

PROMESA

Proyecto de Mejoramiento de Semillas

Quarterly Report
April-June 2000

Submitted to the
United States Agency for International Development
Under Contract No. 524-C-00-98-00025-00

Development Alternatives Incorporated (DAI)
7250 Woodmont Avenue, Suite 200
Bethesda MD 20814

in association with Cargill Technical Services

July 31, 2000

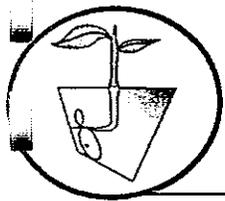


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Development Alternatives, Inc



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July 31, 2000

Mr. Paul Crawford
USAID/MANAGUA
AMEMB, MANAGUA, USAID
Unit 2712 Box 9
APO AA 34021

Subject: Quarterly Report - First Quarter 2000
Reference: Contract No. 524-C-00-98-00025-00

Dear Paul:

Pursuant to the referenced contract requirement, Development Alternatives, Inc. (DAI) herewith submits its Quarterly Report on PROMESA's activities during the second quarter of 2000.

Should you have any technical questions regarding this submission, please do not hesitate to call me at 267-0454. Questions of a contractual nature may be referred to Ms. Margarita Cronin, Senior Contract Administrator (301) 718-8699.

Sincerely,

King Bash
Chief of Party
PROMESA/DAI



Enclosure: As stated

Cc: Martin Napper, Contracting Officer
Marilyn Zak, USAID Mission Director
Rodger Garner, USAID Deputy Mission Director
Raymond Baum, USAID Mission
Leonard Fagot, USAID Mission
Margarita Cronin, DAI, Sr. Contracts Administrator
Marla Pettinato, DAI Associate
James Chapman, DAI Sr. Development Specialist
Charles Johnson, DAI Vice President, Agriculture and Economics

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EXECUTIVE SUMMARY

Investment in Nicaragua's seed industry is increasing. Seed companies are introducing new varieties¹ and establishing new distributors. Yet despite increased investment, the increased seed demand in Primera resulted in a seed shortage in Postrera².

PROMESA is working to stimulate seed production in the Occidente, where Nicaragua's modern seed sector is concentrated. Many seed producers in the Occidente have irrigation and access to credit. Through its support to ASORESEM (Asociacion Regional de Semillas del Occidente), PROMESA is helping this modern sector produce and market more certified seed. In addition to providing seed quality control and marketing services, ASORESEM will represent seed producers in the National Seed Council (CONASEM).

PROMESA is also working with seed producers in northern departments where hundreds of small farmers are multiplying improved bean seed on more than 1,000 manzanas in Primera. The Direccion General de Semillas (DGS) cannot inspect this widely dispersed production area. Instead, it is training private technicians to inspect the seed fields. This program serves as an important precedent for DGS to delegate authority to private organizations to certify seed.

PROMESA works with fifteen organizations of small seed producers, including cooperatives, foundations, and associations. Some are relatively large; UCOOM and COOPPMAT anticipate \$250 thousand dollars in sales in 2000. Most are small, with annual seed sales of less than \$10 thousand. Most are members of UNAG. PROMESA is conducting training workshops to help them develop production and marketing plans. To ensure the sustainability of these services, we are attempting to institutionalize them in UNAG's new business development unit.



Recent personnel changes at DGS delayed the signing of its cooperative agreement with PROMESA. Despite the lack of official authorization, however, professional relationships between the two organizations allowed us to make progress on several fronts. We expect the DGS personnel changes to facilitate future work with MAG-FOR, particularly in the supplemental program.

The objectives of the supplemental program, financed by supplemental Mitch funds, are to

¹ One indicator of increased investment is the rise in the number of new variety introductions. There are fourteen maize varieties and hybrids in PROMESA's field demonstrations in 2000, compared to seven in 1999.

² Increased seed demand in Primera is due, in part, to USAID's policy requiring its PVO partners to buy certified seed instead of grain. The seed shortage was exacerbated by the drought in Primera, which sharply reduced seed yields. Seed imports can fill the deficit, but shipping delays due to sampling and testing requirements could jeopardize the availability of seed in Postrera.

advocate for institutional changes in the national seed system and stimulate private investment. Ongoing supplemental activities include:

CONASEM

PROMESA modified its objectives concerning the National Seed Law. Instead of trying to change it, we are helping MAG-FOR implement important features of the existing law, including the accreditation of private seed services and the establishment of CONASEM.

As the dust settles from the MAG-FOR reorganization, officials are once again making decisions, and new officials are eager to make their mark. PROMESA has therefore renewed its initiative to establish CONASEM. We drafted its internal regulations and encouraged DGPSA, UPANIC, UNAG, and ASORESEM to write letters to the new Minister, asking him to convene CONASEM. The Minister responded by calling for the appointment of representatives.

Accreditation

MAG-FOR is responsible for inspecting certified seed production. It also conducts virtually all seed tests and variety validation trials. But next year, private companies will also offer these services. MAG-FOR is defining the regulations needed to accredit laboratories to analyze seed quality, field inspectors to supervise certified seed production, and crop research centers to conduct variety validation trials. DGS is already training private agricultural technicians to inspect seed fields. We expect DGS accreditation to result in increased investment in private seed services.

PVP

Regulations governing plant variety protection (PVP) were published in May, but Nicaragua has not yet registered as a member of UPOV (Union Internationale Pour la Protection des Obtentions Vegetales). When Nicaragua joins UPOV, PROMESA will equip PVP offices at MIFIC and MAG-FOR. PROMESA is sponsoring workshops to define variety descriptors for the PVP database.

We are helping DGS publish and distribute the PVP law and regulations. According to the law, INTA has until November 30, 2000 to register its varieties developed during the past five years. To help INTA comply with the law, and to provide incentives for MIFIC and MAG-FOR to join UPOV, PROMESA is offering to pay the costs of registering ten INTA varieties in the PVP and commercial registries.

Biotechnology

PROMESA's biotechnology campaign is designed to educate agricultural technicians, policy-makers, and consumers without alienating biotech proponents or detractors. It requires the active support of MAG-FOR, and calls for careful avoidance of outright promotion. The campaign involves technical bulletins for agricultural technicians and policy-makers, and press releases for mass media. Eventually, we want MAG-FOR to be the source of this information.

The new MAG-FOR administration wants to establish field trials of Bt maize. PROMESA advises MAG-FOR to proceed cautiously by establishing an Agricultural Biotechnology Advisory Commission to determine how Bt maize should be tested. MAG-FOR scheduled the establishment of the Agricultural Biotech Advisory Commission for February, to coincide with the National Seed Conference, biotech seminars for policy-makers, and a biotech study tour to Costa Rica.

Seed Promotion

The promotional activities specified in the original project proposal - training in marketing and promotion, field trials, seed packaging and labeling, conferences and trade shows - are either underway or completed. But MAG-FOR considers the original promotion inadequate for expanding seed markets and exploiting Nicaragua's expanding seed production capacity. We are therefore expanding this component using supplemental Mitch-related funds. The new program is the responsibility of a new, full-time promotion specialist.

PROJECT GOAL AND OBJECTIVES

PROMESA (Proyecto de Mejoramiento de Semillas) is a USAID agricultural development project managed by Development Alternatives Inc. under contract number 524-C-00-98-00025-00. Its goal is to assist MAG-FOR in increasing the use of improved seed by small and medium-scale farmers in Nicaragua. This goal is part of a broader agricultural development strategy involving:

- Introducing farmers to new agricultural technologies that produce larger marketable surpluses;
- Raising the living standards of subsistence farmers - many of whom are women - by increasing income from grain sales; and
- Increasing farm productivity and, therefore, incentives to invest in water and soil conservation methods.

To achieve its goal, PROMESA's activities include:

- Helping private seed organizations promote improved seed by conducting field demonstrations;
- Encouraging seed companies and public extension services to provide technical information to small farmers;
- Helping INTA and MAG-FOR provide services the private sector cannot offer; and
- Providing technical support to MAG-FOR in developing seed policies that encourage private investment.

PROMESA is organized into three programs, corresponding to its primary objectives, which are to:

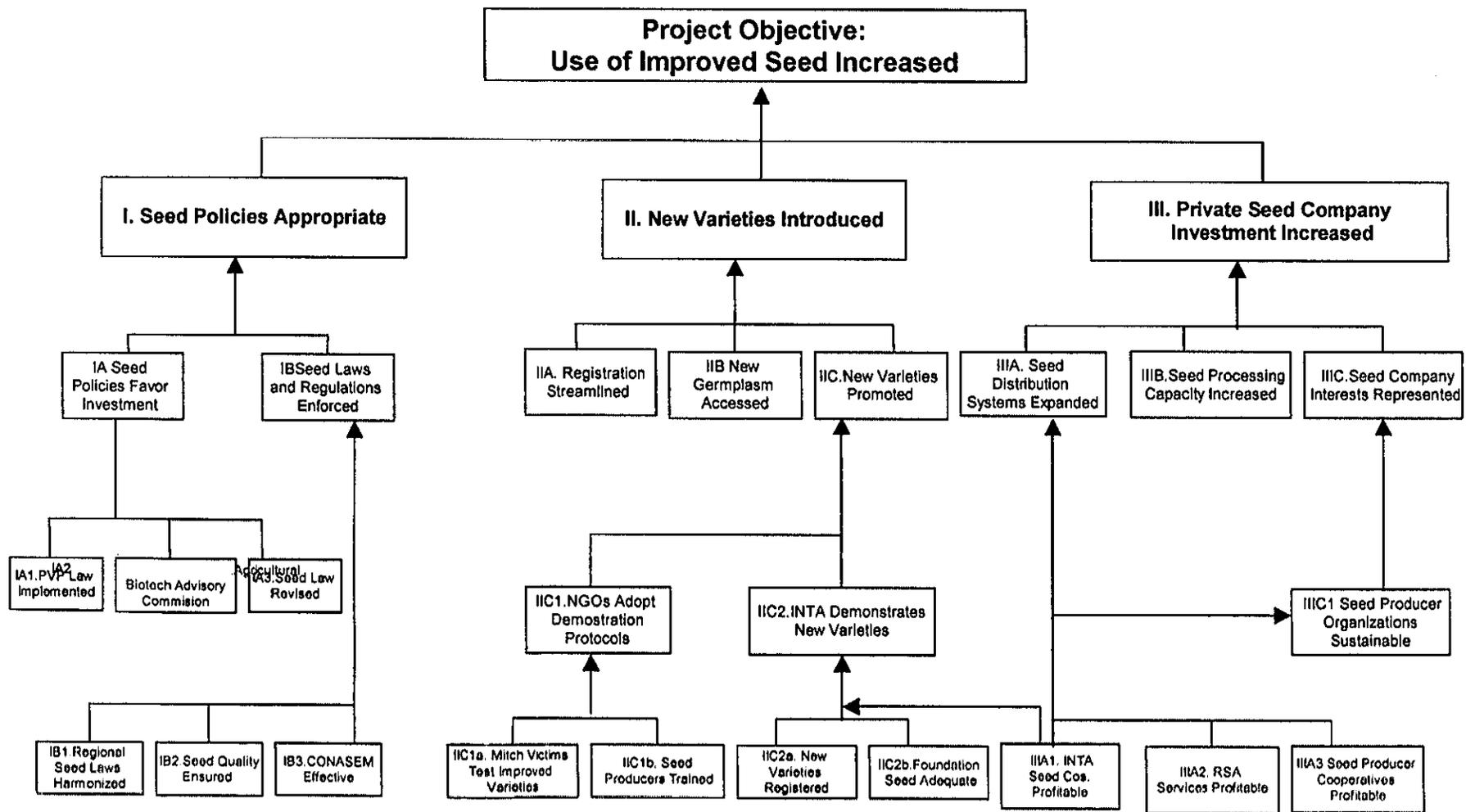
1. Advocate for a national seed system that favors private investment;
2. Facilitate the introduction of new improved varieties and hybrids; and
3. Assist private seed companies in producing and marketing seed profitably.

The first program- advocating for a private sector-led national seed system - is conducted under PROMESA's new agreement with MAG-FOR and largely financed by Hurricane Mitch disaster relief funds.



PROMESA

RESULTS FRAMEWORK



09/08/00

Highlights - Second Quarter 2000

Seed Policies Appropriate

- Re-engineered supplemental program to combine a "bottom-up" approach addressing the concerns of DGS operations personnel for seed quality with a 'top-down' approach addressing the priorities of MAG-FOR policy-makers for trade and investment;
- Encouraged DGPSA, UPANIC, UNAG, and ASORESEM's successful petition to the new MAG-FOR Minister to convene CONASEM; and
- Assisting DGS to define accreditation procedures for seed laboratories and variety validation trials

New Varieties Introduced

- Regionally harmonized requirements for new variety validation trials reduce the testing period in Nicaragua from two years to one crop season.
- Distributed two high-quality maize (HQM) varieties (NB Perlita and Obatampa Africano) and two HQM hybrids (HB Proticta and HQ 61) to small farmer development organizations; and
- Added three conventional, non-HQM maize hybrids (HS-7, HS-9, HN-991) to more than 30 maize demonstration trials.

Private Seed Company Investment Increased

- Monsanto opens a seed sales office in Managua and enters hybrids in PROMESA demonstration trials;
- DGS trains private technicians to inspect certified maize and bean seed production fields;
- INTA includes two of its nascent seed companies in PROMESA's organizational development program;
- ASORESEM establishes office in Leon; and
- Farm supply stores offer credit to seed producers in response to increased seed demand.

STTA Activities

- Joseph Cortes: Redesigned the supplemental program;
 Led workshop to define regulations for accrediting private seed
 laboratories, crop research centers, and seed inspectors; and
 Assisted in developing agricultural biotech information campaign.
- Karen Schwartz: Conducted assessments of six seed producer organizations; and
 Designed long-term strategy for institutional development support.
- Rene Orue: Analyzed the constitutionality of the PVP law; and
 Successfully advocated for approval of PVP regulations.

Anticipated Activities and Results – Third Quarter 2000

Supplemental Program

- Adopt streamlined variety registration procedures;
- Establish CONASEM; and
- Design DGS seed MIS system.

New Varieties Introduced

- Harvest black bean seed and investigate export markets;
- Launch biotech education campaign;
- Conduct field days to demonstrate new maize and bean varieties; and
- Launch seed promotion program.

Private Seed Company Investment Increased

- Conduct field trip to Costa Rica for flower producers and marketers;
- Conduct follow-up business development workshop for seed producer organizations, including INTA seed associations; and
- Conduct study tour to Peru and Bolivia to assess the roles of seed producer associations.

OBJECTIVE I - SEED POLICIES APPROPRIATE

IA. Seed Policies Favor Investment

Planned for this Quarter

Reschedule and plan National Seed Conference to promote private investment.

Accomplishments

- MAG-FOR took ownership of the National Seed Conference and rescheduled it to February 2001 to coincide with a study tour to Argentina and the establishment of the Agricultural Biotechnology Advisory Commission; and
- Conducted study tour with MAG-FOR officials, agricultural technicians, and private farmers to Linda Vista in Costa Rica; identified non-tariff barriers to vegetable and flower seedling imports; submitted report to MAG-FOR.

Discussion

Some seed companies report serious bureaucratic obstacles to seed imports seed, while others say they encounter no problems or delays. One of the factors reducing the transparency in international seed trade is the antiquated, unwieldy, paper-based management information system used by DGS. PROMESA is addressing this problem by updating an appropriate management information program, and training DGS how to use it. If necessary, PROMESA will hire the original programmer to update the system to meet current DGS needs.



The National Seed Conference, which will be held over the course of three days in February 2001, will promote private investment in the seed sector. The conference will present new seed technologies, review seed promotion strategies, identify opportunities and constraints to seed industry development, clarify the role of CONASEM and promote its early achievements, and provide an indicator of the effectiveness of the agricultural biotechnology education campaign.

Plan for Next Quarter

- Demonstrate the capabilities of the DGS information system and train DGS to operate it.
- Conduct second seed accreditation workshop;
- Initiate seed promotion campaign; and
- Assist members in negotiating for tax-exemption for imported seed laboratory and processing equipment.

IA1. PVP Law Implemented

Planned for this Quarter

Attorney Rene Orue to advocate for rapid approval of PVP regulations and prepare legal arguments defending the constitutionality of PVP law # 318.

Accomplishments

- Gained approval for PVP regulations from the Office of the President; published regulations in "Gaceta," the official government publication;
- Defined PVP procedures; and
- Conducted workshops to define PVP variety descriptors.

Discussion

PROMESA convened a meeting of plant scientists from INTA, UNA, and MAG-FOR to define the variety descriptors to use in the PVP database. The committee failed to meet MIFIC's June 22 deadline. Consequently, PROMESA is holding a series of workshops to define variety descriptors.

Opposition to the PVP law continues. On August 8, PROMESA and other agricultural development institutions will sponsor a public debate at the UNA concerning the "PVP Law and its Expected Impact on National Agriculture." We expect the debate to improve public understanding and acceptance of the PVP law (No. 318) and regulations. After summarizing the PVP law and regulations, the debate will focus on breeder rights, procedures for registering proprietary varieties, the relationship between the PVP law and the national seed law (No. 280), and the anticipated impact of the PVP on Nicaraguan agriculture.

Workshop co-sponsors include the Programa de Ordenamiento Social, Ambiental y Forestal, Proyecto de Río San Juan, and a Finnish project called Proyecto Ambiental Nicaragua. Participating farm organizations include UNAG, UPANIC, and ANAR. Six seed breeders will participate, as well as representatives from the Facultad del Medio Ambiente of the UCA, the Escuela Católica de Agricultura de Estelí, the Escuela de Agricultura de Rivas, and UNAN-León, the Colegio de Ingeniero Agrónomos CIAN, and the Colegio de Biólogos y

Ecólogos. Representatives of private seed companies – Agrocentro, SAGSA, CISA-AGRO, FORMUNICA, and RAMAC – and six private seed producers will also attend.

Public sector institutions involved in the debate include MIFIC, MAG-FOR, and MARENA. Participants also include NGOs involved in agricultural development, including CARE, CRS, Auxilio Mundial, and Self Help International. Centro Humbolt and Movimiento Ambientalista de Nicaragua will represent NGOs specifically focused on environmental protection.

Plan for Next Quarter

- Conduct public debate at UNA on PVP;
- Provide MAG-FOR and MIFIC training in using variety descriptors;
- Hold seminars with universities and agricultural researchers on the significance and benefits of the PVP law, and the procedures for applying for plant variety protection.
- Publish PVP Law # 318.

IA2. Agricultural Biotech Advisory Commission Established

Planned for this Quarter

Conduct short-course on agricultural biotechnology for policy-makers and seed technicians. Organize a mass media campaign for the general public. Assess the feasibility of using the new Industry Organization as a source of press releases on agricultural biotechnology.

Accomplishments

- Determined sources of biotech information;
- Organized a biotech library and information database; and
- Met with Cristiani-Burkhard to discuss Bt maize trials in Nicaragua; enlisted private sector support for a biotech educational program;

Discussion

Recent advances in genetic engineering offer the possibility of increasing the quantity and quality of agricultural production. One of PROMESA's policy initiatives involves educating the Nicaraguan public regarding the introduction of appropriate agricultural biotech products into Nicaragua. This is, however, a controversial issue to which people often react emotionally without careful and objective consideration of its benefits and risks. PROMESA's biotech strategy – to educate agricultural technicians and consumers without alienating biotech proponents or detractors – calls for carefully avoiding outright promotional activities, and requires the active support of MAG-FOR.

As part of our supplemental program financed by Hurricane Mitch funds, we are undertaking a public relations campaign to educate consumers on the benefits and risks of agricultural biotech products. Our campaign will target general public technical audiences including NGOs, universities, private and public sector agricultural technicians, and policy makers. The purpose of the campaign is to stimulate public debate and raise awareness of the potential benefits and risks the new technology offers, and to generate support for the judicious introduction of agricultural biotech products.

PROMESA identified various sources of information on agricultural biotech products. These include government agencies (USDA, FDA, etc.), universities (U. of Iowa, U. of Kentucky,

etc.), international organizations (FAO, UPOV, etc.), and agricultural industry associations. By presenting a balanced selection of technical and consumer-oriented information for and against agricultural biotechnology, the campaign will educate the general public, agricultural technicians and policy-makers on its benefits and risks. We developed a system for accessing technical information and press releases, rewriting and translating it as necessary, and faxing or e-mailing them to Nicaraguan agricultural technicians, policy-makers, and journalists. We will also publish a monthly bulletin of biotech highlights.

The first component of the campaign- weekly e-mailing and faxing of biotech information to key individuals will begin on August 1, 2000. The second component - bi-monthly publication of balanced biotech articles in the local press and the monthly publication of a biotech bulletin- will begin in September 2000. The short course on agricultural biotechnology was rescheduled for March 2001 to coincide with the anticipated establishment of the Agricultural Biotech Advisory Council. These activities will continue for one year, with the hope that MAG-FOR will eventually assume responsibility for the campaign.

Plan for Next Quarter

- Disseminate articles from academia, government, and industry to university professors, agricultural technicians and policy-makers;
- Distribute press releases on agricultural biotechnology to journalists;
- Publish information on agricultural biotechnology in popular publications to increase public information on new agricultural technologies;
- Organize an agricultural biotechnology information database to provide the basis for the biotech information campaign;
- Determine legal and technical justifications for establishing an Agricultural Biotechnology Advisory Commission; and
- Conduct workshop to explain the recommendations for the legal framework.

IA3. Seed Law Implemented

Planned for this Quarter

Draft internal regulations for CONASEM.

Accomplishments

- Drafted CONASEM's internal regulations.

Discussion

The change in name from "Seed Law revised" to "Seed Law Implemented" reflects re-engineered approach of the supplemental program. This reengineered approach incorporates MAG-FOR's interest in biotechnology, seedling certification, and seed service accreditation into our supplemental program. It follows a new strategy combining a "bottom-up" approach addressing the concerns of MAG-FOR operations personnel for seed quality with a 'top-down' approach addressing the priorities of MAG-FOR policy-makers for trade and investment. We expect this re-engineered approach to result in increased private investment in the seed sector.

PROMESA will no longer attempt to revise the 1998 Seed Law. MAG-FOR is reluctant to support PROMESA's program to revise the seed law, arguing that the National Assembly is unlikely to modify, let alone replace, legislation they themselves passed so recently. Given this perception of the Assembly's intransigence, PROMESA will pursue the original

objective- private sector-led seed industry development- by exploiting opportunities in the current seed law to (1) justify accreditation of seed labs and variety validation trials, (2) lower tariff and non-tariff barriers on agricultural inputs, and (3) establish an Agricultural Biotechnology Advisory Commission.

In June, the former Director of DGPSA, who was also responsible for DGS, was appointed MAG-FOR Vice Minister. He consistently advocated for the establishment of CONASEM. We anticipate his continued support from his new position, and new opportunities to advocate for supplemental program activities.

Plan for Next Quarter

- Continue advocating for MAG-FOR to convene CONASEM.

IB. Seed Laws and Regulations Enforced

Planned for this Quarter

- Advocate for a more aggressive DGS program to prohibit importing table potatoes used for seed; and
- Support implementation of PVP laws through technical and legal support as requested.

Accomplishments

- PROMESA's MAG-FOR counterpart approved the supplemental program;
- DGS trained private sector technicians to inspect certified seed production; fields; DGS begins defining procedures for accrediting seed laboratories, research centers, and field inspectors; and
- DGPSA published regulations prohibiting the import of table potatoes for use as seed.

Discussion

PROMESA's consultants from Iowa State University, conducted a four-day workshop on seed accreditation programs. The purpose of this series of 3-4 workshops is to accredit laboratories to test seed quality, crop research centers to conduct new variety validation trials required for commercial registration, individual field inspectors to supervise certified seed production, and seed companies to provide a variety of these services. Most of the 23 participants were from the private sector (Table 1). The second workshop will be held on August 15-18.



Table 1
Participants in MAG-FOR
Seed Service Accreditation Workshop

Seed Laboratories

ASORESEM
Centro de Mejoramiento Genético y
Banco de Semilla Forestal
DGS
EAGE
UNA

Crop Research Centers

Aceitera Real
ANAR
EAGE
INTA
SAGSA
UNAG
UNICAFE

Plan for Next Quarter

- Conduct a second workshop to train private technicians to inspect seed production fields;
- Publish and distribute PVP law, regulations, and registration guidelines; and
- Conduct a second seed workshop to define procedures to accredit seed laboratories, crop research centers, and seed field inspectors.

IB1. Regional Seed Laws Harmonized

Planned for this Quarter

Evaluate MAG-FOR's progress in implementing regional seed trade harmonization agreements.

Accomplishments

- Submitted to DGS a proposal, based on regional agreements, to harmonize new variety registration procedures.

Discussion

The regional seed agreement to harmonize laws and regulations governing PVP, seed certification, and phytosanitary requirements for international trade contains an ambiguous phrase that allows members to require seed sampling and testing "as necessary." Nicaragua's DGS still requires sampling and testing of imported seed, but it has the

prerogative to waive this requirement. The current seed shortage for the Primera season may cause DGS to exercise this prerogative.

Plan for Next Quarter

- Advocate for DGS to exercise its right to waive sampling and testing of imported seed; instead, require seed importers to assume the responsibility of guaranteeing seed quality.

IB2. Seed Quality Ensured

Planned for this Quarter

Summarize PNAPP impact assessment report.

Meet with MAG-FOR policy-makers to discuss the impact of PNAPP's Apante 1999 program on bean seed markets.

Accomplishments

- DGS declined to support PROMESA in actively advocating for requiring PNAPP to purchase and distribute seed, rather than grain.

Discussion

DGS lacked clear definitions of authority, causing morale problems and slowing decision-making. The new director of DGPSA resolved this problem by appointing a single director to DGS, and another to Sanidad Vegetal. We expect this to facilitate our future activities with MAG-FOR.

PNAPP has changed its procedures. Now it distributes coupons to farmers who can use them to purchase inputs from specified certified seed dealers. To ensure the use of certified seed, the coupons are only redeemable at dealers who only distribute tagged seed.

IB3. CONASEM Established and Effective

Planned for this Quarter

Advocate for MAG-FOR to convene CONASEM and establish its subcommittees.

Assist MAG-FOR in drafting CONASEM's internal regulations.

Accomplishments

- Enlisted DGPSA, UPANIC, UNAG, and ASORESEM support in successfully petitioning the Minister of Agriculture to call for the appointment of CONASEM members; and
- Drafted CONASEM's internal regulations.

Discussion

DGPSA and DGS directors agreed that CONASEM requires a full-time executive secretary at DGS. PROMESA offered to support DGS in developing this new organization, and to ensure that it has a significant impact in its first year of operation.

Plan for Next Quarter

- Assist MAG-FOR in convening CONASEM and establishing subcommittees.

OBJECTIVE II - NEW VARIETIES INTRODUCED

IIA. Registration Streamlined

Planned for this Quarter

Engage DGS in a review of its variety registration costs.

Accomplishments

- DGS reduced the cost of registering new varieties of basic grains and oilseed crops by 50 percent.

Discussion

PROMESA's initiative to assist MAG-FOR in streamlining variety registration procedures succeeded in reducing national "validation" trial requirements from two years to one crop cycle, and the DGS now accepts validation data from trials conducted outside Nicaragua. As a result, the number of new variety introductions increased from eight in 1998 to seventeen in 1999. Nevertheless, the high cost of registering new varieties continues to be an important obstacle to new variety introductions. For example, INTA has a backlog of new varieties that could be registered, but INTA is reluctant to pay intra-institutional registration fees to the Direccion de Semillas, fearing a precedent that would lead to recurring fees. Several recent events have, however, increased the incentive to register new varieties.

- The new PVP law provides intellectual property rights protection to new varieties. MIFIC and MAG-FOR defined the procedures of their new PVP offices, which will be in operation in a few months.
- DGS reduced the costs of registering new varieties of basic grains and oilseed crops in its commercial registry by more than 50 percent. Previously, the commercial registration cost was \$500 in year 1, \$250 in year 2, and \$100 in subsequent years; now the cost is only \$500 for five years.
- INTA conducts virtually all of the variety validation trials in Nicaragua, but PROMESA is assisting MAG-FOR in defining procedures to accredit crop research centers to conduct new variety validation trials.
- Harmonized requirements for new variety validation trials reduce the testing period in Nicaragua from two years to one crop season. Prior to 1999, new varieties had to be tested for least three years in Nicaragua before it could be registered in the DGS commercial registry. The 1999 regional seed harmonization agreement requires that varieties be tested for at least two years under conditions similar to those found in major production areas in Nicaragua before they can be registered at the DGS. Seed companies typically pay regional testing organizations like PCCMCA to conduct these trials. After two years of successful regional trials, a new variety can be tested in Nicaragua for one growing season – the primary season when the crop is produced. The DGS uses the results of these trials to determine whether the variety is adapted to Nicaragua, and whether it can be registered and sold.
- PROMESA promotes the use of high-quality foundation seed. We expect the demand for foundation seed to increase, thereby raising the incentives to register proprietary varieties. As INTA sells more foundation seed, it will have increased incentives to

register and protect its proprietary varieties, and to either demand royalties for seed multiplication, or ensure that INTA's small farmer clients will be free to multiply these varieties without paying royalties. Increased income from foundation seed sales can be used to pay subsequent registration costs. Once the foundation seed production and sales system is operating, it can become sustainable. To get it started, PROMESA therefore proposed to pay the registration costs of up to ten INTA's new varieties. The total cost is about \$15,000, including \$10,000 for PVP registration and \$5,000 for commercial registration. In addition to releasing 10 new, improved varieties for commercial distribution, this program will provide a test of the new MIFIC and MAG-FOR PVP programs, and income to support their new PVP offices.

Plan for Next Quarter

- Conduct the second workshop to accredit crop research centers to conduct new variety validation trials.

IIB. New Germplasm Accessed

Planned for this Quarter

Incorporate quality-protein maize (QPM) hybrids into INTA's maize validation trials.

Plan a sesame variety demonstration program in Postrera.

Monitor CIAT's program to test bean inoculants at its SOL (Supermercado de Opciones para las Laderas) research center in San Dionisio, Matagalpa.

Evaluate the results of INTA's maize and sorghum validation program in 1999, and plan the demonstration program for 2000.

Assist seed companies in planting 200 manzanas of black bean seed production in Primera.

Accomplishments

- Incorporated quality-protein maize (QPM) hybrids into INTA's maize validation trials; and
- Planted approximately 150 manzanas of black bean seed production in Primera.

Discussion

PROMESA held a planning meeting to promote new quality protein maize (QPM) varieties and hybrids. Three organizations - CIMMYT, Self-Help International, and INTA - exchanged samples of QPM seed and distributed seed to the four other organizations in the meeting - UPANIC, CARE, COCABO, and CIAT. PROMESA planted these QPM hybrids in more than two dozen demonstration plots to compare them with conventional hybrids and varieties.

PROMESA is working with MAG-FOR, APENN, INTA, MIFIC, CEI, and ARAP (Table 2) to promote black beans production for export. After analyzing available information, the committee concludes that a marketing study is needed to update existing information and assess the institutional constraints to Nicaraguan beans entering Mexican markets. PROMESA and ARAP agreed to undertake a three-



phase study, described below.

1. Conduct an institutional assessment of Mexican bean markets to identify key players and determine how to deal with them;
2. Market research to establish market entry strategies; and
3. Trade missions to establish commercial linkages between Nicaraguan suppliers and Mexican buyers.

PROMESA will also conduct an initial assessment of black bean seed markets in Mexico.

Table 2
Organizations Participating in Black Bean Program

PROMESA	Coordination
INTA	Technical assistance in seed production
MIFIC	Inter-governmental coordination
MAG-FOR	Inter-governmental coordination
CEI	Export promotion
APPEN	Export promotion
ARAP	Market research
ASORESEM	Seed production and marketing
COOPPMAT	Seed production and marketing
APROSUR	Seed production and marketing
UPANIC	Seed and grain production and marketing
CONOR 380	Seed production
HORTIFURTI	Grain marketing in Costa Rica
COFAMSA	Grain marketing in Mexico
CECOOPSA	Grain marketing in Mexico
MERCIS	Market research

Plan for Next Quarter

- Coordinate with ARAP to conduct market research on black bean markets;
- Conduct a trade mission to Mexico to identify new varieties, germplasm sources, explore the possibility of purchasing basic, registered seed, or certified seed, and explore the potential of exporting seed to Mexico;
- Organize MAG-FOR data on seed industry including a report on new variety introduction since 1998; and
- Publish an official list of registered varieties and a description of the registration process.

II.C. New Varieties Promoted

Planned for this Quarter

- Design web-site for seed database;
- Plan seed promotion program integrating INTA, MAG-FOR, and PROMESA resources;
- Conduct a pilot seed promotion program in Leon in Primera;
- Meet with donor organizations to promote the use of improved seed; and
- Seek a cooperative agreement with PATIO to promote improved seed to women farmers.

Accomplishments

- Designed a database to provide the basis for a seed industry web-site;
- Conducted introductory meetings with PATIO, a project helping women farmers diversify production;
- Published 10 advertisements in newspapers and agricultural journals and 25 radio spots promoting ASORESEM;
- Assisted NGOs and PVOs in procuring improved seed for Primera; and
- Helped seed producer organizations fulfill seed production agreements with CRS counterpart organizations.

Discussion

PROMESA held a planning meeting on May 26 to promote new high-protein maize (QPM) varieties and hybrids. Three organizations – CIMMYT, Self-Help International, and INTA – exchanged seed samples and distributed seed to the four other organizations at the meeting - UPANIC, CARE, COCABO, CIAT. PROMESA planted these QPM hybrids in more than two dozen demonstration plots, and plans to hold field days to allow farmers to compare them with conventional maize varieties and hybrids.

Initial meetings with PATIO indicate the basis for a cooperative agreement between our organizations. Initially, PROMESA will provide hybrid maize seed for prizes for the winners of PATIO's annual farm-productivity competition. Eventually, we could help PATIO establish variety demonstration trials and use its network of women's organizations to promote and sell certified seed.

PROMESA is assisting MAG-FOR in organizing its information on seed certification, variety registrations, and seed inventories. The seed MIS system will facilitate DGS operations, increase the transparency of seed market transactions, and encourage DGS to publish market information useful to seed companies. Before designing a new database program, we reviewed existing programs used by MAG-FOR, and identified a seed database program written for DGS in 1995-97. Only a small portion of the program's capabilities is currently used. By using the existing database program as the basis for an expanded MIS system, training DGS staff to use the existing program, we can develop a seed information system quickly and cheaply.

PROMESA hired a full-time seed promotion specialist to conduct an advertising campaign to promote the use of certified seed³. The certified seed promotion campaign will focus on two activities: promoting seed sales prior to planting, and attending field days to demonstrate new varieties. The central message of the promotion campaign is "Use Certified Seed", focusing on the quality guarantee of tagged seed. Based on the results of a recent farm survey of producer attitudes, the campaign will highlight the following messages:

- Certified seed ensures quality;
- Certified seed boosts yields;
- Certified seed cuts production risks;
- Certified seed raises profits; and
- Insist on the quality guarantee of tagged seed.

³ The term "certified seed," includes all categories of seed tagged by the DGS, including certified, authorized, and "apta para siembra."

Plan for Next Quarter

- Conduct training workshops for DGS to review and revise existing MIS software program;
- Analyze results from INTA's 1999 field trials;
- Monitor demonstration trials in Leon, Chinandega, Boaco, Matagalpa, Managua, Nueva Segovia, Esteli, Jinotega, Carazo, and Atlantico Sur;
- Write and publish technical articles;
- Contract radio, flyers, and ambulatory loudspeaker announcements;
- Conduct radio interviews;
- Launch the seed promotion campaign; and
- Promote the use of certified seed to NGOs;



IIC1 NGOs Use Improved Seed

Planned for this Quarter

Distribute maize and bean seed to NGOs for variety demonstrations.

Accomplishments

- Planted 32 demonstration trials with NGOs, gremios and private seed companies; and
- Conducted field days in Pueblo Nuevo and Boaco for 295 farmers to evaluate maize and bean varieties and hybrids.

Discussion

Despite farmers' enthusiasm for hybrid maize, many NGO and public sector technicians remain skeptical. We continue to promote hybrids in the variety demonstration program in 2000.

Plan for Next Quarter

- Summarize the results of the field trials in 1999 and distribute them at field days in 2000; and
- Assess the feasibility of a study tour to El Salvador to review hybrid maize promotion programs.

IIC1a. Mitch Victims Test Improved seed

Planned for this Quarter

Coordinate with MAG-FOR, the mayor of Posoltega, and local NGOs to distribute seed to refugees.

Incorporate the Posoltega seed program into ASORESEM'S promotion campaign.

Accomplishments

- Distributed 150 quintals of maize, bean, and sorghum seed to Mitch victims in Posoltega;
- Provided 80 quintals of maize seed to various development organizations for distribution to other Mitch victims; and
- Distributed seed through ASORESEM to establish commercial linkages between farmers and seed producer associations.

Discussion

ASORESEM, with the support of PROMESA, provided the city government of Posoltega with 150 quintals of hybrid corn, bean and sorghum seed for distribution to victims of Hurricane Mitch.

Plan for Next Quarter

- Monitor success of improved seed planted by Mitch victims in Posoltega;
- Assist CRS in monitoring the performance of improved seed planted by its clients.

IIC1b. Seed Producers Trained

Planned for this Quarter

Promote EAGE seed training program.
Promote UNA seed training program.

Accomplishments

- Advertised EAGE's seed training program in national newspapers;
- Redefined UNA's curriculum for the seed training program in 2000 to emphasize seed marketing methods; and
- Signed a cooperative agreement to assist DGS in conducting a seed training program in EAGE (Escuela de Agricultura y Ganadería en Esteli) with the assistance of IAPAR (Instituto Agronómico de Paraná) in 2000;

Discussion

PROMESA is offering 12 scholarships to the UNA seed-training program, including four to DGS, six to UNAG, and two to INTA. This seed-training program was modified to devote more time to seed marketing. This change reflects the need to improve seed marketing methods, and reflects the priorities of course participants.

Plan for Next Quarter

- Assist COOPAMAT in holding bean seed production workshops for seed producer organizations before the Apante planting season; and
- Provide STTA consultant from Iowa State University, and a biotech expert from Uruguay, to teach at UNA seed training course.



IIC2. INTA Demonstrates New Varieties

Planned for this Quarter

Meet with INTA's Seed Unit to establish a coordinated program for promotion the use of foundation seed, and set the stage for a Foundation Seed Market.

Accomplishments

- Developed a collaborative demonstration and field day program to promote improved seed;
- Anticipating increased demand in 2001, INTA is increasing foundation seed production as quickly as possible in 2000;
- Planted seven demonstration trials of five improved varieties of red and black bean varieties; and
- Planted more than 25 demonstration trials of 14 maize varieties and hybrids.

Discussion

PROMESA's strategy for black bean promotion is designed to avoid the problem that undermined two previous campaigns – relying on a single marketing channel. We are establishing alternative marketing channels for black bean exports to Mexico. Table 3 lists the network of producers, technical assistance providers, and marketing organizations involved in the black bean program.

Table 3

Organizations Involved in Black Bean Production

PROMESA	Coordination
INTA	Technical assistance in seed production
MIFIC	Inter-governmental coordination
MAG-FOR	Inter-governmental coordination
CEI	Export promotion
APPEN	Export promotion
ARAP	Market research
ASORESEM	Seed production and marketing
COOPPMAT	Seed production and marketing
APROSUR	Seed production and marketing
UPANIC	Seed and grain production and marketing
CONOR 380	Seed production
HORTIFURTI	Grain marketing in Costa Rica
COFAMSA	Grain marketing in Mexico
CECOOPSA	Grain marketing in Mexico
MERCIS	Market research

INTA provides technical assistance for black bean seed production in Carazo, Masaya and Granada, and these seed producers pay INTA for this service. In this way, the seed program contributes to the sustainability of INTA's extension program. PROMESA pays INTA for technical assistance for black bean seed production in Carazo and Boaco.

PROMESA is developing a proposal to ARAP to conduct a trade mission to Mexico. The mission will provide opportunities for Nicaraguan seed producer organizations, gremios, grain marketers to meet Mexican grain buyers, including brokers, distributors, and supermarket chains. Ownership rights must be established before the new Mexican varieties can be registered, and before DGS can certify seed production. Therefore, we propose to take a representative from INTA to meet with Mexican counterparts, and to negotiate to either import foundation seed from Mexico or produce it in Nicaragua.



Plan for Next Quarter

- Conduct market research in Mexico on black bean seed and grain market channels;
- Promote the black bean program among farmer organizations and agricultural institutions; and
- Provide technical and financial support to introduce four new potato varieties.

IIC2a. New Varieties Registered

Planned for this Quarter

Support INTA in registering new bean varieties.

Accomplishments

- Planted 37 field trials of maize.

Discussion

PROMESA offered to pay the costs of registering 10 INTA varieties in the new PVP registry, and 10 INTA varieties (not necessarily the same ones) in the DGS commercial registry. This will help the new PVP office get into operations and generate some initial income⁴. In addition to registering new varieties, we are helping INTA promote them. INTA's new maize hybrid, HN-991, was added to PROMESA demonstration trials. INTA is in the process of registering its new red bean variety from Honduras: INTA-Canela.

Seed companies and research centers entered several new maize hybrids in PROMESA demonstration trials (Table 4), including two high-protein maize (HQM) varieties (NB Perlita, Obatampa Africano), and two HQM hybrids (HB Proticta, HQ 61). INTA also entered the new HQM hybrid (PR 8763) that it received from CIMMYT.

⁴ Approximately \$10,000 for PVP registration will be divided between the PVP offices of DGS and MIFIC, and \$5,000 will go to the DGS commercial registry.

Table 4
 Hybrids and Improved Varieties in
 PROMESA Demonstration Trials

	<u>1999</u>	<u>2000</u>
Maize Hybrids	HS-5G	HS-5G
	H-59	H-59
	H-53	HS-7
	HN-991	HS-9
	HR-93	H-55
		HN-991
	C-385	
	HB Proticta	
Maize Varieties	NB-6	NB-6
	NB-S	NB-S
		NB Perlita Obatampa Africano
Red Beans	DOR-364	INTA-Jinotepe
	Tio Canela	INTA-Canela
	Esteli-150	INTA-Masatepe
	Esteli-90	
Black Beans		DOR-500
		Negro Tacana
		Jamapa
Pink Beans		Flor de Mayo

Plan for Next Quarter

- Conduct six field days to demonstrate new maize and bean varieties;
- Plant maize, bean, and sorghum demonstration trials for Postrera; and
- Encourage INTA to register new varieties.

IIC2b. Foundation Seed Adequate

Planned for this Quarter

- Conduct preliminary meeting with INTA to determine plans for foundation seed production;

Accomplishments

- INTA agreed to begin multiplying foundation seed in August in anticipation of production contracts.

Discussion

After the success of the Certified Seed Fair for NGOs and seed producers, PROMESA will organize a Foundation Seed Fair to establish market linkages between INTA's foundation seed producers and organizations of commercial seed producers. PROMESA serves as an information broker by explaining the benefits of using foundation seed, and encouraging INTA seed producers to establish foundation seed production contracts for delivery in 2001. PROMESA will propose to guarantee 50 percent payment fulfillment of these contracts.



Plan for Next Quarter

- Conduct meetings between INTA and seed producer organizations to estimate the demand for foundation seed in 2001; and
- Offer to guarantee 50 percent of the value of these contracts.

OBJECTIVE III – PRIVATE SEED COMPANY INVESTMENT INCREASED

III. Private Seed Company Investment Increased

Planned for this Quarter

Plan seed industry conference.

Develop a prospectus of Nicaragua's seed production and market conditions to attract participants to the National Seed Conference.

Accomplishments

- Added Monsanto maize hybrids to demonstration trials (Monsanto established a seed sales office in Managua in June).

Discussion

The establishment of new seed producer organizations (Table 5) is increasing Nicaragua's seed production capacity, and its ability to respond to changing market conditions. Now PROMESA is launching a seed promotion campaign to increase seed demand. It will involve mass media advertising of new variety demonstration field days. It will also involve videos, farmer testimonials, and point-of-purchase advertising. PROMESA's 1999 farm survey is useful for monitoring seed industry conditions, guiding the activities of the supplemental program, and promoting investment. We contracted IEN (Instituto de Estudios Nicaragüenses) to conduct further analysis on the 1999 results, and compare them to 1998 results.

Table 5
Seed Producer Organizations Working with PROMESA

1. APROSUR	Asociacion de Productores de Semillas del Sur
2. ASOPROL	Asociacion de Productores de Semilla de Santa Lucia
3. ASORESEM	Asociacion de Productores de Semillas del Occidente
4. COOPMAT	Cooperativa de Productores de Papa en Matagalpa
5. Fusodevisma	Boaco
6. IDR	La Concordia
7. INTA-La Concha	Carazo
8. INTA-Ticuantepe	Carazo
9. Pida-UNAG	Esteli
10. UCOOM	Unión de Cooperativas Multisectoriales
11. UNAG-El Sauce	Occidente
12. UNAG-San Dionisio	Matagalpa
13. UNAG-San Pedro	Carazo
14. UNAG-San Ramón	Matagalpa
15. UNAG-Santa Lucia	Cooperativa Multisectorial de Productors de Santa Lucia, Boaco

Plan for Next Quarter

- Conduct cost accounting analysis of UCOOM seed operations; and
- Continue collecting information on regional seed markets.

IIIA. Seed Distribution Systems Expanded

Planned for this Quarter

Provide market information to UCOOM for imported hybrid maize seed.
Assess the feasibility of establishing a pilot farmer-dealer distribution system.
Plan field study tour to Costa Rica for vegetable producers and nurserymen.

Accomplishments

- Assisted UCOOM in establishing a distribution agreement with a Salvadoran seed company;
- Designed a database to link UNAG's Bancos de Semillas and other seed producer organizations;
- Conducted study tour to Costa Rica for vegetable producers and nurserymen.
- Assisted COOPAMAT in accessing to credit for seed processing and marketing;
- Assisted UNAG in developing a commercial seed program; and
- Provided marketing assistance to seed buyers and sellers (Table 6)

Discussion

PROMESA plays an increasingly important role as a source of seed market information. We helped NGOs locate and purchase more than 18,000 quintals of certified seed. Five CRS partner-organizations (Table 6) purchased approximately 63 percent of this seed. Other

NGOs purchased the remainder. PROMESA also helped seed producer organizations market over 19,500 quintals of certified seed. Approximately 82 percent of this seed was sold by five of PROMESA's partner-organizations. Four other seed producer organizations sold the remainder.

Table 6
Organizations Using PROMESA's Seed Market Information to
Buy and Sell Certified Seed in 2000

<u>Seed Buyers</u>	<u>Seed Sellers</u>
<u>CRS Partner Organizations</u>	<u>PROMESA Partner Seed Producer Organizations</u>
ADDAC-Esteli	ASORESEM Regional Seed Association in Leon
CARITAS-Matagalpa	COOPPMAT
CARITAS-Jinotega	Escuela Catolica de Agricultura y Ganadaria de Esteli
INPRUH-Somoto	UPANIC
Soc.Garmendia-Jiron	APROSUR Regional Seed Association in Carazo
FIDER-Esteli	
<u>Other NGOs</u>	<u>Other Seed Producers</u>
Save the Children	World Vision
Project Concern International	CIAT Laderas
Allistar, Santiago Reyes	ARAP/Chemonics
Francisco Vargas	COFAMSA
Juan Vanegas	
EURONAIID	
FRAMA	
Casa Com. E. Molina	
PROSESUR	
Asociacion de Productores de Jicaro	

PROMESA developed the TORs for an analysis of production, processing, and marketing costs of different seed crops.

Plan for Next Quarter

- Follow up on the organization of UNAG's seed system, and
- Together with MAG-FOR and INTA, organize a potato seed promotion program.
- Conduct field trip to Costa Rica for flower producers and marketers (Appendix 4).

IIIA1. INTA Seed Associations Profitable

Planned for this Quarter

Assist INTA in organizing its new seed companies.

Accomplishments

- INTA included two of its seed producer associations in Carazo to participate in PROMESA's organizational development program for seed companies.

Discussion

PROMESA conducted a needs assessment of two INTA seed associations - the Asociacion de Productores de Semillas de Carazo and the Asociacion de Productores de Semillas de La Concha. The association in Carazo has 21 members, of whom 14 produce seed. The association is not a legal entity. Nevertheless, it has a revolving fund to purchase production inputs and helps its members market approximately 250 quintals of seed annually. It gets technical assistance from INTA and CIAT. The association expects financial assistance from the Alcaldia of San Marcos. It stores seed for 6-7 months, but has no dedicated storage facilities or plans to rent them. It wants to build a seed processing plant, but has insufficient members and seed production to justify one.

The Asociacion de Productores de Semillas de La Concha has 45 members in six different communities. About 30 members produce seed. Some rent farmland from the association. INTA provides technical assistance in seed production. Producers do not use credit for seed production. Average bean seed yields are high - about 20 quintals per manzana. Only five members report successfully marketing their production as seed; the rest sell it as grain. The association's seed inventory still contains 55 quintals of non-certified seed produced in Postrera 1999. Despite ongoing inventory costs and declining seed quality, the price of this seed remains fixed at C\$750 Cordobas per quintal.

Both associations lack a clear understanding of production costs and marketing strategies. Both are looking for subsidized credit. Both need assistance in organizational development, including strategic planning, policies and procedures, marketing, and promotion. They would benefit from joining APROSUR (Asociacion de Productores de Semillas del Sur) to gain access to PROMESA's business development services.

Plan for Next Quarter

- Conduct a follow-up business development workshop for seed producer organizations, including INTA seed associations, to define seed business strategies and identify strengths and weaknesses of the organizations as regards profitability and sustainability

IIIA2. RSA Services Profitable

Planned for this Quarter

Conduct workshop on seed marketing.

Accomplishments

- Presented a seed-marketing lecture at CLUSA's marketing seminar for UNAG.

Discussion

PROMESA's organizational development team conducted a needs assessment of two regional seed associations and recommended a training workshop on cost accounting and user-friendly software. The team also recommended conducting workshops for representatives of twelve seed producer organizations. The seminar would cover seed

production, processing, marketing, and organizational development, and would result in each association having a draft business plan.

Planned for Next Quarter

- Conduct a business-planning workshop for seed producer organizations.

IIIA2a. Leon RSA

Plan for this Quarter

Develop RSA work plan.

Design a pilot seed promotion program in Leon and Chinandega.

Accomplishments

- Developed work plans for June and July;
- Established new office in Leon;
- Conducted membership survey;
- Advertised seed on local radio stations;
- Assisted members in establishing seed production contracts with CARE;
- Appointed to represent seed producers in CONASEM;
- Developed seed laboratory equipment specifications;
- Agreed for members to pay 0.5 percent of seed sales to support ASORESEM;
- Began quality control program on Primera seed crop;
- Planted 79 manzanas of black beans for seed production;
- Recruited two new members; and
- Distributed 150 quintals of corn, bean and sorghum seed to Hurricane Mitch victims in Posoltega.

Discussion

Before ASORESEM was established in 1999, only DGS conducted seed quality control. ASORESEM, anticipating accreditation of seed certification services, developed its own more rigorous quality control system. Following the MAG-FOR reorganization, ASORESEM has new set of opportunities. It has a strategic opportunity to show MAG-FOR managers how decentralized seed systems operate, coordinating the roles of public seed institutions, regional seed associations (RSAs), and private seed companies. We can also show them how seed accreditation systems operate, accrediting seed laboratories to analyze seed quality, and crop research centers to conduct variety validation trials. PROMESA proposes to conduct a study tour on August 19-27 to evaluate the seed systems in Peru and Bolivia. Peru provides examples of well-functioning RSAs. Bolivia has a good seed accreditation system. Both countries have decentralized national seed systems.

Plan for Next Quarter

- Analyze membership survey;
- Conduct study tour to Peru and Bolivia to evaluate the roles of regional seed associations;
- Assist members in establishing new seed distribution outlets; and
- Assist members in negotiating for tax-exemption for imported seed laboratory and processing equipment.

IIIA2b. Carazo RSA

Planned for this Quarter

Establish technical and commercial linkages between Nicaraguan and Costa Rican nurseries.

Assess the feasibility of introducing new, annual flower varieties to nurseries.

Accomplishments

- Conducted a study tour for nurserymen to Linda Vista, Costa Rica.

Discussion

Participants in the study tour to Linda Vista, Costa Rica wanted to import flower seeds. They considered imported seedling plugs to be too expensive, and preferred instead to produce them in Nicaragua. PROMESA encourages tour participants to develop commercial relationships with Linda Vista, import its products, and eventually try to attract them Vista to invest in Nicaragua. Linda Vista is reluctant to invest here until its recent expansion into Guatemala is consolidated. Nevertheless, it is willing to assist us in developing Nicaragua's plug markets, and will reconsider the prospect of direct foreign investment in Nicaragua in the future. PROMESA proposes to conduct another trip to Linda Vista for its flower show on August 26. Participants will include flower producers and marketers.



Plan for Next Quarter

Study tour to Costa Rica to strengthen linkages with flower producers and marketers.

IIIA3 Seed Producer Organizations Profitable

IIIA3a COOPPMAT in Matagalpa

Planned for this Quarter

Meet with INTA to develop a plan to multiply true potato seed into mini-tubers and seed potatoes.

Evaluate the need for training in financial training and control systems.

Accomplishments

- Assisted COOPMAT to access credit to expand its seed business;
- Produced 1,300 quintals of registered potato seed in the second multiplication of its potato seed program;
- Sold bean seed to NGOs and PVOs;
- Planted 450 manzanas of bean seed; and
- Received UESA approved for the design of the potato warehouse; funding remains under consideration by the executive committee.

Discussion

Inadequate financing for potato seed cultivation reduced the potential seed production. Nevertheless, direct investment by farmers made it possible to harvest 1,300 quintals of registered seed. To prevent this seed from immediately being sold for consumption, PROMESA helped COOPMAT access credit to finance seed storage and marketing.

COOPMAT had planted about 100 manzanas of bean seed to satisfy increased seed demand, but prolonged drought reduced yields. PROMESA helped COOPMAT access credit to purchase seed. As a result, COOPMAT was able to market 1,550 quintals of bean seed. PROMESA's assistance in seed marketing enabled COOPMAT to sign letters of understanding with NGOs to supply of 2000 quintals of bean seed for the Postrera and Apante seasons. To fulfill the terms of these contracts, COOPMAT planted 450 manzanas of bean seed under contract with 220 farmers from Esteli, Jinotega, and Matagalpa. This represents a significant increase in the number of farmers cultivating bean seed and in the number of manzanas of bean seed production.

UESA (Unidad de Estrategias de Seguridad Alimentaria de la Union Europea) has approved the technical specifications of the potato warehouse. Disbursement of funds to carry out the construction of the warehouse awaits final project approval from Brussels.

Plan for Next Quarter

- Provide training in seed business strategies; and
- Monitor bean seed production in Primera.

IIIA3b. UCOOM in Leon

Planned for this Quarter

Assist UCOOM in consolidating its new distributorship relationship with PROSELA.

Accomplishments

- Secured financing from the Financiera Agricola to import hybrid maize seed from El Salvador;
- Began distributing imported seed for PROSELA;
- Increased seed production area by 25 percent, compared to 1999; and
- Started producing black bean seed.

Discussion

PROMESA uses reflows to buy seed from UCOOM at harvest and resell it to them in the planting season. This enabled UCOOM to expand its production operations by 25 in 2000 without incurring additional debt. Prior to its new seed storage and marketing relationship

with PROMESA, UCOOM would sell its seed at harvest. Now, it can store and sell seed on more favorable terms in the subsequent planting season.

Plan for Next Quarter

- Assist UCOOM in selling importing hybrid maize seed for Postrera

IIIA3c. UNAG Bancos de Semillas

Planned for this Quarter

Assist in installing seed processing equipment in Boaco.
Test databases linking Bancos de Semillas.
Train producers in bean and maize seed production and certification standards.
Deliver parent maize and bean seed to Bancos de Semilla.
Design UNAG seed bag.

Accomplishments

- Tested database linking Bancos de Semillas.
- Trained producers in bean and maize seed production and certification standards;
- Delivered maize and bean seed to Bancos de Semillas; and
- Designed UNAG seed bag.

Discussion

Most of the seed producer organizations PROMESA is working with are members of UNAG. Therefore, we are attempting to institutionalize our organizational development and support services in UNAG.

PROMESA held the first six of a series of ten workshops on bean seed certification, bean and maize seed production, and soil testing. A total of 195 participants in Santa Lucia, Condega, San Ramon, San Dioisio, El Sauce, and San Pedro attended the workshops. PROMESA will offer the remaining four workshops on bean diseases during August and September.

Plan for Third Quarter 2000

- Collect survey information on members of Bancos de Semillas, and load it into a database.
- Deliver parent maize and bean seed to Bancos de Semilla;
- Train personnel to use the database;
- Conduct workshops on bean disease in arid areas; and
- Assist UNAG develop its seed business

IIIB. Seed Processing Capacity Increased

Planned for this Quarter

Conduct an inventory of seed processing capacity.

Accomplishments

- Developed TORs for the seed processing study, and reviewed proposals to conduct the study.

Discussion

A superficial assessment of Nicaragua's seed processing capacity suggests that sufficient capacity exists to support the anticipated growth in national seed production. Existing seed processing plants operate at far below capacity. Coffee and grain processing plants could process bean seed. But further analysis suggests that the real capacity for seed processing in Nicaragua is limited by the age and state of disrepair of existing plants, and the inability to apply seed treatments in proximity with stored food products.

PROMESA will contract a seed-processing specialist to inspect seed plants and equipment, and determine their actual capacity during the seed processing season. This survey will determine the need for additional processing capacity. We will share the results with potential investors.

Plan for Next Quarter

- Conduct study of the national seed processing capacity.

IIIC. Seed Company Interests Represented

Planned for this Quarter

Advocate for ASORESEM to represent seed producer organizations in CONASEM.

Accomplishments

- ASORESEM appointed to represent seed producers in CONASEM.

Discussion

ASORESEM includes 80 percent of the certified seed producers in Leon and Chinandega.

Plan for Next Quarter

- Continue advocating for MAG-FOR to convene CONASEM;

IIIC1. Seed Producer Organizations Profitable

Planned for this Quarter

Organizational development specialists to work with the boards of directors of seed organizations, conducting strategic planning and training in basic financial analysis methods. The team will also meet with members to assess their understanding of seed company operations, membership rights and responsibilities, and the benefits of using improved seed.

Accomplishments

- Interviewed boards of directors of six seed producer organizations to assess their plans and needs;
- Met with members to assess their understanding of commercial seed operations, their rights and responsibilities as members, and the benefits of using improved seed.

Discussion

PROMESA helps fifteen small farmer organizations become commercial seed companies. Like many Nicaraguan farmer organizations, they tend to be driven by the interests of their

boards of directors, rather than by members' needs. Despite their legal status as cooperatives, associations, or foundations, all have problems with financial sustainability and member participation. To become financially sustainable, their boards of directors need to think like businessmen. To understand costs, they need training in cost accounting. They need to learn how to market their products and promote the use of improved seed in general. Their members need to take more active roles in planning and monitoring activities. Members need to understand how their organizations operate, the benefits of producing and using improved seed, and their rights and responsibilities as members. If they understand the benefits of improved seed and share organizational objectives, they can produce and market seed more effectively.

A PROMESA team led by an organizational development specialist met with the boards of directors to conduct needs assessments develops plans. They met with members to discuss their roles, rights, and responsibilities. PROMESA is also developing a baseline database of the characteristics of its seed producer organizations to evaluate and monitor their development.

Plan for Next Quarter

- Workshops presenting an integrated approach to seed production, processing, marketing, and organizational development; and
- Work on baseline of characteristics of seed producer organizations.

IV. Start-up, Management, and Administration

Planned for this Quarter

Rewrite technical section of the project contract.
Reallocate funds to the management CLIN.

Accomplishments

- Drafted technical section of project contract

Discussion

The mid-project assessment report will serve as the basis for the annual work plan.

Plan for Next Quarter

- Summarize the use of OFDA funds and reflows.
- Write annual work plan; and
- Revise project budgets.

Appendix 1

Acronyms

ANAR	Asociación Nicaragüense de Arroceros
APROSUR	Asociación de Productores de Semillas del Sur
ASOPROL	Asociación de Productores de Santa Lucia
CONASE	National Seed Council
COOPPMAT	Cooperativa Agropecuaria de Servicio: Productores de Papa de Matagalpa
CRS	Catholic Relief Service
DGS	Dirección General de Semillas
ECAGE	Escuela Católica de Agricultura de Esteli
FUSODEVIMA	Fundación para la sostenibilidad y desarrollo de la Vida Silvestre y el Medio ambiente
GACETA	Official government publication
IAPAR	Instituto Agronómico de Paraná-Brasil
INTA	Instituto Nicaragüense de Tecnología Agropecuaria
MAGFOR	Ministerio Agropecuario y Forestal
MIFIC	Ministerio de Fomento, Industria y Comercio
ONG	Organizaciones No Gubernamentales
PCCMCA	Programa Cooperativo Centroamericano de los Cultivos y Alimentos
PROMESA	Proyecto de Mejoramiento de Semillas
PVP	Plant Variety Protection
UCOOM	Unión de Cooperativas Multisectoriales R.L.
UESA	Unidad de Estrategia de Seguridad Alimentaria
UNA	Universidad Nacional Agraria
UNAG	Unión Nacional de Agricultores y Ganaderos
UPANIC	Unión de Productores Agropecuarios de Nicaragua
UPOV	International Union of variety Protection

Specialized Terminology

Primera	May-August Crop Cycle
Postrera	August-November Crop Cycle
Apante	November-February Crop Cycle
Manzana	0.7 ha.

Appendix 2

Locations of PROMESA's
Demonstration Trials in Primers 2000

- Maize -

	Departamento	Localidad
1.	León	Posoltega
2.	León	El Sauce
3.	León	Malpaisillo
4.	Chinandega	Chinandega
5.	Boaco	Boaco Viejo
6.	Boaco	Mombachito
7.	Boaco	Tierra Maria
8.	Matagalpa	La Dalia
9.	Matagalpa	San Dionisio
10.	Matagalpa	Palsilas
11.	Matagalpa	Darío
12.	Mangua	CNIA-INTA
13.	Nueva Segovia	Jalapa
14.	Estelí	Pueblo Nuevo
15.	Estelí	Estelí
16.	Jinotega	El Salto
17.	Carazo	Jinotepe
18.	Carazo	La Compañía
19.	Atlántico Sur	El Rama
20.	Atlántico Sur	Mueye de los Bueyes

- Beans -

	Departamento	Localidad
21.	Carazo	Masatepe
22.	Carazo	Jinotepe
23.	Matagalpa	Pascila
24.	Matagalpa	San Dionisio
25.	Matagalpa	Darío
26.	Estelí	Pueblo Nuevo
27.	Estelí	Miraflores

Appendix 3

PROMESA Training Programs for UNAG
May-July, 2000

<u>Localidad</u>	<u>Fecha</u>	<u>Nombre del Taller</u>	<u>Productores Capacitados</u>	<u>Objetivo</u>
Santa Lucía	04/05/00	Normas de certificación de semilla de frijol impartido por la Dirección de Semilla	30	Dar a conocer las normas a los productores que establecerán parcelas de semilla de frijol en primera/2000
Condega	05/05/00	Taller sobre producción de semillas de frijol y maíz	42	Dotar de los conocimientos básicos para producción de semillas a los productores
Matagalpa (San Ramón y San Dionisio)	10/05/00	Taller sobre producción de semillas de frijol y maíz	28	Dotar de los conocimientos básicos para producción de semillas a los productores
Santa Lucía	3/06/00	Taller sobre producción de semillas de frijol y maíz	35	Dotar de los conocimientos básicos para producción de semillas a los productores
El Sauce	9/06/00	Normas de certificación de semillas de frijol	35	Dar a conocer las normas a los productores que establecerán parcelas de semilla de frijol en primera/2000
San Pedro - Carazo	Junio	Taller sobre muestreo de suelo	25	Analizar y obtener resultados de suelo para una fertilización adecuada

PROMESA's Future Training Programs for UNAG

<u>Localidad</u>	<u>Fecha</u>	<u>Nombre del Taller</u>	<u>Productores Capacitados</u>	<u>Objetivo</u>
Matagalpa (San Ramón y San Dionisio)	Agosto (Un día)	Taller sobre enfermedades de frijol para zonas secas	35	Aprender a diagnosticar las enfermedades: (fungosas, bacterias y virósisis)
PIDA-Estelí	Agosto (Un día)	Taller sobre enfermedades de frijol para zonas secas	42	Aprender a diagnosticar las enfermedades (fungosas, bacterias y viróticas)
Santa Lucía	Agosto (Un día)	Taller sobre enfermedades de frijol para zonas secas		Aprender a diagnosticar las enfermedades (fungosas, bacterias y viróticas)
El Sauce	Septiembre	Taller de Control de Calidad	35	Enseñar el manejo adecuado para la obtención de semilla

Appendix 4

Gira de Estudio Exhibición de Flores - Linda Vista, Costa Rica 25-27 de Agosto, 2000

Las importaciones de flores a Nicaragua han crecido de manera acelerada en los últimos años. La poca producción nacional no cubre el volumen, ni los diferentes tipos de flores que el mercado nacional demanda. Sin embargo, las pequeñas unidades de producción que algunos productores operan y las iniciativas de algunos proyectos para desarrollar el rubro representan un buen potencial para mejorar la producción. Aunque varios de estos grupos fueron seriamente afectados por el Huracán Mitch, estos continúan interesados en el rubro.

Las iniciativas existentes para la producción nacional de Flores son reducidas y carecen de materiales de calidad y tecnologías, especialmente después que el Huracán Mitch ocasionara grandes pérdidas en áreas y materiales de multiplicación. Debido a estas condiciones las importaciones de flores se han incrementado, porque tampoco se aprovecha el potencial que el rubro tiene para la exportación, y no se ofrece a pequeños y medianos productores esta alternativa que contribuya a diversificar sus ingresos. Por su parte, los comercializadores de flores carecen de experiencia en mercadeo, necesario para contribuir a desarrollar tanto el mercado nacional como internacional.

Dado este panorama, es necesario apoyar el desarrollo de la producción y comercialización de flores, a través de proyectos que puedan ser ejecutados con organizaciones de productores y comercializadores que poseen interés y experiencia en el rubro. Para que los proyectos puedan ser impulsados es necesario contar con materiales de siembra de buena calidad y con tecnología, ambas escasas y de poco desarrollo en el país.

Gira a Linda Vista en Mayo 2000

USAID reconoció una oportunidad para explotar la producción nacional de las flores y el almácigo, por eso pidió a PROMESA que determinara si barreras no tarifarias están restringiendo la transferencia de tecnología de producción. Cuando PROMESA presentó los resultados de este estudio en marzo, USAID sugirió una visita técnica a Linda Vista en Cartago, Costa Rica, la cual se realizó en mayo. Los objetivos de la visita fueron:

- Explorar nuevas alternativas de cultivos de flores y hortalizas para la diversificación de la producción agrícola en Nicaragua.
- Identificar oportunidades de adquisición de materiales promisorios y tecnología en nuevos cultivos.

Durante esta gira, representantes de organizaciones y productores mostraron gran interés en tecnología y materiales de siembra de la empresa Linda Vista, tanto por la calidad y diversidad de productos como por las ventajas que las técnicas utilizadas ofrecen. La participación del Director de Cuarentena Vegetal del MAG-FOR en la gira, contribuyó a que conociera los tramites de importación y a que se pudiera contar con su apoyo para la importación de materiales de siembra. Al final de la gira los participantes recomendaron dos cosas: primero, que es importante dar seguimiento a la iniciativa para importar material de Costa Rica; y, segundo, que es necesario desarrollar ideas de proyectos que puedan ser implementados en Nicaragua. En este sentido el proyecto ARAP ha iniciado un proyecto de cultivo de flores en la zona de Jinotega. Existen otros grupos interesados en Estelí, Matagalpa y Carazo.

Exhibición en Linda Vista el 26 de Agosto

Al 26 de Agosto del presente año la empresa Linda Vista estará realizando en la ciudad de Cartago, Costa Rica, una exposición de sus productos, incluyendo nuevas variedades de flores. Esta es una buena oportunidad para que productores y comercializadores nicaragüenses interesados en el rubro puedan conocer la oferta de materiales de siembra y realizar contactos para compra de éstos materiales. El presente documento presenta propuesta para que un grupo de unas 30 personas realice una gira a la empresa Linda Vista y participen en la mencionada feria.

Esta gira incluye la participación de comercializadores, productores individuales y representantes de organizaciones de productores con poder de negociación y decisión en cuanto a la posibilidad de adquirir compromisos y establecer contratos con la empresa Linda Vista. Con esta participación, las iniciativas de proyectos de los productores y comercializadores podrán contar con una fuente de materiales de siembra de calidad, tecnologías de producción y comercialización, y la posibilidad de establecer contactos de asesoría técnica. Además de ser una oportunidad para promover el inicio de relaciones comerciales y de cooperación con la empresa Linda Vista, los productores y comercializadores nicaragüenses de flores podrán:

1. Conocer la diversidad de variedades disponibles, y definir que materiales podrían ser importados.
2. Conocer tecnologías para el cultivo.
3. Establecer relaciones de cooperación con la empresa Linda Vista para desarrollar sus proyectos.
4. Conocer nuevos sistemas de comercialización de flores.

Con estos elementos, los productores estarán en capacidad de organizar proyectos que se puedan impulsar, así como realizar las coordinaciones específicas con el MAG-FOR para facilitar la importación de materiales.

Patrocinadores: ARAP y PROMESA

Financiamiento: ARAP

Logística: PROMESA

Colaboradores: Dirección de Cuarentena Vegetal MAG-FOR, Dirección de Semillas MAG-FOR, WINROCK Internacional, CARE, CRS.

Participantes: Productores y comercializadores de flores. (Total 20 personas)

Duración: Agosto 25-27

Lugar: Costa Rica

Presupuesto Estimado: (30 personas)

CONCEPTO	Costo/persona (US\$)	Costo Total (US\$)
Hospedaje (1 noche)	50	1,500
Alimentación (3 días)	20	1,800
Transporte terrestre	50	1,500
Gastos de Aduana	20	600
Imprevistos	25	750
TOTAL	165	6,150