

IICA

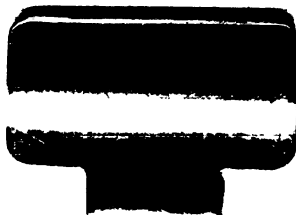


PP010000

Consultant Final Report
IICA/EMBRAPA-PROCENSUL II
ENTOMOLOGY: APPLE PRODUCTION

IICA
PM-A4-
BR-89-
039

ESCRITÓRIO NO BRASIL



1981-1982

Consultant Final Report
IICA/EMBRAPA-PROCENSUL II

ENTOMOLOGY: APPLE PRODUCTION

00001644

Série Publicações Miscelâneas Nº A4/BR-89-039
ISSN-0534-0591

ENTOMOLOGY: APPLE PRODUCTION

Consultant Final Report
IICA/EMERAPA-PROCENSUL II

Roberto H. Gonzalez Rodriguez

Brasília, junho de 1989

INSTITUTO INTERAMERICANO DE COOPERAÇÃO PARA A AGRICULTURA
EMPRESA BRASILEIRA DE PESQUISA AGROPECUÁRIA

IICA
PM-A4/BR
no. 89-039
BV 6394

Gonzalez Rodriguez, Roberto H.

Entomology: apple production. Consultant
final report IICA/EMBRAPA-PROCENSUL II/por
Roberto Gonzalez Rodriguez.-Brasília:IICA/EM-
BRAPA, 1989.

11 p. (IICA. Série Publicações Miscelâneas,
A4/BR 89-039).

ISSN 0534-0591

1. Entomologia-Maça. I. Título. Série.

CDU 634.11:595.7
AGRIS H10

APRESENTAÇÃO

A reprodução e difusão dos Relatórios de Consultores, no âmbito restrito das Diretorias das Unidades do Sistema Nacional de Pesquisa Agropecuária, vinculado à EMBRAPA, tem como objetivo principal o de divulgar as atividades desenvolvidas pelos consultores e as opiniões e recomendações geradas sobre os problemas de interesse para a pesquisa agropecuária.

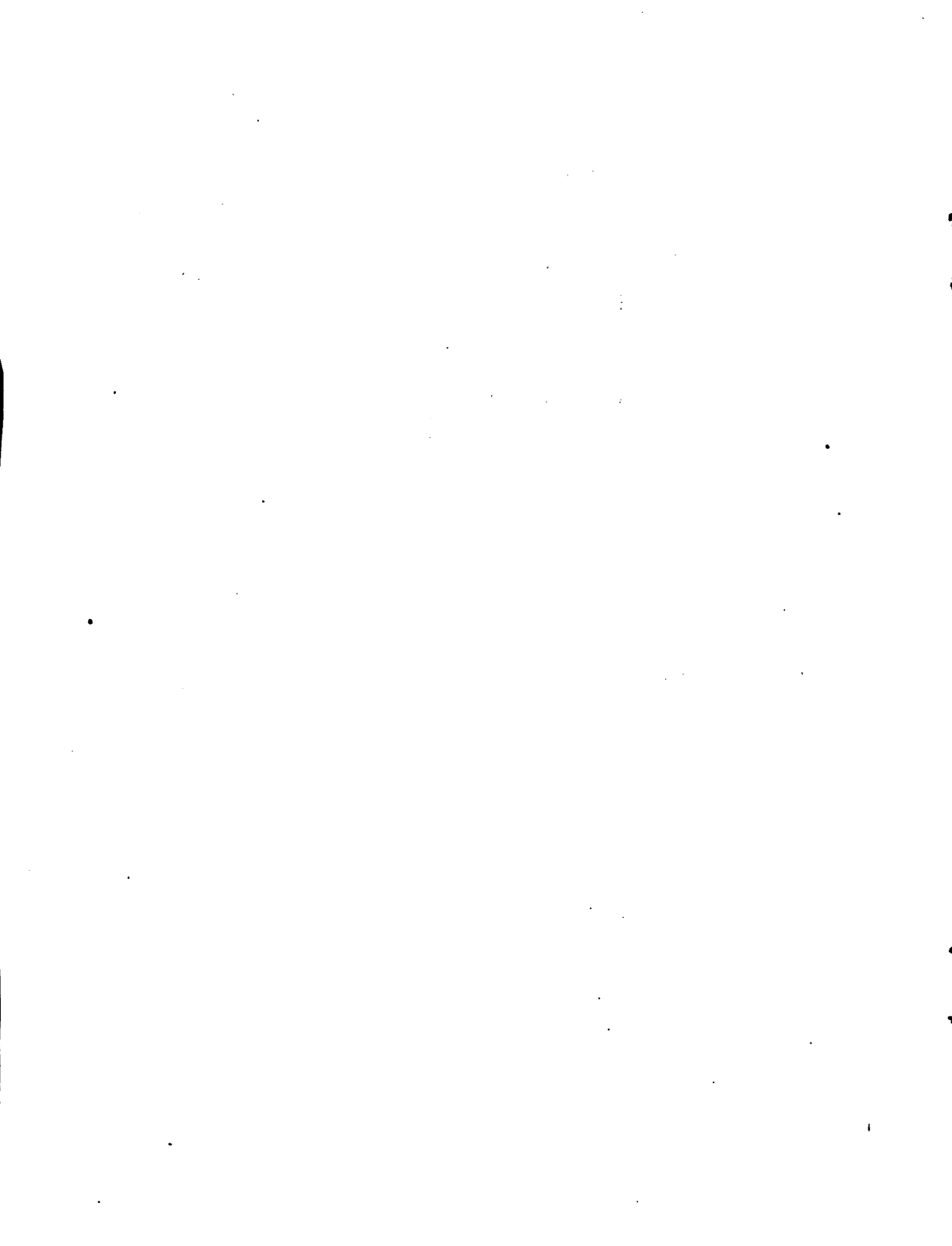
As atividades de consultoria são realizadas no âmbito do Projeto de Desenvolvimento da Pesquisa Agropecuária e Difusão de Tecnologia na Região Centro-Sul do Brasil - PROCENSUL II, financiado parcialmente pelo Banco Interamericano de Desenvolvimento - BID e a EMBRAPA conforme os contratos de Empréstimo 139/IC-BR e 760/SF-BR, assinados em 14 de março de 1985 entre o Governo Brasileiro e o BID.

As opiniões dos consultores são inteiramente pessoais e não refletem, necessariamente, o ponto de vista do IICA ou da EMBRAPA.

A coordenação dos Contratos IICA/EMBRAPA agradecerá receber comentários sobre estes relatórios.



Horacio H. Stagno
Coordenador Contratos IICA/EMBRAPA



INTER-AMERICAN INSTITUTE FOR COOPERATION ON AGRICULTURE
IICA/ENBRAPA CONTRACT

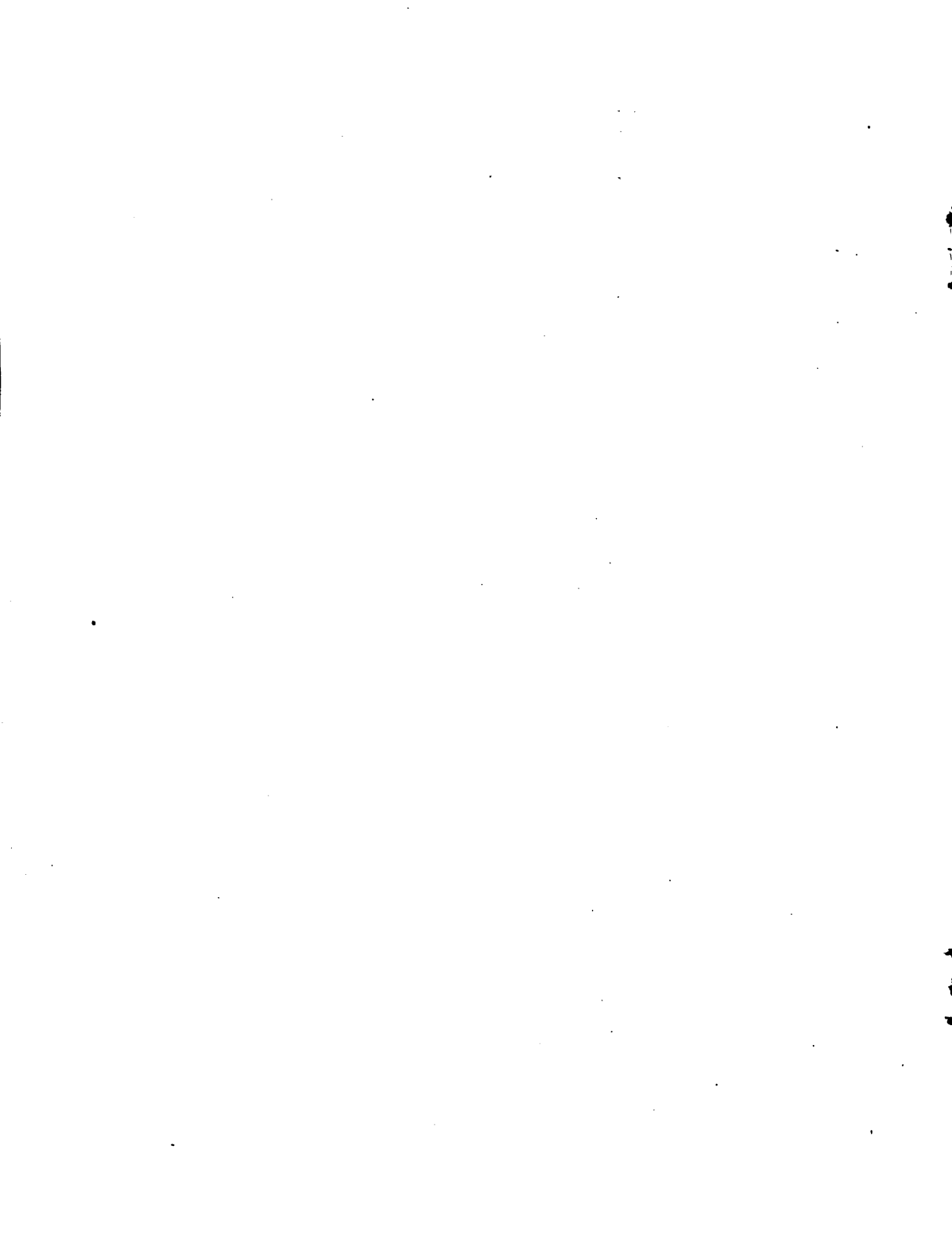
CONSULTANT FINAL REPORT

1. Consultant's full name: *Roberto Hernán Gonzalez Rodriguez*
2. Specialist in: *Entomologia*
3. Title of IICA Project: *2.SB.3.*
4. ENBRAPA Program for which consultancy is provided:

PROGRAMA : *PROCENSUL II*
SUBPROGRAMA : *02-PESQUISA VEGETAL*

IICA Project Activity Code: <i>2.SB.3.02</i>	Administrative Code: <i>R4894 B1B 03102</i>
Title of Activity of IICA Project corresponding to this consultancy	<i>Cooperation with EMBRAPA on research activities in the field of crop production.</i>
CONSULTANT CONTRACT PERIOD	DUTY LOCATION (Center)
<i>February 12st. to 26 st., 1989.</i>	<i>CNPFT - Pelotas - RS.</i>
CONTRACT EXTENTION PERIOD (If any)	DUTY LOCATION (Center)

5. Financial support: *PROCENSUL II*



6. ACTIVITIES UNDERTAKEN BY THE CONSULTANT AND RESULTS

6.1 RESEARCH DONE UNDER DIRECT RESPONSIBILITY OF THE CONSULTANT

Research activities developed	Results Achieved
-------------------------------	------------------

1. Research activities:

- 1.1. Survey of phytosanitary problems on apple production in selected orchards (RS and SC);
- 1.2. Inspection of postharvest treatments and procedures for apples intended to be exported to European markets;
- 1.3. Analysis of registered pesticides (on apples in Brasil) with respect to final residues and feasibility of use for European markets;
- 1.4. Survey of field pre-harvest control programs for Anastrecha fruit flies and other insects of quarantine importance to the United States;
- 1.5. The European red mite problem in apple orchards;
- 1.6. San Jose scale and other related insects with respect to European quarantine restrictions.

2. Results achieved:

- 2.1. Recommendations on new pesticide programs to meet maximum residue limits in Europe and the United States;
- 2.2. Design of supervised trials to establish pesticide degradation curves according to local climatic and ecological conditions;
- 2.3. Draft paper on Pesticides allowed for use on apple orchards: tolerances and pre-harvest safety periods recommended for Brasil;
- 2.4. Agreement in the establishment and use of a Bank data on world pesticide tolerances for temperate fruit, and
- 2.5. Recommendations to growers on post harvest apple procedures; recommendations to EMERAPA to establish a data bank on pesticide tolerances.

An overall achievement transmitted to EMBRAPA/CNPFT and apple growers associations was the prompt establishment and development of pre- and postharvest procedures aimed at export markets with reference to combined goals in the fields of quarantine, quality control, compliance with pesticide tolerances, improvement of packing processes and transport. At present, and although preliminary export attempts began last season, there are no common criteria yet developed among exporters, particularly on postharvest management.

A major challenge is the export of apples and pears to the United States. Towards this aim, research has to be developed in fields such as identification of fruit flies affecting pome fruits, effect of mandatory cold storage quarantine treatments and control of hitchhiking adult and immature insects of quarantine significance.

6.2 SUPPORT TO RESEARCH UNDERTAKEN BY OTHER EMBRAPA RESEARCHERS

Research activities developed	Results achieved
-------------------------------	------------------

Primary, secondary and quarantine insect and mite pests in apple orchards (research program conducted by A.Kovaleski and L.A.B. de Salles)

Identification of quarantine species in the genera Pantomorus, Naupactus, "Eulia" and Anastrepha. Additional material has to be collected in apple growing areas in RS and SC, with a view to determine their pest status, host plant range and control/detection methods. Likewise, a large number of accidental insects feeding on apples must be determined in terms of species identification (e.g., family Chrysomelidae, Tortricidae) and their feeding status on apples, plums and pears.

Interception records of quarantine species should be completed for all live interceptions of quarantine actionable pests, particularly for apples exported to the United States. It is understood that the list of actionable pests should be provided by the interested country (importing country). For nearly cosmopolitan pests occurring on pome fruits such as the Oriental fruit moth, Cydia molesta, no quarantine action should be required, unless it is suspected that species other than molesta occur in Brazil.

The apple orchard fauna registered in Brazil is fairly complete as far as primary and secondary pests concern. However, quarantine pests for potential or actual import markets is not yet known.

The apple mite situation is better known; identifications seem to be correct. This information ought to be published as soon as possible.

6.3 TRAINING ACTIVITIES DEVELOPED BY THE CONSULTANT

Date	Training subject matter	Type of event*	Number of beneficiaries	
			From EMBRAPA	From other institutions

February 14.-Pesticide residues and tolerances in export markets for apples and other temperate fruits.
 Conference presented in Fraiburgo, SC.
 Beneficiaries: EMBRAPA/CNPFT : 3
 Empresa Catarinense de Pesquisa Agropecuaria: 2
 Associação Brasileira dos Produtores de Maca: 23

February 17.-Uso de produtos quimicos na macieira em pré e pós-colheita
 Conference presented in Vacaria, RS.
 Beneficiaries: EMBRAPA/CNPFT: 6
 Assoc. Brasileira Prod. Maca: 34

* Short courses, seminars, conferences, etc.

6.4 IN-SERVICE TRAINING PROVIDED BY THE CONSULTANT

In-service training subject matter	Names of counterparts
EMBRAPA's research programs on pesticide degradation curves to establish pre-harvest safety periods to meet maximum residue limits in foreign markets.	Adalec. J Kowaleski, EMBRAPA/CNPFT (Vacaria) Fernando Cantillano, " " (Pelotas) Dr. L.A.B. de Salles, " " "

6.5 ACTIVITIES IN SUPPORT OF RESEARCH STRATEGY AND PLANNING

Research subject matter	Research program to which subject matter is concerned
-------------------------	---

1. Survey of hitchhiking insects through improved quality control inspections at central packings.

A general survey program must be designed by EMBRAPA/CNPFT and carried on at the various facilities packing for export, with a view to:

- a) identify adult and immature insect forms which are not ordinarily orchard pests but infest fruit during postharvest handling, being attracted to central packing lights or being picked up along with fruit during harvest and/or transport to the packing houses. In the experience of neighbouring apple exporting countries having preshipment inspections supervised by the USDA, these hitchhiking insects are responsible for major fruit quarantine rejections;
- b) design attracting and control methods for the above insects and study their life habits and food sources.

2. Standardize registration procedures in Brazil (i) to allow pesticides which are registered elsewhere, and (ii) to cancel registration of those having no tolerances in import markets.

6.6 ACTIVITIES IN SUPPORT OF OTHER CENTERS AND UNIVERSITIES IMPROVING THE RESEARCH CENTERS LINKS WITH ABROAD

Subject matter on which links were recommended	Persons, centers and universities recommended for contact
--	---

Postharvest management of pome fruits and world data bank of pesticide tolerances.

It is recommended that a Memorandum of Understanding be developed between EMBRAPA and the Faculty of Agricultural Sciences, University of Chile at Santiago. Both institutions can receive mutual benefits from cooperative research on postharvest physiology, postharvest treatments for pome fruits and pesticide residue research.

Both parties would be in position to implement scientific and technical cooperation for the benefit of Brazilian apple industry and export to selected markets. Training would be an important component of this agreement, particularly in the areas of pest management, pesticide residue research, cold and controlled atmosphere storage, quarantine treatments and the like.

Contacts:

- Dr. Antonio Lizana, Dean Faculty of Agricultural Sciences, Univ. de Chile, Casilla 1004, Santiago, Chile.
- Dr. Roberto H. González, same address.

6.7 PUBLICATIONS AND REPORTS UNDERTAKEN WITH THE CONSULTAT'S PARTICIPATION.

Author(s)*	Title of publication or Report and other bibliographic identification
------------	---

L.A.B. de Salles, A. Kovaleski and R.H.González.

Pesticide registration for temperate fruit in the European market: national tolerances and pre-harvest safety periods recommended fro Brazil.

* Personal, institutional, etc.

6.8 SUPPORT PROVIDED TO ENBRAPA RESEARCHERS IN THESIS AND DISSERTATION WORK

Name of the student	Thesis subject matter and sinthesis of advice
---------------------	---

6.9 OTHER ACTIVITIES DEVELOPED BY THE CONSULTANT

Phytosanitary and orchard management inspections were conducted in several apple orchards in RS. and SC. States, as follows:

RS. : EMBRAPA/Vacaria, experimental orchards

AGRIFLOR

RANDON

RASIP

NOVA SCOTIA

VALENTINO

Smaller holdings in Caixias do Sul.

SC. : PORTOBELLO

FISCHER FRAIBURGO AGRICOLA

POMARES RENAR

VINICOLA

POMIFRAI

EMPASC experimental orchards

Packing facilities were also visited as follows:RASIP,AGRIFLOR,PORTOBELLO, FISCHER,VINICOLA,POMIFRAI.

7. OTHER NATIONAL SYSTEM CENTERS, APART FROM DUTY STATION CENTER, ASSISTED BY THE CONSULTANT

Research center	Area of assistance provided by the consultant
-----------------	---

EMBRAPA,CNP Fruteiras de Clima Temperado, Vacaria,RS.

Assistance on Insecticide and Acaricide usage on pome fruits.

8. CONSULTANT'S SUGGESTIONS AND TECHNICAL OR INSTITUTIONAL RECOMMENDATIONS FOR THE IMPROVEMENT OF THE RESEARCH SERVICE

In the Consultant's opinion, EMBRAPA/CNPFT must assume leadership in the following areas:

1. Develop a databank on Pesticide Residues, Registration and Tolerances in the actual and potential world markets for Brazilian pomelo production;
2. Provide official recommendations on pesticide usage to meet international regulations on maximum residue levels; this information is to be developed through research on pesticide degradation;
3. Initiate research on plant quarantine regarding insects and mites of international significance, quarantine treatments and extension information for growers and exporters;
4. Continue national involvement on development of postharvest disease control methods, this area to be consolidated with both plant quarantine and pesticide residue activities.

The above areas of work must also be integrated to a global postharvest program to include packing, cold storage, postharvest physiology, fungicide degradation and testing of approved antioxidants.

The implementation of the above programs has to be explored at the regional level with the support of the Exporters Association. In this moment, the expertise on several research areas is lacking; at the same time, individual Companies developing private research without the appropriate coordination. It is therefore recommended that EMBRAPA submits a proposal for joint activities towards the same goal.

9. AGREEMENTS OR COMMITMENTS ESTABLISHED WITH EMBRAPA RESEARCHERS IN-SERVICE OF
THE FUTURE DEVELOPMENT OF RESEARCH IN THE CONSULTANT'S FIELD OF SPECIALIZATION

It was agreed with Dr. Luiz A.B. de Salles, research entomologist EMBRAPA/CNPFT, Pelotas,RS., to follow up pesticide residue information presently stored in the world data bank maintained by the Consultant . Updated information relevant to Brazilian exports will be provided during the course of this year with a view to developing similar computerized information in CNPFT premises.

10. CONSULTANT'S COMMENTS ON CIRCUMSTANCES WHICH AFFECTED THE CONSULTANCY WORK

Consultant did not meet any problem affecting the consultancy work. The working program developed by Dr. L. de Salles was completely met; other counterparts such as Eng. A.Kovaleski, EMBRAPA (Vacaria) were also responsible for providing adequate support in the field activities, organization of meetings and relevant visits in his area of action.

Date: March 20, 1989

Roberto H. González
Signature



Programa II. Geração e Transferência de Tecnologia

O Programa de Geração e Transferência de Tecnologia é a resposta do IICA a dois aspectos fundamentais: (i) o reconhecimento, por parte dos países e da comunidade técnico-financeira internacional, da importância da tecnologia para o desenvolvimento produtivo do setor agropecuário; (ii) a convicção generalizada de que, para aproveitar plenamente o potencial da ciência e da tecnologia, é necessário que existam infra-estruturas institucionais capazes de desenvolver as respostas tecnológicas adequadas às condições específicas de cada país, bem como um lineamento de políticas que promova e possibilite que tais infra-estruturas sejam incorporadas aos processos produtivos.

Nesse contexto, o Programa II visa a promover e apoiar as ações dos Estados membros destinadas a aprimorar a configuração de suas políticas tecnológicas, fortalecer a organização e administração de seus sistemas de geração e transferência de tecnologia e facilitar a transferência tecnológica internacional. Desse modo será possível fazer melhor aproveitamento de todos os recursos disponíveis e uma contribuição mais eficiente e efetiva para a solução dos problemas tecnológicos da produção agropecuária, num âmbito de igualdade na distribuição dos benefícios e de conservação dos recursos naturais.

INSTITUTO INTERAMERICANO DE COOPERAÇÃO PARA A AGRICULTURA

O Instituto Interamericano de Cooperação para a Agricultura (IICA) é o organismo especializado em agricultura do Sistema Interamericano. Suas origens datam de 7 outubro de 1942, quando o Conselho Diretor da União Pan-Americana aprovou a criação do Instituto Interamericano de Ciências Agrícolas.

Fundado como uma instituição de pesquisa agrônômica e de ensino, de pós-graduação para os trópicos, o IICA, respondendo às mudanças e novas necessidades do Hemisfério, converteu-se progressivamente em um organismo de cooperação técnica e fortalecimento institucional no campo da agropecuária. Essas transformações foram reconhecidas oficialmente com a ratificação, em 8 de dezembro de 1980, de uma nova convenção, que estabeleceu como fins do IICA estimular, promover e apoiar os laços de cooperação entre seus 31 Estados membros para a obtenção do desenvolvimento agrícola e do bem-estar rural.

Com um mandato amplo e flexível e com uma estrutura que permite a participação direta dos Estados membros na Junta Interamericana de Agricultura e em seu Comitê Executivo, o IICA conta com ampla presença geográfica em todos os países membros para responder a suas necessidades de cooperação técnica.

As contribuições dos Estados membros e as relações que o IICA mantém com 12 Países Observadores, e com vários organismos internacionais, lhe permitem canalizar importantes recursos humanos e financeiros em prol do desenvolvimento agrícola do Hemisfério.

O Plano de Médio Prazo 1987-1991, documento normativo que assinala as prioridades do Instituto, enfatiza ações voltadas para a reativação do setor agropecuário como elemento central do crescimento econômico. Em vista disso, o Instituto atribui especial importância ao apoio e promoção de ações tendentes à modernização tecnológica do campo e ao fortalecimento dos processos de integração regional e sub-regional.

Para alcançar tais objetivos o IICA concentra suas atividades em cinco áreas fundamentais, a saber: Análise e Planejamento da Política Agrária; Geração e Transferência de Tecnologia; Organização e Administração para o Desenvolvimento Rural; Comercialização e Agroindústria, e Saúde Animal e Sanidade Vegetal.

Essas áreas de ação expressam, simultaneamente, as necessidades e prioridades determinadas pelos próprios Estados membros e o âmbito de trabalho em que o IICA concentra seus esforços e sua capacidade técnica, tanto sob o ponto de vista de seus recursos humanos e financeiros, como de sua relação com outros organismos internacionais.

