action: Direct contact with institution as well as with the interested professors.
2. In-service Training to Professors of Schools of Higher Agricultural Education in the field of Communication.
Concrete Action: Direct contact with institutions as well as with the interested professors.
3. Organization of a Postgraduate course at the Graduate School of IICA for Plant Pathology Professors in the Andean Zone.
Concrete Action: Direct contact with the institutions and with the interested professors, planning and organization of the course.
4. Organization of a Symposium on the new University Education in the field of Agriculture and Cattle Sciences for University Professors
Concrete Action: Same
5. Awarding of fellowships to professors from the Andean Zone in order to postgraduate work at IICA's Graduate School.
Concrete Action: Selection of participants.
6. Publication of an Information Bulletin for professors of Higher Agricultural Education.
Concrete Action: Same

Project 1.1.2.2. Improvement of the Methodology of University Teaching

Activities

1. Four short national and international courses will be offered on Methodology of Teaching at university level in four schools of agronomy from the countries of the Andean Zone.
Concrete Action 1: Planning of the courses.
Concrete Action 2: Offer the above mentioned courses.
2. Conduct research work on reading habits, desires and ambitions of agricultural sciences students in two universities from the Andean Zone.
Concrete Action 1: Planning and conducting said research work.
Concrete Action 2: Editing the final reports on the to above mentioned research work.

Project 1.1.2 -- Professional Education

Sub-project 1.1.2.2. Improvement of the Methodology of University Teaching

3. Research work on "Comparative Studies of two Teaching Methods" of agronomy of the countries of the Andean Zone.
Concrete Action 1: Planning and conducting the proposed research work.
Concrete Action 2: Editing and publishing the final Report.
4. Preparation of three articles on specific subjects related to the methodology of teaching at university level.
Concrete Action 1: Editing and publishing an article entitled: "Popular Beliefs on Agricultural Sciences "learnings".
Concrete Action 2: Editing and publishing an article entitled: "Learning in Higher Agricultural Education".
Concrete Action 3: Editing and publishing an article entitled Educational Objectives in Teaching Agriculture at University Level".
5. Establish a specialized section for diffusion purposes in the Higher Agricultural Education. This program section will cover aspects related to the Methodology of Teaching at university level.
Concrete Action 1: Editing and publishing six articles relative to the advantages and disadvantages of six different teaching methods; the oral exposition, dynamics and group techniques, discussion methods, instructor's supervision of the research and of the practical and laboratory teaching.
6. Collaborate with the graduate training programs in subject matters related to the Methodology of Teaching at university level sponsored by IICA in the Andean Zone.
Concrete Action 1: Assist in conducting the course on Educational Methodology at graduate level, in the school of Education in La Molina.
Concrete Action 2: To establish contacts with national and international organizations who are interested in the field of the Methodology of Teaching at university level.

Sub-Project 1.1.2.3. Teaching in Communication in Institutions of Higher Agricultural Education.

Activities (includes activities of IICA/AID Contract)

1. Study the actual needs of the national institutions of the rural areas, from the Andean Zone, in the Subject of Communication.
2. Initiation of the postgraduate courses in Communication at the "Universidad Agraria La Molina".
3. Publication of three university text books on Communication.
4. Will conduct four research work.

Project 1.1.2. -- Professional Education

Sub-Proyecto 1.1.2.3. Teaching of Communication in Institutions of Higher Agricultural Education.

5. Two national courses of short duration will be offered.
6. Production of a promotion film.
7. Collaborate in the offering of regular undergraduate courses at La Molina.
8. Initiation of technical and financial assistance program to students of agronomy in order to help them with their studies and thesis work on problems of Communication.
9. Publication of six titles of the Series "Miscellaneous and Teaching Materials in Communication".
10. Assistance to international technical meetings.
11. Consultant services to three national institutions.

Sub-Project 1.1.2.4. Increase of Exchange of information among agricultural scientists.

Activities

1. Research work on facts related to the productivity of scientific literature among agricultural research workers from Ecuador.
Concrete Action 1: Trip to Quito to interview the scientists.
 2. Tabulation and analysis of the data gathered.
 3. Publication of results obtained.
2. Production of texts and teaching materials.
Concrete Action: Preparation of manuscripts and teaching materials.
3. Courses on Scientific Communication.
Concrete Action:
 1. Participate in a course on Technical Writing at La Molina.
 2. A course will be offered in a country of the Andean Zone.

Sub-Project 1.1.2.5. Development of Professional Teaching in Home Economics

Activities

1. In-service Training.
Concrete Action: Carry out in-service training with the first student from the Faculty of Home Education of Caldas, Manizales, Colombia.
2. Home Education Teaching in the Schools and Departments of the Universities of the countries of the Zone.
Concrete Action: The following courses will be given in the Department of Home Education of the "Universidad Agraria La Molina".

Project 1.1.2 -- Professional Education

Sub-Project 1.1.2.5 Development of Professional Teaching in Home Economics

Home Administration
Family Finances
The Family in Latin America

3. Concentration of Home Economists of IICA.
Concrete Action: A meeting of the Specialists of IICA in order to carry out a series of activities for the Andean Zone. Three courses on Home Education will be offered to professors of said discipline with university degree or high school graduate.
4. Consultantship to various Faculties and Programs
Concrete Action: Advisory services to:
The Faculty of "Education "del Hogar" of Caldas, Manizales, Colombia the Extension Programs of Colombia.
The Extension Programs and Social Service of Educador.
The Programs of Extension of Bolivia.
The School of Agronomy of the "Universidad Central" in Maracay, Venezuela.
The Extension Programs of the Ministry of Agriculture and Breeding, Caracas, Venezuela.
5. Promotion and publication of the objectives of the Program.
Concrete Action 1: Collaborate with the promotion plans for the establishment of the School of Higher Education in the School of Agronomy of the "Universidad Central of Maracay, Venezuela
Concrete Action 3: Coordinate the work with other national and international organizations of the countries.
6. Establishment of a Home Education Library
Concrete Action: Continue with the selection of books and establish the library for Home Education Teaching.
7. Carrying out of pilot research on home tasks, with various socio-economic groups in the countries of the Andean Zone.
Concrete Action: Planning, conducting and presentation of the research findings.

Sub-Project 1.1.2.6 Improvement of Agricultural Engineering Teaching

Activities

1. Consultant service to the School of Agricultural Engineering in the Department of Processing Engineering.
Concrete Action 1: Courses on thermodynamics and processes.
Concrete Action 2: Assistance in research projects and thesis sponsorship.
2. Technical advice to the School of Agricultural Engineering in the Department of Irrigation and Drainage.

Project 1.1.2. -- Professional Education

Concrete Action 1: Postgraduate course on Irrigation and Drainage
Concrete Action 2: Assistance in research projects and sponsorship
of thesis work.

3. Technical advice to the departments and institutions of Agricultural
Engineering of the Andean Zone.
Concrete Action: Visits and advisory services in the fields of
irrigation, of processing engineering to the
school of agronomy in the countries of the Andean
Zone.

PART III -- ITEM 1

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1.1.3. -- Production of Texts and Teaching Materials

Budget Summary

	Fiscal year	1967	- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	8,616		
Auxiliary Personnel	<u>2,443</u>	_____	_____
Sub-total	<u>11,059</u>	_____	<u>11,059</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	1,000		
General Equipment	<u>621</u>	_____	_____
Sub-total	<u>1,621</u>	_____	<u>1,621</u>
Total	<u>\$ 12,680</u>	=====	<u>\$ 12,680</u>
	=====	=====	=====

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Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Junior Editor	T&R-V	1	100
<u>Auxiliary</u>			
Secretaty	T&R-IV	1	100

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Antecedents and objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968 (Includes publications financed by funds from The Kellogg Foundation and the Contract IICA/AID).

Project 1.1.3. -- Production of Texts and Teaching Materials

Activities

1. A text book will be published on the Methodology of Teaching.
2. Ten new titles of the Series "Teaching Materials in Communications" will be published.
3. During the year the following works will be published.
 - "Laboratory Methods on Animal Nutrition by Dr. John V. Bateman.
 - "Manual on Pastures" by Mr. Arthur T. Semple
 - "Manual on the Chemical Analysis of Soils" by Elemer Bornemisza.
 - "Statistics and Experimental Designs" by Messrs , Steen Justesen and Rodrigo Umaña.
 - "Manual Anatomy and Plant Morphology" by Ludwing Müller.
 - "Tropical Soils" by Prof. Frederick Hardy. It is expected that this book will be published during the first semester of 1968.

PART III -- ITEM 1

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.1.2 -- Promotion of Research in Food Crops ^{1/}

Budget Summary

	Fiscal year 1967		- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	56,810		
Auxiliar Personnel	<u>5,180</u>	<u> </u>	<u> </u>
Sub-total	<u>61,990</u>	<u> </u>	<u>61,990</u>
 <u>Project Other Costs</u>			
Basic Costs of Operation	13,400		
Graduate Assitants	4,200		
Laborers	1,100		
General Equipment	845	1,000	
Fertilizers, Herbicides, Fungicides and other Field Materials	1,300	1,000	
Fellowships	4,800		
Meeting of Directors of Research	2,818	2,817	
Collecting Materials	<u>1,000</u>	<u> </u>	<u> </u>
Sub-total	<u>29,463</u>	<u>4,817</u>	<u>34,280</u>
Total	<u>\$ 91,453</u>	<u>\$ 4,817</u>	<u>\$ 96,270</u>

^{1/} An amount of \$ 1,183 has been included in this budget in order to start an inventory of the situation of the research in the Andean Zone as a first step for starting Project 2.1.1. - Strengthening of Research Institutions.

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Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Principal Botanist	T&R-I	1	100
Associate Physiologist	T&R-III	1	100

Project 2.1.2. -- Promotion of Research in Food Crops

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
Associate Horticulturist	T&R-III	1	100
Assistant Botanist	T&R-IV	<u>1</u>	100
		<u>2</u>	
<u>Auxiliary</u>			
Secretaries	A-IV		

=====

Previous information and Objectives of the Project

(See description under Basic Programs, Part II)

Description of the Activities for the Year 1967-1968

Activities

1. In-service training
2. Postgraduate studies in Horticulture and tropical fruits
3. Course on Tropical vegetables
4. Selection of high yield varieties of andean tubers
5. Quinoa improvement
6. Value of yucca clones
7. Yucca hybridation
8. Improvement of Plantains
9. Germoplasma bank of tropical vegetables
10. Management and evaluation of arrancacha clones
11. Improvement of "cañihua"
12. Improvement of andean beans
13. Courses on tropical horticulture
14. Publication on food crops
15. Course on scientific method which is the first step for new Project 2.1.1. - Strengthening of Research Institutions - not yet established with its own budget.

Project 2.1.2. - Promotion of Research on Food Crops

The following activities are contemplated on Part II of Project 2.1.5. Mineral Nutrition of Plants - but for the time being they will be conducted as part of Project 2.1.2 - Promotion of Research work on Food Crops.

1. Graduate course on mineral nutrition of plants.
2. Participation in courses and seminars related to mineral nutrition of plants.
3. Research work on the deficiencies and excesses of nutritional elements.
4. Research work on foliar analysis methods by surveying the methods used, the distribution of samples and publication of the findings.
5. Dissemination of the most advanced methods for the diagnosis of the fertilizers of the crops.
6. Organization of symposiums on the methods for determining the requirements of nutrients in the plants.

PART III -- ITEM 1

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.1.3. -- Promotion and Coordination of Research in Industrial Crops (Coffee)

Budget Summary

	Fiscal Year 1967 - 1968	
	Obligated	Deferred Proposed
International Professional Personnel	_____	<u>16,893</u> <u>16,893</u>
<u>Project Other Costs</u>		
Basic Costs of Operation		4,507
Meeting of Work Group	_____	<u>2,400</u> _____
Sub-total	_____	<u>6,907</u> <u>6,907</u>
Total	=====	<u>23,800</u> <u>23,800</u>

Summary of Personnel Assigned to the Project

<u>Title</u>	Class	No.	% of time
<u>Professional</u>			
Associate Agronomist (Head of the Program)	T&R-II	1	100

Antecedents and Objectives of the Project

(See description of the Basic Programs, Part II)

Description of Activities for the year 1967-1968

Actividades

1. Courses for specialization in Coffee
2. Physiology advanced course
- 3a. Inventory of the present status of research in coffee in the countries of the Andean Zone.

Basic Program 2 -- Agricultural Research

- 3b. Establishment of regional network of coffee experiments
4. Publication of the magazine "COFFEE"
5. Consultation and advisory services to the organization of the Andean Zone
6. Technical meeting on Coffee cultivation

PART III -- ITEM 1

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.1.1. -- Development Area of Yaracuy, Venezuela

Budget Summary

	Fiscal year		
	1967	1968	
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	48,916	_____	48,916
<u>Project Other Costs</u>			
Basic Costs of Operation	2,530		
General Equipment	3,000		
Fellowships	<u>3,500</u>	_____	_____
Sub-total	9,030	_____	9,030
Total	\$ 57,946	\$ _____	\$ 57,946
	=====	=====	=====

=====

Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>%of time</u>
<u>Professional</u>			
Senior Extensionist - Head	T&R-II	1	100
Specialist in Natural Resources	T&R-III	1	100
Senior Agricultural Economist	T&R-III	<u>1</u>	100
		<u>3</u>	

=====

Antecedent and Objective of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities

1. Research on Natural Resources for Development. An inventory will be made of the soils of the area to determine its capacity of use and the techniques for its best utilization.

Project 3.1.1. -- Development Area of Yaracuy, Venezuela

2. Research work on Development of Human Resources. Demographic studies and on living conditions of rural families in the area; study of the attitude of the inhabitants of the area for changes proposed.
3. Research on Economic Resources for Development. Studies of the structures of services among the area. Commercialization, markets, credits, cooperatives.
4. Guidance and coordination of the activities in the area. Guidance and coordination as leader of Area: organization of courses and superior guidance of the activities.

PART III -- ITEM 1

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.1.2. -- Technical training in Land Reform through National Center ^{1/}

Budget Summary

	Fiscal year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	-	-	-
Auxiliary Personnel	-	-	-
	<u>-</u>	<u>-</u>	<u>-</u>
Sub-total	<u>-</u>	<u>-</u>	<u>-</u>
<u>Project Other Costs</u>	\$ -	\$ -	\$ -
	=====	=====	=====

1/ This project is financed with funds contributed by Project 206 of the Technical Cooperation Program of the OAS and by headquarters countries.

=====

Antecedents and Objectives of the Project

(See description of the Basic Program, Part II)

Description of Activities for the year 1967 - 1968

Sub-project 3.1.2.2. - CIERA, Ecuador

1. Technical and Administrative Direction of the Center - Overall control and supervision of activities. Organization of Program and Courses. Teaching.

Sub-project 3.1.2.2. - CIERA, Ecuador

1. Technical and Administrative Direction of the Center: Overall and control and supervision of activities. Organization of Program and Courses. Teaching.
2. Assistant to Center Head. Collaboration in the technical and administrative direction of the Center. Teaching.
3. Professor and Researcher (first year). Teaching, research and advisory services.

PART III -- ITEM 1

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.1.3. -- Strengthening of Land Reform Institutions

Budget Summary

	Fiscal year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	16,429	_____	16,429
<u>Project Other Costs</u>			
Basic costs of Operation	<u>2,071</u>	_____	<u>2,071</u>
Total	\$ 18,500	\$ _____	\$ 18,500
	=====	=====	=====

=====
Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Head of Program	T&R-II	1	100

=====
Antecedents and Objectives of the Project

(See description of Basic Program, Part II)

Description of activities for the Year 1967 - 1968

1. Course on microplanning in Bolivia.
2. National Course on Programming and Administration of Land Reform at the level of project, in Venezuela.
3. National Course on Regional Rural Development in Bolivia.
4. "Concentrated Efforts" in Venezuela in the area of Yaracuy.

PART III -- ITEM 2

TRAINING AND SERVICES

Budget Summary

	Fiscal year 1967 - 1968	
	Obligated	Deferred Proposed
<u>Training</u>		
Graduate Assistants	<u>32,500</u>	<u>32,500</u>
<u>Services</u>		
Service Travel	5,000	
Special Services	<u>400</u>	
Sub-total	<u>5,405</u>	<u>5,405</u>
Total	\$ 37,905	\$ 37,905
	=====	=====

Graduate Assistants

The improvement of teaching ^{in schools} at the Colleges of Higher Agricultural Education through the specialization of their professors constitute the major aspect within the Educational Programs. A great majority of such institutions are interested in sending their professors to the Postgraduate School and it is therefore deemed necessary to continue the financing of these graduate assistantships to our Graduate School of Turrialba, or in other Centers of IICA.

Service Travel

The Regional Office receives requests for cooperation of regular and temporary specialists, whose expenses are covered with the item for service travel. Due to the fact that the institutions are constantly requesting these services, it is necessary in the immediate future to provide an increase in this amount, in order to comply with such requests.

Special Services

The governments and national institutions ^{in some instances} urgently request certain services of the IICA's specialists, which is believed should be attended in view of the importance given by the institutions requesting the service and because they fall within the functions of the Andean Zone. Since these service cannot be charged to the regular programs, it is necessary to assign a special item, for this.

must be provided

PART III -- ITEM 3

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

OFFICE OF THE REGIONAL DIRECTOR FOR THE ANDEAN ZONE

Budget Summary

	Fiscal year 1967		1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	34,052		
Auxiliary Personnel	<u>7,044</u>		
Sub-total	41,096		41,096
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>3,031</u>		<u>3,031</u>
Total	<u>44,127</u>	<u>=====</u>	<u>44,127</u> <u>=====</u>

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Regional Director	E&A-D	1	100
Technical Assistant to Regional Director	E&A-IV	<u>1</u>	100
		<u>2</u>	
<u>Auxiliary</u>			
Executive Secretary	A-III	1	100
Secretary	A-IV	<u>1</u>	100
		<u>2</u>	

Justification

The Increase in Personnel Costs is due to the salary increases in accordance with the new salary scale established on the basis of a survey of other organizations and the new salary scale established on the basis of a survey of other organizations and work centers, located in Lima.

PART III -- ITEM 3

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

REGIONAL ADMINISTRATION FOR THE ANDEAN ZONE

Budget Summary

<u>Personnel Costs</u>	Fiscal year 1967 - 1968		
	Obligated	Deferred	Proposed
Auxiliary Personnel	\$ 39,448		\$ 39,448
	=====		=====

=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Auxiliary</u>			
Administrative Assitant - Lima	A-I	1	100
Administrative Assistant - Venezuela	A-II	1	100
Assistant Accountant	A-II	1	100
Secretary	A-IV	1	100
Secretary	A-IV	1	100
Secretary	A-V	1	100
Librarian	A-IV	1	100
Watchman	A-VII	1	100
Mimeograph Operator	A-VII	1	100
Chauffeur	A-VI	2	100
Chauffeur	A-VII	1	100
		<u>12</u>	

=====

Justification

The increase in Personnel Costs is due to salary increases in accordance with the new wage scale set up on the basis of surveys made in other organization and work centers in Lima; the addition of a secretary as an assistant in the Accounting Department, who has been working in this office since February, 1966.

PART III -- ITEM 3

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

GENERAL SERVICES

Budget Summary

	Fiscal year 1967 - 1968		
	Obligated	Deferred	Proposed
Supplies and General Services	4,000		
Communications	3,200		
Printing of Reports and Documents	2,800		
Maintenance	2,000		
Local Transportation	300		
Equipment (For general use)	2,800		
Representation Expenses	2,000		
Insurance on Equipment and Vehicles	<u>800</u>	<u> </u>	<u> </u>
Total	\$ 17,900		\$ 17,900
	=====		=====

=====

Justification

Due to the considerable increase in the prices of goods and services affecting these items, that have occurred over the past two years, it has been necessary to increase the items in order to take care of both the increase in the volume of operations and the increase in costs.

PART IV
REGIONAL OFFICE
FOR THE
NORTHERN ZONE

PART IV

REGIONAL OFFICE FOR THE NORTHERN ZONE (2)

SUMMARY

	Obligated	Fiscal year 1967 Deferred	- 1968 Proposed
<u>Basic Programs</u>			
1.2. Agricultural Education	77,750	7,550	85,300
2.2. Agricultural Research	110,890	9,100	119,990
3.2. Rural Development and Land Reform	83,350	27,450	110,800
Sub-total	<u>271,990</u>	<u>44,100</u>	<u>316,090</u>
<u>Other Activities</u>			
Training and Services	<u>16,000</u>	<u> </u>	<u>16,000</u>
<u>Direction and Administration</u>			
Office of the Regional Director	41,100		41,100
Administration	23,000		23,000
General Services	<u>13,410</u>	<u> </u>	<u>13,410</u>
Sub-total	<u>77,510</u>	<u> </u>	<u>77,510</u>
Total	<u>365,500</u>	<u>44,100</u>	<u>409,600</u>
<u>General Costs and Provisions</u>			
(Proportion)	<u>31,400</u>	<u> </u>	<u>31,400</u>
Grand Total	\$ 396,900	\$ 44,100	\$ 441,000
	=====	=====	=====

PART IV

NORTHERN ZONE

Total Resources in accordance with the source of funds
By Basic Programs, Other Activities, Direction
Administration and General Costs

(In Thousands of Dollars)

	Total	IICA	AID	AEC	TCP	ACRI	UNDP	Donations & Contributions	Misc. Income
1.2 Agricultural Education	86	86							
2.2 Agricultural Research	120	120							
3.2 Rural Development and Rural Reform	173	111		62					
Sub-total	379	317		62					

OTHER ACTIVITIES

16 16

DIRECTION AND ADMINISTRATION

Direction
Administration
General Services

41 41
23 23
13 13

Sub-total

77 77

Total

472 410 62

GENERAL COSTS AND PROVISIONS (Proportion)

31 31

GRAND TOTAL

503 441 62

PART IV -- ITEM 4

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1.2.1. -- Improvement of Professional Education Institutions

<u>Budget Summary</u>	Fiscal	year 1967	- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	52,258	6,025	
Auxiliary Personnel	<u>7,796</u>	<u> </u>	<u> </u>
Sub-total	<u>60,054</u>	<u>6,025</u>	<u>66,079</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	6,046	3,125	
Field Aides	3,600	(3,600)	
Consultants and Lecturers	3,050	500	
Teaching Supplies	1,000	1,000	
Books for the School of Agronomy	500	500	
Fellowships	<u>3,500</u>	<u> </u>	<u> </u>
Sub-total	<u>17,696</u>	<u>1,525</u>	<u>19,221</u>
Total	<u>77,750</u>	<u>7,550</u>	<u>85,300</u>
	=====	=====	=====

Summary of Personnel assigned to the Project

<u>← Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Principal Educator	T&R-I	1	100
Associate Educator	T&R-III	1	100
Associate Communicator	T&R-III	1	100
Senior Especialist	T&R-II	<u>1</u>	100
		4	
<u>Auxiliary</u>			
Secretary	A-IV	1	100
Secretary	A-IV	1	100
Secretary	A-IV	<u>1</u>	100
		<u>3</u>	

Project 1.2.1. -- Improvement of Institutions of Higher Agricultural Education

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Sub-project 1.2.1.1. -- Central America, Panamá and México.

Activities

1. Analysis and studies of the institutions.
2. Seminars and short courses to professors.
3. Advisory services to the Permanent Commission on Agricultural Education.
4. Establishment and development of communications as a subject matter Colleges of Agriculture.

Sub-project 1.2.1.2. -- The Antilles

Activities

1. Analysis and studies of higher agricultural institutions.
2. Seminars and Short courses to professors.

PART IV -- ITEM 4

BASIC PROGRAM 2 -- AGRICULTURAL INVESTIGATION

Project 2.2.1. -- Improvement of Beans in Central America

Budget Summary

Fiscal year 1967 - 1968
Obligated Deferred Proposed

Personnel Costs

International Professional Personnel	20,057	(2,812)	
Auxiliary Personnel	<u>1,775</u>	<u> </u>	<u> </u>
Sub-total	<u>21,832</u>	<u>(2,812)</u>	<u>19,020</u>

Project Other Costs

Basic Costs of Operation	3,108	1,222	
Consultants and Lectures	1,200	2,000	
Teaching supplies and equipment	300		
Field material	<u>1,000</u>	<u> </u>	<u> </u>
Sub-total	<u>5,608</u>	<u>3,222</u>	<u>8,830</u>
Total	<u>\$ 27,440</u>	<u>\$ 410</u>	<u>\$ 27,850</u>
	<u>=====</u>	<u>=====</u>	<u>=====</u>

=====

Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Principal Geneticist	T&F-I	1	55
Associate Geneticist	T&R-III	<u>1</u>	85
		<u>2</u>	
<u>Auxiliary</u>			
Secretary	A-IV	1	50

=====

Project 2.2.1. -- Improvement of Beans in Central America

Antecedents and Objectives of the Project

(See description of Basic Programs Part II)

Description of Activities for the Year 1967-1968

Activities

1. Evaluation of collections, varieties and lines with respect to its adaptation to diseases, potential value in the commercial production and possible use as progenitors in the development of new varieties by crossings.
2. Publication of results of the research work as technical articles.
3. Prepare and distribute to all countries of the area the regional tests of varieties for black and red beans and coordinate the development of these activities.
4. Organize the program at the annual meetings of PCCMCA, on the sessions dedicated to beans.
5. Offer technical advice to countries in the development of their beans program by using personnel from the Regional Office of the Northern Zone and from the Research and Training Center.
6. Edit and publish the Report of the Annual Meeting of PCCMCA.
7. Training of technicians working with Beans in Central America at the Graduate School of Turrialba.

PART IV -- ITEM 4

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.2.2. -- Regional Project on Pastures and Animal Nutrition

Budget Summary

	Fiscal	Year 1967	- 1968
	Obligated	Deferred	Proposed

Personnel Costs

International Professional Personnel	15,801	287	
Auxiliary Personnel	<u>715</u>	<u> </u>	<u> </u>
Sub-total	<u>16,516</u>	<u>287</u>	<u>16,803</u>

Project Other Costs

Basic Costs of Operation	1,764	4,486	
Graduate Assistants		4,800	
Consultants and Lecturers	<u>1,000</u>	<u> </u>	<u> </u>
Sub-total	<u>2,764</u>	<u>9,286</u>	<u>12,050</u>
Total	\$ 19,280	\$ 9,573	\$ 28,853
	=====	=====	=====

=====
Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Senior Animal Husbandryman	T&R-II	1	100
<u>Auxiliary</u>			
Secretary	A-IV	1	20

=====
Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Project 2.2.2. -- Regional Project on Pastures and Animal Nutrition

Description of Activities for the Year 1967 - 1968

Activities

1. Assign a livestock and pasture specialist to take care of the Project.
2. Initiate the compilation of data by means of bibliographical consultations and visits to the countries.
3. Establish direct contacts and obtain the cooperation of the selected experiment stations with the Project.
4. Conduct a meeting with the livestock and pasture technicians from the Zone in order to discuss and agreed upon the execution of the project and assign specific responsibilities to each of the participating institutions.

PART IV -- ITEM 4

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.2.3. -- Regional Coordination of Research in Agriculture and Cattle

Budget Summary

Fiscal year 1967 - 1968
Obligated Deferred Proposed

Personnel Costs

International Personnel	9,790	(192)	
Auxiliary	<u>1,079</u>	<u> </u>	<u> </u>
Sub-total	<u>10,869</u>	<u>(192)</u>	<u>10,677</u>

Project Other Costs

Basic Costs of Operation	1,011	359	
Consultants and Lecturers	800	2,000	
Fellowships	<u>2,000</u>	<u> </u>	<u> </u>
Sub-total	<u>3,811</u>	<u>2,359</u>	<u>6,170</u>
Total	<u>\$ 14,680</u>	<u>\$ 2,167</u>	<u>\$ 16,847</u>
	<u>=====</u>	<u>=====</u>	<u>=====</u>

=====

Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Principal Geneticist	T&R-I	1	45
Associate Geneticist	T&R-III	<u>1</u>	15
		<u>2</u>	
<u>Auxiliary</u>			
Secretary	A-IV	1	30

=====

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Project 2.2.3. -- Regional Coordination for Agricultural Research

Description of Activities during the Year 1967-1968

Activities

1. Second Meeting of the Permanent Commission for Agricultural Research in Central America, with the cooperation of SIECA.
2. Meeting of Agricultural Research Directors of Central America.
3. Continue giving technical advice to the Permanent Commission for Agricultural Research and to SIECA, their efforts to strengthen the Permanent Commission and to promote the establishment of a regional structure which moves agricultural research in Central America and Panamá.

PART IV -- ITEM 4

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.2.4. -- Improvement of Horticultural Crops

Budget Summary

Fiscal Year 1967 - 1968
Obligated Deferred Proposed

Personnel Costs

International Professional Personnel	33,140	(4,881)	
Auxiliary Personnel	<u>3,841</u>		
	<u>36,981</u>	<u>(4,881)</u>	<u>32,100</u>

Project Other Costs

Basic Costs of Operation	3,419	481	
Consultants and Lecturers	1,000		
Teaching supplies and Equipment	400		
Field Materials	1,090		
Fellowships	5,950	1,350	
General Equipment	<u>650</u>		
Sub-total	<u>12,509</u>	<u>1,831</u>	<u>14,340</u>
Total	<u>\$ 49,490</u>	<u>\$ (3,050)</u>	<u>\$ 46,440</u>
	=====	=====	=====

=====
Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Principal Horticulturist	T&R-I	1	100
Associate Horticulturist	T&R-III	<u>1</u>	100
		<u>2</u>	
<u>Auxiliary</u>			
Secretary	A-III	1	100

=====

Project 2.2.4. -- Improvement of Horticultural Crops

Antecedents and Objectives of the Project

(See description under Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities:

1. International Technical Meeting for 16 fellows in the application of minimum quality norms for horticultural products.
2. In-service training for 2 Horticulturists - six months each - in cooperation with the "Instituto Nacional de Investigaciones Agrícolas" of México.
3. Research work (continued) on the improvement and production of tomatoes and yucca in the countries of Central America.
 - a) With regard to tomato, assistance will be given in the evaluation of varieties, production tests, during the rainy and dry seasons and the use of chemical substances in order to prolong its production periods, for fresh tomato as well as for industrialization.
 - b) As for yucca the existing collections will be studied with the purpose of grouping by types the various forms and make recommendations on the best ones.
4. Advisory Services
5. Publications of the work done and publications on specific crops.

PART IV -- ITEM 4

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.2.1 -- Strengthening of Agricultural Extension Institutions

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	26,869	12,280	
Auxiliary Personnel	<u>3,105</u>	<u> </u>	<u> </u>
Sub-total	<u>29,974</u>	<u>12,280</u>	<u>42,254</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	4,107	2,879	
Consultants and Lecturers	1,000		
Teaching Supplies	800		
Fellowships	<u>8,000</u>	<u> </u>	<u> </u>
Sub-total	<u>13,907</u>	<u>2,879</u>	<u>16,786</u>
Total	<u>\$ 43,881</u>	<u>\$ 15,159</u>	<u>\$ 59,040</u>
	=====	=====	=====

=====
Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Associate Agricultural Economist	T&R-III	1	10
Senior Rural Sociologist	T&R-II	1	20
Associate Home Economist	T&R-III	1	75
Associate Extensionist	T&R-III	<u>1</u>	75
		<u>4</u>	
<u>Auxiliary</u>			
Secretary	A-IV	1	20
Secretary	A-IV	<u>1</u>	75
		<u>2</u>	

=====

Project 3.2.1. -- Strengthening of Agricultural Extension Institutions

Antecedents and Objectives of the Project

(See description under Basic Programs, Part II)

Description of Activities during the Year 1967-1968

1. International Short Course on Agricultural Extension for groups of Agricultural Extension Trainers.
2. National Courses in Home Education in Dominican Republic and Haiti
3. National Course for Agricultural Extension Trainers in Mexico
4. Technical advice to groups of Agricultural Extension Trainers in the conduction of their activities in each one of the countries
5. In-service training to two technicians, for six-month each, in the Development Area
6. Publication of a Manual for the Training in Agricultural Extension
7. Technical advice and consultant services to the institutions in Agricultural Extension

Project 3.2.2. -- Strengthening of Agrarian Reform Institutions

2. Agreement for the establishment of the Center.
 - a) Preparation and signature of the Multinational Agreement, between IICA and the countries of Central America, for the establishment and financing of the Center.
 - b) Preparation and signature of the Agreement of privileges and immunities with the host country of the Center.
3. Establishment of the Center.

Arrangements with the host country for the building, equipment and other facilities for the Center as well as to that pertaining to the demonstration area.

PART IV -- ITEM 4

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.2.3. -- Rural Development Projects (Nueva Concepción)

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	25,945	5,005	
Auxiliary Personnel	<u>2,124</u>	<u> </u>	<u> </u>
Sub-total	<u>28,069</u>	<u>5,005</u>	<u>33,074</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	3,270	2,486	
Graduate Assistants	<u> </u>	<u>4,800</u>	<u> </u>
Sub-total	<u>3,270</u>	<u>7,286</u>	<u>11,006</u>
Total	<u>\$ 31,789</u>	<u>\$ 12,291</u>	<u>\$ 44,080</u>
	=====	=====	=====

=====

Summary of Personnel assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Associate Agricultural Economist	T&R-III	1	90
Senior Rural Sociologist	T&R-II	1	40
Associate Home Economist	T&R-III	1	25
Associate Extensionist	T&R-III	<u>1</u>	25
		<u>4</u>	
<u>Auxiliary</u>			
Secretary	A-IV	1	40
Secretary	A-IV	<u>1</u>	25
		<u>2</u>	

=====

Project 3.2.3. -- Projects of Rural Development

Antecedents and Objectives of the Project

(See description under Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities:

1. Diagnosis on the situation of the "Nueva Concepción" area: Agro-economic and social studies on natural resources.
2. Preparation of predictions: in the agro-economic and social studies.
3. Preparation of specific projects on agricultural credit, rural training trials and demonstration methods on crops, technical assistance and communications, livestock development, agricultural mechanization center, social aid, physical infrastructure and planning, organization of co-operatives and commercialization.

Note:

In these activities, the personnel from the Northern Zone, the Specialists from Turrialba, national and international organizations, will participate according to the detailed plans which have been prepared to this effect.

PART IV -- ITEM 5

TRAINING AND SERVICES

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Training Assistants</u>	<u>8,000</u>	<u> </u>	<u>8,000</u>
<u>Services</u>			
Service Travel	5,000		
Special Services	<u>3,000</u>	<u> </u>	<u> </u>
Sub-total	8,000		8,000
Total	<u>\$ 16,000</u>	<u>\$ </u>	<u>\$ 16,000</u>
	=====	=====	=====

Graduate Assistants

When offering fellowships for postgraduate studies, preference will be given to professors from Colleges of Agriculture, to professors of secondary schools of agriculture or to personnel working in Agricultural Research. In this item the amount of \$3,000 for the countries of The Antilles, which can be used either for formal or short training period, according to the needs of those countries.

Service Travel

The corresponding funds destined to this item of service travel will be used, with the cooperation of the personnel from Turrialba or from other institutions, to offer those services to the Colleges of Agriculture or to Schools of Agricultural Teaching at Intermediate level, which cost cannot be covered by the Higher Agricultural Education Program.

Special Services

The amount of \$2,000 is included in order to take care of the requests for special services to the countries, which cannot be financed from funds destined to the technical programs but which fit among the activities of the Northern Zone.

provided under
such as...
intermediate level
agricultural schools

Training Services

The sum of \$1,000 is included in order to take care of the services requested by the countries of The Antilles through the office of Dominican Republic.

As in previous years it is expected that demands for these services will be increased and for this reason this item has been increased.

It is expected that once we have established the Sub-Site in Dominican Republic, requests for these services from the countries of the Antilles will be increased.

PART IV -- ITEM 6

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

OFFICE OF THE REGIONAL DIRECTOR FOR THE NORTHERN ZONE

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	32,348		
Auxiliary Personnel	<u>6,152</u>		
Sub-total	<u>38,500</u>		<u>38,500</u>
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>2,600</u>		<u>2,600</u>
Total	\$ <u>41,100</u>	\$	\$ <u>41,100</u>
	=====	=====	=====

=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
Regional Director	E&A-D	1	100
Assistant to Director	E&A-III	<u>1</u>	100
		<u>2</u>	
<u>Auxiliary</u>			
Executive Secretary	A-III	1	100
Secretary	A-V	<u>1</u>	100
		<u>2</u>	

=====

Justification

The increase in personnel cost is due in part to the addition of one secretary for the Assistant to the Director, due to the fact that the executive secretary cannot take care of her current work and in addition tend to the work of the Assistant to the Director; and it is also due to the adjustment in the salary scale.

PART IV -- ITEM 6

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

REGIONAL ADMINISTRATION FOR THE NORTHERN ZONE

Budget Summary

<u>Personnel Costs</u>	Fiscal year		- 1968 Proposed
	Obligated	1967 Deferred	
Auxiliary Personnel - Guatemala Office	21,760		21,760
Auxiliary Personnel - México Office	1,240		1,240
Total	\$ 23,000		\$ 23,000
	=====		=====

=====
Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Auxiliary</u>			
Guatemala Office			
Administrative Assistant	A-I	1	100
Assitant Accountant	A-IV	1	100
Secretary	A-IV	1	100
Chauffer	A-VII	1	100
Messenger	A-VII	1	100
Watchman	A-VIII	<u>1</u>	100
		<u>7</u>	
<u>México Office</u>			
Messenger	A-VIII	1	100

=====
Justification

The increase in personnel costs is due that a secretary who worked only six month last year is now working full time; to the inclusion of an of-
fice keeper required for the maintenance of the new offices; and to
annual salary increases

PART IV -- ITEM 6

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

GENERAL SERVICES

Budget Summary

	Fiscal year 1967		1968
	Obligated	Deferred	Proposed
Supplies and Services	2,640		
Communications	1,820		
Printing of Reports and Documents	380		
Maintenance of General and Transportation Equipment	1,500		
Office rentals	3,000		
Local Transportation	1,080		
Equipment for general use	1,500		
Representation Expenses	720		
Insurance	770		
	<hr/>	<hr/>	<hr/>
Total	\$ 13,410	\$	\$ 13,410
	=====	=====	=====

Justification

Due to the budget increase to a higher level as compared with the previous year, all the items of General Services have been increased, with the Exception of the item for equipment which has been reduced. These items are for the operations of the Headquarters of the Norther Zone as well as for the office of the Official Representative in México.

PART V
REGIONAL OFFICE
FOR THE
SOUTHERN ZONE

PART V

REGIONAL OFFICE FOR THE SOUTHERN ZONE (3)

SUMMARY

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Basic Programs</u>			
1-3 Agricultural Education	236,676	47,312	283,988
2-3 Agricultural Research	36,215	8,085	44,300
3-3 Rural Development and Land Reform	<u>108,010</u>	<u>7,202</u>	<u>115,212</u>
Sub-Total	<u>380,901</u>	<u>62,599</u>	<u>443,500</u>
<u>Other Activities</u>			
Training and Services	<u>27,400</u>		<u>27,400</u>
<u>Direction and Administration</u>			
Office of the Regional Director	30,524	1,273	31,797
Administration	40,594		40,594
General Services	<u>21,109</u>		<u>21,109</u>
Sub-Total	<u>92,227</u>	<u>1,273</u>	<u>93,500</u>
Total	<u>500,528</u>	<u>63,872</u>	<u>564,400</u>
<u>General Costs and Provisions</u> (Proportion)	<u>60,600</u>		<u>60,600</u>
Grand Total	\$ <u>561,128</u>	\$ <u>63,872</u>	\$ <u>625,000</u>

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PART V

SOUTHERN ZONE

Total Resources in Accordance with the Source of Funds
by Basic Programs, Other Activities, Direction
Administration and General Costs

(In Thousands of Dollars)

	TOTAL	IICA	AID	AEC	TCP	ACRI	UBDP	Dona- tions & Contri- butions	Misc. Income
<u>BASIC PROGRAMS</u>									
1-3 Agricultural Education	284	284							
2-3 Agricultural Research	283	44			25	165	49		
3-3 Rural Development and Land Reform	283	115		128			40		
Sub-Total	850	443		128	25	165	89		
<u>OTHER ACTIVITIES</u>									
	43	27					16		
<u>DIRECTION AND ADMINISTRATION</u>									
Direction	32	32							
Administration	41	41							
General Services	36	21						15	
Sub-Total	109	94						15	
Total	1002	564		128	25	181	104		
<u>GENERAL COSTS & PROVISIONS (Proportion)</u>									
	61	61							
GRAND TOTAL	1063	625		128	25	181	104		

PART V -- ITEM 7

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1.3.1. -- Graduate Teaching

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	69,553		
Auxiliary Personnel	<u>8,860</u>		
Sub-Total	<u>78,413</u>		<u>78,413</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	17,765	6,204	
Consultants and Lecturers	10,400	1,300	
Laboratory Supplies	2,150	2,150	
Teaching Supplies and Equipment	3,470	2,230	
General Equipment	1,900	1,600	
Fellowships	92,250	24,750	
Graduate Assistants		<u>1,500</u>	
Sub-Total	<u>127,935</u>	<u>39,734</u>	<u>167,669</u>
Total	<u>\$ 206,348</u>	<u>\$ 39,734</u>	<u>\$ 246,082</u>

Summary of Personnel Assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Associate Extensionist	T&R-II	1	48
Assistant Home Economist	T&R-IV	1	48
Associate Agricultural Economist	T&R-III	1	24
Assistant Agricultural Economist	T&R-IV	1	24
Principal Educator	T&R-I	1	100
Senior Agrostologist	T&R-II	1	50

Project 1.3.1. -- Graduate Teaching

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Assistant Animal Husbandryman	T&R-IV	1	50
Associate Nutritionist	T&R-III	1	60
Associate Communicator	T&R-III	1	50
Assistant Home Economist	T&R-IV	<u>1</u>	48
		<u>10</u>	
<u>Auxiliary</u>			
Secretary	A-IV	1	48
Secretary	A-IV	1	24
Secretary	A-IV	1	100
Secretary	A-V	<u>2</u>	50
		<u>5</u>	

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Antecedents and Objectives of the Project

(See description under Basic Programs, Part II)

Description of Activities during Year 1967-1968

Sub-Project 1.3.1.1. Coordination of the Program

Activities

1. Budgetary Prevision
2. Coordination and supervision of the Regional Program for Graduate Studies.
3. Annual Meeting of the Academic Council of the Southern Zone.
4. Vice-Dean of Turrialba for the Zone.
5. Publications.

Sub-Project 1.3.1.2. Southern Andean Region

Activities

1. Coordination and supervision of the Program in the Region.
2. Course: Rural Economics.

Project 1.3.1. -- Graduate Teaching

3. Course: Genetic and Plant Improvement.
4. Course: Technology on Plant Foods.
5. Course: Soil and Irrigation.
6. Special Course: Technical Teaching at the University.

Sub-Project 1.3.1.3 "Del Plata" Region

Activities

1. Coordination and supervision of the Program in the Region.
2. Course: Plant Physiology.
3. Course: Plant Genetics
4. Course: Animal Pathology
5. Course: Plant Pathology
6. Special Course: Technical Teachings at the University

Sub-Project 1.3.1.4. Subtropical Region

1. Coordination and supervision of the Program in the Region.
2. Course: Rural Social Sciences
3. Course: Statistics and Experimentation
4. Course: Phytopathology
5. Course: Genetics and Plant Improvement
6. Course: Mechanics, Motors and Agricultural Machinery
7. Course: Animal Nutrition and Pastures
8. Course: Plant Nutrition
9. Course: Soils
10. Course: Rural Extension
11. Course: Animal Pathology
12. Course: Animal Production and Pastures
13. Special Course: Technical University at the University

Project 1.3.1. -- Graduate Teaching

Sub-Project 1.3.1.5. Courses at La Estanzuela

Activities

1. Coordination and supervision of the Program by the Regional Group of the Teaching Council Program.
2. Courses: Animal Industry and Pasture Production.
3. Participation of the Advisory Commission of "Del Plata".
4. Plant Industry Courses
5. Symposiums and Seminars

PART V -- ITEM 7

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1.3.2. -- Teaching at the School Level and Communication in the University

Budget Summary

	Fiscal Year 1967		-- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	22,834		
Auxiliary Personnel	<u>1,918</u>		
Sub-Total	<u>24,752</u>		<u>24,752</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	4,176	2,978	
Graduate Assistants		2,400	
Teaching Supplies and Equipment	200	300	
General Equipment		400	
Fellowships	<u>1,200</u>	<u>1,500</u>	
Sub-Total	<u>5,576</u>	<u>7,578</u>	<u>13,154</u>
Total	\$ <u>30,328</u>	\$ <u>7,578</u>	\$ <u>37,906</u>

Summary of Personnel Assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Associate Extensionist	T&R-II	1	12
Assistant Home Economist	T&R-IV	1	12
Associate Agricultural Economics	T&R-III	1	6
Assistant Agricultural Economist	T&R-IV	1	6
Assistant Educator	T&R-IV	1	100
Associate Communicator	T&R-III	1	50
Assistant Home Economist	T&R-IV	<u>1</u>	12
		<u>7</u>	

Project 1.3.2. -- Teaching at the School Level and Communication in the University

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Auxiliary</u>			
Secretary	A-IV	1	12
Secretary	A-IV	1	6
Secretary	A-V	<u>1</u>	50
		<u>3</u>	

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Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Sub-Project 1.3.2.1. Teaching at University Level

Activities

1. Regional Meetings of Deans
2. Various types of assistance to certain Colleges of Agriculture
3. Individual assistance to Colleges of Agriculture on topics related to Extension and Home Education.
4. Individual assistance to Colleges of Agriculture in topics related to Economics and Development.

Sub-Project 1.3.2.2. Organization and Development of Libraries

Activities

1. Organization and improvement of Libraries.
2. Improvement of Librarians
3. Publications

Sub-Project 1.3.2.3. Improvement of Higher Education

Activities

1. Diagnosis of institutions and research work
2. Specific activities
3. Meetings and regional relations

Project 1.3.2. -- Teaching at the School Level and Communication in the University

4. Consultation and advice

5. Publications

Sub-Project 1.3.2.4. Texts and Teaching Materials

Activities

1. Coordination

2. Production

3. Consultant service

4. Information

Sub-Project 1.3.2.5. Communication at the University

Activities

1. Graduate Courses

2. Seminars

3. Publications

4. Consultant Services

PART V -- ITEM 7

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.3.1. -- Regional Cooperative Program for Agricultural Research

Budget Summary

	Fiscal Year 1967		1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	<u>3,582</u>	<u> </u>	<u>3,582</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	1,079	935	
Coordination Committee Meeting	<u>2,000</u>	<u>1,750</u>	<u> </u>
Sub-Total	<u>3,079</u>	<u>2,685</u>	<u>5,764</u>
Total	\$ <u>6,661</u>	\$ <u>2,685</u>	\$ <u>9,346</u>
	=====	=====	=====

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Summary of Personnel Assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Director of the Temperate Zone and Head of Agricultural and Botany Research	E&A-II	1	50

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Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

1. Visit to the countries of the Zone and interview of the Research Directors
2. Convene the Coordinating Committee
3. Preparation of a work plan for the Regional Program

PART V -- ITEM 7

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.3.2. -- Research in Animal and Vegetable Production for the Temperate Zone

Budget Summary

	Fiscal Year 1967		1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	22,886		
Auxiliary Personnel	<u>1,730</u>		
Sub-Total	24,616		<u>24,616</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	2,938	2,250	
Graduate Assistants		1,400	
Technical Meetings	<u>2,000</u>	<u>1,750</u>	
Sub-Total	4,938	5,400	<u>10,338</u>
Total	\$ 29,554	\$ 5,400	\$ 34,954
	=====	=====	=====

Summary of Personnel Assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Director of the Temperate Zone and Head of Agricultural and Botanic Research	E&A-II	1	50
Senior Agrostologist	T&R-II	1	50
Assistant Animal Husbandryman	T&R-IV	1	50
Associate Nutritionist	T&R-III	<u>1</u>	40
		<u>4</u>	
<u>Auxiliary</u>			
Secretary	A-V	1	50

Project 2.3.2. -- Research in Animal and Vegetable Production for the
Temperate Zone

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities

1. Research on forage production with cultivated pastures.
2. Improvement and management of cultivated pastures.
3. Research on meat production (selection, management and physiology).
4. Nutritive evaluation of natural and cultivated prairies.
5. Studies on methods of production and evaluation of hay and ensilage.
6. Technical advice to the Experimental Station of Bagé for the development of research on Livestock and Pastures.
7. Publication of a Manual on Experimental Techniques in Pastures.
8. Improvement of crops prevalently Alógamos (corn, sunflower and sorghums).
9. Fertility and management of the soil in relation with crops and pastures.

PART V -- ITEM 7

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.3.3. -- Research in Animal and Vegetable production for the Tropical and Sub-tropical Zone *

Budget Summary

	Fiscal Year 1967		1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	-	-	-
Auxiliary Personnel	-	-	-
Sub-Total	-	-	-
<u>Project Other Costs</u>			
Total	-	-	-
	=====	=====	=====

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities

1. Control of diseases and pests
2. Improvement and selection
3. Physiology and Ecology of Cacao
4. Handling and agricultural treatments
5. Industrial processing
6. Convene a meeting with the participation of the Turrialba Center, the Southern Zone and IPEA, Brazil.

* This Project is financed by the contributions from the Comissao Executiva do Plano da Recuperacao Economico-Rural da Lavoura Cacaueira (CEPLAC) of Brazil and the American Cocoa Research Institute (ACRI) from the United States.

PART V -- ITEM 7

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.3.1. -- Strengthening of Rural Development Institutions

Budget Summary

	Fiscal Year 1967		1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	46,169		
Auxiliary Personnel	<u>2,530</u>	<u>997</u>	
Sub-Total	<u>48,699</u>	<u>997</u>	<u>49,696</u>
<u>Projects Other Costs</u>			
Basic Costs of Operation	4,622	1,483	
Teaching Supplies	444	90	
Fellowships	<u>5,040</u>	<u>2,520</u>	
Sub-Total	<u>10,106</u>	<u>4,093</u>	<u>14,199</u>
Total	\$ <u>58,805</u>	\$ <u>5,090</u>	\$ <u>63,895</u>
	=====	=====	=====

Summary of Personnel Assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Associate Extensionists	T&R-II	1	28
Assistant Home Economist	T&R-IV	1	32
Associate Agricultural Economist	T&R-III	1	49
Assistant Agricultural Economist	T&R-IV	1	49
Official Representative and Head of Programs	E&A-II	1	50
Assistant Extensionist	T&R-IV	1	10
Assistant Home Economist	T&R-IV	1	32
Official Representative and Head of Programs	E&A-II	1	33

Project 3.3.1. -- Strengthening of Rural Development Institutions

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Assistant Economist	T&R-IV	1	15
Associate Economist	T&R-III	<u>1</u>	80
		<u>10</u>	
<u>Auxiliary</u>			
Secretary	A-IV	1	28
Secretary	A-IV	<u>1</u>	49
		<u>2</u>	

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Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities (Includes Activities of Project 206 - TCP)

Technical Training in Rural Development

1. "National Course on Farm Management to Specialists in Agrarian Economics". It will be offered in Brazil, during the first semester of 1968, with a duration of four weeks, and with thirty participants.
2. "National Course on Regional Rural Development". It will be offered in Argentina, during the first semester of 1968, four weeks duration, and thirty participants.
3. "National Course on Regional Rural Development". It will be offered in Brazil, during the second semester of 1967, duration, four weeks, with thirty participants.
4. "International Course on Agricultural Credit". Thirty participants. Location and date of said course not yet determined.
5. "National Seminar on Communications in Agricultural Extension". It will be offered in Argentina for technicians in Agricultural Information of INTA. Second semester of 1967.
6. "Course on Home Education". The program, location and date of said course to be determined as soon as the Home Education Specialist assumes her position.
7. Courses for Agricultural Extensionists". The classes will be dictated at "La Estanzuela", Uruguay for the National Center of Agricultural Extension. Second semester, 1967.

Project 3.3.1. -- Strengthening of Rural Development Institutions

8. "Courses for Agricultural Extensionists". The Extension Specialists will participate in six courses which will be offered in this subject by ABCAR, in different States of Brazil, during the period July 1967 to June 1968.
9. In-service training for the Analysis of Rural Development Institutions in Brazil. It will be offered to one fellow during eight months in Brazil. The characteristics of this in-service training to be determined as soon as the Associate Economist with headquarters in Rio de Janeiro, Brazil, assumes his functions.
10. In-service training for the Study of Specific Aspects of the Rural Family in the Economic and Social Development. One fellowship will be offered, during eight months in Uruguay. The characteristics to be determined once the Home Education Specialist assumes her position.
11. "In-service Training for the Study of Alternatives of Production at Real Estate Level". To be offered to a technician from Uruguay, during eight months.
12. "International Course on Transformation of Agricultural Products and Commercialization". It is planned to be offered in Argentina, with a two-months duration to thirty technicians.
13. "National Course on Social Assistance and Rural Family Education". It will be offered in Paraguay.

Research Work in Rural Development

14. "Research Work on Rural Family in the Economic and Social Development". It will be carried out in Uruguay with the cooperation of the "Centro de Investigación y Enseñanza de La Estanzuela". July 1967 - June 1968.
15. Research Work on known Areas of Extensionists and Home Education Specialists". It will be conducted in Argentina, with the cooperation of INTA. July 1967 to June 1968.
16. "Research Work on the Evaluation of the Extension Service". It will be conducted by the "Servicio Nacional de Extensión" of Paraguay, with the cooperation of the Extensionist and the Home Education Specialists of the Southern Zone.
17. "Research Work on the Analysis and Demand of Livestock Products". Planned to be conducted with cooperation of the technicians from "La Estanzuela", Uruguay. The characteristics to be determined as soon as the Specialist in Livestock Commercialization under the Special Fund Project 80 assumes his position.
18. "Research Work on the Process for Commercialization of Livestock Products in Uruguay". A series of research projects are planned to be initiated during the period 1967-1968. The characteristics to be determined once the Specialist on Livestock Commercialization of the Special Fund Project 80 assumes his position.

Project 3.3.1. -- Strengthening of Rural Development Institutions

19. "Research on Economic Background for Real Estate". To be carried out in Uruguay, with the cooperation of technicians from "La Estanzuela".
20. "Research on the Rural Family". A research activity planned by the Turrrialba Specialist, to be carried out by the Regional Home Education Specialists, in the three Zones of IICA.
21. "Register of Institutions for Agricultural Development". Systematization of informations on the organization, objectives, functioning, needs and problems of national institutions for the agricultural development in the countries of the Zone, in order to be able to plan the cooperation which IICA will be able to render.

Consultation and Technical Advice in Rural Development

22. "Consultation and Technical Advice to the Extension Services". To be offered by the Agricultural Extension Specialist and by the Home Education Specialist to INTA, ABCAR, Extension Service of Uruguay, National Extension Service of Paraguay, "Centro de Enseñanza y Extensión de Minas Gerais", CEPLAC, CETREC, "Centro de Entrenamiento del Nordeste, CETREISUL, ETA, IBRA, INDA, CORA, CONSTA, ICIRA, INDAP, as well as to associated programs of IICA such as PIJR (International Program for Rural Youth) and PIDR (International Program for Rural Development).
23. "Consultation and Technical Advice to Home Education Institutions". To be given by the Home Education Specialist, cooperating in the planning of the activities principally related to the research work projected to be carried out by the institutions in this discipline in the countries of the Zone.
24. "Consultation and Technical Advice to Agricultural Credit Institutions". To be given by technicians from Project 206.
25. "Consultation and Technical Advice in Rural Planning". To be given to the Rural Planning Department of DATE.
26. "Programming of Research Work on Farm Management". Consultation and technical advice to the Land Economics Department of the Ministry of Agriculture of Chile.

Publication of Rural Development

27. "Publications on Evaluation Methodology of Rural Development Projects". Technical articles to be prepared.
28. Publications on "Economy of Rural Farm". Technical articles will be prepared.
29. Farm Management text. Collection of materials, direct contacts with collaborators and editing of the chapters of the mentioned text book, which will be published under Program No. 1 "Higher Agricultural Education".

PART V -- ITEM 7

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.3.2. -- Strengthening of Land Reform Institutions

Budget Summary

	Fiscal Year 1967		1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	20,032		
Auxiliary Personnel	<u>473</u>	<u>249</u>	
Sub-Total	<u>20,505</u>	<u>249</u>	<u>20,754</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	443	509	
Fellowships	<u>360</u>	<u>180</u>	
Sub-Total	<u>803</u>	<u>689</u>	<u>1,492</u>
Total	\$ <u>21,308</u>	\$ <u>938</u>	\$ <u>22,246</u>
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Summary of Personnel Assigned to the Project

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Associate Extensionist	T&R-II	1	8
Assistant Home Economist	T&R-IV	1	2
Associate Agricultural Economist	T&R-III	1	7
Assistant Agricultural Economist	T&R-IV	1	7
Official Representative and Programs Head	T&R-II	1	50
Assistant Extensionist	T&R-IV	1	5
Assistant Home Economist	T&R-IV	1	2
Assistant Economist	T&R-IV	1	5
Official Rep. and Programs Head	E&A-II	1	34
Associate Economist	T&R-III	<u>1</u>	20
		<u>10</u>	

Project 3.3.2. -- Strengthening of Land Reform Institutions

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Auxiliary</u>			
Secretary	A-IV	1	8
Secretary	A-IV	<u>1</u>	7
		<u>2</u>	

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Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities (Includes activities of Project 206 TCP)

Technical Training in Agrarian Reform

1. "In-service Training on Extension and Agricultural Credit Applied to Development Projects or of Integral Agrarian Reform". To be offered in Argentina, to six students during six months.
2. "In-service Training on Planning and Execution of Projects on Rural Development and Integral Agrarian Reform". To be offered in Brazil to six students, during six months, using the group of technicians trained in the Concentrated Effort of Rio Grande do Sul.
3. "Course on Techniques for Rural Settlements". To be offered in Chile.
4. "Course on Preparation of Concrete Projects of Integral Agrarian Reform. To be offered in Chile.
5. "Course on Consolidation Projects of Rural Colonies". To be offered in Paraguay, as a continuation of work already initiated.
6. "Training through Reciprocal Teaching". To promote this form of training among Land Reform institutions.
7. "Course on Land Reform". To be offered in Brazil for the technical training of professionals from IBRA and other State institutions of Land Reform.
8. "In-service Training in Integrated Projects of Land Reform". To be offered in Paraguay to a group of six to eight technicians with the cooperation of professionals from Paraguay, for the consideration of agronomic problems of the requests for credit.

Project 3.3.2. -- Strengthening of Land Reform Institutions

9. "Course on Cooperatives in Development Programs and Land Reform". To be offered in Paraguay, in relation with the Agricultural Credit Projects of BID.
10. "In-service Training in Agricultural Communication in Land Reform". To be offered in Brazil in cooperation with technicians of Project 206.
11. "In-service Training in Studies of Land Reform Programs". To be offered in Brazil, in Rio de Janeiro.

Research Work in Land Reform

12. "Research Work on the Integration of the Farmer to the new System of Land Reform", Brazil. It will be oriented by the Associate Communicator of the Southern Zone, using the material prepared for a course on Planning in Agricultural Communications, which was previously offered.
13. "Evaluation of Colonization Activities in Paraguay". With the participation of the Extensionist and of the Specialist in Home Education of the Southern Zone, concluding the activities which were previously initiated.
14. "Research Work on Specific Aspects on Land Reform". To be oriented by Project 206 in relation to its In-service training activities in Brazil.

Consultation and Technical Advice in Land Reform

15. "Technical advice for the Establishment of a National Training Center of Rural Development and Land Reform". To be offered to IBRA, Brazil.
16. "Library and Publication Service". Cooperation with institutions of Land Reform and with Teaching Centers for the Promotion of their Libraries and Publications, specialized in Land Reform.
17. "Concentrated Efforts for the activities of Settlement of Farmers in the Central Valley in cooperation with the "Corporation of Land Reform" of Chile.
18. "Concentrated Efforts in cooperation with organizations of Land Reform from Paraguay for the Settlement of Farmers".
19. "Concentrated Efforts in the Land Reform Southern Coast Project (PRALS)". Continue with the cooperation being offered to the Brazilian activities for conducting and improving such activities being carried out. Consultation and technical advice in the operation of projects in the area; methodological aspects.
20. Consultation and Technical Advice to Project 206 activities with relation to Economic Units of Land Reform in Paraguay".
21. Consultation and Technical Advice to Project 206 activities in relation with the Economic Units of Land Reform in Chile".

Project 3.3.2. -- Strengthening of Land Reform Institutions

22. Consultation and Technical Advice to the "Instituto de Capacitación e Investigación en Reforma Agraria (ICIRA) in their Teaching and Research Programs directed to Professionals who are working with Land Reform in Chile.
23. Coordination of basic research work on the "Municipios Modelos" to be carried out in Brazil by INDA and technical advice to the "Universidad Católica de Rio" (PUC) (Catholic University of Rio) - in said studies. It is expected that this will be a great help in the planning of a methodology and a regional development model.
24. "Technical advice to the constitution of a planning group in the priority area of Brasilia, similar to the activities of PRALS. It is also expected to give similar technical advice to a planning group in North-eastern Brazil.

Publications in Land Reform

25. "Technical Articles on Land Reform in Rural Development".

PART V -- ITEM 7

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.3.3. -- Development Areas

Budget Summary

	Fiscal Year 1967	--	1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	22,101		
Auxiliary Personnel	<u>610</u>		
Sub-Total	<u>22,711</u>		<u>22,711</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	1,386	608	
General Equipment	300	66	
Consultants and Lecturers	<u>3,500</u>	<u>500</u>	
Sub-Total	<u>5,186</u>	<u>1,174</u>	<u>6,360</u>
Total	\$ <u>27,897</u>	\$ <u>1,174</u>	\$ <u>29,071</u>
	=====	=====	=====

Summary of Personnel Assigned to the Program

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Associate Extensionist	T&R-II	1	4
Assistant Home Economist	T&R-IV	1	6
Associate Agricultural Economist	T&R-III	1	14
Assistant Agricultural Economist	T&R-IV	1	14
Assistant Extensionist	T&R-IV	1	85
Official Rep. and Programs Head	E&A-II	1	33
Assistant Home Economist	T&R-IV	1	6
Assistant Economist	T&R-IV	<u>1</u>	80
		<u>8</u>	

Project 3.3.3. -- Development Areas

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
Secretary	A-IV	1	4
Secretary	A-IV	<u>1</u>	14
		<u>2</u>	

=====

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

Activities (Includes activities of Project 206 - TCP)

Technical Training in Development Areas

1. "Course on the Teaching Methodology of Agricultural Extension". To be offered in Santiago, Chile in cooperation with INDAP, in relation with the Development Area of Maipú. Duration, four weeks.
2. A Panel on Planning the Regional Rural Development and National Development Programs". It will be organized by the Dean of the Graduate School of Turrialba, to be carried out in the Development Area of Maipú, Chile, with the financial aid of the United Nations Development Program 80.
3. International Seminar on Regional Agricultural Development Areas and its National Programs for Development. It is planned to be offered in Chile, immediately following the Panel already mentioned, with the participation of technicians who are working in Agricultural Development activities in the countries of the Southern Zone. Its financing is still pending.
4. "Course for Extensionists in the Area of Maipú". This activity is being planned by Project 206 in cooperation with the United Nations Development Program in the mentioned Area.
5. "In-Service Training on the Methodology of Planning in Development Areas. Agricultural Economics Studies". To be offered in Santiago, Chile, in the Area of Maipú.
6. "In-Service Training on the Methodology of Planning Development Areas. Rural Sociology Studies". To be offered in Santiago, Chile, in the Area of Maipú.
7. "In-Service Training on the Methodology of Planning Development Areas. Home Education Studies". To be offered in Santiago, Chile, in the Area of Maipú.

Project 3.3.3. -- Development Areas

8. "In-Service Training on Methodology of Planning Development Areas. Natural Resources Studies". To be offered in Santiago, Chile, in the Area of Maipú.
9. "In-Service Training in the Preparation of Budgets of Agricultural Enterprises of the Area of Maipú". To be offered in Chile to one student staying temporarily two months in Montevideo.
10. "Technical Training in Projects of Pre-Investments Studies". This activity has been planned by Project 206 in relation with the establishment of the Regional Development Area in Southern Brazil.

Research Work on Development Areas

11. "Research Work on the Rural Family of the Area of Maipú". Will be carried out by the Home Education Specialist of the Southern Zone once she has taken charge of her position.
12. "Research Work on Economic Aspects in the Maipú Development Area". Research work for the analysis of the economic factors to be taken into consideration while planning the Regional Development.
13. "Research Work on Sociological Aspects in the Maipú Development Area". Research work for the analysis of the sociological factors to be considered while planning Regional Development.
14. "Research Work on Natural Resources in the Maipú Development Area". Research work for the analysis of the natural resources to be considered while planning Regional Development.
15. "Research on Home Education Aspects in the Maipú Development Area". Research work for the analysis of Home Education factors to be taken into consideration while planning the Regional Development.
16. "Equipping and infrastructure aspects in the Development Area of Maipú". Research to analyze the equipping and infrastructure factors to be taken into consideration while planning the Regional Development.
17. "Research on the Economic Aspects in the Development Area in Mendoza". The proposed research to be conducted is for the planning of activities in the projected Development Area of Mendoza.
18. "Research on the Sociological Aspects in the Development Area in Mendoza". The proposed research to be carried out is for the planning of activities in the projected Development Area in Mendoza.
19. "Research on Natural Resources in the Development Area of Mendoza". The proposed research to be carried out is for the planning of activities in the projected Development Area of Mendoza.

Project 3.3.3. -- Development Areas

20. "Research on Home Education Aspects in the Development Area of Mendoza". The proposed research work to be carried out for the planning of activities in the projected Development Area of Mendoza.
21. "Research on Pre-Investment Projects". Brazil. This activity is being proposed by Project 206 in relation with the establishment of a Regional Development Area in Southern Brazil.

Consultation and Technical Advice in Development Areas

22. "Planning the Development Area of Mendoza". Cooperation with the technicians of the Area of Maipú and with the technicians of the Economics, Extension and Home Education Units, with headquarters in Montevideo, for the initial planning of the Development Area to be established in Mendoza, Argentina, jointly with the National University of Cuyo (College of Land Sciences), the Ministry of Economics of the Province and with INTA.
23. "Consultation and technical advice to the Development Area of Maipú in conducting its Activities".
24. "Consultation and Technical Advice in Extension and Home Education in the Development Area of Maipú, Chile".
25. "Consultation and Technical Advice in Extension and Home Education in the proposed Development Area of Mendoza".
26. "Consultation and Technical Advice in Pre-Investment Projects, Brazil". This activity is being proposed by Project 206 in relation with the establishment of a Regional Demonstration Area in Southern Brazil.

Publications in Development Areas

27. "Partial Evaluation of the Activities of the Development Area of Maipú".
28. "Information Bulleting on the progress made in the Development Area of Maipú".

PART V -- ITEM 8

TRAINING AND SERVICES

Budget Summary

	Fiscal Year 1967		--	1968
	Obligated	Deferred		Proposed
<u>Training</u>				
Graduate Assistants	<u>19,400</u>	_____		<u>19,400</u>
<u>Services</u>				
Service Travel	5,000			
Special Services	<u>3,000</u>	_____		_____
Sub-Total	<u>8,000</u>	_____		<u>8,000</u>
Total	\$ <u>27,400</u>	\$ _____		\$ <u>27,400</u>
	=====	=====		=====

=====

Graduate Assistants for the Year 1967-1968

Continuing with the policy of sending Graduate Assistants to the Graduate School of the Research and Training Center of Turrialba or to other teaching centers of this institution, and with the aim of promoting the specialization of professors from Higher Agricultural Education institutions, it is contemplated to increase the number of graduate assistants.

Service Travel

This Item is destined to cover the expenses for the services of regular or temporary professors who cooperate in the teaching program of the Regional Office. The increasing demand for these services makes it necessary to maintain, at least, this Item at the same level. This Item has been increased by \$3,000 to take care of special requests urgently made by countries of the Zone and which are not covered by the Regular Budget, since it cannot be anticipated.

because of the variation in the national economy.

PART V -- ITEM 9

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

OFFICE OF THE REGIONAL DIRECTOR FOR THE SOUTHERN ZONE

<u>Budget Summary</u>	Fiscal year	1967	- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	21,927		
Auxiliary Personnel	3,948		
Sub-total	25,875	_____	25,875
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	4,649	1,273	5,922
Total	\$ 30,524	\$ 1,273	\$ 31,797
	=====	=====	=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Regional Director	E&A-D	1	100
<u>Auxiliary</u>			
Executive Secretary	A-III	1	100

Justification

The budget increase is due to an adjustment to the actual cost of operations. The item for travel which has been insufficient, has been increased to a more realistic level.

The item for "Direction of la Estanzuela" which heretofore was included in this budget, has been transferred to Technical Program 5-C, as it is the direction of a technical program rather than an administrative function.

PART V -- ITEM 9

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

REGIONAL ADMINISTRATION FOR THE SOUTHERN ZONE

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
OFFICE IN MONTEVIDEO, URUGUAY			
<u>Personnel Costs</u>			
Auxiliary Personnel	23,054		
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	1,040		
Sub-total	<u>24,094</u>		<u>24,094</u>
OFFICE IN BUENOS AIRES, ARGENTINE			
<u>Personnel Costs</u>			
International Professional Personnel	5,792		
Auxiliary Personnel	2,383		
Sub-total	<u>8,175</u>		<u>8,175</u>
OFFICE IN RIO DE JANEIRO, BRAZIL			
<u>Personnel Costs</u>			
Auxiliary Personnel	6,700		6,700
OFFICE IN SANTIAGO, CHILE			
<u>Personnel Costs</u>			
Auxiliary Personnel	1,625		1,625
Total	<u>\$ 40,594</u>	<u>\$</u>	<u>\$ 40,594</u>
	=====	=====	=====

=====

Regional Administration for the Southern Zone

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Auxiliary</u>			
OFFICE IN MONTEVIDEO, URUGUAY			
Administrative Assistant	A-I	1	100
Junior Accountant	A-III	1	100
Accountant Aid	A-V	1	100
Secretaries	A-IV	2	100
Office Clerk	A-VII	1	100
Chauffeur	A-VII	1	100
Janitor	A-VIII	<u>1</u>	100
		<u>8</u>	
OFFICE IN BUENOS AIRES, ARGENTINE			
<u>Professional</u>			
Coordinator of Programs	E&A-II	1	50
<u>Auxiliary</u>			
Accountant Aide	A-V	<u>1</u>	100
		<u>2</u>	
OFFICE IN RIO DE JANEIRO, BRAZIL			
<u>Auxiliary</u>			
Accountant Aid	A-II	1	100
Chauffeur	A-VII	1	100
Janitor	A-VIII	<u>1</u>	100
		<u>3</u>	
OFFICE IN SANTIAGO, CHILE			
<u>Auxiliary</u>			
Junior Accountant	A-IV	1	100

=====
Justification

The increase in personnel costs is mainly due to the addition of a Junior Accountant and to the appointment of a Coordinator of Programs in Argentine, (half time).

PART V -- ITEM 9

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

GENERAL SERVICES

Budget Summary

	Fiscal year		1968
	Obligated	Deferred	Proposed
Supplies and Services	5,926		
Rentals	9,550		
Local Transportation	2,690		
Equipment for General Use	1,940		
Communications	603		
Printing of Reports and Documents	400		
	<u> </u>	<u> </u>	<u> </u>
Total	\$ 21,109	\$	\$ 21,109
	<u> </u>	<u> </u>	<u> </u>

=====
Justification

a) Supplies and Services

There is an increase of \$2,596 due to the continuous raise in costs of things.

b) Rentals

There is a decrease of \$ 950.00 due to the fact that in the previous year the cost of transferring to another office was charged to this item. The Ministries of Agriculture in Brasil, Chile and Uruguay contribute 50% of the respective offices in these locations.

c) Equipment for General use

Increased by \$ 1,140 in order to take care of office equipment needs.

d) Others

This new item has been provided to cover communication expenses which are reaching a volume high enough to justify a separate item for such costs.

In addition an item for \$ 400 was provided to cover the printing of reports and documents of the Regional Office

PART VI

TRAINING AND RESEARCH CENTER

PART VI

TRAINING AND RESEARCH CENTER (4)

Turrialba

SUMMARY

	Fiscal Year 1967	--	1968
	Obligated	Deferred	Proposed
<u>Basic Programs</u>			
1-4 Agricultural Education	307,628		307,628
2-4 Agricultural Research	312,689		312,689
3-4 Rural Development and Land Reform	<u>67,547</u>	-----	<u>67,547</u>
Sub-Total	<u>687,864</u>	-----	<u>687,864</u>
<u>Other Activities</u>			
Commercial Farm Operation at Turrialba <u>1/</u>			
Creamery Operation at Turrialba <u>2/</u>			
<u>Direction and Administration</u>			
Office of the Center Director	56,993		56,993
Administration	88,337		88,337
<u>General Services</u>			
Engineering Office	74,755		74,755
Other General Services	<u>74,667</u>	-----	<u>74,667</u>
Sub-Total	294,752	-----	294,752
Total	982,616		982,616
<u>General Costs and Provisions (Proportion)</u>	<u>113,000</u>	-----	<u>113,000</u>
Grand Total	\$ 1,095,616	\$ -----	\$ 1,095,616
	=====	=====	=====

1/ It is estimated that the Commercial Farm will produce a gross income of \$136,250 and that expenditures will amount to \$128,520, leaving a net profit of \$7,730, which will be transferred to the General Working Fund. A detail of calculations is given at the end of Part VI.

2/ It is estimated that the operation of the Creamery will require expenditures in the amount of \$51,657 in order to produce an income of \$62,000, leaving a net profit of \$10,343, which will also be transferred to the General Working Fund. A detail of calculations is given at the end at Part VI.

Note: An amount of \$10,000 from Miscellaneous Income will be transferred to the General Working Fund and Turrialba may apply any excedent to cover expenditures of a non-recurrent nature.

PART VI

TRAINING AND RESEARCH CENTER

Total Resources in accordance with the Source of Funds
By Basic Programs, Other Activities, Direction,
Administration and General Costs

(In thousands of Dollards)

	TOTAL	IICA	AID	AEC	TCP	UNDP	Dona- tions & Contri- bution	Misc. Income
	933	308	126	16	9	470	4	
	702	313	142	144	81		22	
	116	68	48					
Sub-total	1751	689	316	160	90	470	26	

ASIC PROGRAMS

- 1.4. Agricultural Education
- 2.4. Agricultural Research
- 3.4. Rural Development and Land Reform

DIRECTION AND ADMINISTRATION

- Direction
- Administration
- Engineering Office
- General Services

	85	57				28		
	127	88	23			16		
	75	75				49		10
	133	74						
Sub-total	420	294	23			93		10
Total	2171	983	339	160	90	563	26	10

GENERAL COSTS AND PROVISIONS

(Proportion)

	113	113						
GRAN TOTAL	2284	1096	339	160	90	563	26	10

PART VI -- ITEM 10

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1.4.1. -- Graduate School

Budget Summary

	Fiscal Year 1967		1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	156,040		
Auxiliary Personnel	<u>23,140</u>	-----	<u>179,180</u>
Project Other Costs	179,180		
Basic Costs of Operation	24,247		
Field and Laboratory Helpers	13,000		
Teaching Supplies and Equipment	10,550		
General Equipment	5,225		
Maintenance	10,857		
Laborers	1,499		
Fellowships	44,000		
Librarians Training Course	8,100		
Service Vehicles	2,050		
Purchase of Books	500		
Magazine Subscriptions	<u>3,420</u>	-----	-----
Sub-Total	123,448	-----	<u>123,448</u>
Total	\$ 302,628	\$	\$ 302,628
	=====	=====	=====

=====

Summary of Personnel Assigned to the Project

(See the Summary of the distribution of Personnel, Page 364)

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

(See description of Basic Programs, Part II)

PART VI -- ITEM 10

BASIC PROGRAM 1 -- AGRICULTURAL EDUCATION

Project 1.4.2. -- Advisory Services to Agricultural Teaching

Budget Summary

	Fiscal Year 1967	--	1968
	Obligated		Proposed
			Deferred
<u>Project Other Costs</u>			
Basic Costs of Operation			
(Service Travel)	\$ 5,000	\$	\$ 5,000
	=====	=====	=====

=====

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the Year 1967-1968

(See description of Basic Programs, Part II)

PART VI -- ITEM 10

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.4.1. -- Experimental Station

Budget Summary

	Fiscal	Year 1967	1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	147,989		
Auxiliary Personnel	<u>21,555</u>	-----	<u>169,544</u>
Sub-total	<u>169,544</u>	-----	<u>169,544</u>
<u>Project Other Costs</u>			
Basic Costs of Operation	23,291		
Field and Laboratory helpers	14,625		
Laborers	29,643		
"Turrialba" Magazine	8,000		
Laboratory Supplies	7,150		
Field Materials	10,720		
Feed and Medicines for cattle	8,000		
"La Lola" Farm Operation	19,863		
General Equipment	3,825		
Maintenance	9,058		
Service Vehicles	2,050		
Purchase of books	500		
Magazines Subscriptions	<u>3,420</u>	-----	<u>140,145</u>
Sub-total	<u>140,145</u>	-----	<u>140,145</u>
 Total	 \$ 309,689	 \$ -----	 \$ 309,689
	=====	=====	=====

=====

Summary of Personnel assigned to the Project

(See the Summary of the distribution of personnel, page 364)

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the year 1967-1968

(See description of Basic Programs, Part II)

PART VI -- ITEM 10

BASIC PROGRAM 2 -- AGRICULTURAL RESEARCH

Project 2.4.2. -- Advisory Services to Agricultural Research

Budget Summary

Fiscal Year 1967 - 1968
Obligated Deferred Proposed

Project Other Costs

Basic Costs of Operation
(Service Travel)

\$ 3,000	\$	\$ 3,000
=====	=====	=====

=====

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the year 1967-1968

(See description of Basic Programs, Part II)

PART VI -- ITEM 10

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.4.1. -- Development Area

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	41,300		
Auxiliary Personnel	<u>3,832</u>		
Sub-total	<u>45,132</u>		<u>45,132</u>
<u>Project Other Costs</u>			
Field and Laboratory helpers	4,875		
Expenditures related with the Selection, Demarcation and functioning of rural Development Area in Costa Rica	<u>5,540</u>		
Sub-total	<u>10,415</u>		<u>10,415</u>
Total	<u>\$ 55,547</u>	\$	<u>\$ 55,547</u>
	=====	=====	=====

=====
Summary of Personnel assigned to the Project

(See the Summary of the distribution of personnel, page 364)

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the year 1967-1968

(See description of Basic Programs, Part II)

PART VI -- ITEM 10

BASIC PROGRAM 3 -- RURAL DEVELOPMENT AND LAND REFORM

Project 3.4.2. -- Advisory Services to Rural Development and Land Reform Institutions

Budget Summary

	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Project Other Costs</u>			
Basic Costs of Operation (Service Travel)	8,000		
"Extensión en las Américas" Magazine	<u>4,000</u>		
Total	\$ <u>12,000</u> =====	\$ =====	\$ <u>12,000</u> =====

=====

Antecedents and Objectives of the Project

(See description of Basic Programs, Part II)

Description of Activities for the year 1967-1968

(See description of Basic Programs, Part II)

PART IV -- ITEM 10

SUMMARY OF THE DISTRIBUTION OF TIME OF THE TECHNICAL PROFESSIONAL PERSONNEL
AND OF THE AUXILIARY PERSONNEL BETWEEN THE THREE BASIC PROGRAMS
IN THE TRAINING AND RESEARCH CENTER OF TURRIALBA

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>		
			Program 1 Project 1.4.1	Program 2 Project 2.4.1	Program 3 Project 3.4.1
<u>Professional</u>					
Junior Agrostologist	T&R-VI	1	40	45	15
Senior Biometry Specialist	T&R-II	1	40	45	15
Associate Communicator	T&R-III	1	40	45	15
Senior Forester	T&R-II	1	40	45	15
Assistant Forester	T&R-IV	1	40	45	15
Junior Forester	T&R-IV	1	40	45	15
Senior Agricultural Economist	T&R-I	1	40	45	15
Assistant Extensionist	T&R-IV	1	40	45	15
Principal Plant Physiologist	T&R-I	1	40	45	15
Junior Plant Physiologist	T&R-V	1	40	45	15
Senior Plant Physiologist	T&R-II	1	40	45	15
Associate Geneticist	T&R-III	1	40	45	15
Aide Geneticist	T&R-VI	1	40	45	15
Principal Horticulturist	T&R-I	1	40	45	15
Associate Horticulturist	T&R-III	1	40	45	15
Senior Nutritionist	T&R-II	1	40	45	15
Associate Animal Husbandryman	T&R-III	1	40	45	15
Assistant Nutritionist	T&R-III	1	40	45	15
Assistant Animal Husbandryman	T&R-III	1	40	45	15
Head Librarian	T&R-III	1	50	50	
Librarian	T&R-IV	1	50	50	
Aide Librarian	T&R-IV	1	50	50	
Aide Librarian	T&R-IV	1	50	50	
Bibliogrepher	T&R-V	1	50	50	
Registrar	T&R-III	1	100		
English Teacher	T&R-V	1	100		
"La Lola" Farm Supervisor	T&R-IV	1	100		

Summary of the distribution of Time of the Technical Professional Personnel and of the Auxiliary Personnel Between the Three Basic Programs in the Training and Research Center of Turrialba

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>		
			Program 1 Project 1.4.1	Program 2 Project 2.4.1	Program 3 Project 3.4.1
<u>Auxiliary</u>					
Secretary	A-III	3	40	45	15
Secretary	A-IV	3	40	45	15
Secretary	A-V	1	40	45	15
Secretary	A-VII	1	40	45	15
Secretary	A-IV	1	50	50	
Secretary	A-V	1	50	50	
Junior Cataloger	A-VI	1	50	50	
Principal Aide <i>cl h</i>	A-IV	2	50	50	
Office Helper <i>cl h</i>	A-VII	2	50	50	
Office Helper <i>cl h</i>	A-V	1	50	50	
Nurse	A-VII	1	100		
Janitor and Cleaner	Misc.7	<u>1</u>	100		
		<u>18</u>			

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PART V -- ITEM 11

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

OFFICE OF THE TURRIALBA CENTER DIRECTOR

Budget Summary

	Fiscal Year 1967		-- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	40,089		
Auxiliary Personnel	<u>10,094</u>		
Sub-Total	<u>50,183</u>		<u>50,183</u>
<u>Other Costs</u>			
Basic Costs of Operation	4,500		
General Equipment	1,000		
Representation Expenses	<u>1,310</u>		
Sub-Total	<u>6,810</u>		<u>6,810</u>
Total	\$ <u>56,993</u>	\$	\$ <u>56,993</u>
	=====	=====	=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Director and Dean	E&A-D	1	100
Deputy Director	E&A-I	<u>1</u>	100
		<u>2</u>	
<u>Auxiliary</u>			
Secretary	A-III	2	100
Receptionist	A-V	<u>1</u>	100
		<u>3</u>	

Office of the Turrialba Center Director

Justification

The increase in Personnel Costs is mainly due to salary increases to personnel in accordance with the revised wage scale resulting from surveys made in other international organizations and work centers.

Explanation - 1967-1968

The Director's Office of the Turrialba Center is responsible for the technical, financial and administrative supervision of all the operations of the Center, both of the Regular Program and of those financed through contracts and agreements with other organizations. This implies supervision of ^{these basic} eight Technical Programs headquartered at the Turrialba Center, to which have been assigned eleven "work units" financed with Regular Funds; eight under the AID Contract; five under the Contract with the Atomic Energy Commission of the United States; three under the Cacao Program; and seventeen Senior Specialists under the United Nations Development Program. The Director also supervises the operation of the farm belonging to IICA, located at the Turrialba Center, and of "La Lola" farm. He keeps liaison relations between IICA and the United Nations Special Fund and GAC; with the Agency for International Development (AID), through the Coordinator of the AID Contract; with the Atomic Energy Commission (AEC) of the United States; and with the American Cacao Research Institute (ACRI). He also deals with the Regional Directors on matters referring to the activities of the staff who are away from the Turrialba Center, and with the Director General's Office on matters that are under its supervision. Furthermore, he is in charge of maintaining official and public relations within the sphere of influence of the Center. As Dean of the Graduate School, he supervises the activities of the School, not only at the Turrialba Center but also at the Regional Offices.

In order to discharge all of these functions, he is assisted by the Deputy Director at the Turrialba Center and by the Assistant Deans of the Regional Offices.

PART V -- ITEM 11

ADMINISTRATIVE SERVICES AND BUSINESS OFFICE

Budget Summary

	Fiscal Year		1967 - 1968
	Obligated	Deferred	
International Professional Personnel	24,037		
Auxiliary Personnel	52,525		
Sub-total	<u>76,562</u>		<u>76,562</u>
<u>Other Costs</u>			
Basic Costs of Operation	8,775		
General Equipment	3,000		
Sub-total	<u>11,775</u>		<u>11,775</u>
Total	\$ <u>88,337</u>		\$ <u>88,337</u>

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Head of Services	E&A - II	1	100
Business Office Supervisor	E&A - IV	1	100
		<u>2</u>	
<u>Auxiliary</u>			
Secretary	A - III	1	100
Secretary	A - IV	1	100
Secretary	A - V	2	100
Assistant Accountant	A - II	1	100
Junior Accountant	A - IV	2	100
Accountant Aide	A - V	4	100

Administrative Services and Business Office

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
Cashier	A - II	1	100
Office clerk	A - VI	2	100
Office Clerk	A - VII	1	100
Office Aide	A - V	2	100
Office Aide	A - VI	<u>1</u>	100
		18	

PAR V -- ITEM 11

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

GENERAL SERVICES - ENGINEERING OFFICE

Budget Summary

	Fiscal year		1967 - 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	11,707		
Auxiliary Personnel	26,008		
Sub-total	<u>37,715</u>		<u>37,715</u>
<u>Other Costs</u>			
Operation of service vehicles	8,875		
Buildings maintainance	28,165 ^{1/}		
Sub-total	<u>37,040</u>		<u>37,040</u>
Total	\$ <u>74,755</u>		\$ <u>74,755</u>

^{1/} This amount is formed from a gross expenditure of \$ 108,165, less \$ 80,000 from rental income fo the residences occupied by the pro fessional personnel.

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Head of the Engineering Office	E&A - III	1	100
<u>Auxiliary</u>			
<u>Engineering Office</u>			
Office Helper	A - V	1	100
Office Helper	A - VII	1	100
Draftsman	A - VIII	1	100

General Services - Engineering Office

<u>Title</u>	<u>Class</u>	<u>No</u>	<u>% of time</u>
<u>Engineering Office</u>			
Watchman	A - VII	3	100
Foreman	A - V	1	100
Warehouse clerk	A - VII	1	100
		<u>8</u>	
<u>Transportation Service</u>			
In charge	A - V	1	100
Mechanic	A - V	1	100
Chauffer	A - V	2	100
Chauffer	A - VIII	1	100
		<u>5</u>	

=====
Justification

The Office of Administrative Services is responsible for implementing and enforcing compliance with the provisions of the regulations and norms of administrative policy. Also concentrated in the administrative Office are all matters related to the handling and welfare of the personnel, group insurance programs for officials and students, and similar matters. In connection with the agency in San José, service is given to members of the staff and foreign students in all matters involving contact with Government authorities, such as obtaining residence papers, driving licenses renewal of official documents and the processing of duty exemptions and withdrawal from customs, of merchandise imported for the use of the Institute and foreign staff.

In addition to the foregoing, Administrative Services is also in charge of accounting; budget control; administration of contracts and donations; administration of student scholarships; control of purchases, in and out of the country; execution of payrolls; operation of the Printing shop and Document Service; general files, communications; transportation; maintenance of work buildings, dwellings and student dormitories, commercial department and general service department.

In order to discharge these duties, Administrative Services has made a rationalization of the different functions and has divided them into five main groups and their branches, as follows:

Administrative Services, Business Office and Engineering Office

1. Business Office: Secretarial; Cash and Banks; Accounting; Administration of AID, NEP, ACRI, UNDP Contracts; Students; Current Account; Financial Statements; time and Pay; Purchases and Distribution; Inventories; Budget Control.
2. Engineering Office: Maintenance: Buildings; Dwellings; Roads; Electricity an Telephones; Improvement of Urban Appearance; Transportation: Gasoline Station; Mechanical Service for Vehicles and Machinery; Structures
3. General Services: Printing Shop; Distribution of Publications; Dormitories; Mess Hall; Laundry; Communications; Correspondence-File-Mimeograph; Grade School; Sanitation.
4. Commercial Departments: Coffee; Sugar Cane; Cattle; Creamery; Photocopy Service.
5. Agency in San José: Quotations; Shipments; Personnel and Student Documents; Transportation of Goods.

Explanation 1967-1968

The same presentation as last year is maintained, fundamentally at the same budget level, even though the following changes were made:

Grade School: One professor was added; that is, the present budget includes full-time 4 professors, 2 for Spanish and 2 for English; this increase was necessary considering the larger number of students and their different levels.

Mess Hall: The present budget only includes the sum of \$ 1,880.00 instead of the \$ 8,067.00 included last year, since its operation was given out as a concession. The amount budgeted will be used for maintenance of the facilities.

Engineering Office: Even though the physical plant of the Center increased by 9 dwellings and one 20 room dormitory building for students, the budget for this section has been kept at the same level.

Due to the policy adopted during the 1966-1967 period and the concentration of activities by groups and sections, it has been possible to give better service, communications and in general, the many activities of General Services, while maintaining the budget level in spite of the increase in the number of activities and students at the Graduate School.

PART V -- ITEM 11

DIRECTION, ADMINISTRATION AND GENERAL SERVICES

GENERAL SERVICES == OTHER GENERAL SERVICES

Budget Summary

	Fiscal year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	19,592		
Auxiliary Personnel	52,143		
Sub-total	71,735		71,735
<u>Other Costs</u>			
Basic Costs of Operation	2,932		2,932
Total	74,667		74,667

=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No</u>	<u>% of time</u>
<u>Professional</u>			
Head of the Printing Shop and of the Laboratory Equipment Maintenance	E&A - IV	1	100
Director of the Grade School	Esp.- IV	1	100
		2	
<u>Auxiliary</u>			
<u>Purchasing and Services Office</u> <u>in San José</u>			
Agent	A - I	1	100
Office Clerk	A - V	1	100
<u>General Services</u>			
Office Clerk	A - VII	1	100
Chauffer	A - VIII	1	100
		4	

General Services -- Other General Services

<u>Title</u>	<u>Class</u>	<u>No</u>	<u>% of time</u>
<u>Communications</u>			
Mail clerk in charge of Past Office	A - VII	1	100
Distributor of Internal mail	Misc.- 1	1	100
Mimeograph Operator	A - VII	1	100
File Clerk	A - IV	1	100
		<u>4</u>	
<u>Grade School</u>			
English Teacher		1	100
Spanish Teacher		1	100
Spanish Teacher		<u>1</u>	100
		3	
<u>Printing Shop and Laboratory</u>			
<u>Equipment Maintenance</u>			
Cost Clerk and Inventories	A - V	1	100
Printer	A - VI	1	100
Photography Laboratory Aide	A - VII	1	100
Binder	A - VIII	1	100
Aide	A - VIII	2	100
		<u>6</u>	
<u>Distribution of Publications</u>			
Distribution Clerk	A - IV	1	100
Distribution Helper	Misc.- II	1	100
		<u>2</u>	
<u>Dormitory and Laundry</u>			
In Charge	A - VI	1	100
Aide	Misc.- I	1	100
Aide	Misc.- II	9	100
		<u>11</u>	
<u>General Services</u>			
<u>Cleaning of Buildings</u>			
Cleaners	Misc.- II	6	100

OTHER ACTIVITIES

COMMERCIAL FARM

	Fiscal Year 1967 - 1968		
	Detail	Expenditures	Income
<u>Estimated Income</u>			136,250
Coffee - 1,800 "fanegas"	74,250		
Sugar cane - 10,000 tons	61,500		
Miscellaneous	<u>500</u>		
<u>Expenditures</u>			
<u>Coffee</u>		59,650	
Personnel Costs	1,000		
Laborers	18,000		
Supplies and Services	400		
Fertilizers, Herbicides and Fungicides	11,000		
Harvesting	15,000		
Proceesing	9,250		
Replanting	<u>5,000</u>		
<u>Sugar Cane</u>		38,150	
Personnel Costs	750		
Laborers	8,000		
Supplies and Services	400		
Fertilizers, Herbicides and Fungicides	9,000		
Harvesting	12,000		
Transportation	3,000		
Replanting	<u>5,000</u>		
<u>General Costs</u>		19,420	
Salaries of Administrative Personnel (Professional and Auxiliary)	6,000		
Other Personnel Costs- Compensation Insurance	600		
Other Personnel Costs Administration	400		
Supplies and Services	320		
Travel	100		
Maintenance of Roads (Includes drainage and fences)	2,000		

Fiscal Year 1967 - 1968
Detail Expenditures Income

Buildings Maintenance (Including rain conduits)	500		
General Equipment	9,000		
Insurance of things	<u>500</u>		
		11,300	
<u>Service Vehicles</u>			
Salaries	5,000		
Other Personnel Costs	300		
Supplies - Fuels and Oils	3,500		
Maintenance	<u>2,500</u>		
		7,730	
<u>Income Excess over Expenditures</u>			
To be transferred to the General Working Fund	<u> </u>	<u> </u>	<u> </u>
	=====	\$ 136,250	\$ 136,250
		=====	=====

OTHER ACTIVITIES

CREAMERY

	Fiscal Year		
	1967	-	1968
	Actual	Expenditures	Income
<u>Estimated income</u>			62,000
<u>Expenditures</u>		51,657	
Salaries	11,487		
Other Personnel Costs	1,400		
Supplies and Services	5,500		
Milk Containers and other	1,500		
Electricity	1,700		
Operation and Maintenance of Vehicles	2,000		
Equipment	4,000		
Construction	1,500		
Purchase of milk	15,000		
Grains	7,570		
<u>Excess of income over Expenditures</u>		<u>10,343</u>	
To be transferred to the General Working Fund	\$	62,000	\$ 62,000
		=====	=====

PART VII

OTHER PROGRAMS

PART VII

PROJECT 206 OF TCP OF THE OAS -- INTER-AMERICAN PROGRAM OF RURAL DEVELOPMENT AND LAND REFORM

Budget Summary

1967-1968
Proposed

Personnel

Travel

\$
=====

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Antecedents

The Project entitled "Inter-American Program for Rural Development and Land Reform" is operated by IICA, as a continental program and is being financed by the Technical Cooperation Program of the Organization of American States. Therefore, quota funds are not required for its operation.

The general coordination of the overall Project is in charge of a Director with headquarters in San José, Costa Rica, and the Project operates at the Inter-American Center for Land Refrom (IICA-CIRA), with headquarters in Bogotá, Colombia and in the three Zones, where regional specialists have been stationed.

The proposed activities fall within the specific functions of IICA. The activities to be carried out by IICA/CIRA will be described further on. The ones corresponding to the Zones are shown in the respective chapters, under Technical Program 1-C - Agricultural Policy.

Additional Financial Contributions to the Program

Project 206 is totally financed by the Technical Cooperation Program of the OAS.

It is pointed out that the original TCP budget for calendar year 1966, has been extended up to June 30, 1967 in order to adopt the same fiscal year used by the Pan American Union which is the same one in force in IICA.

For the 1967-1968 a proposed budget has been submitted in the amount of \$ 557,300, which will be presented for the consideration of the Inter-American Economic and Social Council (IA-ECOSOC).

Peru and Ecuador offer additional financing for their National Centers, CENRA and CIERA, respectively; also, Colombia, offers its financial contribution for the operation of IICA-CIRA.

Project 206 of TCP of the OAS -- Inter-American Program for Rural Development
and Land Reform

In accordance with the Agreement signed the 25th. of September, 1963 here-
as the "Universidad Nacional" of Colombia and the "Instituto Colombiano de
Reforma Agraria (INCORA) agreed, with the cooperating institution, the estab-
lishment for the site for the Inter-American Center for Land Reform in Bogotá,
INCORA offers the following contributions to the Project:

Rentals	US\$ 7,200
Services	13,000
Personnel and Expenses	25,000

The building being occupied by the Center, offered by INCORA, has a total
value of \$ 57,000.

Within the facilities being offered by the Government of Colombia, the
Annual Interdisciplinary Course on Rural Development and Land Reform is being
carried out. This course will have a six-month duration; the first half of
the program will be offered at the site of the Center in Bogotá, and the
other half is dedicated to field work. Forty students with fellowships from
the Project will attend this course.

Besides the financial aid offered by TCP and INCORA, already mentioned,
the Program receives local contributions from the countries where National
Centers for Training in Land Reform operate, as in the case of Peru and Ecua-
dor. The detailed information for this appears in the corresponding chapter
of the Andean Zone.

General Approach of the Project

In many instances gaps have been felt between the theoretical courses in
regional centers and in the execution in the practice of activities of Rural
Development and Land Reform. This Project is being designed to provide a
better connection for training and experience between the theory for develop-
ment and the practice of Rural Development and Land Reform Projects.

It is not just going to be a simple experience for the students to ob-
serve field work, but they will actually participate in it, by receiving
training in real Projects of Rural Development and Land Reform. In order
that this approach will bring effective results, special emphasis will be
given to national projects in specific cases.

Model Type

While initiating national programs* the following stages and activities
are anticipated for technicians located in the country:

* In those countries where activities of Project 206 are actually being carried
out (exclusively for Land Reform) there is a need for a gradual adjustment for
a wider approach on the new Project. What has been described here refers to
one country where technicians of the new Project are being assigned in cer-
tain cases to neighboring countries.

Project 206 of TCP of the OAS -- Inter-American Program for Rural Development and Land Reform

1. Identification of organizations or national institutions more active in Rural Development (in general, the regional aspects or projects) and Land Reform. Close technical and institutional relationships.
2. Identify the most promising project or projects (current and proposed ones) with which closer relationships are more advisable (those feasible projects from an economic and social stand point) and which urgently needs an overall training program of its personnel).
3. Select a team of 3 to 8 technicians for the course in Bogotá.
4. Identify the most limiting bottlenecks for the technical training of the Project team. To plan and offer the courses or short courses and the in-service training requested (in those cases where it is necessary to train a considerable amount of technicians, the policy in these cases should be to "train the trainers"; that is to say, choosing a process by means of which the training offered is multiplied. For most urgent needs this process should be used in order to offer this knowledge to other projects).
5. Promote those changes which have been considered necessary on the basis of experiences with the project or projects, in the offering of training at the Colleges of Agriculture.
6. Plan and direct the in-service training of the team sent to Bogotá on its return.
7. Identify, count up and plan the participation of other specialists of Project 206 in the national program.
8. Plan and conduct the participation in other national programs and in the courses of Bogotá.

Action Methods

The Program, as all Projects of the Technical Cooperation Program, is designed to offer training. Research work will be conducted only if this is the necessary training in a given case.

Due to the restructuring of IICA programs, this organization which is responsible of the administration and operation of the Project, is in a position to provide a great amount of its resources and technicians for the success in fulfilling the objectives of the Project. To express this concretely, IICA has grouped all its activities in three lines of action or programs as follows: Higher Agricultural Education, Agricultural Research, and Rural Development and Land Reform. It is proposed to integrate and coordinate the activities of the third program mentioned above with those of the Project.

The Project will cover the following action methods:

Project 206 of TCF of the OAS -- Inter-American Program for Rural Development and Land Reform

1. Institutional Strengthening: This method is oriented towards improving the organization and efficiency of the national institutions of Rural Development and Land Reform, which are the tools available to the countries to obtain their progress. It will cover not only the training and specialization of personnel of the institutions, but also the preparation of specialized groups in the planning and programming of activities, the evaluation of institutions, the coordination with other institutions having the same objectives, all these sustained in previous studies of diagnosis.
2. Planning and Operation of Projects of Regional Development and Integral Land Reform: Its objective is the training of groups of nationals at a level where they can increasingly continue offering this activity all over the country. As a training method, the planning will be carried out in pilot projects of Rural Development and Integral Land Reform in collaboration with the same national organizations and its technicians, and conditioned to the help given by the respective governments which will operate them.

As far as possible the pilot projects already initiated by IICA as well as by other groups of Contract OAS/ISRAEL, will be used.

The training process will prepare them to obtain a better application of the factors and elements, such as the redistribution of land, credit, community development, farm management, technical assistance, etc., which the previous study of the situation recommended. The need of personnel for the operation of these projects will be trained, according to the needs and during the execution of its operation.

In each case, and in accordance with the specific case, objectives and concrete goals will be attained (for example: the settlement and standards of living to a certain level, of a given number of families) which shall be met in a definite period of time and which will permit on objective evaluation of the results obtained. In the great majority of cases these projects can be used as investment plans which will be studied and carried out as part of the same Project for its presentation to international institutions of credit and for financial aid.

3. Programs for the Economic Increase of Production: This training will be oriented towards the need for technicians for the improvement of production, in determined areas, of one or more integrated crops in an exploitation system, acting preferably in and within the Programs of Regional Development and Land Reform, principally integrated with crops destined to the local market. The basic objectives will be the preparation of groups of national technicians trained in the formulation and diffusion of the methodologies which permit the farmer, in a massive way, the adoption of techniques and new systems which will render more production and price stability and a better earning. The methodology used will be centered on the so called "packaged practices" in which approximately one basic factor with a definite effect, such

Project 206 of TCP of the OAS -- Inter-American Program for Rural Development and Land Reform

as is the use of fertilizers, will be offered jointly with other contributing factors, as the use of improved seed, irrigation, pesticides, herbicides, as well as the integration of services as credit, extension and marketing, etc., without disregarding the social factors (stimulations, etc.). The objectives and concrete goals will be determined in this case, in porcentual increases and income of the production and the productivity within the area and the selected crops. These programs will also be carried out jointly with national institutions. With this approach in the offering of training the continued preparation of national groups can be attained, thus assuring its continuation once the outside assistance is discontinued.

4. Program of Basic Studies: These programs are principally oriented to train national technicians in the evaluation of the results of projects of Regional Development and Integral Land Reform, specially, but not only, those included in the Program. They will be particularly centered in the identification and valuation of the success factors, with the aim to develop a scientific methodology for the training and assistance in the programming and operation of the Regional Development and Integral Land Reform.

PART VIII
DIRECTION AND ADMINISTRATION

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Office of the Director General

Budget Summary

Fiscal Year 1967 - 1968
Obligated Deferred Proposed

Personnel Costs

International Professional	21,449		
Auxiliary Personnel	7,711		
	<u> </u>	<u> </u>	<u> </u>
Sub-total	29,160		29,160
	<u> </u>	<u> </u>	<u> </u>

Other Costs

Basic Costs of Operation (Travel)	4,000		4,000
	<u> </u>	<u> </u>	<u> </u>
Sub-total	4,000		4,000
	<u> </u>	<u> </u>	<u> </u>
Total	\$ 33,160	\$	\$ 33,160
	<u> </u>	<u> </u>	<u> </u>

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Director General		1	100
Deputy Director		<u>1</u>	100
		<u>2</u>	
<u>Auxiliary</u>			
Secretary	A-II	1	100
Secretary	A-IV	<u>1</u>	100
		2	

Justification

The increase in Personnel Costs is due to the normal annual salary increase for the auxiliary staff.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Office of the Deputy Director

Budget Summary

	Fiscal Year 1967		-- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	18,117		
Auxiliary Personnel	<u>12,447</u>	<u> </u>	<u> </u>
Sub-Total	<u>30,564</u>	<u> </u>	<u>30,564</u>
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>2,000</u>	<u> </u>	<u> </u>
Sub-Total	<u>2,000</u>	<u> </u>	<u>2,000</u>
Total	\$ <u>32,564</u>	\$ <u> </u>	\$ <u>32,564</u>
	=====	=====	=====

=====
Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Director General in Charge	E&A-D	1	100
Assistant to Director General in Charge	E&A-IV	<u>1</u>	100
		<u>2</u>	
<u>Auxiliary</u>			
Secretary	A-III	1	100
Secretary	A-III	1	100
Statistics Assistant	A-IV	1	100
Statistics Secretary	A-III	<u>1</u>	100
		<u>4</u>	

=====
Justification

The increase in Personnel Costs is due to the normal annual salary increases for the Auxiliary staff. As explained in the Director General's Message the adjustment in the salary scale was not applied to the professional Personnel.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Office of the Deputy Director - Head of Technical Affairs

Budget Summary

	Fiscal Year 1967		-- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	17,964		
Auxiliary Personnel	<u>3,527</u>	<u> </u>	<u> </u>
Sub-Total	<u>21,491</u>	<u> </u>	<u>21,491</u>
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>2,000</u>	<u> </u>	<u> </u>
Sub-Total	<u>2,000</u>	<u> </u>	<u>2,000</u>
Total	\$ <u>23,491</u>	\$ <u> </u>	\$ <u>23,491</u>
	=====	=====	=====

=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of Time</u>
<u>Professional</u>			
Head of Technical Affairs	E&A-I	1	100
<u>Auxiliary</u>			
Secretary	A-III	1	100

=====

Justification

The increase in personnel costs is due to one step increase in the staff salaries.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Office of the Deputy Director -- Liaison with Scientific Associations

Budget Summary

	Fiscal Year 1967-1968		Proposed
	Obligated	Deferred	
<u>Personnel Costs</u>			
International Professional Personnel	11,279		
Auxiliary Personnel	<u>3,527</u>	<u> </u>	<u> </u>
Sub-total	14,806		14,806
Total	<u>\$ 14,806</u>	<u>\$ </u>	<u>\$ 14,806</u>
	=====	=====	=====

=====
Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Liaison Officer with Scientific Associations	E&A-III	1	100
<u>Auxiliary</u>			
Secretary	A-III	1	100

=====
Justification

In accordance with Resolution IICA/JD-565-35, the Board of Directors in its Fifth Meeting, April, 1966, authorized an amount of \$ 6,000 for the support of the Liaison Office with Scientific Associations. This amount added to the one originally budgeted of \$ 8,424, leads to a budgetary level for 1966-1967 in the amount of \$ 14,824.

The increase in personnel costs is the result of one step increase in the salaries of the staff.

PART VIII -- ITEM 12

EXLCUTIVE OFFICES AND ADMINISTRATION

Office of Official Relations -- Head of Official Relations

Budget Summary

Fiscal Year 1967-1968
Obligated Deferred Proposed

Personnel Costs

International Professional Personnel	19,527		
Auxiliary Personnel	<u>4,462</u>	<u> </u>	<u> </u>
Sub-total	23,989		23,989
	<u> </u>	<u> </u>	<u> </u>

Other Costs

Basic Costs of Operation (Travel)	<u>2,500</u>	<u> </u>	<u> </u>
Sub-total	2,500		2,500
	<u> </u>	<u> </u>	<u> </u>
Total	\$ <u>26,489</u>	\$ <u> </u>	\$ <u>26,489</u>

=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Head of Official Relations	E&A-I	1	100
<u>Auxiliary</u>			
Executive Secretary	A-III	1	100

=====

Justification

The increase in Personnel Costs is due to a one step increase in the salaries of the staff and to an adjustment in the salary of the Head of Official Relations to bring it in line with the salary of other staff members carrying similar duties and responsibilities.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Office of Official Relations -- Public Information

Budget Summary

	Fiscal Year 1967-1968		Proposed
	Obligated	Deferred	
<u>Personnel Costs</u>			
International Professional Personnel	20,622		20,622
Auxiliary	-	-	-
Sub-total	<u>20,622</u>	<u> </u>	<u>20,622</u>
<u>Other Costs</u>			
Basic Costs of Operation	2,500		2,500
Materials, Preparation Costs and Printing	<u>10,000</u>	<u> </u>	<u>10,000</u>
Sub-total	<u>12,500</u>	<u> </u>	<u>12,500</u>
Total	<u>\$ 33,122</u>	<u>\$ </u>	<u>\$ 33,122</u>

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Assistant Editor (Press, Radio, TV, Visual Aids)	T&R-IV	1	100
Junior Editor (Visual Aids)	T&R-IV	<u>1</u>	100
		<u>2</u>	

Justification

The increase in Personnel Costs is due to a one step increase in the salaries of the staff.

Office of Official Relations -- Public Information

General Objectives

Public Information is a fundamental part of the duties of the Official Relations Office. To carry out its duties properly, the Head of Official Relations is supported by a Junior Editor, specialized in Visual Aids, and an Assistant Editor, who specializes in Press, Radio and TV.

The General Objectives is to keep government officials, agricultural leaders, technical staff, and key personalities of national and international institutions well informed about the more important activities that the Institute carries out in the various Member States. This information covers not only work done under the programs financed through the regular budget, but also the work done under Projects of the Technical Cooperation Program of the OAS, and by virtue of agreements, contracts and grants from public and private institutions in the Member Countries.

Among the most important tasks performed are the publications of the Annual Technical Report; the publication of announcements and prospectus; the publication of the series "Services to the Countries"; the preparation of exhibits; the distribution of press information, and the preparation of general reports.

All the above publications were distributed through frequently-revised lists, based on the Official Relations Directory, which is an annual publication put out by the Official Relations Office for the express purpose of expediting the relations of the Institute with its contacts in the Member States.

The tasks mentioned will be pursued with the same efficiency in the coming fiscal year.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Office of Official Relations - Distribution (Publications)

<u>Budget Summary</u>	Fiscal Year 1967 - 1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel			
Auxiliary Personnel	<u>4,901</u>	<u> </u>	<u>4,901</u>
Total	<u>4,901</u>	<u> </u>	<u>4,901</u>

=====
Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Auxiliary</u>			
Secretary	A-IV	1	100
Office Helper	A-VIII	<u>1</u>	100
		2	

=====
Justification

The reduction in Personnel Costs is do to the Repacement of the secretary by another one with a lower salary.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Offices in the United States

Budget Summary

	Fiscal year	1967 - 1968
	Obligated	Deferred Proposed
<u>Personnel Costs</u>		
International Professional Personnel	19,862	
Auxiliary Personnel	<u>6,568</u>	
Sub-total	<u>26,430</u>	<u>26,430</u>
<u>Other Costs</u>		
Basic Costs of Operations (Travel)	<u>2,000</u>	
Sub-total	<u>2,000</u>	
Total	<u>28,430</u>	<u>28,430</u>

=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Official Representative in the United States (Pan American Union)	E&A-I	1	100
<u>Auxiliary</u>			
Secretary	A-I	<u>1</u>	100
		2	

=====

Justification

The increase in Personnel Costs is due to the annual salary increase and to the inclusion of an item in the amount of \$ 1,000 for additional temporary secretarial help when needed. The classification of the Secretary has not been indicated because her salary does not come under the classification adopted by IICA for its personnel. Since she works in the United States, her salary was determined by the salary level of similar positions in the Pan American Union.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Office of the Treasurer and Director of Administrative and Financial Affairs

Budget Summary

	Fiscal Year 1967-1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	19,254		
Auxiliary Personnel	<u>3,813</u>	<u> </u>	<u> </u>
Sub-total	<u>23,067</u>	<u> </u>	<u>23,067</u>
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>2,500</u>	<u> </u>	<u> </u>
Sub-total	<u>2,500</u>	<u> </u>	<u>2,500</u>
Total	<u>\$ 25,567</u>	<u>\$ </u>	<u>\$ 25,567</u>
	=====	=====	=====

=====
Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Director	E&A-D	1	100
<u>Auxiliary</u>			
Secretary	A-III	1	100

=====
Justification

The increase in Costs of Personnel is due to the annual salary increases and to an adjustment in the salary of the Treasurer and Director to bring it in line with his duties and responsibilities.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Planning Office - Director of Planning

Budget Summary

	Fiscal Year 1967-1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	18,319		
Auxiliary Personnel	<u>3,527</u>	<u> </u>	<u> </u>
Sub-total	<u>21,846</u>	<u> </u>	<u>21,846</u>
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>7,000</u>	<u> </u>	<u>7,000</u>
Total	\$ <u>28,846</u>	\$ <u> </u>	\$ <u>28,846</u>
	<u>=====</u>	<u>=====</u>	<u>=====</u>

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Planning Director	T&R-D	1	100
<u>Auxiliary</u>			
Secretary	A-III	<u>1</u>	100
		<u>2</u>	

Justification

The Planning Office is divided in two sections. The first one, called "Planning Director", includes the Director and his Executive Secretary, is organized in much the same way-as the other offices of the Executive Offices. The second section, called "Studies and Programs", is the technical planning instrument.

Planning Office -- Planning Director

The increase in personnel costs is due to the annual salary increases. For the purpose of continuing the program of analysis and diagnosis of the needs of the agricultural Institution for teaching, research, rural development and land reform in Latin America as well as advisory services to the Regional Offices, the items for travel and for supplies and services have been increased.

On the other hand the item for Publications has been reduced due to the fact that the Planning Director will devote his efforts to the program above mentioned.

PART VIII -- ITEM 12

EXECUTIVE OFFICES AND ADMINISTRATION

Planning Office - Programs and Programming

Budget Summary

<u>Personnel Costs</u>	Fiscal year 1967 - 1968		
	Obligated	Deferred	Proposed
International Professional Personnel	40,439		
Auxiliary Personnel	6,392		
Sub-total	<u>46,831</u>	<u> </u>	<u>46,831</u>
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>10,000</u>	<u> </u>	<u>10,000</u>
Sub-total	<u>10,000</u>	<u> </u>	<u>10,000</u>
Total	\$ <u>56,831</u>	\$ <u> </u>	\$ <u>56,831</u>

=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Senior Rural Sociologist	T&R-I	1	100
Senior Agricultural Economist	T&R-II	1	100
Assistant Agronomist	T&R-IV	<u>1</u>	100
		3	
<u>Auxiliary</u>			
Secretary	A-IV	1	100
Secretary	A-IV	<u>1</u>	100
		2	

=====

Planning Office - Programs and Programming

Work has been done in the analysis of teaching and research agricultural Institutions in Central America and in Perú, within a global study for CIDA. A study of the problems for the adoption on new agricultural techniques at the level of the farmer was started, the field work have been completed.

PART VIII -- ITEM 13

EXECUTIVE OFFICES AND ADMINISTRATION

Administrative Services

Budget Summary

	Fiscal year	1967	- 1968
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	11,262		
Auxiliary Personnel	<u>18,613</u>	<u> </u>	<u>29,875</u>
Sub-total	<u>29,875</u>	<u> </u>	<u>29,875</u>
Total	\$ <u>29,875</u>	<u> </u>	\$ <u>29,875</u>
	<u> </u>	<u> </u>	<u> </u>

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Office Supervisor	E&A-IV	<u>1</u>	100
<u>Auxiliary</u>			
Secretary	A-IV	1	100
Executive Secretary	A-III	1	100
Filing Clerk	A-V	1	100
Office Helper	A-VII	1	100
Mimeograph Operator	A-VI	1	100
Watchman	A-VIII	1	100
Janitor	A-VIII	1	100
Janitor	A-VIII	1	100
Messenger	A-VII	1	100
Messenger	A-VIII	<u>1</u>	100
		<u>10</u>	

Justification

As explained in the Program-Budget for 1966-1967, the Inter-American Communication Service - SIC, has been to the Regional Office of the Andean Zone, starting in year 1966 -1967.

PART VIII -- ITEM 13

EXECUTIVE OFFICES AND ADMINISTRATION

Internal Audit Office

Budget Summary

	Fiscal Year 1967-1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	12,642		
Auxiliary Personnel	5,870		
Sub-total	<u>18,512</u>		<u>18,512</u>
<u>Other Costs</u>			
Basic Costs of Operation (Travel)	<u>1,000</u>		<u>1,000</u>
Sub-total	1,000		1,000
Total	<u>\$ 19,512</u>	\$	<u>\$ 19,512</u>

Personnel Summary

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Internal Auditor	E&A-III	1	100
<u>Auxiliary</u>			
Assistant Internal Auditor	A-I	<u>1</u>	100
		<u>2</u>	

Justification

The re-organization of the accounting services, for the purpose of decentralizing the accounting work of IICA, mentioned in the Program-Budget for year 1966-1967, has been completed.

As a result, the Internal Auditor and his Assistant are now completely devoted to their functions of internal auditing for the Executive Offices and the Turrialba Center, as well as for the Regional Offices. The increase in Costs of Personnel is due to one step increase in staff salaries. An item of \$ 1,000 has been provided in order to enable the Internal Auditor to make at least on trip to the Regional Offices.

PART VIII -- ITEM 13

EXECUTIVE OFFICES AND ADMINISTRATION

General Accounting and Budget

Budget Summary

	Fiscal Year 1967-1968		
	Obligated	Deferred	Proposed
<u>Personnel Costs</u>			
International Professional Personnel	13,245		
Auxiliary Personnel	<u>20,892</u>	<u> </u>	<u> </u>
Sub-total	34,137	<u> </u>	34,137
Total	\$ 34,137	\$ <u> </u>	\$ 34,137
	=====	=====	=====

Summary of Personnel

<u>Title</u>	<u>Class</u>	<u>No.</u>	<u>% of time</u>
<u>Professional</u>			
Budget Officer	E&A-III	<u>1</u>	<u>100</u>
<u>Auxiliary</u>			
Assistant Accountant	A-II	1	100
Assistant Accountant	A-II	1	100
Junior Accountant	A-IV	1	100
Secretary	A-IV	1	100
Secretary	A-IV	<u>1</u>	100
		<u>5</u>	

Justification

Due to the limitation of funds, it will not be possible to absorb the Personnel Costs of the General Accountant in 1967-1968. For this reason these costs will be financed under another program until it is possible to absorb it definitely.

PART VIII -- ITEM 13

EXECUTIVE OFFICES AND ADMINISTRATION

General Services

Budget Summary

	Fiscal Year 1967 Obligated	Deferred	- 1968 Proposed
<u>Executive Offices</u>			
Supplies and Services	13,000		
Communications	9,000		
Printing of Report and Documents	2,500		
Rentals	10,000		
Local Transportation	4,500		
Representation Expenses	2,000		
Maintenace	769		
Sub-total	41,769		41,769
<u>Office in the United States</u>			
Supplies and Services	800		
Communications	300		
Printing of Report and Documents	300		
Representation Expenses	100		
Sub-total	1,500		1,500
Total	\$ 43,269		\$ 43,269

Justification

In accordance with the experience of year 1964-1965, it is foreseen that the amount budgeted for General Services, particularly of the items of Supplies and Services and Communications, will be insufficient to take care of the actual needs of the Executive Offices. These have been in continuous increase as a result of the expansion of IICA programs.

PART IX

GENERAL COSTS AND PROVISIONS

PART IX -- ITEMS 14 to 17

GENERAL COSTS AND PROVISIONS

<u>Item</u>	Fiscal Year 1967-1968 Obligated	Deferred	Proposed
<u>General Costs</u>			
14 Personnel General Costs			
Recruitment, Repatriation, Transfers and Instalation	12,000		12,000
Severance and Legal Costs	7,000		7,000
Reimbursement of Income Tax to International Staff Living in their Home Country	12,500		12,500
Financial Assistance to Staff for Advanced Studies	20,000		20,000
Fellowships (as per agreement with AIA)	6,000		6,000
Sub-total	<u>57,500</u>	<u> </u>	<u>57,500</u>
Other General Costs			
Auditing Costs	8,000		8,000
Legal Counsel	3,000		3,000
Annual Meeting of the Board of Directors	3,500		3,500
Transportation of the Members of the Technical Advisory Committee	6,500		6,500
Contribution to the Inter-American Committee for Agricultural Development (CIDA)	9,500		9,500
Total General Costs	<u>88,000</u>	<u> </u>	<u>88,000</u>
<u>Provisions</u>			
15 Contingencies	30,000		30,000
16 Contribution to the United Nations Development Program	73,000		73,000
17 General Working Fund	65,000		65,000
Grand Total	<u>\$ 256,000</u> =====	<u> </u> =====	<u>\$ 256,000</u> =====

General Costs and Provisions

Summary and Distribution of General Costs and Provisions

Year 1967-1968

(In Hundreds of Dollars)

	Total	Andean Zone	Northern Zone	Southern Zone	Turrialba Center
General Costs					
Financial Assistance to Staff for Advanced Studies	68				
Contingencies	20				
General Working Fund	30				
	<u>65</u>				
Sub-total	183	37.9	20.71%	31.4	17.20%
				44.5	24.38%
				69.2	37.71%
United Nations Development Program					
	<u>73</u>	<u>13.1</u>	18.00%		
Total	256	51.0		31.4	
				<u>16.1</u>	22.00%
				60.6	
				<u>43.8</u>	60%
				113.0	

General Costs and Provisions

Justification

The total of General Costs and Provisions for fiscal year 1967-1968 shows an increase of \$ 2,500 as compared with year 1966-1967. On one hand, the item of \$ 4,000 for debt service was eliminated as the loan has been repaid and the support of \$ 6,000 for ALAF was also eliminated due to the fact that this item has been included in the budget of the Direction General. On the other hand the following items were increased: Severance and Legal Costs by \$ 3,000; Reimbursement of Income Tax by \$ 2,500; Financial Assistance to Staff for studies by \$ 2,000; Auditing Costs by \$ 500, Contribution to CIDA by \$ 500, Contingencies by \$ 3,000 and the Contribution to the United Nations Development Program by \$ 1,200.

PART X

A P P E N D I X E S

PART IX

APPENDIX A

S A L A R Y S C A L E

PROFESSIONAL STAFF

Executive and Administrative

(Effective as of July 1, 1966)

s t e p

Class	1	2	3	4	5	6	7	8
D	<u>Director and Deans</u>							
	12,678	13,182	13,709	14,258	14,829	15,422	16,038	16,682
I	<u>Executive Level Officers in the Executive Offices</u>							
	10,842	11,273	12,721	12,191	12,678	13,182	13,709	14,258
II	<u>Heads of Centers, Services or Projects</u>							
	8,915	9,274	9,643	10,030	10,427	10,842	11,273	11,721
III	<u>Senior Level Administrative Officers</u>							
	7,062	7,342	7,633	7,935	8,249	8,574	8,915	9,274
IV	<u>Intermediate Level Administrative Officers</u>							
	5,589	5,813	6,042	6,283	6,535	6,793	7,062	7,342

PART X

APPENDIX C

S A L A R Y S C A L E

PROFESSIONAL STAFF

Teaching and Research

(Effective as of July 1, 1966)

S T E P

Class	1	2	3	4	5	6	7	8
<u>SENIOR POSITIONS</u>								
I	Principal							
	10,842	11,273	11,721	12,191	12,678	13,182	13,709	14,258
II	Senior							
	8,915	9,274	9,643	10,030	10,427	10,842	11,273	11,721
III	Associate							
	7,062	7,342	7,633	7,935	8,249	8,574	8,915	9,274
<u>INTERMEDIATE POSITIONS</u>								
IV	Assistant							
	5,589	5,813	6,042	6,283	6,535	6,793	7,062	7,342
V	Junior							
	4,603	4,788	4,978	5,174	5,376	5,589	5,813	6,042
VI	Aide							
	3,937	4,094	4,256	4,424	4,603	4,788	4,978	5,174

PART X

APPENDIX E

STATEMENT OF QUOTAS AS OF JUNE 30, 1966

	Approved Quotas Period 1965-1966	Unpaid Quotas			Total
		Period 1965-1966	Period 1964-1965	Previous Periods	
Argentina	173,387	173,387.00	147,610.00	-	320,997.00
Bolivia	7,039	7,039.00	-	-	7,039.00
Brasil	179,253	147,856.00	-	-	147,856.00
Chile	45,282	45,282.00	-	-	45,282.00
Colombia	45,282	45,282.00	28,496.00	-	73,778.00
Costa Rica	7,039	6,017.00	-	-	6,017.00
Cuba	38,244	38,244.00	32,891.00	89,726.05	160,861.05
Dominican Republic	8,681	8,681.00	7,421.00*	-	16,102.00
Ecuador	10,323	10,323.00	3,954.86	-	14,277.86
El Salvador	7,039	-	-	-	-
Guatemala	8,681	-	-	4,431.00	4,431.00
Haití	7,039	7,039.00	6,016.00	26,189.00	39,244.00
Honduras	7,039	-	-	-	-
México	128,809	-	-	-	-
Nicaragua	7,039	-	-	-	-
Panamá	7,039	1,023.00	-	-	1,023.00
Paraguay	7,039	7,039.00	6,016.00	10,979.00	24,034.00
Perú	17,362	17,362.00	-	-	17,362.00
United States	1,548,521	-	-	-	-
Uruguay	19,005	19,005.00	16,446.00	24,818.78	60,269.78
Venezuela	67,102	-	-	-	-
Total	2,346,244	533,579.00	248,850.86	156,143.83	938,573.69

Notes:

- 1/* Balance
 - 2/ CUBA: 27 940 00 quota 1963-64; 14 613 00 for 1962-63; 8 429 00 for 1961-62; 8 297 00 for 1960-61; 8 082 00 for 1959-60; 8 013 00 for 1958-59; 7 801 00 for 1957-58 and 6 551 05 for 1956-55
 - 3/ GUATEMALA: 4 431 00 quota for 1962-63
 - 4/ HAITI: 5 142 00 quota for 1963-64; 3 818 00 for 1962-63; 4 381.00 for 1961-62; 4 330 00 for 1960-61; 4 280 00 para 1959-60; 4 238 00 for 1958-59
 - 5/ PARAGUAY: 5 142 00 quota 1963-64; 3 277 00 for 1962-63 2 211 00 for 1961-62; 349 00 for 1960-61
 - 6/ URUGUAY: 14 056 00 quota 1963-64; 8 152 00 for 1962-63; 2 610 78 balance 61-62
- This statement is submitted in accordance with article 48, part g) of IICA regulations.

PART X

APPENDIX F

SUMMARY OF INCOME AND EXPENDITURES
FOR COMMERCIAL OPERATIONS

	1965-1966 Expended	1966-1967 Estimated	1967-1968 Estimated	1968-1969 Estimated
<u>INCOME</u>				
Creamery	62,064	65,000	62,000	65,000
Dining Room and Dormitory	40,439	38,000	14,000	15,000
Commercial Farm (Coffee and Sugar Cane)	106,003	120,000	136,250	150,000
Gas and Service Station	33,165	20,000	30,000	30,000
Print Shop and Photocopy	<u>50,909</u>	<u>45,000</u>	<u>45,000</u>	<u>45,000</u>
Total	<u>292,580</u>	<u>288,000</u>	<u>287,250</u>	<u>305,000</u>
<u>EXPENDITURES</u>				
Creamery	40,260	44,000	51,657	54,000
Dining Room and Dormitory	57,882	60,000	14,000	15,000
Commercial Farm (Coffee and Sugar Cane)	106,544	115,000	128,520	140,000
Gas and Service Station	33,165	20,000	30,000	30,000
Print Shop and Photocopy	<u>54,275</u>	<u>38,000</u>	<u>45,000</u>	<u>45,000</u>
Total	<u>\$ 292,126</u> =====	<u>\$ 277,000</u> =====	<u>\$ 269,177</u> =====	<u>\$ 284,000</u> =====
Net Income	<u>\$ 454</u> =====	<u>\$ 11,000</u> =====	<u>\$ 18,073</u> =====	<u>\$ 21,000</u> =====

