



Review of Agricultural Extension
and Research Project - INTA 2001,
Nicaragua



By Tom Alberts, Olga Baires
and Alice M. Ennals



Noragric Report No. 3

**REVIEW OF NIC-032 INTA / AGRICULTURAL EXTENSION
PROJECT**

Volume I - Main Report

Final Report

Amsterdam, 25 September 2001
Dr. Tom Alberts, Team leader
Dr. Olga Baires
Ms. Alice M Ennals

Executive Summary

This Report is a review of the Norwegian support to INTA, the Nicaraguan Institute for Agricultural Technology. It was established in 1993 with major support from the World Bank but Swiss Aid, COSUDE, also played an important role. INTA is a public entity with a major mandate in agricultural extension and research.

Norway has supported research and extensions activities since the 1980s and also a special project for female farmers. At the request of the Government of Nicaragua an agreement was signed with Norway in 1996. The Norwegian support to INTA consisted of two major components, namely:

- Support for the Process of the Generation and Transfer of Agricultural Technology and Training; and
- Training and Technical Assistance for Women Farmers. - PROCATEPA

Although the first Project has specific objectives and activities over time Norwegian support became more of a core (budget) support to INTA as such. This was probably a positive development since it provided INTA with needed flexibility in allocating donor funding to priority activities. For this reason, instead of trying to analyse the NORAD support, a number of key issues was identified and analysed. The PROCATEPA project was primarily a NORAD supported project and was reviewed in some detail.

NORAD support to INTA has been small compared to the over-all budget and the funding provided by the World Bank. Nevertheless, Norwegian support has been substantial. In total (1997-2000) about USD 3.8 million was provided. Of this sum about USD 1 million was for PROCATEPA.

INTA has a well developed system for monitoring its activities. A large amount of information is collected yearly on the different aspects of INTA activities. Apart from regular reviews there has only been one evaluation and it was carried out by the National Agricultural University in 1997. The available information does not permit an assessment of the impact of INTA on technological innovations of the beneficiaries. Having said this, available data and the interviews with stakeholders suggest that INTA has had a positive impact on the technological development and the standard of living of the beneficiaries.

Training of INTA staff, particularly upgrading extension agents to a university degree, has been a priority area. NORAD's support was particularly important in this respect. With the assistance of INTA staff some data processing was carried out. Between 1997 and 2001 the percentage of INTA staff members with a university degree actually declined from 34 to 28 percent. A significant number of INTA students was either fired or resigned. Moreover, there was a large number of un- or underemployed agronomists in Nicaragua. And only 13% of the scholarships were awarded to female students. There were good reasons to assign priority to extension and to secure that research activities supported extension. There was a positive interaction between research and extension within INTA. Nevertheless, the issue of research training has been virtually ignored by INTA and there is not one PhD holder within INTA. In summary, the benefits of INTA support (and NORAD's) to training do not seem to justify the costs and there was a strong gender imbalance.

Although there was a strong gender imbalance with respect to the scholarships awarded there has been a slight improvement in the gender balance within INTA. While the share of women within INTA only increased slightly between 1997 and 2001, (from 27 to 28 percent), the share of women with university education increased from 19 to 23 percent.

NORAD's support to PROCATEPA has been successful in many respects. While in the past the focus was on providing special support to women projects (WID -Women in Development) INTA has developed a framework for providing support to families with a focus on women priority areas. Significant methodological development and training have been carried out. In this way there has been a significant mainstreaming of gender issues within INTA.

As of 2000 a new Programme for technological development was introduced. It has a long time horizon, 16 years. The lead donor has been the World Bank. But IFAD and Swiss Aid are contributing as well. During the planning phase, Norway explicitly stated its wish to participate in a Sector Wide Approach (SWAP). However, for several reason such as the weakness of the Ministry of Agriculture to take a strong co-ordinating role, the lack of interest of the World Bank to develop a jointly funded national programme, and the desire of INTA to continue to receive Norwegian bi-lateral funding Norway never became an active partner in the development of the new programme.

In summary, since its creation in 1993, INTA has become an important institution in agricultural applied and adaptive research and extension. Norwegian support to INTA has been important in this respect and not least to gender mainstreaming.

It is recommended, in line with SWAP policies, that in the future, Norway should not continue with bi-lateral funding. In this context, there are two basic options, either to conclude NORAD's present support to agricultural research and extension or to engage in a long term programme funding with other donors, not least the World Bank.

Volume I. Main Report

Table of Content

Executive Summary	2
Table of Content.....	1
List of Acronyms Used	2
Foreword	5
1. Background	7
1.1 Norwegian Support to INTA: Generation and Transfer of Technology Process (GTTA)- 1996-1998 (project 1).....	8
2. Major Conclusions	10
2.1 INTA Impact on Technology Transfer.....	10
2.2 PROCATEPA and Gender Issues	11
2.3 NORAD Support to INTA, Excluding PROCATEPA.....	13
2.4 Institutional Development and Capacity Building.....	14
2.4.1 Overall Assessment.....	14
2.4.2 INTA Training Programmes and NORAD Support.....	15
2.4.3 Research Training	16
2.4.4 Employment Policies.....	16
2.5 INTA Support as a Sector Wide Approach - SWAP	17
2.6 Key elements of the Programa Nacional de Tecnología y Formación Técnica Agrícola - PNTFTA.....	17
3. Summary	18
4. Recommendations	21
4.1 Background	21
4.2 Available options.....	21

List of Tables

Table 1. Planned Budget 1996-1998	9
Table 2. The Addendum 1998.....	9
Table 3 NORAD funded disbursements by INTA 1997-2001.....	13
Table 4. Percentage distribution of INTA staff by level of formal training.....	14
Table 5. Gender distribution of INTA employees with university training 1997 and 2001. 15	
Table 6. Summary table on questions raised in the Terms of Reference	19

Volume II Appendices

Appendix 1. Proyecto Capacitación y Asistencia Técnica a Productoras Agropecuarias - PROCATEPA

Appendix 2. List of Documents Consulted

Appendix 3. Terms of Reference. Review of NIC-032 INTA / Agricultural Extension Project

Appendix 4. NORAD support to INTA, excluding PROCATEPA

Appendix 5. List of Persons Met

List of Acronyms Used

AET	Area de Experimentación Tecnológica/ <i>Technological Experimentation</i>
ADT	Area de Difusión Tecnológica/ <i>Technological Diffusion</i>
ALIDES	Alianza Centroamericana para el Desarrollo Sostenible/ <i>Central American Alliance for Sustainable Development</i>
ATPM	Asistencia Técnica Participativa Masiva/ <i>Massive Technical Public(Participative) Assistance</i>
ATP1	Asistencia Técnica Publica Cofinanciada/ <i>Co-Financed Public Technical Assistance.</i>
ATP2	Asistencia Técnica Privada/ <i>Private Technical Assistance</i>
AVT	Area de Validación Tecnológica/ <i>Technological Validation Plot</i>
CA's	Círculos Agropecuarios/ <i>Agricultural Farmers Groups</i>
CATIE	Centro Agronomico Tropical de Investigación y Enseñanza/ <i>Tropical Agricultural Centre of Research and Teaching</i>
CIAT	Centro de Investigación de Agricultura Tropical/ <i>International Centre for Tropical Agricultural Research</i>
CONAGRO	Comisión Nacional Agropecuaria/ <i>National Agricultural Commission</i>
COSINTA	Consejo del Sistema Nicaraguense de Tecnología Agropecuaria/ <i>Board for Nicaraguan Agricultural Technoloy System</i>
DGTTA	Dirección de Generación y Transferencia de Tecnología Agropecuaria/ <i>Directorate of Generation and Transfer of Agricultural Technology</i>
ECODESNIC	Estrategia de Conservación para el Desarrollo Sostenible de Nicaragua/ <i>Strategy of Conservation for Sustainable Development of Nicaragua</i>
FAITAN	Fondo de Apoyo a la Investigación Tecnológica Agropecuaria en Nicaragua/ <i>Support Fund for Technological Agricultural Research</i>
FAT	Fondo de Apoyo a la Asistencia Técnica/ <i>Support Fund for Technical Assistance</i>
FOMENTA	Programa de Fomento a la Tracción Animal/ <i>Programme of Animal Traction</i>
FUNICA	Fundación Nicaragüense de Tecnología Agropecuaria/ <i>Foundation for Nicaraguan Agricultural Technology</i>
GON	Government of Nicaragua

GTTA	Generación y Transferencia de Tecnología Agropecuaria/ <i>Generation and Transfer of Agricultural Technology</i>
IDR	Instituto de Desarrollo Rural/ <i>Institute for Rural Development</i>
IICA	Instituto Interamericano para la Cooperación Agrícola/ <i>Inter-American Institute for Agricultural Cooperation</i>
IPG	Incorporación de la Perspectiva de Género/ <i>Incorporation of Gender Perspective</i>
INATEC	Instituto Nacional de Tecnología/ <i>National Institute of Technology</i>
INRA	Instituto Nicaraguense de Reforma Agraria/ <i>Agricultural Land Reform Institute of Nicaragua</i>
INTA	Instituto Nicaraguense de Tecnología Agropecuaria/ <i>Nicaraguan Institute of Agricultural Technology</i>
MAGFOR	Ministerio Agropecuario y Forestal/ <i>Ministry of Agriculture and Forestry</i>
MARENA	Ministerio del Ambiente y Recursos Naturales/ <i>Ministry of Environment and Natural Resources</i>
MECD	Ministerio de Educación, Cultura y Deportes/ <i>Ministry of Education, Culture and Sports</i>
MIP	Manejo Integrado de Plagas/ <i>Integrated Pest Management (IPM)</i>
NORAD	Agencia Noruega de Apoyo al Desarrollo Internacional/ <i>Norwegian Aid Agency</i>
PAANIC	Plan de Acción Ambiental de Nicaragua/ <i>Nicaraguan Environmental Plan</i>
PAEF	Plan de Administración Empresarial de Finca/ <i>Farm Business Management Plan</i>
PAS	Producción Artesanal de Semilla/ <i>Artisanal Production of Seeds</i>
PASOLAC	Proyecto de Agricultura Sostenible de Laderas de Centro América/ <i>Central American Hillside Project for Sustainable Agriculture</i>
PEAZF	Proyecto de Extensión Agropecuario para Zonas Favorecidos/ <i>Agricultural Extension Project in Favoured Zones</i>
PEAZNF	Proyecto de Extensión Agropecuario para Zonas No Favorecidos/ <i>Agricultural Extension Project in Non-Favoured Zones</i>
PNAPP	Programa Nacional de Apoyo al Productor Pequeño/ <i>National Programme Support to Small Scale Farmers</i>

POA	Plan Operativo Annual/ <i>Annual Plan</i>
POA's	Planes Operativos Anuales/ <i>Annual Plans</i>
PMP	Pequeña y Mediana Producción/ <i>Small and Medium Size Production</i>
PROTIERRA.	Proyecto Municipios Rurales/ <i>Rural Municipality Project</i>
PRM	Programa Regional de Maiz/ <i>Regional Maize Programme</i>
PROCATEPA	Proyecto de Capacitación y Asistencia Técnica a Productoras Agropecuarias/ <i>Project for the Training and Technical Assistance for Women Farmers</i>
PSE	Planificación, Seguimiento y Evaluación/ <i>Planning, Monitoring and Evaluation</i>
PYME	Pequeña y Mediana Empresa/ <i>Small and Medium Size Enterprise</i>
RA's	Representantes Agropecuarios/ <i>(Agricultural Representatives)</i>
SNGTT	Sistema Nacional de Generación y Transferencia de Tecnología Agropecuaria/ <i>National System of Generation and Transfer of Agricultural Technology</i>
SINTA	Sistema Nacional de Tecnología Agrícola/ <i>National System of Agricultural Technology</i>
SWAP	Sector Wide Approach
UNA(N)	Universidad Nacional Agraria/ <i>National Agricultural University of Nicaragua</i>
UNAG	Unión Nacional de Agricultores y Ganaderos/ <i>National Union of Farmers and Ranchers</i>

Foreword

The expatriate Team members arrived in Managua on 27 May and the mission was concluded on 9 June. On Monday, 28 May, the Team was briefed by Mr. Alf Friisø of the Norwegian Embassy in Managua. For a list of persons met see Appendix 5.

The Norwegian support consisted of two projects: *Support for the Process of the Generation and Transfer of Agricultural Technology and Training* and *Training and Technical Assistance for Women Farmers - PROCATEPA*. During discussions with NORAD, since the first project was to a large extent core support to INTA as such, it was for this project agreed to focus mainly on INTA at large and to study in some detail PROCATEPA. An attempt was made to review the impact of the specific NORAD support to INTA. The results of this review and other issues can be found in Appendix 4. The results of the PROCATEPA Review can be found in Appendix 1. A few comments in English are provided as well.

Apart from these two aspects, the Report focuses on a number of key issues such as: INTA's impact on technology transfers; gender issues, which will be covered throughout this report but also under PROCATEPA and Gender Issues; Capacity building, because of the significant support provided by NORAD in this area; INTA support as a Sector Wide Approach SWAP and finally the new agricultural technology programme, which became operational in 2000, *Programa Nacional de Tecnología y Formación Técnica Agrícola*. It is supported by the World Bank, IFAD and COSUDE (Swiss Aid).

The methodology used involved identifying key documents both at NORAD in Oslo and at the Norwegian embassy in Managua as well as INTA and government institutions. Interviews were held with key stakeholders including talks with a large number of farmers.

At the beginning of the work the mission met with the Director General of INTA, Ing° Genaro A. Muñiz and senior staff. It was agreed that the Team would work at the INTA premises and in close collaboration with INTA staff. This would enable the Team to share important conclusions with INTA staff members and to open up space for a constructive dialogue.

Field visits were made to Estelí (30 May) and Chontales (4-5 June). During these visits, the Team interviewed INTA field staff members, male and female farmers and NGOs, including peasants' organisations.

According to the TOR, attached as Appendix 3, prior to the departure the Team "... shall present a debriefing report to the Norwegian Embassy in Nicaragua". It was agreed with the Embassy to invite key stakeholders as well so as to enable the Team to obtain constructive criticism and suggestions. The debriefing meeting was held at the Norwegian Embassy in Managua on 8 June.

The Draft Report was forwarded on 3 July to NORAD. INTA's comments were forwarded to the Norwegian Embassy in Managua and promptly forwarded to the consultant. The Embassy's comments were forwarded at a later stage. The consultant has carefully read these comments and have introduced changes in the Final Report as appropriate.

The Team would like to express its deep gratitude to the INTA staff members for the hard work and substantive support provided to the Team. This collaboration went far beyond the normal duties of the employees. The support provided by the Norwegian Embassy was essential for the success of the mission.

1. Background

Norway has supported research and extension activities in Nicaragua since the end of the 1980s, through Government institutions, through Norwegian and Nicaraguan NGOs and through international organisations (FAO, CATIE).

Before the start of the Nicaraguan Institute of Agricultural Technology, INTA, Norwegian support was channelled through the Ministry of Agriculture in the form of a general support, but also to a special extension programme for women farmers¹. This support was suspended during a period due to weaknesses in management. However, the women farmer programme always continued although at a reduced level.

Recognising the strategic importance of research and extension to the development of the agricultural sector and the inappropriateness of organising research and extension as entities within the administration of the Ministry of Agriculture, the Government with the technical and financial assistance of the World Bank decided to create an independent agricultural research and extension institute to be called INTA.²

INTA was created in 1993 under the Executive Decree No 22-93³. The institution has a legal personality and technical and administrative autonomy. At national level INTA is the main body of transfer of technology. Its mission is to:

... increase production and productivity of small and medium producers through generation and transfer of viable agro-economic technologies that takes into account the preservation of natural resources. This requires developing mechanisms permitting inter-institutional flexibility and co-ordination with participatory strategies.⁴

Different to many other public bodies, there is less change of professional personnel in INTA when there is a governmental change. However, the political circumstances are dominating to the extent that at least the top-management is changed with changes in the government, the so called *cargos de confianza*.

INTA has a managing director who is appointed by the President. There is a Board of Directors and it is chaired by the Minister of Agriculture. There are a total of 9 Board members and they are all appointed by the president. The private sector has four members and are appointed for a period of two years. The Director General, appointed by the president for a period of four years, acts as secretary for the Board meetings and has no vote.

Apart from the President of the Board, the Minister of MAGFOR, there is an Executive President which also has executive functions. Having three key actors, the President and the Executive President of the Board and a Director General might entail conflicts regarding authority. Ultimately, the power rests with the President of Nicaragua.⁵

¹ PROCATEPA first phase

² ODEN Development Consultants, 1999

³ The Decree was published in La Gaceta No. 61.

⁴ Proyecto de Inversión Público, NORAD-INTA, 1999

⁵ There was a presidential decree published in the Gaceta on 23 April 2001 which introduced several important changes in the organisational set-up of INTA. None of the staff members contacted at INTA had been consulted

INTA has several donors supporting different components of its work. From the beginning the World Bank and the Swiss Aid (COSUDE) were active donors. In 1994 the World Bank and COSUDE entered into a co-financing agreement. This resulted also in a COSUDE technical expert joining in on the bi-annual INTA donor visiting missions.

Today INTA enjoys co-operation with numerous organisations such as: NORAD (Norway), COSUDE (Switzerland), JICA (Japan), China Taiwan, Kellogg's Foundation, World Bank, and for technical and scientific collaboration with FAO, IICA, CATIE, CIMMYT, CIP, SNV among others.

1.1 Norwegian Support to INTA: Generation and Transfer of Technology Process (GTTA)-1996-1998 (project 1)

Norwegian support was a result of a request from the Government of Nicaragua in 1995. After revising the project documents an Agreement was signed in November 1996. The agreed goal of the programme was: "Increased, diversified, more sustainable and more profitable agricultural production among rural families in Nicaragua". As can be seen this refers to the general mission of INTA.

The following activities were contemplated in order to support and strengthen the institution INTA in their Generation and Transfer of Technology Process (1996-1998):

- **Training of technical staff (improving academic level),**
- **Develop methods for research and extension**
- **Support to acquire equipment as well as vehicles, and support to model farms in each of the three geographic regions of project 1.**

Research and extension activities can be further specified as integrated pest management (IPM), genetic improvement of seeds and animals, diversification of farm-production, post-harvesting techniques, tree nurseries, energy-saving ovens, fodder production for dry season, and soil erosion control techniques etc.

The development objective stated the goal of 60 percent of target farmers (24,000 rural families) to have increased 20 percent of their production capacity since 1993, and that 30 percent have a higher profit through better sustainable agricultural techniques. In addition the immediate objective is to support and strengthen INTA as an institution, through supporting the organisation, methods, human resources and general office equipment (infrastructure).

An addendum to the project document was added in November 1998, soliciting additional funds for 1999. The addendum was approved for INTA's request for extending support on an interim basis through 1999, until a more long-term support in co-operation with Norway, the World Bank and other donors was to be established. In fact the time covered was (1997-2000). The final report, dated May 2001, covers the years (1997-2000).

prior to the reorganisation. Even the Executive President of the Board was not consulted prior to the presidential decree. To what extent this presidential decree will resolve the problem of authority remains an open question.

Table 1. Planned Budget 1996-1998⁶

Budget item	Project 1		Project 2 ⁷		Overall Support	
	USD ('000)	%	USD ('000)	%	USD ('000)	%
Scholarships	332	19			332	13
Salary			143	18	143	6
Equipment, material (vehicles, i.e.)	432	24	32	4	464	18
Research trials and extension	1 015	57	496	64	1 511	59
Operational costs			79	10	79	3
Consultants and evaluations			30	4	30	1
Total	1 779	100	779	100	2 559	100

(Rounded figures).

Table 2. The Addendum 1998⁸

Budget item	Project 1	Project 2	Overall Support, 1999
	USD ('000)	USD ('000)	USD ('000)
Scholarships/human resources*	62		62
Equipment, material	67		67
Extension activities	365	252	617
Support to organisation of farmers	90		90
Radio cabins (infrastructure)	4		4
Extension, ATPm	57		57
Irrigation to smallholders	25		25
Monitoring and evaluation	30		30
Technical assistance service	179	129	308
Operational costs	185	139	185
Total	924	521	1 445

* Total sum until 2002 for scholarships is US\$ 270,000.

It is important to add that educational programme was planned until 2002. In addition a lot of money was carried over in year 2000, from the 1999 budget.

⁶ Source NORAD

⁷ Project 2 refers to the PROCATEPA gender programme.

⁸ Source: INTA

Norway approved the Operative Plan 2000 where NOK 2,000,000 still remained to be disbursed under the present agreement. Under the Work Plan and Budget for the year 2000 presented by INTA, NOK 1,200,000 will be used in year 2000, whereas NOK 300,000 are to be disbursed in the period 2001-2004. (Also see Cooperation programme for the agricultural sector INTA-NORAD: Annual Work plan 2000, 28.1.2000). The goals and purpose of addendum remained unchanged in the context of the project.

The purpose (NORAD appropriation document 1998) of the support is improved agricultural extension service through strengthening of INTA's:

1. Human resources;
2. Organisational and methodological capacity;
3. Integration of gender perspectives in its general work;
4. Integration of a participatory role of the farmers in its field approach;
5. Collaboration with other institutions.

2. Major Conclusions

2.1 INTA Impact on Technology Transfer

The Team spent considerable time trying to assess the impact of INTA on the small and medium sized farms. INTA has developed a comprehensive monitoring system which should enable to provide some assessments of the impact of INTA on the standard of living of the beneficiaries.

As far as the Team could assess, apart from regular reviews, only one evaluation has been carried out, namely *Evaluación de impacto de la asistencia técnica* carried out by UNA in 1997. The study, based on a sample of 270 peasants, concludes that there has been technological innovations and that no less than 74% of the families reported that their consumption had improved.⁹

One attempt followed by the Team was to analyse the yearly reports *Informe de resultados de la asistencia técnica participativa ATPI. INTA*. The last one covers the year 1999. The survey is based on a sample of 10% of the producers. One of the problems with these pieces of information is that that it is not a **random sample**. In fact, the selected producers are probably among the better-off ones.¹⁰

⁹ To what extent these families improved their standard of living more than other peasant families is not clear from the study. It should be noted that in the period 1994-1997 there was a rapid economic growth. Moreover, there was no base line study carried out prior to the commencement of INTA activities in 1994. Finally, it is not clear that it was a random sample.

¹⁰ ATPI refers to small and medium size peasants operating under favourable conditions such as access to markets and good climatic conditions. The farmers are organised into groups of 20 and out of these two farmers are asked to keep written records. It is highly probable that these are more apt to adopt new technologies than the others. Apart from this, there are farmers who have received technical assistance for different periods of time. In addition the figures in the table are incorrectly added in several instances.

In 1997, a first attempt was made to make a random sample of the producers with a view to collect systematic information. As of 1998 this pilot activity was extended and since then there is a sample of 10%. - (*Registro de los(as) productores*). The information includes information on the situation of the previous year, planned and results obtained. Thus the 1999 report, the latest available, includes information on the situation of the peasant in 1998 and the planned and obtained results for 1999. However, it should be recalled that in 1998 the hurricane MITCH affected the country, strongly negatively influencing the results for 1998 and would thus give exaggerated results of the effects of extensions activities.

At this stage it is not possible to ascertain to what extent INTA's activities have contributed to improve the standard of living of the farmers. It becomes even more difficult to discuss to what extent the benefits generated outweigh the costs incurred. Since the new Technology Programme has time horizon of 16 years, the evaluation aspects should be addressed.¹¹

However, over time, these existing pieces of information can provide important information.¹² While the monitoring side of INTA is performing quite well, there is a need to make a serious effort to establish a system which will permit future evaluations.¹³

Nevertheless, the available information does strongly suggest that INTA has had a significant impact on the technological development of its peasants. To what extent the benefits generated justify the costs incurred remain an open question.

2.2 PROCATEPA and Gender Issues¹⁴

The small and medium size farms play an important role in the Nicaraguan economy. They generates about 60% of the gross value of agricultural production. A series of studies have shown some important results with respect to gender. Women play an important role in agricultural production accounting for about one fourth of the value added of the agricultural production.

In the past the special role of women was largely neglected. The first phase of the project (1990-1994) was designed and implemented by the then Ministry of Agriculture and Livestock. The objective was to satisfy the demand by women producers who were not attended by the existing project to Generate and Transfer of Agricultural Technology. It was a traditional project - Women in Development - WID. The focus was primarily on women and the families as such were not engaged. The project was subsequently transferred to the newly

¹¹ The World Bank *Project Appraisal Document*, Report No:20168-NI from 2000 contains a Project Analysis and in the Annex 4 *Cost Benefit Analysis Summary* the empirical basis is weak. Still, the study concludes that the internal economic return of the project is above thirty percent.

¹² It will be necessary to divide the sample into cohorts of peasants. The original situation of the peasants entering the system in a certain year and their evolution over time. Summing the results of peasants entering the system for the first time with peasant who have received technical assistance for many year is not meaningful. It might also be necessary to review the sampling methods used by INTA. The reports should include a methodological chapter explaining the procedures followed.

If the same clients are revisited on a really basis, it is probable that the extension workers will dedicate more attention to this group of clients. Thus the sample will not remain a random sample.

¹³ INTA is of the view that a random sample should be 10% of the universe. However, by using relevant sampling theory this size could probably be reduced significantly.

¹⁴ For details see Appendix 1.

created INTA. In quantitative terms the project was not very successful and reached only 80 women and 19 men. However, with the experience gained the importance of gender issues could be better integrated in the newly created INTA.

Thus INTA recognised that:

- The main subjects and actors in agricultural development are the rural families constituted by both men and women;
- The families work for a common objective, however, each of its members have different roles; and
- The Nicaraguan women contribute with a fourth of the value added of the agricultural sector.

This in turn was translated into the following basic premise for INTA:

- To attend the male and female clients while taking into account their basic needs and technological interests. This implies that within the family production unit the productive activities, both short and long term, carried out by men and women will both be supported, with the objective to achieve technological and economic development which should be equitable for both.

In many projects/programmes cross-cutting issues such as gender and the environment are not adequately dealt with. Instead of mainstreaming these activities, small groups are created without a significant over-all impact. In contrast, within INTA a series of activities was carried out which involved the institution as such.

The proposed technology packages developed by the project were also transferred to the beneficiaries. To what extent these have been sustained could not be verified by the Team. The target was to reach 3 000 families. The result was almost 6 000 families.

While there are no systematic studies on the impact on the family incomes, available information, and the interviews with the farmers, suggest that there has been an improvement.

One of the main reasons for the success of the project was that it provided supervised credit, in the form of material and technical support. From the point of view of sustainability two issues emerge.

A peasant family received for example pigs or poultry and was required to return part of the offspring to INTA which could then extend the support to other families. The repayment rate has been significantly below 100%. Also, the beneficiaries do not pay any interest. This means that over time, unless additional funding is made available and/or an interest rate is charged, the micro credit will cease to exist.

Supervised credit to small farmers is rather costly because it requires an important input of technical assistance. At present there are no studies on this topic. But if the costs are high it might become difficult to justify the costs in terms of benefits obtained.

From the point of view of poverty alleviation another concern can be raised. These INTA micro credits are mainly available for peasants with a development potential (ATP1). There are good ground for allocating scarce resources to activities with a growth potential. But it also leaves out the very poor from this kind of support. With respect to the poorer segments, the impact of gender awareness of INTA has contributed to addressing the development of the poorer (ATPm) also with a gender perspective.

Noteworthy is also that women as well as the men confirmed that, as a result of the project, there has been a greater interaction of the family members and the status of women (empowerment) has improved.

The provision of credits to the beneficiaries was also very important, particularly for women. It enabled the women to acquire new knowledge and to manage their projects and to receive recognition for their capacity. In addition the women were empowered and could more actively participate in the decision-making within the family.

The Team has noted that INTA has been quite successful in mainstreaming gender within INTA. This was particularly evident regarding the extension work of INTA. Within INTA some concern can be expressed regarding gender equality. It should be noted that in 2001 INTA had 707 employees and of these only 27.7 per cent were women. Of the 45 scholarships provided with NORAD funding only six of these went to women.

Both with respect to PROCATEPA and to gender mainstreaming, the support of NORAD was both timely and have had a strong positive effect. For more details see Appendix 1.

2.3 NORAD Support to INTA, Excluding PROCATEPA

Norwegian support was initially seen as a series of specific projects within INTA. For details see Appendix 4.

In the request from 1998 the activities were more loosely specified and the NORAD support had become more of a budget support than support to specific projects within INTA.

This move towards more general budget support was also confirmed by senior employees of INTA who viewed NORAD support as a flexible way to insure the continuity of the INTA programme as such which at times faced difficulties to be implemented due to the rigidities of World Bank financing. While this flexibility was appreciated by INTA, it created difficulties for NORAD. It appears that INTA assumed that the support was more flexible than it really was intended to be. As a result, it also became very difficult for NORAD to monitor its support to INTA.

The Team attempted to identify NORAD financed project/activities but in the end NORAD support could not be analytically separated from INTA over-all activities.

Table 3 NORAD funded disbursements by INTA 1997-2001¹⁵.

¹⁵ These figures are based on INTA accounts.

Project	Disbursements (‘000 USD)
INTA Extension	2 732
PROCATEPA	1 049
TOTAL	3 781

In total NORAD has supported INTA with USD 3.8 million of which the major part was for extension (INTA core support) with USD 2.7 million. Support to PROCATEPA during this period was in the order of USD 1 million.

Nevertheless, an important area of support was Development of Human Resources which is discussed below.

2.4 Institutional Development and Capacity Building

2.4.1 Overall Assessment

NORAD has provided support to training of INTA staff. This support has been directed at training of extension staff and general staff.

In 1997 INTA had 518 staff members and this number had grown to 707 (36.5%), at the beginning of 2001¹⁶. While the share of women was 26.6%, in 1997 it had only improved marginally to 27.7% in 2001.

In order to assess the impact of the various training programmes, the INTA staff members were grouped into three categories:

1. University training completed
2. At least secondary school completed
3. Others

The table below present the results:

Table 4. Percentage distribution of INTA staff by level of formal training

Year	Group 1	Group 2	Group 3
1997	34.2	40.9	24.9
2001	27.7	43.6	28.7

One of INTA's major objectives has been to upgrade its staff, particularly to university level. In this respect it should be of concern to INTA that the share of university graduates declined from 34.2% in 1997 to 27.7% in 2001.

¹⁶ INTA has a lot of information available in its databases. The Team is grateful to the assistance in retrieving and processing the information on INTA staff.

Usually women are discriminated in a number of ways. One world-wide observation is that for the same training women receive a smaller remuneration than men. To test this hypothesis further work would have been needed. Still, the available data permit an analysis of the share of qualified women within INTA and its development over time. The following table summarises the results:

Table 5. Gender distribution of INTA employees with university training 1997 and 2001.

Gender	1997		2001	
	Number	Percent	Number	Percent
Women	34	19.2	45	23.0
Men	143	80.8	151	77.0

While there was only a marginal improvement in the share of women at INTA between 1997 and 2001, the situation has improved significantly with respect to women with university training. In 1997 there were only 34 women with a university degree versus 143 men. By 2001 there were 45 women versus 151 men. Thus the share of women with a university degree had increased from 19.2% to 23.0%.

2.4.2 INTA Training Programmes and NORAD Support

Upgrading of INTA staff has been a priority of the institution. For higher education the staff members have in general continued to work and have studied during the spare time, mainly during week ends. The employees have thus continued to receive their salaries.

45 INTA staff members were originally granted scholarships, financed by NORAD, to upgrade their formal training to the level of university graduates. Of these only 6 were women. In this respect there has been a serious gender imbalance. No less than 16 of the students have been fired or have resigned.

In addition there are 33 students studying. When the World Bank declined financing this line of activities NORAD accepted to finance 11 of these.

From the point of view of INTA, this support enabled it to upgrade its staff and to provide incentives. However, the Team has been informed that about 150 - 200 Nicaraguans are graduating as agronomists each year in the country. In addition, many competent professionals are under- or unemployed. From the point of view of INTA the support was important but viewed in a larger perspective, the good use of Nicaraguan human resources, NORAD support in this context does not seem to have been justified.

Apart from the academic training the following presents the results of short-term courses:

•	Short English courses	24
•	Executive secretary courses	44
•	Graphic Design	9
•	Windows and PC knowledge	44
Total		121

According to the INTA Final Report on NORAD support the target for the total number of trained persons was 366 persons. The number of actually trained persons was 194. The main reason for this was that WB funding became available for this kind of training activities and the NORAD funds were channelled into other activities.

2.4.3 Research Training

The need for capacity building of the research component has been virtually neglected¹⁷. There is no possibility of managing research programmes without trained researchers. A PhD degree is a necessary, but not a sufficient, condition for managing research projects. Obtaining a PhD degree is only the first step in a research career. To manage research projects, directed at serving the needs of small and medium sized farmers would also require management competence and openness to interdisciplinary work. Also, to monitor world-wide research is not possible without a critical mass of Nicaraguan researchers. At present the research part of INTA does not even have one PhD.¹⁸

The World Bank's view on this issue was that there were several other donors interested in funding higher university training and that there was no need to include this aspect in the new Technology Programme which became operational in 2000.¹⁹

In a longer perspective it will be necessary to revisit the question of university agricultural training and research in Nicaragua. Norway has long experience in this field and could play a strategic role in this context. For example, several decades ago Norway supported a department of forestry at the Makerere University in Uganda. During the dictatorial regime of Idi Amin the activities were transferred to Dar es Salaam University and subsequently to Sokoine which eventually became an agricultural university. The university has an excellent reputation and would most probably not have existed without Norwegian long-term support.

2.4.4 Employment Policies

While providing INTA staff with the possibility of upgrading his/her professional level by offering course may be one way to improve the competence of INTA, there are other ways of accomplishing this.

It is in this context that the Team has also noted with concern that there is not yet a tradition, of widely publishing vacant posts and there is no institutionalised mechanism whereby the competence of applying candidates are evaluated against job descriptions.²⁰ Also, political pressures have been exerted on INTA to employ and fire staff members. During changes in the Government of Nicaragua (GON) many people are fired and replaced with persons of

¹⁷ Several staff members now have a MSc degree. This training does not include scientific research. Nevertheless, during a first phase they can surely make an important contribution in applied research relevant to the farmers. However, in a longer perspective agricultural research will necessitate research training.

¹⁸ There is one person who might have a PhD degree but this question is subject to controversy. The WB is supporting the restructuring of a number of agricultural research systems in Africa with a view to establish a more effective and demand driven research system. Important projects can be found in Kenya, Uganda and Tanzania. All of these systems include a large number of PhD holders and the capacity building element is also strong.

¹⁹ E-mail from Mr. Piccioni

²⁰ A positive change is taking place. World Bank funded posts and the NORAD financed extension agents were widely announced and candidates selected on the basis of merit.

"confianza". This has been the case of INTA as well and was recognised by senior staff members as a serious problem. As was mentioned earlier, INTA Board members (Consejo Directivo) are appointed by the president of Nicaragua.

2.5 INTA Support as a Sector Wide Approach - SWAP

INTA was the result of a joint donor mission at the beginning of the 1990s and was formally established in 1993 and became operational the following year. As the World Bank support to INTA was coming to an end in 1999, the Bank set in motion a planning process for the next phase. This work involved making funds available to contract Nicaraguan professionals and expatriate expertise to work jointly with WB staff members.

Within the donor community, particularly among the so-called Like Minded Group, involving countries such as the Netherlands, Norway, Sweden, Denmark and Canada, there has emerged a strong consensus to pool resources into jointly funded programmes. In theory the World Bank has been positive in many countries to this idea but in practice it has many times overlooked the practical implications. In the case of the development of the *Programa Nacional de Tecnología y Formación Técnica Agrícola*, PNTFTA, NORAD had expressed a clear desire to become an active partner.

The World Bank did not actively include NORAD, or other donors of the Like Minded Group, during its planning phase. Due to personal connections and because of its strong presence within INTA, Switzerland, however, participated.

Other reasons should also be considered in this context. During the last years, MAGFOR has had several ministers and did not articulate a strong desire for a SWAP approach. Finally, INTA appreciated the flexible Norwegian funding mechanism and was not particularly eager to include Norway within a SWAP arrangement which would have somewhat curtailed INTA's sphere of freedom.

It should be of great concern, both to donors and to the GON, that the development of the new programme will primarily be financed with borrowed money (from the WB and IFAD)²¹. The possibility of obtaining grants was never sufficiently explored.

2.6 Key elements of the Programa Nacional de Tecnología y Formación Técnica Agrícola - PNTFTA

One of the major advances, in comparison to previous modalities of support is, that PNTFTA has a relatively long time horizon, 16 years. To a large extent it has the essential elements of a SWAP (Sector Wide Approach). It is composed of five major components:

- Competitive funding mechanisms for private services (*Fondos competitivos*) for extensions services (FAT) and for research (FAITAN)
- Development of institutional capacity

²¹ The total cost of the project for the first four year period is estimated at USD 38,3 million of which the WB will finance the major part USD 23.6 million. It is an IDA loan which means a very low rate of interest is charged. In fact a significant part of the money can be considered as a grant. Ironically, the debts of highly indebted countries to the WB and the IMF, such as is the case of Nicaragua, are often paid by bi-lateral donors so that these countries can qualify for new loans.

- Strengthening of INTA
- The establishment of a national system for agricultural technical training and education (SETAC)
- The establishment of an information system for agricultural technology (SIA)

The programme budget is estimated at USD 38 million for the period 2000-2004. The major inputs will come from the WB with USD 24 million, IFAD with USD 3 million, the GON with USD 6 million and Swiss Development Cooperation with USD 2 million.

According to the project document, there will be a project management system largely following WB modalities in other countries. In this way there will be programme employees, financed by the WB, but mainly performing functions as public employees. While there are many advantages in creating separate and/or parallel structures for implementing the activities there are also many negative side effects. Within INTA persons with the same formal training and experience are paid significantly different salaries depending on whether they are contracted with the use of WB financing or by the Nicaraguan public administration. Of course this type of arrangements create unnecessary tension.

The other problem refers to donor preferences and in this case the WB. From a legal point of view a project is always requested by the recipient country. Still it seems important to ask: to what extent does the project reflect the priorities of the GON? Within INTA the general feeling was that the Bank had set its own priorities and that these did not necessarily always agree with INTA's priorities. (For example the WB not funding the home garden component.)

It was not possible to explore the administrative framework for the new Project. Therefore, it is not clear whether there will be one account for the programme as a whole or if there will be separate accounts for the different components. If NORAD would provide support to the new Technology Project, there will be a need to clarify the administrative modalities, including reporting system.

3. Summary

The Team has attempted to evaluate the impact of INTA on the beneficiaries, small and medium size farmers. Because of lack of base-line data and a systematic monitoring of the development of the beneficiaries and non-beneficiaries it has not been possible to assess the impact of INTA. Apart from an impact assessment from 1997, no systematic studies are available. Having said this, available information, interviews with INTA staff and farmers, all suggest that INTA has played a positive role in promoting technological innovations among the farmers. To what extent the benefits generated outweigh the costs remains an open question.

The NORAD support has made a strong positive impact on mainstreaming gender issues within INTA, but a lot remains to be done. The PROCATEPA project has empowered women and has had a positive impact on the family incomes.

With respect to the specific issues raised in the Terms of Reference the following table summarises the main conclusions:

Table 6. Summary table on questions raised in the Terms of Reference

Related to terms of reference:	Observations:
Effectiveness, i.e. the extent to which the NORAD-financed project has succeeded in achieving its goal and purposes;	NORAD support has shown good results. Also due to the fact that there are many donors. Impact and evaluation studies are lacking. The PROCATEP project has been particularly successful.
Efficiency, i.e. the relation between the resources used and the results being achieved by the NORAD-financed project;	Not possible to state at this stage. Providing support through NGOs would probably have been cheaper. There are new approaches by using other partners such as private companies and <i>gremios</i> . Can still be further explored. However, it is a value having a state institution investing in training and methodological development. - Part of an institution building process.
The co-ordination and co-operation with other institutions and projects, in particular the support to INTA provided by the World Bank and COSUDE;	In comparison to the WB and COSUDE, NORAD's participation has been weak. The GON has not been active in securing donor co-ordination. INTA has been able to use NORAD funding in a flexible way to meet priority needs.
Sustainability, i.e. the extent to which INTA and other relevant institutions will be able to continue to provide research and extension services to farmers, and in particular female small holders	Without a significant input of donor funding for a long-term period, INTA will have serious difficulties to maintain itself as a functioning institution.
Evolution and present state of government policy on agricultural research and extension	The New Agricultural Technology Project supported by the WB, IFAD and COSUDE reflects the GON's new policy orientation. The private sector will play a stronger role. Pending on the outcome of the elections, important changes may be introduced.
The evolution and the state of attention given by INTA and co-operating entities at field level to female farmers in terms of problems addressed, and proportion of female to male farmers served,	There has been a continuous methodological gender development. Gender awareness has grown significantly and has also been translated into field activities. NORAD support has played significant role in mainstreaming gender within INTA. There still remain gender imbalances within INTA.
The evolution in the understanding of, and attention given to, gender issues among staff in INTA and collaborating entities (i.e. organisational culture);	The percentage of professional female staff has improved but there still remains a serious imbalance.
The effectiveness of the methodology used by the PROCATEPA project with regard to mainstreaming gender into INTA;	The shift from Women in Development (WID) to mainstreaming gender issues within INTA has been quite successful. To view the family as the target and by focussing on women in this context has greatly improved INTA staff's acceptance of the need for a gender dimension.
The appropriateness of the Government's	The GON approach has been strongly influenced by

<p>approach to research and extension, including the establishment of competitive funds for research and extension and the present and foreseen role of INTA;</p>	<p>donor policies, not least the WB. The new Project has many positive aspects, not least the long-term perspective proposed (16 years). There is a risk that donor support will continue to be fragmented.</p>
<p>Ministry of Agriculture and INTA procedures for monitoring the impact of the extension service at the farm level;</p>	<p>Monitoring with respect to activities carried out is quite good. There has yet to be established a system for monitoring the impact of INTA's activities on the standard of living of the beneficiaries Lots of information has been generated but there is a clear lack of definition of what kind of information is needed and for what.</p>
<p>How NORAD might follow-up its support to the sector in relation to the program financed by the World Bank, COSUDE and IFAD;</p>	<p>NORAD has a series of options. The new Technology Project has many features of a sector programme. NORAD should therefore avoid continuing bi-lateral project support. NORAD can remain a sleeping partner or become a lead donor in areas where Norway has special competence, e.g. agricultural university training and research (eg. In Tanzania.)</p>
<p>Links and collaboration with other agricultural research and extension projects and activities supported by Norway through FAO, CATIE and Norwegian NGOs in Nicaragua</p>	<p>CATIE-IPM relation is improving. CATIE has an upcoming evaluation that is soon taking place where this could further be verified. FAO-Norway collaboration has terminated, Utviklingsfondet has a relation to CIPRES and in the field there is some collaboration. UNAG has also more collaboration at the regional level.</p>

4. Recommendations

4.1 Background

The modalities for agricultural extension and research are changing rapidly in Nicaragua. The role of the State is continuously changing. As an example, the farmers are expected to contribute towards the costs of extension services and more of the services will be outsourced to private companies. INTA has played an important role in this development and will remain a key actor.

The new Agricultural Technology Project has a long term dimension, 16 years, composed of 4 phases, each having a time horizon of 4 years. The total budget is in the order of USD 180 million.

During contacts with some of the key donors (Sida, Danida and the Netherlands) it seems as if the Dutch are seriously considering providing core support to the new Project. Both Sida and Danida seem less interested in this Project.

4.2 Available options

Continue bi-lateral support

NORAD could continue to bi-laterally support INTA. This idea was proposed to the Team several times by INTA senior staff members. However, against the background of the emerging consensus on SWAP policies, this is not recommended by the Team. Nevertheless, to secure the continuation of gender activities within INTA, NORAD might consider providing some bridging funding until the direction of the new Project has become clearer and not least pending of the national elections in Nicaragua this year. The main focus should be to secure that gender issues remain high on the INTA agenda. However, this should not necessarily be considered as a recommendation but more as a possible option.

Phase out support

NORAD support to INTA has been largely successful. One major option would be to completely phase out the support to agricultural extension and research. There are other key actors engaged (WB, IFAD, COSUDE and probably the Netherlands) so there is no immediate need for additional resources.

Commitment to long term support

If NORAD decides to continue to support agricultural research and extension, it should have a **long term perspective** and it should also include a focus on institutional capacity building. In this context there are basically two options.

NORAD can remain a **sleeping partner** and channel the funding as core support to the Project as such. A dialogue with other like minded countries, particularly the Dutch would be appropriate. In this case, the lead donor agency would probably remain the World Bank.

But NORAD could also decide to become a **lead agency** within a certain component, since there are areas where Norway has special competence. This includes capacity building in agricultural university training, research and extension.

Given the long-term horizon for the Project several issues will emerge. In this scenario there are several possible areas of support. For example, agricultural know-how is growing very rapidly, not least GMO (genetically modified organisms) technology. INTA is mainly operating within the realm of old, albeit important, knowledge. Institutions in the South must adapt themselves to the rapid changes to better capture and benefit from agricultural research results world-wide. The Central American countries are small and cannot each sustain all encompassing university PhD training and research. In this context, there is a need to make a survey of existing agricultural university training and research with a Central American perspective and with a view to develop a long term strategic plan. Such an initiative should of course be of interest to Nicaragua, to other Central American countries, as well as to other donors.

The Project also involves agricultural competitive research funding moulded along existing lines of donor funding. Norway has significant experience in this field and could consider financing this part of the Project. (Fondo de Apoyo a la Investigación Tecnológica Agropecuaria de Nicaragua - FAITAN). In this context NORAD could also continue to support INTA as a more active partner.

On the one hand, SWAPs permit donors to support national development programmes together with other donors, without engaging itself in the process. On the other hand, if NORAD would become more than a sleeping partner it would have to allocate and/or contract human resources to play a more active role together with the GON and not least with other donors. This is by itself is an important objective, namely to move from bi-lateral fragmented project support to national programme support.

**REVIEW OF NIC-032 INTA / AGRICULTURAL EXTENSION
PROJECT**

Volume II - APPENDICES

Final Report

Amsterdam, 25 September 2001
Dr. Tom Alberts, Team leader
Dr. Olga Baires
Ms. Alice M Ennals

Table of content

APPENDIX 1. PROYECTO CAPACITACION Y ASISTENCIA TECNICA A PRODUCTORAS AGROPECUARIAS -PROCATEPA-	25
APPENDIX 2. LIST OF DOCUMENTS CONSULTED	42
APPENDIX 3. TERMS OF REFERENCE	46
APPENDIX 4. NORAD SUPPORT TO INTA, EXCLUDING PROCATEPA.....	50
APPENDIX 5. LIST OF PERSONS MET.....	65

APPENDIX 1. PROYECTO CAPACITACION Y ASISTENCIA TECNICA A PRODUCTORAS AGROPECUARIAS -PROCATEPA-

INTRODUCCION

En el marco de la evaluación del apoyo de NORAD al Instituto Nicaragüense de Tecnología Agropecuaria -INTA-, se presentan los resultados del estudio de evaluación del Proyecto de Capacitación y Asistencia Técnica a Productoras Agropecuarias -PROCATEPA-.

El objetivo del apoyo noruego estuvo orientado a apoyar y complementar los esfuerzos de Nicaragua en desarrollar el sector agrícola. Las metas estuvieron orientadas a una producción agrícola incrementada, diversificada, sostenible y rentable para las familias rurales nicaragüenses, con énfasis en la equidad entre hombres y mujeres.

Los objetivos generales de la evaluación fueron:

- a) Medir el logro de los objetivos y los resultados esperados de PROCATEPA FASE II, tal como se describen en el Convenio firmado el 14 de noviembre de 1996 y los adendum subsiguientes
- b) Medir el impacto de PROCATEPA FASE II, en cuanto a una corriente sensible al Género, dentro del modo de operación del INTA

Se definieron los términos de referencia (ver anexo) los cuales determinan el contenido de la presente evaluación.

Para alcanzar los objetivos de la evaluación, además de la revisión bibliográfica, se estableció un proceso participativo en el cual se realizaron las siguientes actividades:

- a) Entrevistas con responsables de programas y especialistas, equipos técnicos (extensionistas), del nivel central y de dos zonas de trabajo: a) B-3 que comprende Estelí, Matagalpa, Jinotega, Madriz y Nueva Segovia; b) C-3 que comprende RAAN (Waspán) Boaco, Chontales, Zelaya Central, Río San Juan.
- b) Entrevistas a Grupos de Productores y Productoras provenientes de las zonas en mención.
- c) Visitas a fincas de referencia en La Peña, Chontales; Teustepe, Boaco; La Laguna, Estelí.

Este proceso fue muy rico, dado que permitió identificar alcances del proyecto que no están descritos en el último informe con fecha de mayo 2001²². Claro está, que estos resultados identificados son cualitativos, mientras no se han realizado estudios cuantitativos para demostrarlos. Un aspecto muy difícil de medir es la rentabilidad de la tecnología aplicada de parte de las familias participantes dado que no se tienen aún disponibles datos cuantitativos; sin embargo, en las entrevistas quedó evidenciado que las familias aplican las tecnologías que pueden ser rentables para ellas, ya que se promovieron a través de un fondo revolvente y de un compromiso de retorno de parte del productor o la productora que firmo el convenio.

²² Proyecto de Capacitación y Asistencia Técnica a Productoras Agropecuarias -PROCATEPA FASE II, INFORME FINAL-, INTA, Managua, mayo 2001.

El logro de los resultados previstos así como otros resultados cualitativos, son producto del trabajo con el enfoque de familia en PROCATEPA FASE II, que permitió la ampliación de la cobertura, tanto de mujeres como de hombres, pasando de atender 80 mujeres y 19 hombres en la Primera Fase (90-94), a definir para la segunda fase (96-98) 552 familias pequeñas y medianas productoras rurales. Con la extensión del proyecto hasta el año 2000, se previó atender en total de 3,000 familias, pero esta meta se sobrecumplió, ya que el fondo revolvente permitió llegar a 5,904 familias, de las cuales el 46% del total son mujeres (2, 904).

De manera que se puede decir que, el proyecto PROCATEPA FASE II, socialmente, fue rentable. PROCATEPA FASE II, ejecutó en total \$USA 1, 049, 398.26 (un millón cuarenta y nueve mil trescientos noventa y ocho mil dólares con veintiséis centavos), que dividido entre las 6,000 familias que atendió hasta el momento actual, da un promedio de \$174. 90 por familia. El INTA aportó una contrapartida del 21% del monto financiando equivalente a C\$ 3,223,519.00 (tres millones doscientos veinte y tres mil quinientos diecinueve córdobas)²³.

Queda pendiente validar el nivel de adopción de las tecnologías propuestas, las preferencias de manera diferenciada entre hombres y mujeres, la rentabilidad y la sostenibilidad, ya que el proceso evaluativo pudo solamente identificar tendencias de la aplicación tecnológica. Este estudio permitirá valorar la pertinencia de PROCATEPA, como modelo de proyecto necesario en el trabajo de GTTA con familias pobres rurales, principalmente en los municipios priorizados en la estrategia reforzada de reducción de la pobreza. Según las entrevistas con el equipo técnico nacional, no hay financiamiento previsto para este tipo de proyectos.

Es importante destacar que las familias entrevistadas le encuentran sentido a la capacitación y asistencia técnica y a la promoción de tecnologías de parte del INTA, únicamente si las familias tienen acceso a fondos (en especie) para ejecutar sus propio proyectos, principalmente las mujeres. En el marco de la estrategia reforzada de reducción de la pobreza y la consulta con grupos rurales pobres y extremadamente pobres²⁴, quedó claramente establecido que capacitación y asistencia técnica dirigida a estos grupos, sin microproyectos concretos, no tiene sentido, y estos últimos solo es posible con proyectos tipo PROCATEPA.

En el capítulo siguiente se entrará más en detalle sobre PROCATEPA FASE II, sus diferentes etapas y el contexto favorable actual en el INTA para realizar la GTTA en condiciones de equidad para hombres y mujeres.

²³ El dato no se brinda en dólares (\$USA).

²⁴ Informes de los Talleres de Consulta sobre la estrategia reforzada de reducción de la pobreza, con grupos rurales y urbanos pobres y extremadamente pobres de los Departamentos de Madriz, Nueva Segovia, Matagalpa, Jinotega, Boaco, RAAS, RAAN, Río San Juan (coordinados y ejecutados por la Dra. Olga Baires), SETEC, Managua, diciembre 2000-mayo 2001.

ANTECEDENTES Y CONTEXTO

Antecedentes históricos

El Proyecto de Capacitación y Asistencia Técnica a Productoras Agropecuarias Fase I, fue diseñado y ejecutado para el período 1990-1994, de parte del Ministerio de Agricultura y Ganadería (MAG), atendiendo la demanda de mujeres campesinas de León, Chinandega, Masaya y Carazo, en un esfuerzo por satisfacer de manera diferenciada sus necesidades productivas y tecnológicas, ya que diversos estudios de esa época²⁵ demostraron que las mujeres estaban sin acceso a los servicios de Generación y Transferencia de Tecnología Agropecuaria (GTTA).

Esta primera fase, se implementa con el enfoque de “mujer y desarrollo”, es decir la atención específica a las mujeres sin involucrar a la familia, pues se concebía que facilitándole el acceso a los recursos y beneficios del proyecto, directamente a las mujeres, su posición cambiaría. El proyecto no se cruzaba con los otros programas del MAG, lo que dio por resultado, un proyecto con poco apoyo institucional.

Con la creación del Instituto Nicaragüense de Tecnología Agropecuaria (INTA), PROCATEPA se trasladó a esta nueva institución donde terminó la primera fase. El INTA, más especializado en GTTA, viendo la importancia del proyecto, diseñó la segunda fase. Después de un proceso de evaluación ex-ante (1995) con los equipos técnicos nacionales y regionales, PROCATEPA FASE II definió, que su acción debía cubrir a toda la familia, y desde ese ámbito atender a las mujeres, es decir se empezó a visualizar el enfoque de “género y desarrollo”, ya que la problemática productiva y tecnológica de las mujeres no solo es de ellas, sino que es de la familia, de la comunidad y de la sociedad en su conjunto.

De esta manera PROCATEPA FASE I, que atendía únicamente a 80 mujeres y 19 hombres con capacitación y asistencia técnica para la producción de granos básicos en parcela²⁶ y apoyo a la organización social (colectivos de mujeres), pasó a ofertar 12 tecnologías a 5,904 familias²⁷, hombres, mujeres y jóvenes²⁸, con perspectiva de equidad, rentabilidad y sostenibilidad (intereses estratégicos) de la unidad económica familiar como un núcleo integral, donde los hombres y las mujeres tienen roles diferenciados y demandas tecnológicas diferenciadas para desarrollar sus actividades productivas.

PROCATEPA Fase II, se insertó en la planificación global institucional. La asistencia técnica y la capacitación además cruzaban los programas promovidos por el INTA: producción de semillas; suelo, agua y agroforestería; post-cosecha, granos básicos; manejo integrado de plagas; producción de animales, y cultivos diversos. Este es un salto de calidad muy

²⁵ El SNV de Holanda en Nicaragua, ha realizado diferentes estudios sobre la actividad productiva de las mujeres campesinas, identificando que la mayoría de mujeres estudiadas, ejercen su actividad en el patio; pero nunca ha recibido ni capacitación, ni asistencia técnica, ni crédito para mejorar su producción. Pocas mujeres cultivan en parcela y son socias de cooperativas..

²⁶ El acceso a parcelas de tierra de parte de las mujeres es reducida, ya que solo llega por herencia o como viuda que fue favorecida por la reforma agraria; eso explica el reducido número de familias atendidas en la primera fase.

²⁷ Superando la meta de 3,000 familias.

²⁸ Este proyecto de jóvenes está siendo financiado por la Fundación Kellogs y FAO.

importante en PROCATEPA II. De esta manera se cubrieron dos modalidades de atención tecnológica:

- a) ATP1, la clientela, hombre o mujer paga una pequeña parte (10C\$)²⁹, el resto es subsidiado. En esta modalidad se atendieron 4,904 familias, 2,248 mujeres (50%),
- b) ATPM, es totalmente gratuita en zonas extremadamente pobres como Waspán³⁰. En esta modalidad se atendieron 1,410 familias, 452 mujeres (32%).

Contexto actual

Se reconoce que el aporte de las familias de la pequeña y mediana producción campesina, genera el 60% del valor bruto de la producción; 42% de los rubros de exportación; 70% de los granos básicos; 78% de la producción ganadera. Mas específicamente, las familias de la pequeña y mediana producción, participan en el 99% de la producción de frijol; 96% de la producción de maíz; 77% de la producción de ajonjolí (sesam); 64% de la producción de sorgo, según un estudio de FIDEG 1994-1995.

El aporte de los géneros al valor agregado de la producción agropecuaria se manifiesta de la siguiente manera: en café y ajonjolí, las mujeres aportan el 32%, los hombres el 68%; en granos básicos, 18% y 82% respectivamente; en crianza de ganado menor, las mujeres aportan el 73% y los hombres el 27%, según datos obtenidos por el mismo estudio de FIDEG 1995-96. Otros organismos como el SNV-Holanda, ha venido realizando desde inicios de los 90, diversos estudios para visibilizar las actividades productivas de las mujeres campesinas, destacando otro elemento interesante de los sistemas de producción, el subsistema Patio, cuyo manejo tradicionalmente ha estado en manos de las mujeres; pero invisibilizado en las estadísticas locales, sectoriales y nacionales. Esto explica porque no se concebía como parte integrante de los sistemas de producción y porque no se ofertaba tecnología a ser manejada por mujeres.

Concebir una política de género³¹ y los instrumentos metodológicos de planificación³² que aseguran el análisis y enfoque de género en la Generación y Transferencia de Tecnología Agropecuaria -GTTA- (diagnósticos, planificación de finca, seguimiento y evaluación) ha sido un proceso de 10 años desde que inicio PROCATEPA. Es necesario destacar, que además, hay otros proyectos que han contribuido también a la institucionalización del enfoque de género, como PRODETEC (Proyecto de Desarrollo Tecnológico/FINNIDA) y la asesoría del SNV-Holanda, a través de PROPATIO. En la actualidad, el Banco Mundial brinda asesoría al INTA, a través de Proyecto Nacional de Tecnología Agrícola en el marco del Programa Nacional de Tecnología y Formación Técnica Agrícola.

Proyecto único en su tipo

²⁹ Diez Córdoba.

³⁰ Ver Estrategia Reforzada de la Pobreza, SETEC, agosto 2000.

³¹ Política y Estrategia de Género en el INTA, Dirección de Extensión, Unidad de Género, INTA, marzo, 2001.

³² Instrumentos para la aplicación de la perspectiva de género, INTA, Unidad de Género, Dirección de Extensión, diciembre 1999.

Se destaca a PROCATEPA como el único proyecto que destinó recursos específicos para los microproyectos diferenciados por género, permitiendo llevar a la práctica el análisis y enfoque de género en la GTTA, fortaleciendo no solo a la clientela beneficiada (hombres y mujeres), sino a los/as extensionistas en el rol de capacitadores/as y asesores/as en GTTA.

El INTA reconoció que:

- Los principales sujetos y protagonistas del desarrollo agropecuario son las familias rurales, constituidas por hombres y mujeres.
- Las familias trabajan por un objetivo común, sin embargo, cada uno de los miembros desempeñan roles diferentes.
- El aporte del trabajo de la mujer nicaragüense representa una cuarta parte del valor agregado del sector agropecuario (FIDEG, 1997).

El INTA pudo así definir una premisa, “atender la clientela masculina y femenina, considerando sus necesidades básicas e intereses tecnológicos, lo que implica que en la unidad productiva familiar se atenderán a hombres y mujeres en las actividades y metas productivas que cada quien realiza a corto y largo plazo, a fin de lograr un desarrollo tecnológico, económico y social igualitario para ambos”.

Las etapas³³ que se diferencian en este esfuerzo del INTA, en el marco del Proyecto de Capacitación a Mujeres Agropecuarias son las siguientes:

Primera Etapa o Etapa Inicial, 1992-1995. Su objetivo fue crear las condiciones y mecanismos para incorporar el enfoque de género en el proceso de Generación y Transferencia de Tecnología Agropecuaria (GTTA). Se realizaron las siguientes acciones: a) diagnósticos para el conocimiento de la clientela femenina en más de 20 Dominios de Recomendación, en 7 agencias del INTA en las regiones III y IV (Masaya y Carazo respectivamente); b) capacitación a técnicos/as del INTA en desarrollo rural con enfoque de género; c) inclusión de mujeres en la atención tecnológica.

Segunda Etapa, o Definición, 1995-1997. Su objetivo fue institucionalizar el enfoque de género. Se realizaron las siguientes acciones: a) creación de la unidad de género³⁴; b) definición de una política de género y una estrategia para su implementación; c) definición de un plan de capacitación; d) definición de indicadores cuantitativos para el S y E; e) incremento de la clientela femenina.

Tercera Etapa, o Ajuste, 1997-2000. Su objetivo fue desarrollar las capacidades técnicas y metodológicas para la aplicación del enfoque del género en los proyectos del INTA. Se realizaron las siguientes acciones: a) Mejoramiento de la identificación de la demanda de las mujeres; b) Extensión de PROCATEPA II a todas las Zonas; c) Firma de convenios con productores y productoras; d) Estudios de Patio en la Zona B-3 y B-5³⁵ (con asesoría de PROPATIO, SNV-Holanda); e) Registro de información estadística desagregada por sexo; f) Elaboración de guías tecnológicas de interés para la producción femenina.

³³ Evolución del proceso de incorporación del enfoque de género en el INTA, documento síntesis, INTA, Managua, mayo 2001

³⁴ Ubicada en la Dirección de Apoyo a la Producción. Posteriormente pasó a la Dirección de Extensión, donde su impacto fue mayor a nivel institucional.

³⁵ B-3: Estelí, Madriz y Nueva Segovia; B-5: Matagalpa y Jinotega y RAAN.

Se produjeron resultados que no estaban previstos a nivel institucional:

- a) Diagnóstico institucional con perspectiva de género, el cual aportó información respecto a los niveles de conocimiento en el INTA para aplicar el enfoque de género; se detectó baja incidencia en la planificación, pero hubo mayores avances en la Transferencia.
- b) Se realizó la sistematización de experiencias, que permitió una mejor identificación de la problemática y de la participación de las mujeres en actividades productivas.
- c) Se fortalecieron los procedimientos metodológicos a través del diseño de instrumentos para aplicar género en las diferentes etapas y actividades del proceso de GTTA³⁶.

El último período de esta etapa hasta el momento actual se caracterizó por la aplicación de manera sistemática, de los pasos metodológicos de la asistencia técnica, aplicados con la familia con enfoque de género:

- Firma de convenios con la clientela, hombres y mujeres.
- Plan de producción conjunto.
- Plan de capacitación.
- Visitas sistemáticas a los grupos
- Aplicación del instrumento “Planificación y Administración Empresarial de Finca” (PAEF).
- Atención tecnológica bajo el enfoque de sistemas de producción.

Según el Informe Final de PROCATEPA³⁷, se cumplió en un 100% las actividades propuestas en los planes operativos y se logró un sobrecumplimiento en actividades productivas demandadas por las familias productoras, alcanzando satisfactoriamente los resultados.

En el capítulo siguiente se analiza el logro de los objetivos, de los resultados propuestos y se describen los resultados cualitativos identificados en el proceso de la evaluación.

COMENTARIOS GENERALES SEGÚN LOS TÉRMINOS DE REFERENCIA

Los comentarios se sustentan en los términos de referencia definidos para la Misión Evaluadora.

Eficiencia

PROCATEPA FASE II definió el siguiente Objetivo de Desarrollo:

“Contribuir a la atención equitativa a mujeres y hombres de las familias pequeñas y medianas productoras rurales de manera que mejoren su producción en términos de cantidad y calidad, mediante la diversificación de su producción, el incremento de su productividad, rentabilidad y sostenibilidad”.

³⁶ Instrumentos para la aplicación de la perspectiva de Género, INTA, Diciembre 1999.

³⁷ Con fecha Enero 2001.

El proyecto hacia el año 2000 alcanzó una cobertura del 46% de mujeres, del total de familias atendidas al año 2000, lo que al mismo tiempo es un sobrecumplimiento de la meta última de atención de 3,000 familias al año 2000, a 5,907 familias en el proceso de demanda-oferta tecnológica.

Se puede determinar que las tecnologías promovidas por PROCATEPA fueron aplicadas, unas más que otras, por las familias beneficiadas. Pero la meta definida de al menos 2-3 tecnologías adoptadas por familia no se puede determinar en el momento actual, dado que aún no existe esta información sistematizada. Medir la adopción de las tecnologías propuestas queda pendiente (estudio de validación social, económica, técnica, alimentaria y ambiental), que permita al mismo tiempo validar a PROCATEPA como proyecto modelo.

Es importante constatar que productores y productoras entrevistados/as, aseguran manejar bien lo práctico y lo teórico adquirido en el proyecto para el manejo de la tecnología aplicada, aunque es importante seguir con la capacitación y asistencia técnica, ya que su demanda se complejiza y crece.

Ya se planteó que no se puede medir con datos cuantitativos la rentabilidad de las tecnologías, pero los y las productoras entrevistadas y visitadas en las fincas de referencia, aseguran que es rentable, ya que la calidad de las especies y razas mejoradas les han permitido un ingreso que antes no lo tenían, por otro lado señalan que ha disminuido la emigración como mano de obra temporal a Costa Rica, dedicándole más tiempo a su finca, es decir hay mayor ocupación del tiempo disponible durante todo el año. Este es un indicador cualitativo de impacto no previsto muy importante.

El INTA, está en proceso de la recuperación del fondo revolvente de PROCATEPA FASE II, que permitirá seguir atendiendo a más familias. Hay una recuperación que va desde el 50%-100%. Según opinión de, personal técnico entrevistado de las agencias regionales, esta recuperación tiene mucho que ver con el compromiso de los y las extensionistas y con el interés de la Gerencia. Es un reto para el INTA la sostenibilidad de este esfuerzo realizado y el avance en la atención con equidad en la GTTA.

Objetivos Inmediatos

Objetivo Inmediato 1

“Aportar experiencias para la atención adecuada al género femenino, mediante el conocimiento de sus necesidades prácticas y estratégicas de manera que se realicen acciones de GTTA diferenciadas por género”

PROCATEPA abrió la brecha para el abordaje de los aspectos de género a nivel institucional, de manera que se adoptará en la vida laboral. Esto permitió el cumplimiento de este objetivo inmediato, el cual puede medirse por el esfuerzo importante en la institucionalización del enfoque de género, que se expresa en el diseño de la política y su difusión, la capacitación de los y las extensionistas y la elaboración de instrumentos metodológicos para las diferentes fases de la Generación, Transferencia de Tecnología Apropriada, con lo cual salió fortalecido el INTA. En los talleres participativos en Estelí y Chontales con los/as extensionistas pudo

verificarse que hay un proceso de apropiación del enfoque de género en el trabajo de extensión. Lo mismo pudo verificarse con los especialistas y metodólogos/as, tanto del nivel central como regional. También fue importante la transversalidad de todos los programas de INTA en PROCATEPA.

Se identificaron otros logros respecto a productores y productoras:

- ◆ Acceso de mujeres al conocimiento tecnológico y la experiencia en manejo de fondos revolventes (especies, efectivo); ha mejorado su autoestima.
- ◆ Alternativas tecnológicas difundidas para las mujeres, han generado el ahorro de tiempo (acarreo de agua por ejemplo) e incremento de ingresos a las familias.
- ◆ Los hombres expresan satisfacción por la participación y acceso de las mujeres en los servicios tecnológicos.
- ◆ Se formó la red natural de productoras de semilla.
- ◆ Tienen facilidad como multiplicadoras de tecnología.

Se identificaron los siguientes logros respecto a los Extensionistas:

- ◆ Han aprendido a identificar la problemática y participación de las mujeres en actividades productivas.
- ◆ Han logrado mayor incidencia de las mujeres en los procesos de planificación.
- ◆ Han logrado mayores avances en la aplicación del enfoque de género en la transferencia.
- ◆ Los Extensionistas reconocen que la clientela femenina tiene las siguientes cualidades:
 - Mayor cultura de pago, son más receptivas al cambio tecnológico, son más exigentes con los servicios de asistencia técnica, tienen más visión estratégica, son más responsables, son más francas, han ayudado a promover actitudes de cambio.

El INTA ha previsto una cuarta etapa para el 2001-2004, de Fortalecimiento del Enfoque Transversal de Género, cuyo objetivo es:

- ◆ “Fortalecer las capacidades institucionales en la aplicación práctica del enfoque de género en la GTTA, de manera que permita la toma de decisiones oportunas y adecuadas”.

Se prevé realizar las siguientes acciones: divulgación de la política de género; mejora en la identificación de la demanda tecnológica; aplicación de la metodología e instrumentos; incorporación de indicadores al sistema de seguimiento y evaluación (cualitativos); capacitación a prestadores de servicio; estudios de casos. Para ello cuentan con la asesoría del BM en el marco del Proyecto Nacional de Tecnología Agrícola que implementa INTA como componente del programa Nacional de Tecnología y Formación Técnica Agrícola.

Una demanda de las familias atendidas por PROCATEPA, planteada a satisfacer en esta misma etapa, es la capacitación y asistencia técnica en mercadeo y comercialización, organización empresarial y que se incremente el acceso a sistemas de riego artesanal, con énfasis en el 46% de mujeres atendidas. De esta manera se estará respondiendo a un interés estratégico de las familias. Esta línea de trabajo en el momento actual no está cubierta ni con el financiamiento del BM ni de COSUDE.

Objetivo Inmediato 2

“Incrementar el número de mujeres atendidas con los servicios de generación y transferencia de tecnologías (GTTA) ofrecidas por el INTA, dirigidas a la producción del género femenino”.

El logro de este objetivo puede medirse por el nivel organizativo alcanzado por las familias productoras atendidas. Se organizaron 359 grupos en 85 municipios, representado éstos el 56% del total de municipios del país, con una cobertura de 729 comunidades. Fue sumamente importante el acceso a microproyectos para las familias beneficiadas, principalmente para las 2,700 mujeres atendidas (46% del total 5,907), que les permitió por un lado, la adquisición de conocimientos en Generación y Transferencia de Tecnología Agropecuaria de forma práctica, manejar el producto de su trabajo, ser reconocidas sus capacidades y participar más activamente en la toma de decisiones a nivel familiar y respecto a la tecnología a aplicar.

Desde la perspectiva del INTA, la organización de la clientela significa primero, fortalecer las capacidades locales, para llevar a hombres y mujeres a niveles superiores gremiales y empresariales según su nivel de ingreso, producción y rentabilidad. En el momento actual no se han realizado estudios que indiquen la movilidad social de las familias de un nivel a otro. Sin embargo los hombres y las mujeres entrevistadas en las visitas de campo, sienten que la familia se ha empoderado con la adopción de metodologías de transferencia, como es por ejemplo la producción artesanal de semilla de frijol; han desarrollado capacidad de manejo tecnológico de cerdos para producción y monta (centros de producción porcina y monta), y para aves también (bolsón de aves), lo que les ha mejorado su ingreso.

Confirman haber mejorado las relaciones de género con una mayor interacción de los miembros de las familias en las diferentes actividades, tanto reproductivas como productivas por lo que las mujeres participan más libremente en las actividades de capacitación y asistencia técnica.

Este desarrollo de las mujeres ha llevado al surgimiento de una Red Natural de Productoras de Semilla a nivel nacional, que en los eventos de capacitación intercambian sus semillas. Esta forma natural de organización es un impacto social muy importante, el cual debe ser sustentado con más información. El rol tradicional de las mujeres, referido a la socialización familiar y comunitaria, las convierte en agentes potenciales para la masificación de la GTTA como elemento importante de la sostenibilidad social del proyecto. Otro aspecto de la sostenibilidad es, la recuperación del fondo revolvente, que permitirá ampliar aún más la cobertura poblacional, potenciando las capacidades familiares y de las mujeres en particular.

En estos mismos encuentros, pudo comprobarse la aplicación de las metodologías participativas propuestas (SARAR³⁸, Investigación en Finca-Extensión, Cascada³⁹) para: a) la identificación de problemas con las familias campesinas con énfasis en la atención a la problemática de las mujeres; b) el análisis de las propuestas tecnológicas como alternativas de solución, sobre su conveniencia y posibilidades económicas de la familia, aunque no se realizó el estudio de factibilidad con los diferentes aspectos que este requiere, como por

³⁸ Se refiere al rescate del saber autóctono de la gente, para el autodiagnóstico de su situación..

³⁹ Se basa en la atención a círculos compuesto por 10 personas, las cuales cada una atiende otras diez, llegando de esa manera a cubrirse una población compuesta de 100 personas por cada extensionista.

ejemplo, la factibilidad de trabajo con los F1, F2 y F3, que requiere al llegar al F3, comprar de nuevo un/a pura raza, como es el caso de los centros de producción porcina y de monta y bolsones de aves.

En todo caso, lo importante fue que las alternativas tecnológicas estuvieron como marco general la preservación del ambiente, la diversificación de la producción, la seguridad alimentaria, promoción de la participación comunitaria, reducción del atraso tecnológico e introducción de la perspectiva de género.

De manera general, puede considerarse que los objetivos inmediatos fueron alcanzados, únicamente está haciendo falta que, el sistema de seguimiento y evaluación establecido, pueda ser ampliado para la generación de todos los indicadores que fueron definidos en este nivel como por ejemplo, cuantas familias adoptaron cuantas tecnologías, cuantas mujeres tienen realmente independencia personal y económica; para medir el desarrollo personal, familiar y comunitarios de las mujeres, que es otro de los indicadores, es importante la definición de criterios. El resto de indicadores previstos⁴⁰ a nivel de objetivos fueron medidos y se pueden verificar.

RESULTADOS

Los resultados previstos se pueden agrupar en dos bloques:

- a) Resultados para el reforzamiento de las capacidades institucionales. Las acciones principales fueron: contratación de personal; capacitación al personal; dotación de medios y equipos; asesorías y consultorías.
- b) Resultados para el reforzamiento de las capacidades del grupo meta. Las acciones principales fueron: organización de las los y las participantes en el proyecto; capacitación a los hombres y mujeres de las familias seleccionadas, para la GTTA; dotación de materiales e insumos (microproyectos); asesoría de parte del equipo técnico a los hombres y mujeres de las familias seleccionadas, para la GTTA.

Este reagrupamiento no es rígido, dado que también hay una interrelación entre los resultados; al mismo tiempo que hay reforzamiento institucional, el mayor beneficiario es el grupo meta. El reforzamiento de las capacidades del grupo meta con su efecto positivo, beneficia a la institución por su éxito alcanzado. Se adoptó este agrupamiento para facilitar el análisis de conjunto.

Para el bloque a) se definieron los siguientes Resultados:

1. Conformado y consolidado el equipo que laborará en PROCATEPA, con personal capaz de aplicar la metodología del proyecto y que aportará a la introducción de la perspectiva de género en el INTA.
2. Aplicado de parte del INTA, un enfoque de “sistema de finca y de análisis de género” con las familias atendidas por PROCATEPA.

⁴⁰ Ver el documento del Proyecto de Capacitación y Asistencia Técnica a Productoras Agropecuarias, Fase II 1996-1998, Managua, Nicaragua, 6 de marzo de 1996, páginas 13 y 14.

3. Establecido el sistema de monitoreo y evaluación con información pertinente, desagregada por género.

Estos tres resultados fueron alcanzados satisfactoriamente, así lo indica el documento del Informe Final, cuyas actividades fueron realizadas en un 100%. Pudo ser constado por medio de las entrevistas y trabajo de equipo con responsables de programas y especialistas, y extensionistas.

El primer resultado se logra con la creación de la Unidad de Género, adscrita primeramente en la Dirección de Servicios Técnicos de Apoyo. Posteriormente en la Dirección de Extensión lo que fue estratégico. Contó con una Coordinadora a nivel nacional, un asistente de coordinación y un equipo de apoyo (un conductor y una secretaria); un gerente del proyecto por cada una de las cinco zonas y seis técnicos como apoyo a los procesos de extensión, organización y seguimiento a la ejecución del proyecto. El trabajo de este equipo impactó a nivel general de tal manera, que se institucionalizó el enfoque de género a través de su política de género, aplicada por el personal. Es importante destacar el apoyo decidido de la Dirección General y de la Dirección de Extensión.

El segundo resultado también se alcanzó desde el momento que el personal del INTA adoptó para la GTTA, el enfoque de finca/familia/género, aumentando de esta manera la cobertura del grupo meta considerablemente. Para lograrlo, se capacitó y formó a todos los equipos de trabajo en el conocimiento de los instrumentos metodológicos y planteamiento teóricos necesarios para la implementación de los enfoques a nivel de campo, logrando así el efecto deseado.

En este sentido, se logró editar en diciembre de 1999⁴¹, un documento guía que paso a paso permite a los y las extensionistas implementar cada fase de la planificación en finca de manera sostenida hasta el momento actual:

- a) Fase de diagnóstico
- b) Fase de planificación
- c) Fase de ejecución
 - Generación
 - Transferencia
- d) Seguimiento y evaluación

El mismo documento aporta los conceptos básicos de la perspectiva de género y los elementos a considerar en el análisis de género. En la medida que el personal técnico del INTA sea estable, este resultado es sostenible, de lo contrario el INTA deberá permanecer en procesos de capacitación para los nuevos ingresos.

Respecto al tercer resultado, es loable el esfuerzo realizado por el establecimiento del sistema de monitoreo y evaluación, mediante un software (MEVA) que permite el seguimiento de la ejecución física de los proyectos. Este sistema es parte integral del sistema de seguimiento y institucional.

⁴¹ Instrumentos para la aplicación de la perspectiva de género, INTA, diciembre 1999.

El sistema de monitoreo y evaluación es alimentado de los Libros de Seguimiento (que se encuentran en cada una de las agencias) de cada uno de los proyectos que el INTA ejecuta en su plan operativo anual, en el cual se incluyen el plan de actividades de los proyectos con inversión pública como es el caso de PROCATEPA.

Existe también el registro de productores y productoras, que debe proporcionar información sobre todos los procesos implementados y su nivel de incidencia en la familia campesina. Según se pudo evaluar, en este aspecto todavía existen debilidades en la obtención de toda la información que permita por ejemplo, determinar cuantas familias han adoptado cuantas tecnologías de las propuestas por PROCATEPA. Sin embargo, el sistema ya brinda información desagregada por género, la cual pudo ser utilizada en la evaluación presente. Falta el cruce de algunas variables e indicadores de PROCATEPA para completar el cuadro evaluativo. En este sentido es necesario sumar un esfuerzo más en la revisión de los indicadores cuantitativos y cualitativos de objetivos y analizar su posible combinación.

En el sistema de monitoreo y evaluación la familia campesina juega un rol importante, dado que los registros productivos y reproductivos es responsabilidad de las familias llenarlos, con la asistencia del personal técnico. Estos registros alimentan los cuadros de salida que entran al sistema de monitoreo y evaluación.

Para el bloque b) se definieron los siguientes Resultados:

1. Realizados los diagnósticos participativos de la situación en que se encuentran las unidades productivas familiares en 1996, así como conocida la relación entre los miembros de las familia y el entorno, desagregado por género, que conforma las bases de datos que permitiría conocer el estado inicial, medio y final.
2. Aplicado un método participativo de GTTA, en donde las mujeres y los hombres de las familias atendidas, han tenido acceso a la toma de decisiones sobre las acciones de GTTA que se ejecutarán, así como la organización para la ejecución y desarrollo de actividades de GTTA y la consecución de otros servicios.
3. Adoptado por las mujeres y los hombres de las familias atendidas, las siguientes alternativas tecnológicas transferida por PROCATEPA, tales como manejo y reproducción de aves y cerdos mejorados, huertos familiares, bombas de mecate, entre otras.

Es importante destacar que el primer resultado no solo se cumplió para PROCATEPA al inicio del proyecto, para el conocimiento de la problemática productiva, tecnológica, económica y social e identificación de las familias participantes, sino que en 1998, el INTA incluyó la perspectiva de género en los diagnósticos agrosocio-económicos en todas las áreas de atención. Con esta información de base se elaboran los planes operativos. De esta manera este resultado se cumplió con un efecto positivo a nivel institucional.

Para alcanzar el segundo resultado satisfactoriamente, además de la implementación de metodologías participativas (SARAR, IFE, Cascada) con grupos para su efecto multiplicador, el proceso de transferencia de tecnología se desarrolló bajo dos modalidades de atención:

- a) Asistencia Técnica Participativa Cofinanciada (ATP1), dirigida a familias productoras con potencial de desarrollo, agrupadas o de forma individual; estas familias asumen una parte del costo de la asistencia técnica, C\$10 (diez córdobas) cada mes durante un año que dura el convenio firmado, sea grupal (no más de 20 personas) o individual (con el hombre y/o con la mujer) que deciden aplicar determinada tecnología.

Basado en el diagnóstico inicial que se levanta durante la firma del convenio, en conjunto con el grupo se elabora el plan de producción para cada finca, paralelamente se elabora el plan de capacitación grupal, basado en el plan de producción y en la necesidad del grupo. En esta modalidad se atendieron 4, 487 familias, 50% mujeres.

- b) Asistencia Técnica Masiva (ATPm). Como su nombre lo indica, esta modalidad de asistencia técnica se basa en los pasos metodológicos siguientes: selección de las zonas a atender identificación de comunidades y dominios de recomendación; identificación y establecimiento de comunidades céntricas; identificación y establecimiento de fincas de referencia; selección de opciones tecnológicas de acuerdo a las familias productoras; puntualizar las actividades de transferencia. Bajo esta modalidad se atendieron 1,417 familias, 33% % mujeres. Esta modalidad está concentrada en Waspán, uno de los municipios con pobreza severa, según el perfil de pobreza.

En los encuentros organizados en Estelí y Juigalpa en el proceso de esta evaluación, pudo constatar que los productores y productoras, manejan los pasos metodológicos promovidos por PROCATEPA y aplicados por el INTA en todas sus zonas, lo que conlleva al empoderamiento de las familias en el manejo sus fincas.

El logro del tercer resultado se puede evaluar de positivo por el cumplimiento de todas las actividades propuestas, superando la cobertura poblacional prevista como pudo observarse en el resultado anterior.

De las tecnologías ofertadas⁴², no se tiene información exacta de cuantas tecnologías fueron las más aplicadas por las familias atendidas por el proyecto; pero se puede identificar la tendencia hacia: a) los bolsones de aves, habiendo entregado 1,615 a igual numero de familias; b) centros de reproducción porcina y de monta, con la entrega de 831 centros y un beneficio a 2,093 por el servicio de monta; c) producción de semilla artesanal, beneficiando a 1,100 familias con una producción de 776 mz; d) huertos hortícolas y frutales, beneficiando a 842 familias. Las otras tecnologías tienen una preferencia empezando por las bombas de mecate, estufas mejoradas, silos metálicos, botiquines veterinarios y ovejas Pelibuey (51 centros reproductivos), las cuales en el momento tienen una demanda significativa. Otras tecnologías se promovieron en campañas masivas como el apoyo para el desarrollo de las tecnologías de producción animal; los viveros forestales se contabilizan por las plántulas producidas (286,730), más que por el manejo en manos de las familias. Se montaron 92 parcelas de diversos rubros.

La capacitación y asistencia técnica estuvo acompañada de la divulgación de material técnico para productores y productoras, con un total de 123,618 plegables, de los cuales 47% en

⁴² 1. Bolsones avícolas; 2. Centros de reproducción porcina y de monta; 3. Centro de reproducción de ovejas pelibuey; 4. Botiquines veterinarios; 5 Apoyo para el desarrollo de las tecnologías de producción animal; 6. Cultivos diversos (huertos hortícolas y frutales); 7. Bombas de mecate; 8. Estufas mejoradas; 9. Post-cosecha (silos metálicos); 10. Producción de semilla artesanal; 11. Viveros forestales; 12. Otras alternativas tecnológicas a través de parcelas demostrativas PDT y PDB.

temas de producción animal, 23% en granos, básicos y el 30% en cultivos diversos; se distribuyeron 150 folletos en temas sobre manejo agronómico de hortalizas y frutales, manejo de aves y cerdos, y se contrataron 4 emisoras para la difusión de mensajes tecnológicos. En la visita de campo a Estelí, pudo constatar que estos mensajes todavía se transmiten.

Según el informe final las actividades se cumplieron en un 100%. Sin embargo en la visita a Chontales, se hicieron observaciones en cuanto a fallas en la asistencia técnica para las aves, donde la vacunación no surgió efecto en algunos casos, lo que ocasionó la muerte de los animales de algunas familias atendidas. Pero fue interesante darse cuenta que las familias, principalmente las mujeres entre ellas se ayudan mutuamente, de esta manera las que perdieron sus aves, pudieron recuperarlas ya que recibieron donaciones de huevos para encubar; principalmente esta tecnología es de fácil transmisión y masificación, las mismas mujeres se encargan de transmitirla a sus vecinas, donando huevos para la experimentación. Se obtienen 40 huevos más con las gallinas mejoradas que con las criollas, es decir que pasaron de producir 80 huevos, a 120 por postura.

No se obtuvieron casos de muerte de cerdos/as; pero si hubo casos de esterilidad, en este caso los/as técnicos/as intervienen buscando solución al problema. Se visitaron fincas de referencia, donde el manejo de cerdas para cría o cerdos para monta, una vez pagada la deuda deja un ingreso importante para las familias. Por ejemplo una monta cuesta C\$200⁴³ (doscientos córdobas) y pueden realizar en el mes de 6-10 montas; el pago lo recibe en especie con dos cerditos o en efectivo. La producción porcina también deja sus ganancias, en todo caso percibe C\$100 más por un cerdito de raza (\$250) que por uno criollo (C\$150).

Toda esta información aún no está sistematizada, por lo que es importante realizar un estudio cuantitativo que permita medir el impacto de la aplicación y/o adopción tecnológica en la economía familiar campesina.

Las otras tecnologías ofertadas como las bombas de mecate, donde hay pozo, no hay duda de su impacto en la economía de tiempo y de energía de parte de las mujeres y de las niñas, las encargadas de mantener agua en la casa. No se visitaron patios productivos (donde hay pozo) que permitiera socializar con la familia su efecto positivo en la dieta alimenticia.

La cocina CETA, según el testimonio de una productora, permite no solo ahorrar leña, sino mejorar la salud, pues sus pulmones ya no absorben tanto humo. Esta tecnología necesita más promoción

La producción de semilla artesanal es una tecnología importante para la familia, también necesita más promoción, dado que en las entrevistas grupales con los productores y productoras, se pudo detectar que la influencia de otros organismos que donan semillas, llevan a las familias a no interesarse en esta tecnología, en detrimento de la misma; sin embargo está surgiendo la red natural de productores de semillas que intercambian entre si.

CONCLUSIONES SEGÚN DEMANDA DE LOS TÉRMINOS DE REFERENCIA

⁴³ Aproximadamente \$15 (quince dólares).

1. De manera global, puede concluirse que PROCATEPA se ejecutó con eficacia, a pesar de que el Huracán Mitch, interrumpió y atrasó ciertos procesos que se retomaron más tarde con éxito, aunque faltan algunos datos cuantitativos para su afirmación en 100%. Dicha situación permite determinar la necesidad de continuar algunas acciones encaminadas a la realización de estudios cuantitativos, sea a través del estudio de casos o de una encuesta para ampliar el universo del estudio.
2. Asimismo puede afirmarse que se ejecutó con eficiencia, desde el momento que se sobrecumplió la meta de las familias atendidas, con la modalidad de fondo revolvente. Aún hay posibilidades de mayor cobertura con la recuperación del fondo, el cual va del 50%-100%, según el interés del personal técnico y de los gerentes en cada zona. Este tipo de proyectos demuestra que para las familias pobres rurales, principalmente para las mujeres, la GTTA solo tiene sentido si tienen acceso a microproyectos concretos que al mismo tiempo les mejore el ingreso para hacer sostenible el esfuerzo, del INTA y de la familia misma.

Las pequeñas familias campesinas fueron responsables, principalmente las mujeres, respecto al compromiso adquirido con el fondo revolvente; en este caso, es más fácil pagar en especie que en moneda. Es necesario destacar el avance que existe en los grupos rurales con potencial para el desarrollo, que van superando paulatinamente el paternalismo, al demandar y adquirir compromisos con fondos revolventes manejados institucionalmente, con los cuales han demostrado su capacidad de cumplimiento y son una alternativa para emerger de la situación de postración⁴⁴.

3. La comprensión, atención y evolución del enfoque de género en la práctica, fue posible por la institucionalización del mismo y la definición de una política de género que es necesario implementar. El personal de dirección, responsables de programas y especialistas y equipos de campo han adoptado el enfoque de género en su práctica laboral.
4. Los pasos metodológicos utilizados para la institucionalización del enfoque de género fue adecuada; esta experiencia se puede socializar con otras instituciones del mismo sector. Fue clave el traslado de la Unidad de Género de la Dirección de Servicios Técnicos de Apoyo a la Dirección de Extensión, teniendo mayor impacto a nivel institucional.

Los instrumentos metodológicos diseñados para el trabajo de GTTA, no dejó dudas sobre su adecuación y pertinencia, además que aclaró muy bien el procedimiento a seguir de forma participativa la planificación en finca con enfoque de familia y género. En el momento actual queda su adecuación a los tres nuevos proyectos⁴⁵ surgidos en la reciente reestructuración, en lugar de los siete programas con los cuales PROCATEPA trabajó el enfoque de género.

Es importante aclarar que para la nueva fase y en el marco de la reestructuración actual, los 7 programas mencionados del INTA, se convierten en 3 proyectos: a) proyectos de

⁴⁴ En los talleres de consulta en 8 Departamentos priorizados en la estrategia de reducción de la pobreza (SETEC, diciembre 2000-mayo 2001), fue importante valorar este avance y constatarlo; aunque también se destacó la vulnerabilidad de algunos grupos que necesitan de otro tipo de atención y que salen fuera del contexto del INTA.

⁴⁵ Proyectos en zonas no favorecidas; proyectos en zonas favorecidas; proyectos de investigación y desarrollo..

extensión para zonas en condiciones no favorables (ATPm); b) proyectos de extensión para zonas en condiciones favorables (ATP1 y ATP2); c) proyectos de investigación y desarrollo. Esto obliga a readecuar los instrumentos metodológicos diseñado para el trabajo de GTTA.

5. En el nuevo proyecto nacional de tecnología agrícola, acciones como las de PROCATEPA, no están concebidas, lo que es lamentable, dado que en el contexto actual de empobrecimiento, la GTTA para las familias a atender, no tiene sentido sino se facilita el acceso a microproyectos concretos, principalmente en el contexto de la estrategia de reducción de la pobreza.

En los talleres de consulta sobre la estrategia reforzada de reducción de la pobreza en 8 Departamentos priorizados⁴⁶, quedó evidenciado que en esas circunstancias, el INTA no logrará el efecto deseado, ya que dejará al descubierto esta demanda (microproyectos) de las familias rurales pobres; el INTA no tiene fondos para otros proyectos como PROCATEPA.

En la actualidad se plantea que uno de los imput del desarrollo multidimensional, es la reproducción social de la fuerza de trabajo, sin la cual no hay producción. Entonces si es tan importante, debe también pensarse en diversas tecnologías que alivien la carga de las mujeres, a quienes tradicionalmente se les ha asignado este rol. Es necesario destacar que los ejemplos de microproyectos tecnológicos dirigidos a disminuir el tiempo invertido en el rol de la reproducción social de la fuerza de trabajo, permiten mayor participación de los hombres, que al fin por su importancia es responsabilidad de ambos.

6. El INTA, tiene un buen sistema de monitoreo y seguimiento, solo falta definir más cruces de variables e indicadores par obtener información que sustente el impacto del proyecto en términos cuantitativos para medir adopción, rentabilidad y sostenibilidad.

RECOMENDACIÓN GENERAL

NORAD puede en el marco del gran proyecto nacional de tecnología agrícola (del programa nacional de tecnología y formación técnica agrícola), financiar las necesidades existentes en INTA que no serán cubiertos ni por BM ni por COSUDE, dado que sus componentes ya están ya delimitados. Por lo tanto necesita apoyo para iniciar la Cuarta Etapa de Fortalecimiento 2001-2004, la cual tiene como objetivo “fortalecer las capacidades institucionales en la aplicación práctica del enfoque de género en la GTTA, que permita la toma de decisiones oportunas y adecuadas”. Se plantean una serie de acciones que serán apoyadas por el BM y COSUDE, NORAD puede apoyar las siguientes:

1. Responder a la demanda de capacitación y asistencia técnica en mercadeo y comercialización, y organización empresarial, de las familias atendidas por PROCATEPA, con énfasis en el 46% de mujeres atendidas, a lo largo de estos 8 años, como un interés estratégico para el empoderamiento de las familias y cierre de la cadena productiva. Se considera haber logrado una capacidad instalada importante que permite

⁴⁶ Ver Informes sobre los talleres de consulta en 8 Departamentos priorizados, sobre la estrategia reforzada de reducción de la pobreza, Olga Baires, SETEC, diciembre-mayo 2001

dar este salto de calidad, principalmente con las familias atendidas en la modalidad de ATP1. Incrementar la promoción de las cocinas CETA dado los beneficios que trae para la salud de familia, en particular de la mujer. Debe pensarse en tecnologías ahorradoras de energía humana y del tiempo de la mujer invertidos en la preparación de tortillas (58 jornales al año), que al mismo tiempo permita una mayor interacción de la familia en esta actividad.

2. Responder al reto de la estrategia de reducción de la pobreza, principalmente con los grupos más empobrecidos de Nicaragua (como es el caso de Waspán)⁴⁷, atendidos en con la modalidad de ATPM, con los cuales la única alternativa es, capacitación y asistencia técnica con ejecución de microproyectos (fomento). PROCATEPA ha demostrado que la GTTA es exitosa para sacar a las familias de la pobreza, con esta perspectiva.
3. Estudiar la adopción tecnológica, para medir rentabilidad, sostenibilidad y tendencia de la adopción. Es importante conocer cuantitativamente, que tecnologías prefieren y porque, comparativamente con las tecnologías poco preferidas y porque. A dicho estudio puede incorporarse otras variables que están definidas en el marco general (social, económica, técnica, alimentaria y ambiental) e indicadores de género que se consideren importantes para el empoderamiento de las familias y las mujeres en particular, como por ejemplo, obtener información sobre la red natural de productoras de semilla y otros indicadores cualitativos mencionados, surgido en el proceso de GTTA.

Para la nueva fase, deberá pensarse en nuevos indicadores como por ejemplo, el tiempo invertido en las actividades reproductivas que desgastan la energía de las mujeres como es por ejemplo, la fabricación de tortillas (58 jornales en El Salvador, según diagnósticos realizados en ese país). De esta manera, obtenidos los datos de situación esta podrá visibilizarse y buscar alternativas tecnológicas para disminuir el tiempo dedicado esta actividad que absorbe mucha energía de la mujer.

⁴⁷ Sectores priorizados en el perfil de pobreza de Nicaragua, SETEC, año 2000.

APPENDIX 2. LIST OF DOCUMENTS CONSULTED

INTA Documents

Plan Operativa Anual 1997, INTA

Plan Operativa Anual 1998, INTA

Plan Operativa Anual 1999, INTA

Plan Operativa Anual 2001, INTA

Memoria Institucional 1996, INTA

Memoria Institucional 1997, INTA

Memoria 2000, INTA

Proyecto Apoyo Noruego a los procesos de generacion y transferencia de tecnologia agropecuario. Informe Final. INTA, Managua, Mayo 2001.

Proyecto de Cooperacion al sector Agropecuario Norad-INTA: Apoyo Noruego a los procesos de Generacion y Transferencia de Tecnologia Agropecuario Trienio 1996-1998. INTA, Managua, 6 de Marzo, 1996.

Proyecto de Capacitación y Aasistencia Técnica a Productoras Agropecuarias. PROCATEPA II Fase, 1996-1998. INTA, Managua, March 1996.

La atencion a la clientela del INTA vista a traves de indicadores tecnicos economicos, ciclo 1999-2000. INTA, Managua, Agosto de 2000.

Apoyo tecnologico a los pequenos y medianos productores(as) agropecuarios, con enfasis en la seguridad alimentaria y proteccion de los recursos naturales, INTA, Managua 17 de octubre, 2000.

Agreed Minutes of the Fourth Annual Meeting on the agricultural extension service program (NIC-032) 1996-1998 held between Nicaragua and Norway, March 16th, 2000 (translated).

Agreed Minutes from the Third Annual Meeting between Nicaragua and Norway on the program agricultural extension service 1996-1998 (NIC-032), Managua, May 20, 1999 (translated).

Co-operation programme for the agricultural sector INTA-NORAD. Annual Financial Report 1999 and budget 2000 (translated).

Agreed Minutes from the Second Annual Meeting between Nicaragua and Norway on the program agricultural extension service 1996-1998 (NIC-032), Managua, 14th August, 1998 (translated).

Agreed Minutes of the Annual Meeting between Nicaragua and Norway on the program agricultural extension service 1996-1998 (NIC-032), Managua, 12th May, 1997 (translated).

Cooperation programme for the agricultural sector INTA-NORAD. Annual Workplan 2000, Managua 28th January, 2000 (translated).

Proyecto de conformación, INTA, Managua, May 1993.

Informe apoyo a la extension, 1998, INTA.

Informe PROCATEPA 1998, INTA.

PROCATEPA Fase II, Informe Final, Mayo 2001, INTA

Politica de Género, INTA 2000

Instrumentos Metodologicos para la GGTA, INTA (date)

Proyecto de capacitación y asistencia técnica a productoras agropecuarias.

PROCATEPA Segunda Fase, Documento de Proyecto, 1996-1998, INTA

Informe de Actividades NORAD, Chontales, 2000, INTA

Generación y transferencia de tecnología en el INTA. Without date.

Informe de resultados de la asistencia técnica participativa ATP1. Without but probably INTA, 2000.

Instituto Nicaraguense de Tecnología Agropecuario, INTA, Proyectos de Inversión Publicas, Informe Avance IV Trimestre (1999), INTA.

NORAD Documents

NOTAT: *Nicaragua- Revidert mandat for dialog for støtte til landbrukssektoren, 21st March, 2000.*

NOTAT: *Meeting between the Embassy and the Nicaraguan Minister of Agriculture, 27th June 2000.*

NOTAT: *NORAD support to the Agricultural sector in Nicaragua- How to proceed? 13th June 2000.*

NOTAT: *NIC-032 Forberedelse til møte med INTA 19 April 1999*

NOTAT: *NIC-032. INTA. Rapport fra årlig møte 20.5.1999.*

NOTAT: *NIC-032 INTA. Rapport etter årlig møte 14.08.1998*

Nicaragua: Proyecto de ordenamiento y tecnología, Segunda fase, Ayuda Memoria: Mision del 21 setiembre al 2 de octubre de 1998.

Review of the Support from NORAD to INTA-NIC 032, Lars Ekman, ODEN Developments Consultants

Appropriation Document, NIC-032 INTA-Agricultural extension 1999. (Addendum), approved 12th November 1998.

Review of the project proposal, propuesta de proyecto, borrador version 3: Estimulando el desarrollo agropecuario en Nicaragua mediante la entrega de nuevas tecnologías para aumentar la producción protegiendo la base de recurso natural, CIAT/MAG, 1997, Lars Ekman ODEN Development Consultants

NIC-32 Oversendelse av addendum no. 2., 5 juni, 2000.

NIC-032 INTA/Jordbruksveiledning 1996-1998 (H.P Melby, 29. August 1996, Managua)

Nordic Consulting Group. *Review of Government Financial Management in Nicaragua. Final Report.* Oslo, November, 2000.

COSUDE. *Informe de Misión COSUDE.* Tulum, Desarrollo Empresarial. Octubre, 1999.

Others

Government of Nicaragua. *Estrategia Reforzada de Reducción de la Pobreza.* Managua, August, 2000.

FAO - INTA. *Sistemas integrados de manejo de la fertilidad de los suelos. Crédito, asistencia técnica y organización: Dos años de experiencia con el Fondo de Financiamiento Campesino. Región Centro Norte de Nicaragua.* August, 2000.

Ministerio Agropecuario Forestal, MAG-FOR. *Programa Nacional de Tecnología y Formación Técnica Agrícola.* Brochure.

Ministerio de Agricultura y Ganadería. *Una ruta para modernizar la Nicaragua rural.* Documento preparado para reunión del Grupo Consultivo para Nicaragua, Ginebra, Suiza, Abril 1998.

Unión Nacional de Agricultores y Ganaderos. UNAG. *Boletín. 20 Aniversario de la UNAG.* Managua, April 2001.

COSUDE. *Lineamientos operacionales para el desarrollo agrícola de COSUDE en América Central 2000-2005.* Without date.

Sida. *SIDA support to Land Titling in Nicaragua. Draft considerations 1998-09-30.*

Universidad Nacional Autónoma de Nicaragua, Facultad de Ciencias Económicas.
Evaluación de impacto de la asistencia técnica. Managua, June 1997.

World Bank. *Project Appraisal Document. Agricultural Technology Program.*
Washington D. C., January, 2000.

Estrategias y organizacion del programa MIP de INTA, Informe de Consultoria, Charles
Staver, CATIE, 1996.

Proyecto Manejo Integrado de Plagas CATIE/INTA-MIP, Final Report, May 1989-June
1994.

APPENDIX 3. TERMS OF REFERENCE

TERMS OF REFERENCE

REVIEW OF NIC-032 INTA / AGRICULTURAL EXTENSION PROJECT

1. BACKGROUND

The Project has received economic support according to an agreement between Norway and Nicaragua of 14 November 1996, within a budget frame of 17 million Norwegian kroner over a three-year period. On 3 December 1998, an Addendum no. 1 was signed for NOK 10,800,000 for a one-year period for the non-scholarship part of the program, and until 2002 for the scholarship part of the program. Addendum no. 2, signed on 18 February 2000 and 13 March by Nicaragua and Norway respectively, extended the timeframe of the non-scholarship part of the program to December 2000, and the scholarship part until December 2004.

The overall aim of Norway's assistance has been to support and supplement Nicaragua's development efforts in the agricultural sector. The goal of this program has been to achieve an increased, diversified, more sustainable and more profitable agricultural production among rural families in Nicaragua.

The purpose of the program has been to improve agricultural extension service through strengthening of INTA (The Nicaraguan Institute for Agricultural Technology). The program covered human resources, organisational and methodological capacity, integration of gender perspectives in its general work, integration of a participatory role of the farmers in its field approach, and collaboration with other institutions.

The program is further outlined in the two Project Documents "Apoyo Noruego a los Procesos de Generación y Transferencia de Tecnología Agropecuaria, Trienio 1996-1998" ("Norwegian Support for the Processes of Generation and Transfer of Agricultural Technology, three-year period 1996-1998") and "Proyecto de Capacitación y Asistencia Técnica a Productoras Agropecuarias, PROCATEPA Fase II, 1996-1998" ("Training and Technical Assistance for Women Farmers, PROCATEPA Phase II 1996-1998"). The extension phase of the program is described in INTA's letter requesting additional support dated 29 September 1998.

The Norwegian financial support to INTA has been given in parallel to a substantial program supported by the World Bank and COSUDE. During the period of implementation, coordination between the two programs has been sought after. To a large extent, the results achieved by INTA are difficult to attribute to the specific support of any one of the donors.

One exception is the gender-focused project PROCATEPA, which has operated in a semi-autonomous mode within INTA.

2. OBJECTIVE

The objective of the review is to assess the results of the two projects; in general in relation to their goals, purposes and expected outputs as described in the agreement of November 14, 1996 and subsequent addendums, and in particular to assess to the impact of the PROCATEPA project to mainstream a gender sensitive mode of operation into INTA.

In addition to the review objective, the team should also assess how agricultural research and extension will be established within the "Programa Nacional de Tecnología y Formación Técnica Agrícola" ("National Technology and Technical Education Program") supported by the World Bank, COSUDE and IFAD, with a view to determining how the objectives of the NORAD supported program are being sustained. Specific attention should be given to possible needs not addressed by this program.

3. SCOPE OF WORK

Specifically the consultants shall focus, assess and, where relevant, provide recommendations on the following issues:

- effectiveness, i.e. the extent to which the NORAD-financed project has succeeded in achieving its goal and purposes;
- efficiency, i.e. the relation between the resources used and the results being achieved by the NORAD-financed project;
- the co-ordination and co-operation with other institutions and projects, in particular the support to INTA provided by the World Bank and COSUDE;
- sustainability, i.e. the extent to which INTA and other relevant institutions will be able to continue to provide research and extension services to farmers, and in particular female small holders
- evolution and present state of government policy on agricultural research and extension
- the evolution and the state of attention given by INTA and co-operating entities at field level to female farmers in terms of problems addressed, and proportion of female to male farmers served,
- the evolution in the understanding of, and attention given to, gender issues among staff in INTA and collaborating entities(i.e. organisational culture);
- the effectiveness of the methodology used by the PROCATEPA project with regard to mainstreaming gender into INTA;
- the appropriateness of the Government's approach to research and extension, including the establishment of competitive funds for research and extension and the present and foreseen role of INTA;

- Ministry of Agriculture and INTA procedures for monitoring the impact of the extension service at the farm level;
- how NORAD might follow-up its support to the sector in relation to the program financed by the World Bank, COSUDE and IFAD;
- Links and collaboration with other agricultural research and extension projects and activities supported by Norway through FAO, CATIE and Norwegian NGOs in Nicaragua
- any other related subject the consultants might find relevant.

4. IMPLEMENTATION

- 4.1. The work in Nicaragua will be performed during 12 working days in Nicaragua (two weeks), starting on 27 May 2001. In addition the leader of the team and team members will dispose 3 working days for preparations and 5 days for writing the draft report. The team leader will in addition dispose an additional 3 days for editing the final report for a debrief at NORAD Oslo.
- 4.2. The consultants should base the work on the review of relevant documents, meetings with farmers at visits to the project areas in Nicaragua, meetings with INTA personnel, representatives of relevant institutions such as the World Bank and COSUDE and projects, and with representatives of the Norwegian Embassy in Managua, and NORAD-Oslo.

The detailed program for the study is the responsibility of the consultants, and should include the meetings and visits, which are considered necessary. The practical arrangements for the study are the responsibility of the consultants, if not specified otherwise. INTA will assist the consultants with the organisation of field visits and meetings.

5. REPORTING

At the end of the review, the consultants shall present a debriefing report to the Norwegian Embassy in Managua. A draft report shall be presented within three weeks after the debriefing. After receiving comments from NORAD, the Norwegian Embassy and INTA a final report shall be submitted to the Norwegian Embassy within three weeks.

The Team Leader shall also be prepared to conduct a debriefing at NORAD-Oslo.

The report shall be written in English. The main text should not exceed 20 pages. Additionally, the report should include a summary of major conclusions and recommendations and a list of meetings held, visits made, and documents consulted. In addition to a printed copy of the report, a Microsoft Word file should also be delivered.

The Consultancy team shall consist of three persons with the following backgrounds:

1. agricultural development and policy;
2. agricultural project management

3. agricultural service provision – research and extension;
4. rural sociology and gender issues in agricultural development and service provision

The consultants shall command Spanish to the extent required to conduct interviews and meetings and read documents in Spanish.

Managua, 11 May 2001

Tove Stub i.a.
Chargée d'Affaires
Royal Norwegian Embassy, Managua

APPENDIX 4. NORAD SUPPORT TO INTA, EXCLUDING PROCATEPA

Norway has supported research and extension activities in Nicaragua since the end of the 1980s, through Government institutions, through the Norwegian and Nicaraguan NGOs and through international organisations (FAO, CATIE).

Before the start of the Nicaraguan Institute of Agricultural Technology, INTA, Norwegian money was channelled through the Ministry of Agriculture in a form of a general support, but also to a special extension programme for women farmers⁴⁸. This support was suspended during a period due to weaknesses in management. However, the women farmer programme always continued although at a reduced level.

“Recognising the strategic importance of research and extension to the development of the agricultural sector and the inappropriateness of organising research and extension as entities within the administration of the Ministry of Agriculture, the Government with the technical and financial assistance of the World Bank decided to create an independent agricultural research and extension institute to be called INTA” (ODEN Development Consultants 1999).

INTA was created in 1993 under the Executive Decree No 22-93⁴⁹. The institution has a legal personality and technical and administrative autonomy. At national level INTA is the main body of transfer of technology. Its mission is to “... increase production and productivity of small and medium producers through generation and transfer of viable agro economic technologies that takes into account the preservation of natural resources. This requires developing mechanisms permitting inter-institutional flexibility and coordination with participatory strategies.” (Proyecto de Inversión Público, NORAD-INTA, 1999).

Different to many other public bodies, there is less change of scientific personnel in INTA when there is a governmental change. However, the political circumstances are dominating to the extent that at least the political management is often changed.

INTA has several donors supporting different components of its work. From the beginning the World Bank and the Swiss Aid (COSUDE) were active donors. In 1994 the World Bank and COSUDE entered into a co-financing agreement. This resulted also in a COSUDE technical expert joining in on the bi-annual INTA visiting missions.

Today INTA enjoys cooperation with numerous organisations such as: NORAD (Norway), COSUDE (Switzerland), JICA (Japan), China Taiwan, Kellogg's Foundation, World Bank, and for technical and scientific collaboration with FAO, IICA, CATIE, CIMMYT, CIP, SNV among others.

⁴⁸ PROCATEPA first phase

⁴⁹ The Decree is published in La Gaceta No. 61.

Norwegian support to INTA: Generation and Transfer of Technology Process (GTTA)-1996-1998 (project 1)

Norwegian support was a result of a request from the Government of Nicaragua in 1995. After revising the project documents an Agreement was signed in November 1996. The agreed goal of the programme was: "Increased, diversified, more sustainable and more profitable agricultural production among rural families in Nicaragua". As can be seen this refers to the general mission as previously mentioned.

The following activities were contemplated in order to support and strengthen the institution INTA in their Generation and Transfer of Technology Process (1996-1998):

- Training of technical staff (improving academic level),
- Develop methods for research and extension
- Support to technical equipment as well as vehicles, and support to model farms in each of the three geographic regions of project 1.

Research and extension activities can be further specified as integrated pest management (IPM), genetic improvement of seeds and animals, diversification of farm-production, post-harvesting techniques, tree nurseries, energy-saving ovens, fodder production for dry season, and soil erosion techniques etc.

The development objective stated the goal of 60 percent of target farmers (24,000 rural families) to have increased 20 percent of their production capacity since 1993, and that 30 percent have a higher profit through better sustainable agricultural techniques. In addition the immediate objective is to support and strengthen INTA as an institution, through supporting the organisation, methods, human resources and general office equipment (infrastructure).

An Addendum to the project document was added in November 1998, soliciting additional funds for 1999. The addendum was approved for INTA's request for extending support on an interim basis through 1999, until a more long-term support in co-operation with Norway, the World Bank and other donors was to be established. In fact the time covered was (1997-2000). The final report, dated May 2001, covers the years (1997-2000).

Budget and costs as programmed in 1996-1998 (NORAD document):

	Project 1		Project 2 ⁵⁰		Overall Support	
	USD ('000)	%	USD ('000)	%	USD ('000)	%
Scholarships	332	19			332	13
Salary			143	18	143	6
Equipment, material (vehicles, i.e.)	432	24	32	4	464	18
Research trials and extension	1 015	57	496	64	1 511	59
Operational costs			79	10	79	3
Consultants and			30	4	30	1

⁵⁰ Project 2 refers to the PROCATEPA gender programme.

evaluations						
Total Sum	1 779	100	779	100	2 559	100

(Rounded numbers).

The Addendum 1998 (Source: INTA document):

	Project 1	Project 2	Overall Support, 1999
	USD ('000)	USD ('000)	USD ('000)
Scholarships/human resources*	62		62
Equipment, material	67		67
Extension activities	365	252	617
Support to organisation of farmers	90		90
Radio cabins (infrastructure)	4		4
Extension, ATPm	57		57
Irrigation to smallholders	25		25
Monitoring and evaluation	30		30
Technical assistance service	179	129	308
Operational costs	185	139	185
Total Sum -USD ('000)	924	521	1 445

* Total sum until 2002 for scholarships is US\$ 270,000.

2000-2002: It is important to add that educational programme was planned until 2002. In addition a significant amount of money was carried over in year 2000, from the 1999 budget.

Norway approved the Operative Plan 2000 where NOK 2,000,000 still remained to be disbursed under the present agreement. Under the Work Plan and Budget for the year 2,000 presented by INTA, NOK 1,200,000 will be used in year 2000, whereas NOK 300,000 are to be disbursed in the period 2001-2004. (Also see Cooperation programme for the agricultural sector INTA-NORAD: Annual Work plan 2000, 28.1.2000).

The goals and purpose of addendum remained unchanged in the context of the project.

The purpose (NORAD appropriation document 1998) of the support is improved agricultural extension service through strengthening of INTA's:

6. Human resources;
7. Organisational and methodological capacity;
8. Integration of gender perspectives in its general work
9. Integration of a participatory role of the farmers in its field approach;
10. Collaboration with other institutions.

Results Achieved

In order to discuss achievements of the NORAD support it is first important to point that it is apparent that in Project 1, NORAD is parallel financing the general activities of INTA, together with WB, COSUDE and the government of Nicaragua. It is therefore impossible to break down activities into only Norwegian funded activities. This was confirmed when Price Waterhouse did an audit in 1999, with good results, but with a strong recommendation to facilitate the monitoring by distinguishing Norwegian funding from other sources. However, when viewing existing documents today, it still does not make sense to report on separate NORAD funded activities. There seems to have been a common understanding that Norwegian funding was flexible and a general budget support to activities of INTA. There has never been documented mal-management and the planned activities are in general followed. In fact, at various meetings and in many documents it is expressed that the flexibility that the NORAD funds give when others funds are late in arriving are very much appreciated.

It has earlier also been stated that “together with the fact, that Project 1 financial share of INTA’s overall budget is 2.7 % makes it methodologically difficult to argue that results are only to be attributed to NORAD supported Project 1⁵¹. This is in particular so considering that the target group for the NORAD project, 24,000 families, represents about 60% of the total number of families assisted by INTA in 1997, 40,400 (ODEN Development Consultants, 1999).

Due to the above the final report NORAD INTA May 2001, is subsequently also reporting on the general INTA programme (more than just NORAD funding).

In the review process the Team learned that changes and the general monitoring of the programme takes in fact place during the Annual Meetings between the NORAD and INTA. This information is therefore taken into consideration in the following discussion.

Another source for understanding the evolution of change of INTA has been through reading the Institutional Reports (Memorias Institucionales). They are not available for all years⁵². However, as well as the Annual Meetings NORAD-INTA, they share some more information as to why some activities were changed or not, or incomplete. It is important to take into account that during the reporting time of the project, Nicaragua had several natural disasters negatively affecting agriculture and the rural population. Some of these were the phenomenon of *El Niño* (excess of drought), and the hurricane Mitch culminating in 1998. Further, the agricultural season 1999-2000 was affected first by tremendous rains resulting in the loss of thirty percent of the maize production, and later that year a rat plague also caused damage. Thus, not all activities can be accomplished in such circumstances (i.e. in 1999, 70% of activities were reported accomplished).

The discussion below will concentrate on the main programme and purpose as supported by NORAD.

A. Organisational and Methodological Capacity; the evolution of the extension modules

⁵¹ The PROCATEPA project is different as it is only funded by NORAD.

⁵² Missing 1998 and 1999. Annual Report of 1999 can be read in “Inversion Publica NORAD-INTA 1999”.

A new process for transferring technology in INTA was initiated in 1995. For example, the community problem assessments in rural communities as a base for Annual Planning (POA) attempted in working participatory and in a farmer driven fashion rather than in a traditional top down way. [A rural diagnosis performed by the university that formed a type of base line is recognised outdated due to the devastating consequences of Mitch]. Today INTA has three methods of transferring technology:

- A) ATPM: Massive Technical Public Assistance, which is free and aimed to assist poor farmers.
- B) ATP1: Co-Financed Public Technical Assistance where farmers organised in groups pays to the technician for the visit made to his/her farm.
- C) ATP2: Private Technical Assistance made by firms that receive supervision and training from INTA and where the farmer pays a percentage for the assistance provided.

Through the years there has been changes to some of the extension structure and names⁵³. An evaluation study done by the National Autonomous University of Nicaragua (UNAN), Department of Agricultural Economy in 1997, resulted in further expansion of the mass technical assistance. This has been followed up with NORAD support.

A negative consequence in the aftermath of the devastating hurricane Mitch is that a lot of donations to the rural sector channelled through different institutions have created in certain areas expectations of farmers to receive everything for free. In terms of technology transfer a lot of people will not want to pay for services and inputs that many NGOs give away for free. INTA, however, continues to work with the intention of “selling” the best service. In areas where people can not pay, there are the “fondos revolvente”, i.e. revolving funds where farmers pay back part of produce of what was received. In ATPm, farmers share the outputs (produce) with other farmers. There have also been efforts at local level at joining up in activities with i.e., World Food Programme’s “Food for work”.

ATPM: Massive Technical Public Assistance

All services are free of charge. The target group are farmers cultivating on small parcels, with no access to credit, and with a limited market access. Other factors taken into consideration are land tenure, access to land-plot (distance) and agro-climatic conditions. The methods operate with geo-central located communities (322) and from these there is further contact with more distant communities (1354). In the report of 1999 and 2001 it is mentioned that one reaches 30,579 producing families of which 28% are female (*in Memoria 2000 only 20,859 persons are given...*).

The “massive extension” is done with workshops that often take place in a model farm that is centrally located. This is the farm where the practises are tried, brochures can be distributed and workshops organised. The person living on the model farm is the contact person and the community leader also facilitating the coordination with their activities. Farmers, who benefit from the events and receive animals and seeds share the production with other farmers.

⁵³ PTTM: Programa de Transferencia de Tecnologia Masiva and ATPB: Asistencia Tecnica Publica Masiva.

ATP1: Co-financed Public⁵⁴ Technical Assistance

When starting in 1995 there were 18 groups and 398 farmers. Today 12,797 farmers are grouped under this module. The groups pay part of the technology transfer, which is about 15 percent of the cost of a technician. The group (around 20 persons) share the cost of approximately 100 Cordoba's⁵⁵ as salary for a days work to the technician.

There is a requirement that farmers are organised, at least informally. With each family the technician makes contracts for the assistance given. The farmer signs the "sheet of assistance" per visit. Questions have been raised as to how one solves the fact that many do not read. It has been ensured by INTA technicians, that this is not a very big obstacle because normally someone in the family can read. The technician comes approximately twice a month, in addition there is a supervisor that also come and evaluates the changes recorded in the farmers' production.

There are meetings held with the leaders of the ATP1 groups. To discuss and exchange experiences. A lesson learned is to have the activities with most impact during the time of the year when farmers have less agricultural workload.

ATP2: Private Technical Assistance:

This module is viewed as an innovative initiative in Nicaragua (POA 1998). Producers are considered as clients, and not as passive receivers of aid. Further the services offered respond to concrete problems on their farms. This form for extension started in 1995.

Today there are 21 firms/enterprises selected to give private technical assistance (currently working is 17). This service reaches 5,935 farmers and the goal is 15,000. It is aimed at farmers that are in a better position, i.e. cattle farmers, farmers with mono-crops, etc.

Individual farm plans are made for approximately five years with the aim for increasing production. The farmer pays less in the beginning, it starts off slightly subsidised. But after five years the farmer shall absorb it all. The firm decides the salary of the technician

Technicians of the Private firms are considered as INTA staff when it comes to training courses and technical workshops. Only if there are very special requirements do they pay for training. An example of ATP2 in Juigalpa follows:

The Madroño enterprise has 10 technicians that work with 800 farmers. So far 75% of the money has been recovered from the farmers. As part of the Madroño methodology they have meetings where they introduce themselves. Then a diagnostic is done to identify problems faced by the farmers and this is followed up by a discussion on how to identify solutions. In the beginning the environment was not very receptive to pay for extension services. Today, apparently it works quite well. The enterprise makes a plan for the farm, together with the producer, and discusses and estimates the future production potential for each farm. Most of the time in Juigalpa problems are related to the lack of technology, lack of technical

⁵⁴ Sometimes referred to *participative*

⁵⁵ May 2001, 1 USD=approximately 13 Cordobas.

assistance and the difficulties of cattle production. Later in the programme cycle, as part of the methodology, they do an evaluation with farmers on an individual as well as group basis. Most of the “ATP2 farmers” both read and write. The technician comes twice a month to the farmer, once a month a supervisor also comes along.

In all the above modalities the staff have received gender training. The World Bank has also supported a gender pilot study in each of the ATP modules.

Issues that have yet not been contemplated are situations where poor persons live in areas where private firm works (thus in general reckoned as a so called Favoured Zone) and therefore charges for extension services. Today, in this hypothetical situation, these persons would not be attended. Neither has there yet been experience with people upgrading from one type of pay (or not pay) form of assistance to another. This is an issue to contemplate for the future.

A consultant report from 1997 pointed out a potential risk when looking at the CATIE and IPM-INTA programme. There is a chance that paid assistance might lead to over-use of pesticides. The contracts made with the farmers are of short duration and focused on giving high yields. This is a situation that open for mis-use of of such inputs. This worry has however not been discussed at depth in the field.

TABLE: Number of Producers and area cultivated (approx.) (in manzana)

Mode of Transfer	Attended producers	Basic Crops	Diverse Crops	Number of Animals
ATP1	12,797	28,000	26,000	119,000
ATP2	5,858	17,000	12,000	85,000
ATPM	19,841	55,000	8,000	253,000
Total	38,496	100,000	46,000	457,000

Source: INTA Memoria 2000

From INTA reports it can be detected that sixty percent of the assisted families have accepted and applied at least three technologies, while the remaining 40 percent are in the process of adopting them since they started in 1999. 80% (of those adopting technologies) are grouped under the ATP1 methodology.

B. The Programmes and Projects

In the beginning NORAD cooperation was limited to supporting programmes in the areas of Esteli, Madriz, and Nueva Segovia, Matagalpa, Jinotega, Boaco, Chontales and Rio San Juan (in INTA terms: Zones B3, B5 and C6). This was expanded later to also include the areas of Managua, Masaya, Granada, Carazo, Rivas, Leon and Chinandega (Zones A2 and A1).

Strengthening aspects of infrastructure and INTA material

According to the project document, some agencies and model farms have been upgraded, as well as, vehicles, boats, photocopier bought etc. Didactic materials, such as radio programmes have been developed and written materials produced⁵⁶.

In the central office a Geographic Information System (GIS) system has been installed. It is used for geo-referencing maps of areas where technology is transferred, soil types, precipitation etc. for research use. There is also a database available at all INTA agencies with a register of a number of sampled farmers.

A future challenge is to establish document centres also in the regions. Today, a lot of information remains at central level. The demand for information and reports is high. Information is sought by independent professionals and students, as well as by technicians.

Other activities

Since 2000 there has been a restructuring of the projects and programmes. There has been a change from 7 programmes to 3 projects without eliminating themes. This was done in order to integrate the work better and to avoid that the farmer had to work with a separate technician for each crop or activity. Today, there is a contract for each system, i.e. as ATP1.

Projects are divided in:

1. Agricultural Extension Projects in Favoured Zones (PEAZF)⁵⁷, and
2. Agricultural Extension Projects in Not Favoured Zones (PEAZNF).
3. A third project is the Research and Development Project.

In each of the programmes below there is a generation of technology component as well as a transfer of technology of component.

- Programme of Basic Grains (rice, maize, sorghum and beans)
- Diverse Crops Programme
- Animal Production
- Soil, water and agro forestry
- Production of Artisan Seeds
- Support to the small and medium producers through production of basic grains (maize and beans)
- Gender Unit

The results from each of these programmes will not be commented on in detail. In the final report of May 2001, there are tables showing the success rate of implementation of the activities of these programmes in detail. The activities are mostly described quantitatively in **measuring numbers** of areas of experimentation, validation and demonstration. There is

⁵⁶ 1 book for the Waspm region has been translated into Miskitia. There are some ideas for also producing materials in English for the Atlantic coast.

⁵⁷ Proyecto de Extension Agropecuario para Zonas Favorecidos (PEAZF) and Proyecto de Extension Agropecuario para Zonas No Favorecidos (PEAZNF)

information on the number of workshops held with technicians, field days organised, workshops with female and male producers, practical demonstrations, excursions, number of brochures produced per topic, number of radio programmes, massive events (on model farms), number of home gardens, school gardens and trained farmers. The columns in the tables show the number programmed and the number implemented. Mostly the results are very favourable. However, there is less information that analyses the adoption rate and other more complex qualitative information.

INTA in the May 2001 Report, concludes that programme has been a success and that the following technologies were adapted: better storing and drying of crops through the metal silos which 35% of the farmers are using. 30 % have diversified their production. Further, growing of fruits such as avocado, citrus and papaya is now implemented in all zones of the project. In 2000 45% of the families had also adopted agroforestry techniques involving soil and water conservation.

In order to look at the evolution and changes in the programme (since the PRODOC was written in 1996) some main points have been extracted from the annual meetings between INTA and NORAD:

Annual reports

In the meeting of 1997 INTA suggested incorporating new activities (sesame seed project, setting up veterinary first aid post, the marking out of plots, strengthening of pilot project with rural youth and temporary hiring of technicians to strengthen work with small-scale producers of basic grains during 97-98 cycle). Formal requests were subsequently solicited.

INTA proposed in 1998 that the geographic limitations of Norwegian support were eliminated. Thus they came to include the zones A1 and A2 (Managua, Leon, Granada Masaya, Carazo, Rivas, and Chinandega).

In relation to the scholarship support for technicians and other staff, NORAD reported that it was willing to assure financing beyond the NORAD programme period (under present agreement or in a possible bridging phase). INTA was left to identify the mechanism for this.

Difficulties and delays in work in 1999 period were reported especially in terms of field activities due to bad weather conditions resulting from the hurricane Mitch.

Extra Norwegian support was also given in 1988 after the hurricane to contract 35 extension agents to aimed at programmes for the poor, small and medium producers, through the programme PNAPP (National Programme Support to Small scale Farmers) that was created by MAG-FOR but implemented by INTA. It gives a period of credit, and works through the ATPM module with 10,000 new producers. In total INTA has since 1993 operated with 126 technicians.

During the 1999 meeting the Nicaraguan delegation stated that certain items were approved in the 1988 budget but not implemented because they were not prioritised. A proposal for utilisation of these funds was suggested submitted.

An audit was started in 1998 and finished in 1999 by Price Waterhouse. The work was delayed due to various reasons. The reasons for delay were given as following: 1. The accounting operations of the projects were incorporated into INTA's general accounting system, meaning that the auditors had to visit all local INTA offices. Changes were made to avoid this in the future; 2. The volume of accounting operation was underestimated; 3. INTA had to prepare an accounting system exclusively for the projects financed by Norway.

Various times during the Annual Meetings Norway has raised a concern with INTA relating to the lack of coordination with the CATIE IPM programme. This point is dealt with in more detail below, however it can be perceived that INTA feels it should have a stronger role in planning the programme and using the Norwegian funds directed to CATIE. In more recent years the coordination seems to have improved given that the concern has been followed up with high-level meetings between the Nicaraguan Agricultural Minister and the Director of External affairs from CATIE Head Quarters. Today the Director General of INTA is also the president of the regional IPM board.

Accomplishments were presented in the Annual Meeting, NORAD-INTA, of 2000. Among the relevant successes it was brought to the front the participation in validating varieties of rice, corn and sorghum and the training 15,500 producers through Participatory Technical Assistance 1, and 26,000 producers by means of Massive Technical Assistance. The production of seeds for basic grains, coconut, cocoa and vegetables was also a major achievement, as well as, the establishment of family orchards, 145 breeding centres for pigs and goats, distribution of 890 poultry packages, 28 poultry farms and parcels with improved pasture. An increase for the families was demonstrated in higher production of eggs and milk. The egg-production of hens rose from 120 eggs per year to 180. The milk production rose from 1.5 to 2.2 litres as a result of the implementation of new technologies (and new breeds).

Although not directly funded with NORAD money, INTA has recently created a market unit. A consultant report in 1999 created a base for establishing two programmes emphasising in:

1. Commercialisation of products and services from INTA
2. Support and facilitation to rural farmer families

This programme started to work in 2000. And the programme entered into the 2001 Work Plan. There are several dimensions ranging from subletting parts of INTA Research Centres for conferences and workshops, selling own produce such as improved seeds and also supporting rural families by providing a information service, i.e. through the radio, on market prices of products to help their commercialisation (still in process). Although the review team were informed by several the need to create cooperatives, there are still relatively few activities attempting to pool farmers produce neither for internal nor external markets. However, there are various post-harvesting techniques promoted, such as, preserving beans as well as processing fruit for marmalades. However, it is difficult for poor farmers to get involved in this due to hard competition and certain investment risk.

C. Research components

(Information from field discussions, Juigalpa trip):

UNA, the University in Juigalpa, has supported planting activities and layout of field plots (sampling design) in addition to data collecting data for four to five years. This work is predominantly used for thesis material.

The technological model (this model is found in the annual reports) of INTA defines shared action and responsibilities between producers and technicians. The logic allows opens for farmer's participation. Using existing knowledge (here it is slightly unclear whether traditional farmers knowledge is considered) a phase of experiments starts. This phase has also input from an agro-socio-economic assessment (where farmers also have input). Normally the phase of experimenting, generating and adaptation is done with the ATP1 module and lasts approximately 1 year. In the following phase of validation and integration, ATPM and ATP2 also take part. A network of farmers most interested in experimenting is established. These farmers are considered very important for the diffusion of techniques. Model farms and workshops are instrumental in this process.

Today in the IPM work, there is collaboration and funds from COSUDE, IPM and University of Samorana in Honduras. Pest specialists plan the IPM activities, and a lot of information is received from IPM CATIE. The policy of use of chemical and organic pesticides is a bit unclear. In other words there is no strict line on this. INTA uses both (chemical as well as organic fertilisers). The technicians are trained in the different techniques.

D. Integration of a participatory role of the farmers in its field approach

This relates to how the different ATP extension modalities work, as well as the investigation (in situ). INTA has an interesting process of doing a problem tree assessment every two years (is it really done so often?) in the communities. Extension and research is then programmed to find solutions to needs that occur that are within the institution's mandate. An elected representative often already involved in the local development committee in the community helps the INTA work be part of a more integral development agenda. The results from the assessments are part of the planning done in the regions that contribute to the Annual Planning (POA). (How this is eventually carried out from central level might be another issue).

E. Relations with other institutions

During field visits the Team noticed that several NGOs are in a process of forming working contracts with INTA, sometimes by initiative of INTA. Collaborative activities have consisted of exchanging technicians; help from INTA on selecting improved seeds as well as other training and workshops. Given duplication of work among organisations collaborative efforts are welcomed at local level.

The IPM-CATIE collaboration

The programme for Integrated Pest Management (CATIE) originally received support from Sweden and Norway in Nicaragua, because the regional IPM programme funded by US AID funds in 1984, excluded Nicaragua due to the Sandinist government.

In Nicaragua the programme was called the CATIE-MIDINRA IPM branch. The team consisted of four international experts and four national experts. Nicaragua was considered an important country for the programme⁵⁸.

In August of 1998 INTA invited CATIE-IPM to do a consultancy to see how they could incorporate IPM better into their programme. The CATIE-IPM group have felt at times that INTA is rather orthodoxically managed from the central office, for example their impression was, although planning takes place at regional level the final work plan was decided in Managua. They have an understanding that it is not easy for INTA with the frequent World Bank missions with different review experts. Furthermore, these experts are often very traditional (white/senior/male) and not necessarily updated with farmer field school and other participatory methodology approaches.

A mention has been made of INTA's concern (Annual Meeting 1997) on why Norway is supporting CATIE so strongly when INTA is also working with IPM. CATIE sees the relation on two levels. Often there has been more resistance at central high-level for collaboration, while at local level in the region collaboration between the institutions have often been successful. CATIE is in fact grateful for NORAD not to have changed their policy or started to micro-manage the institutions. This is interpreted as a compliment of trust based on the results they see from CATIE in the field.⁵⁹ CATIE also recognises how important NORAD funds have been for INTA particularly when other funds have been late in arriving.

CATIE works with a national vision through their multi-institutional approach. They think it is positive that from 1999 IPM-COSUDE has played a role in institutionalising the IPM programme in INTA. However, there are challenges in carrying out in real life the multi-institutional approach. This approach fits with a desire of the World Bank that INTA should act as a facilitators and not as an implementer.

Today the relations between the institutions have improved. In the second and third phase, the President of the Executive Board of CATIE-IPM has been the executive director of INTA. Also on the national committee for IPM Nicaragua, INTA has a seat.

Recommendations from CATIE:

- INTA can improve its collaboration with institutions and NGOs. This process, however, has been noted, is improving. Working closely in the multi-institutional model has been a very important experience for CATIE that they believe INTA would also gain a lot from this.
- INTA must continue to internalise IPM concerns. The university (in evaluation) showed a concern related to the mix use of chemical and IPM techniques.

⁵⁸ The national counterpart was the Ministry of Agriculture that also had their office with 125 persons. The governmental change in 1990, changing the "executive role" of the government to one of facilitator, meant that the state sector was left with a very reduced number of researchers and extension workers.

⁵⁹ It should be mentioned that NORAD gave USD 2 million extra to administer (total budget from before is USD 10 million). This money normally goes to NGO, but it has a big administration cost. With the new agreement, CATIE IPM is responsible for using this money to incorporate the participation of the NGOs that will benefit from the multi-institutional IPM work.

It must be mentioned that CATIE-IPM this autumn is going through a Norwegian/NORAD evaluation. They currently have a budget of USD 10 million for the current phase.

The UNAG/Juigalpa collaboration:

For general background see additional notes.

As in the case with the INTA-CATIE relationship, the INTA- UNAG relationship is less complicated at local level in comparison to the national level. For example, in Chontales the organizations divide the extension work between them (so that they do not duplicate zones). Collaboration, however, seems to be more a result of personal friendship than institutional policies.

Below follows some recommendations from the UNAG (Juigalpa) meeting where local INTA officers also participated:

- There is a need to identify mechanisms for collaboration
- There is a lack of a national strategy on rural development in the country from a political perspective
- INTA's role should be to lead organisations such as UNAG and private enterprises (says UNAG)
- Extension is cheaper if the private sector/NGOs does it rather than the state, and besides they might have further outreach than INTA.
- Universities should have a lead role in coordinating research- also in the field-testing in the districts. Needs to give more scientific priority towards cattle (i.e. look at alternatives etc.)
- Both INTA and UNAG see the need to better coordinate information, i.e. on the planned market information in order to avoid future duplication (MAGFOR also has such a system)

GENERAL CONCLUSIONS:

- Activities planned as well as implemented are listed in the INTA documents. However, the adoption rates are a bit scattered and sometimes also missing an explanation as to the method for how calculating these results. It could be interesting to do a follow up of the University (UNAN) study /evaluation that was done in 1997. Several partners should be involved in planning such an evaluation. Themes of interest to focus on could include the socio-economic dimension of adaptation (among others).
- Scope for improving the monitoring impact- has been mentioned in earlier Norwegian review (L.Ekman). The RRA studies, the UNA study, use of GIS and new statistical data-programmes of statistics were mentioned as possibilities for developing an interesting monitoring system. In reports received by the Review Team there is still a need for visualising the use of these methods. However, it is recognised that all institutions worldwide struggle with measuring impact and conveying this to the public.

- Some NGOs commented on positive experiences with the INTA initiative of collaborating with local NGOs, while others see that working in a multi institutional way should still be strongly encouraged.
- INTA has interesting experience in trying to evolve and strengthen their participatory planning with farmers and staff. The Review team was very impressed with the dedication of the technicians. Farmers showed many good results in the field, and had expressed interest in certain inputs, which have then been accommodated (i.e. working with sheep (Pelibuey without wool) in certain regions). Research is maybe still guided in classical terms, but they attempt to find solutions to problems raised by farmers. More in depth studies on aspects of farmer driven research and extension would be interesting to follow up.
- The socio economic unit of INTA should be supported and encouraged to assist in developing socio-economic impact analysis of INTA results, for example, with collaboration with economists, and/or rural sociologists etc.
- The market and price unit of INTA has an interesting role in working with the difficult issues of finding better markets for the big block of agricultural producers that are participating in the INTA programmes. There is potential for exploring both national and international (niche markets, fair trade, ecological products) markets.
- Gender dimensions have reached further out than PROCATEPA. Technicians work around the family as a production unit. The Youth programme is another dimension of broad focus.

Additional notes on UNAG and CATIE:

- **UNAG (Juigalpa):**

The UNAG office in Juigalpa works in 90 percent of the municipalities. They play a gremial role and develop activities and work with the farmers offering veterinarian assistance and sometime legal assistance. Livestock is the main activity in the region of Juigalpa- Chontales.

UNAG works in 5 sectors: Youth (child program supported by Redd Barna, Norway), women, cooperatives, cattle ranchers and other producers. A person from each of these groups is represented in their regional council.

Cajas Rurales:

The “Cajas Rurales” (farmers credit) is only for the members of UNAG and were created due to a national need. The credit programme itself identifies finance from outside, and to farmers they offer credit to specific prioritised activities. The interest rate is 12-15 percent, but they are trying to lower this to possibly 10 percent at the next national assembly of UNAG.

PCaC. Programa Campesino a Campesino.

This methodology started with small-scale farmers. Today they also work with cattle farmers. In the region of Esteli, INTA and UNAG have collaborated a lot, also using this methodology.

The logic of PcaC is that it works through “promoters”. The success of the methodology has been that it strengthens organisations, and local knowledge. A central point is that extension must be done with and by local organizations.

INTA notified that there have been signals from the Director General that there will be less emphasis on extension in the future. Instead there will be a stronger shift towards research.

A role that INTA used to have at the regional level that many would like to see them start with again, is to organise and take the initiative for a consultative committee of transfer of technology in the region where different organizations working in the field can better share and coordinate work.

- **IPM-CATIE**

The creation of INTA was done by decree in 1993, with the hope of de-politicising the agricultural research and extension. In the end of 1993 MIP-CATIE-MAG was formed. By 1994, various projects were transferred to INTA, and the project became CATIE-MIP-INTA. (The creation of INTA is related to the relation CATIE and INTA)

The CATIE IPM programme has had an evolution in various phases:

1. Phase 1: 1989-1994: CATIE-MIDINRA MIP (regional funds earmarked for environment and not bilateral)
2. Phase 2: 1995-1998: CATIE-INTA-MIP-
3. Phase 3: 1998-2001: CATIE-MIP-NORAD. Today the programme has 18 scientific staff (working regional and national from Managua).

In terms of evolution the phases can be described accordingly:

Phase 1: CATIE worked directly with farmers

Phase 2: Focus on developing methodologies and monitoring system. CATIE concentrates work with the technicians. They also start working in networks where there is a conscientious choice to not only work with one (governmental) institution, but to work at a multi-institutional level. Thus 123 national institutions became partners. Together with national partners (where INTA is one) a common work programme is developed.

Phase 3: It is acknowledged that more time must be spent on developing a multi-institutional network (training, and massive extension). The IPM programme starts working directly with small projects (USD 800) for farmers groups of 20 families. Contracts are signed between farmers and INTA-CATIE. After the project cycle the technicians do a participatory evaluation with the farmer.

When technicians have been trained through three growing cycles with IPM management they receive a Registered Diploma from CATIE. (And the farmers? This depends on the collaborating institution).

APPENDIX 5. LIST OF PERSONS MET

Embajada Noruega/NORAD

Tove Stub, Chargée d'Affaires
Alf Friisø, Segunda Secretario
Felipe Rios, Asesor

Embajada de Suecia/ASDI

Torsten Wetterblad, Primer Secretario

Equipo INTA Nacional y Regionales

Luis Osorio, Presidente Ejecutivo
Genaro Muñiz, Director General
Danilo Montalván, Asistente de la Dirección General, Responsable Cooperación Externa
Noel Meléndez, Jefe de Planificación,
Claudia Solórzano, Responsable de la Unidad de Género
Sara Obregón, Especialista en Género
Julio Solórzano, Director de Política Tecnológica
Guillermo Gutierrez, Unidad de Mercadeo
Lesbia Rizzo, Responsable de Area de Agroecología
Claudia Urbina, Especialista en Seguimiento
Carlos Echegoyen, Metodólogo Nacional
José Ramón Sandoval, Director de Extensión
Carlos Chavez, Responsable de Juventud Rural y Supervisor de PROCATEPA

Gloria Morales, Gerente Zona No Favorecida (ATPM)
Meyling Aróstegui, Metodóloga Zona 1
Rosa Amelia Gutierrez, Extensionista Agencia León
Lilybeth Arguello, Coordinadora de Matagalpa
Maritza Palacios, Coordinadora PROCATEPA Regional (Estelí, Madriz y Nueva Segovia)
Carla Vanesa Rodríguez, Socioeconomista Agencia Zonal Estelí
Nohelia Rivera, Responsable de Género, Agencia Zonal Estelí
Cándida Gutiérrez, Agencia Ocotal
Julio Molina, Gerente Investigación y Desarrollo, Regional
Efrén Gutiérrez, Agencia Condega (ATP1)
Alexander Benavides, Extensionista Agencia Condega (ATP1)
Edurín Lira, Agencia Condega, Técnico Líder
Márlon Lira, Extensionista Agencia Somoto (ATPM)
Sergio Cruz, Extensionista Agencia Estelí (ATPM)
Luis Moncada, Extensionista Agencia Estelí (ATP1)
Fulton José Torres, Extensionista Agencia Estelí (ATP1)
Diógenes Altamirano, Supervisor Empresas Privadas, Agencia Zonal Estelí
Inoc Corea, Metodólogo Agencia Estelí
Oscar Huete, Supervisor Zonal (Estelí, Madriz, Nueva Segovia)
Daniel Martínez A., Director Técnico Zonal (Chontales, Boaco, Rio San Juan y Yelapa Central-RAAS)
Juan Carlos Bravo, Gerente de Investigación

Cora Marengo, Responsable de Planificación, Oficina Regional (Chontales, Boaco)
Gladys Romero, Administradora Regional (Chontales, Boaco)
Denia Acuña, Líder Santo Tomás, Juigalpa
Fredy Ríos Requeses, Extensionista (ATP1)
José Esmilce Amador
Benito Cruz Villagra, Extensionista (ATP1)
Alcides Tellez Hurtado, Extensionista (ATP1)
Hilda López Guevara, Extensionista (ATP1)
Rodolfo Báez, Extensionista (ATP1)
Noel Duarte Rivas, Extensionista (ATP1)
Denis Rodríguez Fonseca, Extensionista (ATPM)
Byron Cruz Orozco, Extensionista (ATPM)

Secretaría Técnica de la Presidencia

Manuel Obregón, Consultor, Asesor Secretario Técnico de la Presidencia
Mario Arana, Consultor Jefe, Secretaría Técnica de la Presidencia

Ministerio de Agricultura Ganadería y Forestal (MAGFOR)

Oscar Neira Cuadra, Director de Políticas del MAGFOR
Miguel Angel Castellón, Director de Programas de Desarrollo
Meylin Gutiérrez Hegg, Directora Cooperación Externa
Rene Escoto Masis, Asesor Externo COSUDE, Dirección de Política Tecnológica

Organismos Internacionales

Omar Palacios, Asesor de Programas, COSUDE
Iván Jerez, Programa de Apoyo al Sector Agrícola, DANIDA
Ineke van de Pol, Primera Secretaria, Asesora en Desarrollo Rural y Género, Embajada de Holanda
Nestor Napal, Ayuda Popular de Noruega (APN)
Falguni Guharay, CATIE-MIP/AF (NORAD)
Jean-Francois Ghyoot, Representante de la FAO
Armando Cerrato, Asistente de Programas, FAO
Mildred Milkes, Organismo Salud para América Latina, Oficina Estelí

Organismos no gubernamentales

Daniel Núñez, Presidente Unión Nacional de Agricultores y Ganaderos (UNAG Nacional)
Luis Orlando Valverde, Secretario Junta Directiva Nacional (UNAG Nacional)
Esperanza Castro, Directora Universidad Nacional Agraria, Juigalpa (UNA)
Nelly López, Profesora Técnica (UNA-Juigalpa)
Adolfo Ramírez, Director Instituto Técnico Agropecuario, Juigalpa
AFODENIC, Juigalpa, Consejo Directivo
Román Zeledón, PRODESA, Juigalpa
Zobeyda Hernández, Directora Ejecutiva PRODESA, Juigalpa
Douglas Aleman B, Presidente Departamental, UNAG Chontales
Luz Adilia Zepeda, UNAG Chontales
Francisco Molina, UNAG Chontales

NORAGRIC
Centre for International Environment and Development Studies
Agricultural University of Norway
P.O. Box 5001
N-1432 Ås
Norway

Phone: +47 64 94 99 50
Fax: +47 64 94 07 60
E-mail: noragric@noragric.nlh.no
Internet: <http://www.nlh.no/noragric>

