PD-ABY-232

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EXECUTIVE SUMMARY

MAG-FOR made important changes in the regulatory structure of the national seed system. In consultation with the private seed sector, MAG-FOR developed a program to accredit private seed laboratories to analyze seed quality, crop research centers to conduct variety validation trials, and seed companies to certify seed[1].

PROMESA sponsored a series of workshops to assist MAG-FOR to define accreditation procedures, and continues to assist MAG-FOR in seeking approvals[2] and implementing the program. PROMESA is also helping seed laboratories, research centers, and seed companies develop the quality control systems needed for accreditation, in order to begin offering services as soon as MAG-FOR's accreditation program gets underway.

4th Quarter Seed Promotion Activities

- Second Certified Seed Fair between seed associations, PL-480, and PNAPP;
- Black bean market study tours to Costa Rica and Mexico;
- 6 variety demonstration trials with partner NGOs;
- 5 field days co-sponsored by public and private organizations;
- Quality protein maize (QPM) compared with improved and conventional varieties.

New institutions are forming in response to growth in the seed sector and the changing needs of private seed companies; others are changing t heir roles. PNAPP purchased seed, rather than grain used as seed, from regional seed associations, negotiating as a block at a BAGSA auction. MAG-FOR IS committed to establishing CONASEM. MAG-FOR and MIFIC are implementing the PVP law. A committee representing relevant public sector institutions is considering establishing an agricultural biotechnology advisory commission. MAG-FOR is assessing the feasibility of establishing an agricultural biotechnology department at DGPSA. These initiatives will encourage seed companies to release proprietary seed products in Nicaragua.

MAG-FOR eliminated some of the constraints to new variety introductions. It reduced the testing period for new varieties from two years to one crop cycle, cut registration costs by fifty percent, and granted temporary registration status to two black bean varieties that are still in validation trials. Other constraints continue to exist. The PVP law is untested, and the regional seed harmonization agreement has not been fully implemented.

Seed promotion activities - variety demonstrations, field days, farmer training, seed science courses, and targeted promotion programs - are assisting in opening up new seed markets and investment as seed companies increase production of certified seed. Promotion activities during the fourth quarter have resulted in:

- MAG-FOR's PNAPP purchased 900 quintals of certified seed for its Apante program;
- 450 manzanas of black bean production in Apante in northern and central areas;

[1] MAG-FOR is increasingly reliant on private seed technicians to certify seed. MAG-FOR's new management information system for the seed sector will increase the transparency of regulatory activities. These programs are indicators of MAG-FOR's commitment to delegate authority to the private sector.

[2] Draft regulations for the accreditation program were submitted for MAG-FOR approval in December.

- Foreign investor analyzing the market potential for vegetable and ornamental plant plugs in Nicaragua; and
- Farm association building a new seed processing plant in the Occidente.

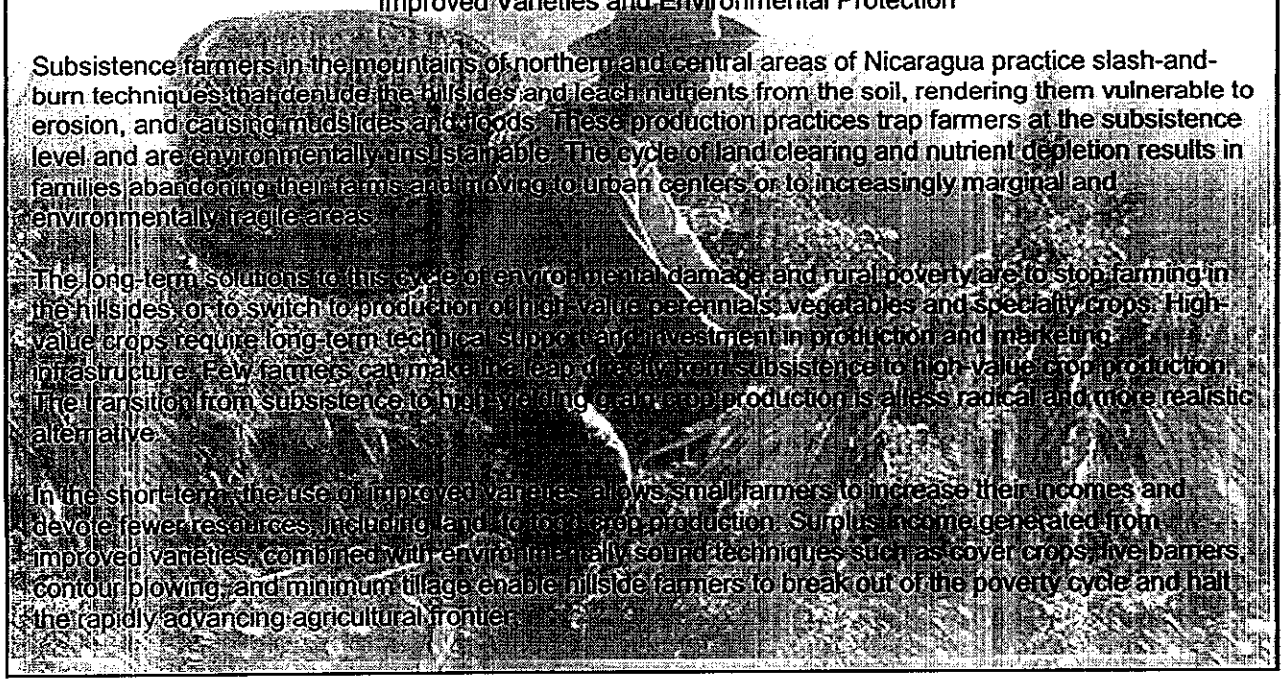
One of PROMESA's primary objectives for the first quarter of 2001 is to increase the participation of counterpart organizations in long-term seed promotion programs. We are expanding our variety demonstration and field day program involving NGOs, farm organizations, and GON small farmer development programs. We will encourage CONASEM to adopt this collaborative promotion strategy as an integral part of its seed promotion program. We are also trying to transfer PROMESA's bilateral programs with public seed institutions, like MAG-FOR and INTA, to regional seed associations (RSAs), and other seed organizations.

PROJECT GOAL AND OBJECTIVES – 1st Quarter 2001

PROMESA and MAG-FOR are working together to increase small farmers' access to certified seed of improved varieties. We acknowledge the importance of traditional varieties for subsistence farmers in some marginal production areas. We do not recommend substituting traditional varieties with certified seed on all farms. But we also recognize that increasing farm income, sustaining agricultural growth, and protecting the natural environment will require extensive use of certified seed to increase and diversify the sources of farm income.

The use of improved varieties and appropriate hillside farming techniques are critical components to environmentally sustainable strategies to increase farm incomes and slow the advance of the agricultural frontier. Certified seed of improved grain and oilseed crop varieties can increase yields and reduce per-unit production costs. The profits generated by certified seed can provide surplus income and create incentives to invest in sustainable agricultural practices.

Improved Varieties and Environmental Protection



Subsistence farmers in the mountains of northern and central areas of Nicaragua practice slash-and-burn techniques that denude the hillsides and leach nutrients from the soil, rendering them vulnerable to erosion, and causing mudslides and floods. These production practices trap farmers at the subsistence level and are environmentally unsustainable. The cycle of land clearing and nutrient depletion results in families abandoning their farms and moving to urban centers or to increasingly marginal and environmentally fragile areas.

The long-term solutions to this cycle of environmental damage and rural poverty are to stop farming in the hillsides, or to switch to production of high-value perennials, vegetables and specialty crops. High-value crops require long-term technical support and investment in production and marketing infrastructure. Few farmers can make the leap directly from subsistence to high-value crop production. The transition from subsistence to high-yielding grain crop production is a less radical and more realistic alternative.

In the short-term, the use of improved varieties allows small farmers to increase their incomes and devote fewer resources, including land, to food crop production. Surplus income generated from improved varieties, combined with environmentally sound techniques such as cover crops, live barriers, contour plowing, and minimum tillage enable hillside farmers to break out of the poverty cycle and halt the rapidly advancing agricultural frontier.

In 2001, PROMESA will shift from "doer" to "facilitator" in order to increase the sustainability of its seed programs by encouraging key industry stakeholders to modify their behaviors in different ways:

- Encourage public and non-profit intermediaries such as NGOs to work through the private sector to reach small farmer clients;
- Allow small farmers make the decisions as to which seed varieties to plant, and exercise their choice in private markets, rather than through GON or NGO programs; and
- Assist national and international seed companies introduce, market and sell improved seeds to all types of farmers, both directly and through distributors and other intermediaries.

To encourage the desirable behavioral "shifts" explained above, PROMESA will concentrate future efforts in two areas:

1. Development of a clear policy agenda that facilitates private sector-led development of the seed sector, focusing responsibility on GON and private sector organizations to fully implement the agenda.

2. Strengthening private sector organizations that participate in seed production and marketing so that they can fulfill these functions with minimal influence and support from temporary intermediary organizations such as NGO and GON programs.

PROMESA is organized into three components: Seed Policy Advocacy, New Variety Introductions, and Private Seed Company Development (see Results Framework diagram below). Seed Policy Advocacy activities are funded by a special, supplemental Hurricane Mitch recovery fund, except for the costs of long-term PROMESA personnel. Other activities are financed by USAID development funds.

Highlights - Fourth Quarter 2000

Supplemental Program: Seed Policies Favor Investment

- Presidential decree makes Nicaragua a member of UPOV;
- North Carolina State University submits first application for PVP protection;
- MAG-FOR completes procedures for accreditation.

Improved Varieties Introduced

- MAG-FOR's new management information system, including variety registrations, seed certification, and commercial seed transactions, will increase MAG-FOR's efficiency, improve transparency in regulatory and commercial transactions, and provide market information for private seed companies;
- More than 100 small farmers attend field days in Boaco to evaluate improved maize varieties and hybrids, setting the stage for an expanded hybrid maize promotion program in 2001; and
- ANAR registers ANAR-97 rice variety for commercial release.

Commercial Seed Sector Growing

- Seed companies and RSAs sell certified bean seed at BAGSA auction to PNAPP for Apante program;
- UNAG/Agronegsa's marketing plan projects sales of $250,000 in 2001; and
- CLUSA's Financiera Agricola seeks partner organizations to finance black bean production and exports.

STTA Activities

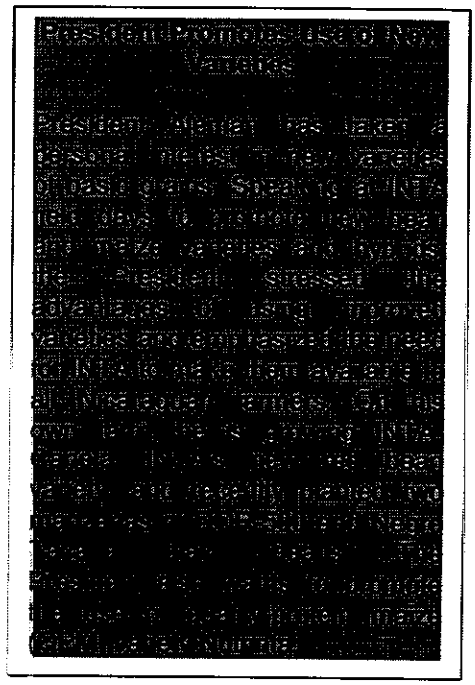
Joseph Cortes:	Conducted third seed accreditation workshop, where MAG-FOR finalized its seed accreditation program.
Rene Urue:	Assisted MIFIC in soliciting a Presidential decree to join UPOV.
James Chapman:	Defined new roles for GON and NGO seed organizations to assist in distributing certified seed through private channels to small farmers.
Jose Berrios	Analyzed the seed processing capacity of existing processing plants, and assessed their needs for training and equipment.
Anajuac Ybarra	Assessed the feasibility of establishing new, private seed distribution channels to small farmers, and conducted a survey of potential seed distributors

Next Quarter's Activities and Anticipated Results

Supplemental Program: Seed Policies Favor Investment

- Nicaragua joins UPOV, providing intellectual property right protection to plant breeders;
- MAG-FOR negotiates with MIFIC for authority over seed service accreditation programs;
- MAG-FOR relies on assessments of private seed technicians to certify seed grown in Apante;
- MAG-FOR assesses feasibility of establishing an agricultural biotechnology department at DGPSA;
- MAG-FOR recommends import tax exemption for seed-related materials and equipment;
- PROMESA coordinates with IICA's policy program to address MIFIC's protection of infant agribusinesses;
- MAG-FOR seed management information system in operation;
- Seed web-page in operation;
- OIRSA annual meeting reviews the status of national programs to implement the regional seed harmonization agreement s; and
- CONASEM convenes, providing an effective voice for the private seed sector in defining seed policies.

Improved Varieties Introduced



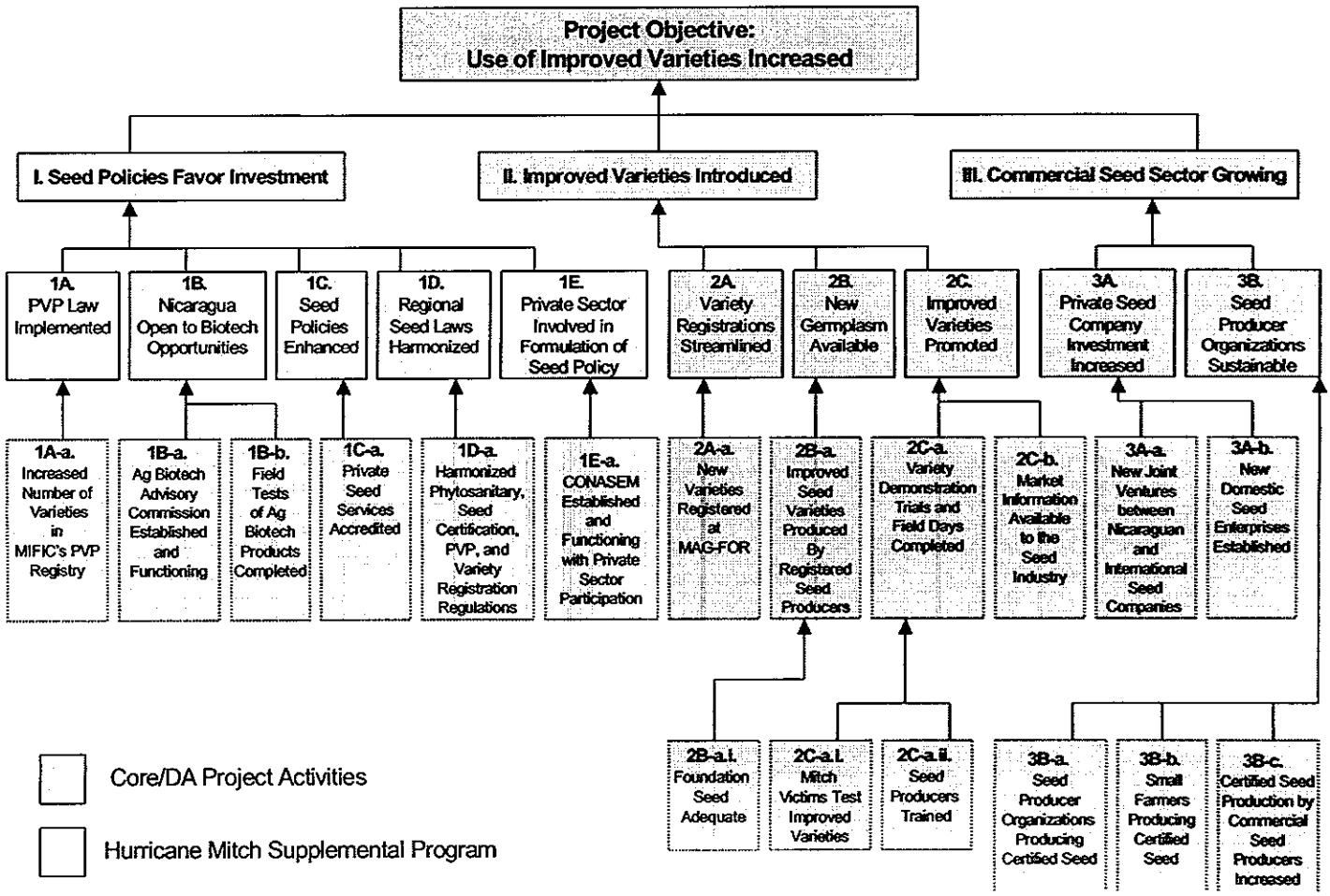
- USAID's hybrid maize promotion program targets NGO partners for a mass demonstration in 2001;
- INTA registers four new varieties of basic grains for commercial release;
- ANAR registers ANAR-97;
- PROMESA assists INTA in marketing registered seed at the National Seed Conference;
- Course on agricultural biotechnology, co-sponsored by UCA and UNA, for ad hoc agricultural biotechnology advisory commission, and the agricultural community;
- Study tour to Florida for small flower producers;
- Black bean market research in El Salvador and Guatemala;
- Costa Rican grain buyers tour black bean production areas and negotiate contracts;
- Field days in Carazo, Matagalpa, Jinotega, Esteli, Nueva Guinea, Cardenas, and Rama to promote new red and black bean varieties;
- Field days in Sebaco and Esteli to establish linkages between NGOs and commercial vegetable seed distributors;
- Cooperative in Pueblo Nuevo produces registered seed of quality-protein maize (QPM) Nutrinta variety.
- PROMESA encourages NGOs to send agricultural technicians to seed science courses at UNA and ECAGE;

- Study tour, organized by UPANIC, to review bean variety and ryzhobia research at Zamorano; and
- PROMESA and partner organizations participate in CIAT's Participative Variety Selection program in 2001, including bean variety demonstrations in the Occidente, Managua, Carazo, and northern areas.

Commercial Seed Sector Growing

- Private seed laboratories, crop research centers, and seed companies prepare for accreditation;
- Third farm survey measures changes in the use of improved varieties and certified seed;
- Case studies of financial control systems for RSAs and small seed companies;
- National Seed Conference;
- Seed business development plan for ANAR;
- Farm association begins construction of a new seed processing plant in Chinandega to process maize, beans, sesame, and soybean seed;
- Bilateral agreements established between regional seed associations (RSAs) and GON seed programs (INTA and MAG-FOR);
- Seed companies in Esteli harvest and process registered seed of red bean varieties;
- Seed sector analysis report.

PROMESA RESULTS FRAMEWORK



Project Objective: Use of Improved Varieties Increased

GROUP I SEED POLICIES FAVOR INVESTMENT

A market-driven seed sector requires a policy environment that facilitates trade of private goods and services in response to market signals, and reduces market imperfections through a prudent regulatory framework. With support from both the core project contract and Hurricane Mitch Supplemental funds, PROMESA has undertaken programs to develop policies that provide incentives required for the growth of a healthy, market-based seed system. The key accomplishments are:

- Nicaragua joins UPOV to facilitate the implementation of a Plant Variety Protection law passed by the National Assembly in November 1999, which allows breeders to protect their ownership rights over new varieties development and protects the intellectual property rights of seed imported into Nicaragua;

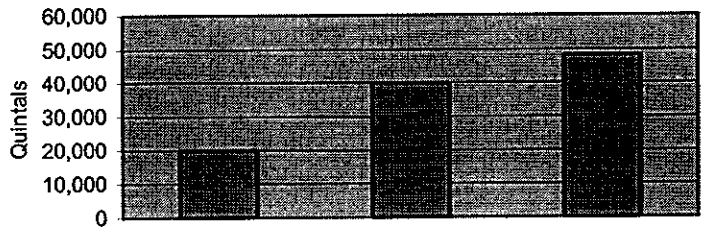
- MAG-FOR develops procedures for accrediting private seed organizations to conduct certain key regulatory activities: seed quality control by laboratories, new variety validations, and seed certification;

- MAG-FOR agrees to convene CONASEM (National Seed Council) to provide the private sector with a formal voice and vote in the determination of future Nicaraguan seed policies; and

- Campaign accelerates to inform the Nicaraguan public about the potential advantages and risks of biotechnology, and its potential to dramatically reduce crop production costs, increase yields, and improve the health of the population.

The impact of seed promotion activities on the use of certified seed of basic grains crops in 1998 and 1999 is indicated in the figure below.

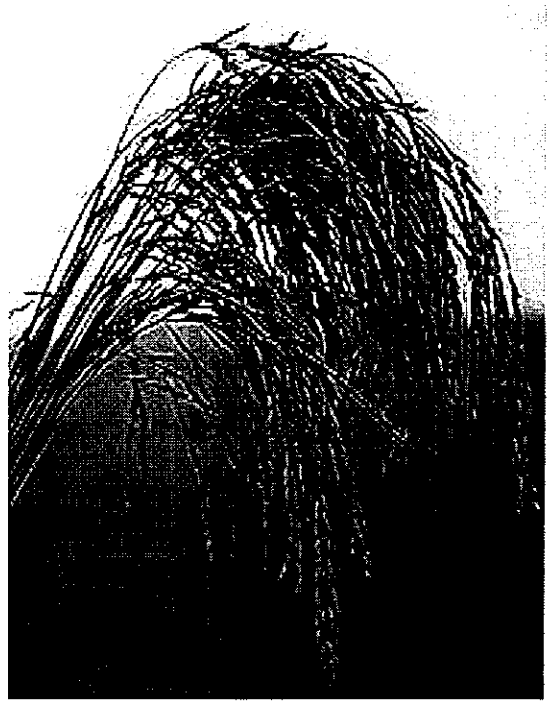
Figure 2
Consumption of Certified Seed
-Basic Grains and Oilseed Crops-



(Source: DGS/MAG-FOR)

IA. PVP Law Implemented

Planned for this Quarter
- Assist MIFIC in defending PVP law in the National Assembly; and
- Conduct seminar on "Variety Characterization" for members of MIFIC's IPR registry committee.



Accomplishments
- Consultant analyzing taxes on imported seed equipment;
- Agreement with ANAR to register ANAR-97, develop a business plan, and lobbying for seed policy changes; and
- Seminar on variety characterization.

Discussion
Prepared a brief to assist MIFIC in defending PVP in the National Assembly. Fortunately, the National Assembly did not debate the presidential decree to join UPOV, so MIFIC was not required to defend the PVP law.

Plan for Next Quarter
- Provide computer equipment to MIFIC and MAG-FOR for PVP offices.
- Publish PVP law
- Provide training on MAG-FOR's updated seed information system.
- Assist MAG-FOR and MIFIC in processing the first batch of PVP registrations and assess the costs of registering new varieties;

IA-a. Number of Varieties Registered in MIFIC's PVP Registry Increased

Planned for this Quarter
- Assist ANAR in registering ANAR-97 for certification and commercial release.

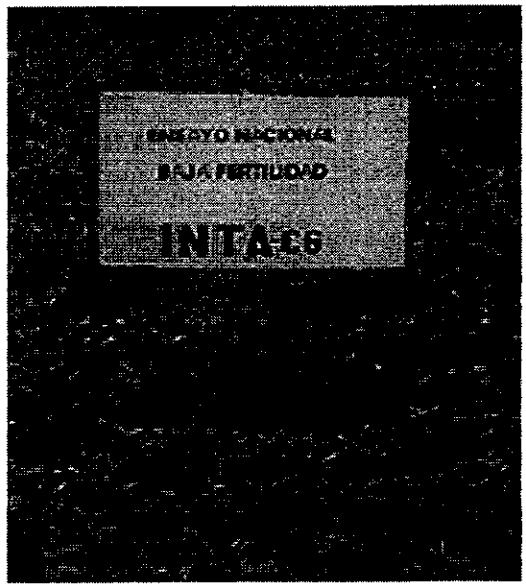
Accomplishments
North Carolina State University registering Vector Burley 21-41 tobacco leaf for PVP protection.

Discussion
Nicaragua's National Assembly passed PVP Law No. 318 in November 1999. DGS and MIFIC met in March to define PVP implementation procedures, adopting a system that relies on breeder data, rather than on field tests conducted by regulatory agencies. During May-October 2000, work groups composed of crop scientists from public and

private sector agricultural institutions met to define variety descriptors. In October, the Office of the President approved membership in UPOV. Nicaragua will become a member of UPOV in January 2001 when it pays the initial $7,000 annual membership fee.

Most Nicaraguan crop breeders lack ownership rights over their varieties. The existence of a PVP law will not ensure that proprietary varieties are available to small farmers. The PVP law, and membership in UPOV, may be insufficient to motivate them to protect their varieties. Even if research centers want to protect their varieties, crop breeders may lack incentives to provide information for PVP registration. Other constraints to PVP registration also exist. For example, INTA is reluctant to register its varieties because it wants to avoid the annual fees required for protection.

The PVP law is, therefore, a necessary but insufficient condition for the release of improved varieties by companies concerned with protecting ownership control over their varieties and hybrids. A PVP law is not the only, or even the most important requirement. Appropriate regulations for implementing the law are also essential. Transparent regulatory procedures must be defined and followed. Enforcement by credible regulatory authorities must be in place. A PVP law and membership in UPOV can motivate researchers to develop new varieties, but they need property rights over them to benefit from registration. Until all of these conditions exist, we do not expect the PVP law to significantly increase the release of new improved varieties.



In the interim, PROMESA will assist seed organizations in registering their proprietary varieties for protection. Seven INTA varieties are candidates for registration, including: high-protein maize (QPM), maize hybrids, bean varieties, and rice varieties.

Maize Varieties:	NB-9043	NB-Nutrinta
Maize Hybrids:	H-INTA-991	HQ-INTA-993
Red Bean Variety:	INTA-Masatepe	
Rice Varieties:	INTA-N1	INTA-Dorada

Plan for Next Quarter

- Assist ANAR in registering ANAR-97;
- Assist INTA in registering maize varieties;

- Assist MIFIC in registering Nicaragua in UPOV (Union Internationale Pour la Protection des Obtentions Végétales;
- Equip new PVP offices in MIFIC and MAG-FOR;
- Prepare to publish and distribute PVP regulations.

IB. Nicaragua Open to Biotech Opportunities

IB-a. Agricultural Biotech Advisory Commission Established and Functioning

Planned for this Quarter.
- Convene agricultural biotech advisory commission.

Accomplishments
Met with MAG-FOR Minister to discuss the need for an agricultural biotechnology advisory commission.

Discussion
Regulatory institutions like MAG-FOR, MARENA, and MIFIC focus on different aspects of agricultural biotechnology. To streamline the regulatory processes for evaluating, importing, and commercializing biotech products, these institutions need to share objective, technical information about these new technologies. A technical commission consisting of representatives of public and private institutions is needed to integrate the biological, agronomic, and environmental considerations used to assess the potential impacts of these new technologies, and provide scientifically-valid regulations to govern the testing and introduction of agricultural biotech products.

In November, PROMESA submitted to the minister of MAG-FOR a report outlining the legal and technical basis for establishing an Agricultural Biotechnology Advisory Commission (CARBA). The report recommends that CARBA be composed of representatives from public and private institutions. Its objectives are to: (a) review the potential benefits and risks of introducing plant biotech products; (b) advise public decision-makers; and (c) inform the public on agricultural biotechnology. PROMESA expects the commission to be dominated by public and academic institutions, but private companies will serve as important sources of information. CARBA will concern itself exclusively with agricultural biotechnology, since the 1993 Convention on Biological Diversity (CBD) already calls for the establishment of a biotechnology commission with a broader mandate.

PROMESA will continue to advocate for CARBA's establishment, ensure that its internal regulations are consistent with scientifically-valid objectives, and search for appropriate sources of long term funding.

Plan for Next Quarter
- Solicit support of MAG-FOR, UCA, UNA, and other organizations to sponsor a biotechnology training course;
- Meet with MAG-FOR to definea schedule for convening the ad hoc Agricultural Biotech Advisory Commission, and establishing the official commission;
- Recommend that MAG-FOR establish an Agricultural Biotechnology Department at DGPSA; and
- Design a website providing biotech news and information sources.

IB-b. Field Tests of Agricultural Biotech Products Completed

MAG-FOR received its first application to test Bt maize hybrids in 1999. PROMESA advised MAG-FOR to proceed cautiously by establishing CABRA and asking it to recommend whether Bt maize should be field-tested in Nicaragua. MAG-FOR received another application for field tests in 2000. Eventually, agricultural biotech products will be smuggled into Nicaragua unless the MAG-FOR defines appropriate regulatory guidelines for testing and release.

Plan for Next Quarter

- Determine whether seed companies will request authorization to conduct field tests of agricultural biotech products in 2001.

IC. Seed Policies Enhanced

IC-a. Private Seed Services Accredited

Planned for this Quarter

- Advocate for a Seed Law amendment allowing MAG-FOR to accredit private companies to certify their own seed.
- Conduct workshop to train private seed inspectors to supervise seed production;
- Conduct workshop to accredit seed laboratories, crop research centers, and seed field inspectors; and
- Present accreditation procedures to MAG-FOR and MIFIC policy-makers for approval.

Accomplishments

- Won the support of MAG-FOR's Minister for the accreditation program. MAG-FOR is negotiating with MIFIC for exclusive authority over the program;
- Conducted third accreditation workshop to define MAG-FOR's accreditation procedures; and
- MAG-FOR trained private seed technicians to supervise seed certification.

Discussion

The private seed sector depends on MAG-FOR for seed certification and quality control. MAG-FOR laboratories conduct all seed analyses and MAG-FOR technicians supervise most commercial seed production. INTA conducts all variety validation trials. As seed markets grow, the demand for seed services will exceed the capabilities of the public institutions. Seed producers will need alternative suppliers. In some cases, private companies will be able to provide these services better, cheaper, and faster.

Anticipating rapidly increasing demand for seed certification, and fixed budgets for providing these services, MAG-FOR began training private inspectors to supervise certified seed production, resulting in hundreds of new seed producers in northern departments multiplying certified seed. MAG-FOR also developed a program to accredit

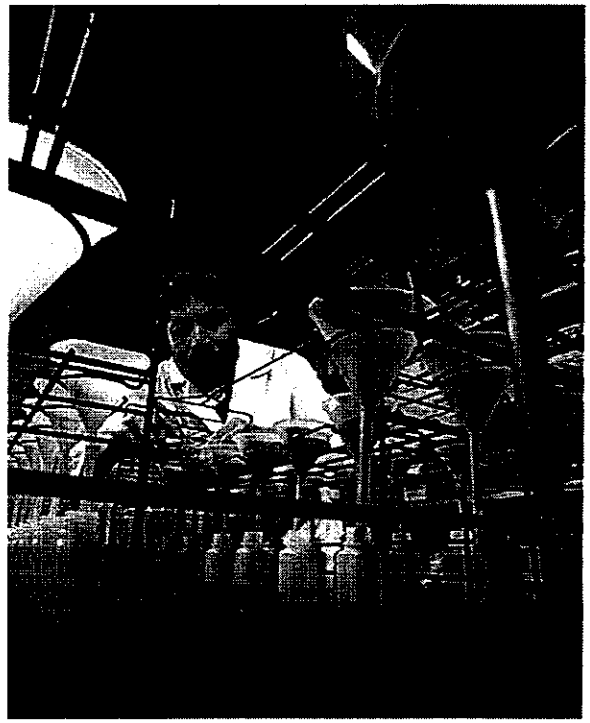
laboratories to test seed quality, crop research centers to validate new varieties, and seed companies to certify seed.

In the short run, accreditation will result in faster and cheaper seed testing, variety validation, and seed certification. Eventually, it to result in MAG-FOR regulating truth-in-advertising, rather than trying to guarantee seed quality. In the long run, accreditation will allow larger volumes of seed to be certified, and provide incentives for seed companies to establish quality control systems that generate competitive advantages in national and international markets.

The rights of private companies to provide seed services is established in the 1998 Seed Law, which requires MAG-FOR to accredit private laboratories to test seed, and crop research organizations to validate new varieties. But the Seed Law reserves authority over seed certification to the MAG-FOR. MAG-FOR is willings to accredit private seed companies to certify seed, but this will require changing the Seed Law. PROMESA is advocating for an appropriate amendment, but we do not expect approval in the short term.

Plan for Next Quarter

- Conduct workshop to define procedures for seed organizations seeking accreditation, and seek approval for accreditation process;
- Assist MIFIC in evaluating MAG-FOR's accreditation procedures;
- Determine the legal basis for MAG-FOR, rather than MIFIC, to accredit private seed services; and
- Organize farm associations to advocate for the implementation of the accreditation program.



ID. Regional Seed Laws Harmonized

ID-a. MAG-FOR Implements Regionally Harmonized Regulations

Planned for this Quarter

- Advocate for implementation of the regional seed harmonization agreement .

Accomplishments

- Briefed new Minister of MAG-FOR on status of harmonization program; and
- Recommended reviewing seed harmonization at regional OIRSA meeting in March 2001.

Discussion

Harmonizing the seed laws and regulations in Central America, standardizing seed quality categories, and accepting seed certified by other official seed agencies will

stimulate regional seed trade and encourage seed companies to produce for regional markets. A regional World Bank project to harmonize seed laws began at approximately the same time as PROMESA, and resulted in four decisions:

1. Commitment to pass UPOV-compliant PVP laws;
2. Mutual recognition of seed certification by authorized seed certification agencies of common standards, and use of a regional seed certification tag;
3. Elimination of testing for most seed-borne pests and diseases; and
4. Reduction in the period required for new variety testing to two years of breeders' data, and one cycle in the country where the variety is to be registered.

In November 1999, MAG-FOR signed a regional agreement harmonizing seed laws and regulations (Regional Harmonization of Field Trials and Laboratory Standards for Seed Varieties). At MAG-FOR's request, PROMESA provides technical assistance in its implementation., which has resulted in two successful harmonization initiatives.

(1) Nicaragua passed a PVP law in November 1999. (2) Harmonized phytosanitary standards require only minimal phytosanitary testing for certified seed of basic grain and oilseed crops traded within Central America.

Discrepancies between the harmonized regulations and the 1998 National Seed Law continue to delay the publication of the harmonized phytosanitary requirements. Legal obstacles also delay implementation of the other decisions. Implementing a regional seed certification tag, and streamlining registration procedures, will require changing the Seed Law.

Plan for Next Quarter

- Promote regional seed harmonization at the National Seed Conference;
- Brief new Minister of MAG-FOR on the status of seed harmonization in other Central American countries;
- OIRSA discussion of seed harmonization at its next regional meeting; and
- Assist MAG-FOR in publishing harmonized seed phytosanitary testing requirements.

IE. Private Sector Involved in Seed Policy Formulation

Planned for this Quarter

- Continue advocating for a Seed Law amendment to increase private sector representation in CONASEM and allow MAG-FOR to accredit private organizations to certify seed.

Accomplishments

- Briefed new Minister of MAG-FOR on problems with the Seed Law.

Discussion

MAG-FOR is gradually adopting seed policies that favor private investment. It has made substantial progress in removing constraints to seed sector development by agreeing to harmonize regional seed laws, supporting passage of a PVP law, and accrediting the

private sector to provide key seed services. An opportunity now exists to accelerate this process by involving the private sector in policy development.

CONASEM can be instrumental in advocating for new policies to stimulate seed industry development, including 1) increased private sector participation in CONASEM, at least as advisors, 2) programs to facilitate the introduction of agricultural biotech products, and 3) strategies to increase investment and competition in the seed industry.

Plan for Next Quarter
- Hold seed policy debates at the National Seed Conference.

IE-a. CONASEM Established and Functioning With Private Sector Participation

Planned for this Quarter
- Advocate for MAG-FOR to establish CONASEM.

Accomplishments
- Contracted consultant to conduct analysis to support exemption of seed equipment from import taxes;
- MAG-FOR Minister agrees to convene CONASEM.

Discussion
Seed importers participate in policy debates through their membership in the Asociación Nicaragüense de Importadores y Formuladores de Agroquímicos (ANIFODA), an association of importers and distributors of agricultural production inputs. The 1998 Seed Law, however, calls for the establishment of a Consejo Nacional de Semillas (CONASEM) as a forum for these and other private sector stakeholders to participate with the public sector in seed policy analysis. PROMESA is advocating for the immediate establishment of CONASEM. In June 2000, MAG-FOR instructed member institutions to appoint their representatives to CONASEM. MARENA and UNAG appointed their representatives in July. We expect CONASEM to be established during the first half of 2001.

Before CONASEM can serve as an effective forum for seed policy debate, its members must convene, approve its internal procedures, and appoint subcommittees to conduct business. PROMESA drafted internal regulations for CONASEM in July 2000.

Unfortunately, the private sector is under-represented in CONASEM. The 1998 Seed Law reserves eight CONASEM seats members for public institutions and universities. Two are for farmer associations (UNAG and UPANIC), each of which have small, commercial seed operations. One is for ANIFODA. Only one member will represent seed producer associations.

There is no consensus in the MAG-FOR concerning the need to change the Seed Law, so we anticipate extended debate and delays on this issue. When CONASEM convenes, PROMESA will assist it in assessing the need to advocate for changing the 1998 National Seed Law, including the composition of CONASEM and MAG-FOR's exclusive authority over seed certification.

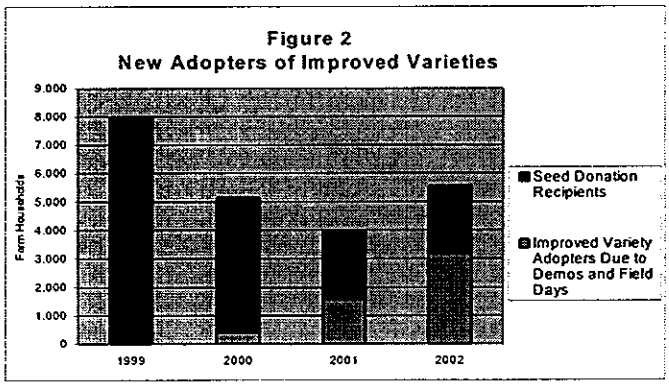
Plan for Next Quarter

- Submit list of proposed tax-exempt agricultural imports to MIFIC for submission to the National Assembly;
- Advocate for establishing of the National Seed Council (CONASEM) to represent private and public sector interests;
- Add lobbying responsibilities to "convenio" agreements with counterpart organizations; and
- Enlist the support of private counterpart organizations to advocate for the establishment of CONASEM.

GROUP 1 - IMPROVED VARIETIES INTRODUCED

Seed donations, variety demonstrations, and field days are complementary and synergistic in increasing the rates of adoption of improved varieties. To estimate the impact of these activities, PROMESA distinguishes between two types of beneficiaries: new variety adopters and seed donation recipients. Early- and second-wave adopters are relatively good farmers with higher grain yields than the national average. Adoption due to their participation in demonstrations and field days begins slowly, after a lag of at least one crop cycle, and increases gradually in subsequent years. Seed donation recipients tend to farm in marginal areas, and have yields lower than the national average.

The immediate impact of seed donations falls quickly, as recipients tend to stop using improved varieties after a few years. Nevertheless, they provide a short-term demonstration effect to other farmers, thereby promoting environmentally sustainable agricultural practices.



Most of our 55 variety demonstrations in 2000 were lost due to drought in Primera. To compensate for lost demonstrations, we increased the number of field trials in Postrera. Nevertheless the total number of demonstrations in 2000 was below expectations, and the number of field days also declined. The impact of the drought and loss of demonstrations and field days will show up in 2001 when, after a one-year lag, fewer farmers than expected will adopt improved varieties. To compensate for losses in 2000, we will depart from our plan, which did not include demonstration or field days. We will plant 35 demonstrations and hold 5 field days in the next six months. If PROMESA is extended to a fourth year, we will further increase the number of demonstrations and field days.

According to PROMESA farm surveys, approximately 20 percent of the small farmers in western, northern, and central areas of Nicaragua used improved varieties in 1997. In 1998, the proportion of farmers using improved varieties fell to about 15 percent. The use of improved varieties continued to fall in 1999 to about 10 percent of small farmers. We expect the seed promotion activities sponsored by PROMESA and its counterpart organizations during the past two years will reverse this trend, and increase the use of improved varieties in 2000 to 1997 levels, i.e. to approximately 20 percent of small farmers. Next quarter's farm survey will determine whether our expectations are met.

2A - Variety Registration Streamlined

The November 1999 regional seed harmonization agreement includes streamlined variety validation procedures. The new procedures require two years in regional trials and at least one crop cycle in the major areas where the variety will be grown. The implementation of these procedures is blocked by the Seed Law, however, which stipulates at least three years of validation trials.

MAG-FOR recognizes the urgent need to release new varieties. Once CONASEM is established, we expect it to advocate for changing the Seed Law to streamline variety release procedures[1], including a shorter validation period for new varieties. However, we do not expect these changes to occur before a new National Assembly is in place in 2002.

2A-a New Varieties Registered at MAG-FOR

Planned for this Quarter
- Assist MAG-FOR in implementing streamlined variety release procedures.

Accomplishments
- Assisted ANAR in registering ANAR-97.

Discussion
PROMESA is helping private and public crop research organizations register new varieties and hybrids including three high-protein maize, one red bean, two black beans, one sorghum, one sesame, and two rice varieties. The full impact of streamlined variety registrations is expected after 3-5 years, but because new varieties were already in the pipeline, we expect a measurable impact as early as 2001.

Plan for Next Quarter
- Encourage INTA and ANAR to establish cooperative agreements to release and promote new varieties;
- Assist INTA in selling registered seed at National Seed Conference; and
- Advocate for MAG-FOR to reduce or eliminate variety registration costs.

2B New Germplasm Available

Planned for this Quarter
- Determine the feasibility of a cooperative marketing agreement between Nicaraguan and Costa Rican associations of black bean producers. Continue market research on black bean markets in Mexico, Costa Rica, Guatemala, and Cuba; and
- Remove market barriers to Nicaraguan black beans in Mexico.

Accomplishments
- Conducted study tours of black bean markets in Mexico and Costa Rica;
- Assisted black bean producer organizations, MIFIC and MAG-FOR lobby Mexico's Secretaria de Agricultura, Ganaderia, Ambiente y Recursos (SAGAR) to change its phytosanitary regulations to allow black bean imports from Nicaragua.

[1] For example, MAG-FOR is eager to reduce the lengthy validation trials required for releasing perennial crops, including fruit, coffee, and forestry cultivars.

Discussion

INTA's rice improvement program is assisting ANAR in improving the genetic uniformity of ANAR-97. Large volumes of certified ANAR-97 seed will be available in 2002.

As part of its program to develop an export market for black beans, PROMESA assisted three seed producer organizations, MIFIC and MAG-FOR to assess the phytosanitary standards needed to satisfy Mexican legal requirements for the export of Nicaraguan black beans within the framework of the free-trade agreement that exists between the two countries. This advocacy effort resulted in reactivating the bean export promotion process that, according to the Mexican authorities, had been paralyzed by lack of action on the part of Nicaragua.

A study tour to Mexico was organized with the participation of two black bean exporters, in order to:

- Establish market contacts. Participants visited processing plants, wholesale importers, and brokers. The two most attractive potential clients are bean processors La Costena and Nestle of Mexico;
- Inform Nicaraguan black bean exporters of the characteristics of Mexican black bean marketing chains; and
- Discuss with Mexican officials the process of establishing new standards for Nicaraguan black beans. SAGAR committed to publishing the requirements by March 1, 2000.

PROMESA's support in lobbying MIFIC and MAG-FOR to define phytosanitary standards, together with the study tour activities, has reinitiated long-stalled efforts for Nicaragua to enter the Mexican black bean market.

A study tour to Costa Rica was organized in order to establish commercial links between AGRONEGSA and potential Costa Rican buyers and to discuss with government officials the possibility of exporting Nicaraguan black beans to Costa Rica. The study tour found strong demand in Costa Rica for Nicaraguan black beans. PROJINCA Packing Co. expressed an interest in 5000qq a month, and Empresa Comercializadoras Cadena de Detallistas, 2000qq a month. Meetings with representatives of Costa Rica's National Production Council resulted in their offering support in establishing marketing contacts and facilitating a bi-lateral trade agreement.

The study tour determined that given the quality of Nicaraguan black beans, our proximity to Costa Rica, and the volume of Costa Rican black bean imports (30,000 tons/year), Costa Rica is an ideal market for Nicaraguan black beans.

Plan for Next Quarter

- Assist INTA in inaugurating its new seed processing plant in Managua;
- Conduct study tours of black bean markets in El Salvador and Guatemala;
- Assist ECAGE in importing and demonstrating new potato varieties; and
- Investigate the feasibility of revitalizing the National Potato Program.

2B-a.1 Registered Seed Producers Produce Improved Seed Varieties

One of PROMESA's primary goals is to increase the number of improved varieties available to small farmers. Most imported seed is hybrid, primarily used by large farmers. PROMESA encourages NGOs and GON organizations to import seed for their small farmer development programs. We also help Nicaraguan seed producers increase the number of open-pollinated varieties and hybrids grown for seed, and ensure that small farmers have access to them.

Increasing the number of seed varieties produced depends, in part, on increasing the size of seed markets. Market growth can be demand-driven or supply-driven: the introduction of new, improved varieties can increase seed demand. By increasing the number of registered varieties, we expect to increase the demand for improved seed. The number of varieties of basic grains and oilseed crops grown for seed grew from 23 varieties in 1998, when the seed project began, to more than 40 in 2000.

Plan for Next Quarter

- Hold Registered Seed Market to assist seed producer organizations in purchasing and contracting with INTA for future production of registered seed.

2B-a.2 Foundation Seed Adequate

Planned for this Quarter

- Convince INTA to increase production of registered seed.

Accomplishments

INTA agreed to rapidly increase its supply of registered bean seed on the basis of PROMESA's promise to assist in marketing it to seed producer organizations.

Discussion

PROMESA's strategy for increasing the number of improved varieties available to small farmers is to stimulate demand for registered seed and incentives for crop research organizations like INTA to register new varieties. We will hold a seed market to sell INTA's registered seed, thus increasing the demand for registered seed and, in turn, INTA's incentives to register its new varieties.

Plan for Next Quarter

- Forecast demand for registered and certified seed in 2001, and distribute projections to seed producers prior to Seed Markets;
- Assist INTA in developing a system for projecting the demand for registered seed; and
- Seed producer cooperative in Nueva Guinea to produce registered seed of Nutrinta variety QPM maize.

2C-1 Improved Varieties Promoted

Planned for this Quarter

- Advocate for MAG-FOR to summarize and publish non-proprietary seed market information on a website that eventually will be turned over to CONASEM;

- Advocate for MAG-FOR's PNAPP to distribute certified seed, rather than grain used as seed; and
- Develop a prototype seed industry website.

Accomplishments
- Defined seed promotion strategy for 2001; and
- PNAPP distributed bean seed, rather than grain, in Apante.

Discussion
Variety demonstrations and field days are the best way to promote improved varieties. Other seed promotion methods - mass media advertising, point-of-purchase advertising, and distributor incentives – are important and complementary, but secondary, activities in our program.

PROMESA's seed promotion program in 2001 relies on variety demonstrations and field days, as in previous years, but increasingly focuses on convincing USAID-funded NGOs to adopt improved varieties and hybrids. MAG-FOR and INTA will be active partners in this program.

MAG-FOR's DGS and PROMESA successfully petitioned PL-480 and PNAPP to buy seed, instead of grain used as seed, for their Apante program. Unfortunately for seed producers, this market will disappear if PNAPP's seed program is discontinued.

Marketing Strategies for New Technologies

Early Adopters
When a new technology like an improved variety or hybrid is initially introduced, the first farmers to adopt it are technology enthusiasts. They tend to be young, innovative, technically proficient, and require only minimal technical support. They provide an important function for the technology promoter by field testing the new variety. Unfortunately, this market is small.

The next group of adopters are "visionaries" seeking competitive advantages. Unlike technology enthusiasts, visionaries require considerable technical support in adapting the new technology to their farming systems, and using it to competitive advantage. Despite the high cost of technical support to visionaries, they serve an important function by testing the practicality and profitability of the new variety. However, the supply of visionaries is quickly exhausted.

Mainstream Market
The transition from early to mainstream adopters is a treacherous period for new technology promoters, fraught with waning interest of early adopters, and reluctance of mainstream customers. Mainstream adopters seek reassurances from other conservative, mainstream customers, but only find the testimonials of visionaries and technology enthusiasts.

To survive this stage of the adoption process, proponents of the new technology must identify and focus on a small, but accessible, target niche market. They need to invest whatever resources are necessary to make the new technology successful in that market. Then they can use the conservative, niche market adopters to provide testimonials to reassure mainstream customers in other target markets. PROMESA has identified NGO/PVOs funded by USAID as the target, niche market that can help transfer improved varieties and hybrids to mainstream markets.

Plan for Next Quarter

- Conduct study tours for NGO agricultural staff to El Salvador to assess hybrid maize promotion programs targeting small farmers; and
- Develop a catalogue of seed varieties and hybrids registered for sale in Nicaragua.

2C-a Variety Demonstration Trials And Field Days Completed

Planned for this Quarter

- Plant 6 demonstration plots and hold 3 field days

Accomplishments

- Planted 6 demonstration trials of bean and maize varieties and hybrids and held 5 field days.

Discussion

Historically, Nicaragua's major seed importers tended to act as order-takers serving relatively large farmers, and ignoring small farmers. They rarely used demonstration trials or field days to promote their seed products. Only INTA and NGOs actively promoted the use of improved varieties to small farmers.

QPM Maize Compared with Traditional and Conventional Improved Varieties

In 2000, CYMMIT and the Programs Regional De Maiz compared promising new QPM varieties and hybrids with such traditional varieties as Tuzla Morado, and conventional improved varieties like NB-6 in Miraflores, Esteli. High rainfall in Postrera caused extensive damage to the traditional and conventional varieties; but the QPM varieties and hybrids proved to be relatively tolerant, and had the

In collaboration with private seed companies, NGOs, gremios, and universities, PROMESA planted 6 bean and maize variety and hybrid demonstration trials this quarter. Private seed companies and NGOs sponsored 5 field days at the demonstration sites. MAG-FOR and INTA also participated in the field days. Having lost most of the variety demonstrations in 2000 to a prolonged drought in Primera, we planted more demonstrations in Postrera than originally planned[2]. To make up for losses in 2000, we will expand our demonstration program in 2001.

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Plan for Next Quarter

- Plan variety demonstration and field day program for 2001, co-sponsored by INTA, NGOs, gremios, and private seed companies; and
- Ensure that imported varieties and hybrids are included in INTA field trial program for 2001/02.

[2] Only 25 demonstration trials survived in 2000, compared to 40 specified in the original plan. The number of field days declined for the same reason.

2C-a.ii Mitch Victims Test Improved Varieties

Planned for this Quarter
- Assist CRS in evaluating the performance of maize varieties and hybrids in field trials.

Accomplishments
- Distributed 40 quintals of beans to Mitch victims in Posoltega prior to Christmas for food consumption.

Discussion
Due to adverse conditions in 2000, CRS lost all but one of its variety trials. Therefore, the CRS maize performance evaluations are rescheduled to 2001.

Plan for Next Quarter
- Monitor performance of improved seed planted by Mitch victims in Posoltega;
- Plan maize seed sales program for Mitch victims in Posoltega.

2C-a.iii Seed Producers Trained

Planned for this Quarter
- Support UNA and EAGE seed training courses;
- Encourage NGOs to send agricultural technicians to attend seed science course at UNA and ECAGE.

Accomplishments
Sixteen seed technicians graduated from UNA's training program.

Discussion
PROMESA is encouraging UNA and ECAGE to share seed science expertise by sponsoring UNA seed specialists to lecture at ECAGE's seed training seminars. In response to student evaluations of UNA's seed science course in 2000, the university decided to emphasize seed company management and marketing in its 2001 training program.

Plan for Next Quarter
- Coordinate UNA and ECAGE programs;
- Conduct evaluations of ECAGE seed training course; and
- Advocate for USAID's NGO partners to send field technicians to UNA and ECAGE seed courses.

2C-b Market Information Available to the Seed Industry

Planned for this Quarter
- Provide MAG-FOR with training on its updated seed MIS system.

Accomplishments
- Demonstrated seed market information system; training workshops rescheduled to next quarter.

Discussion

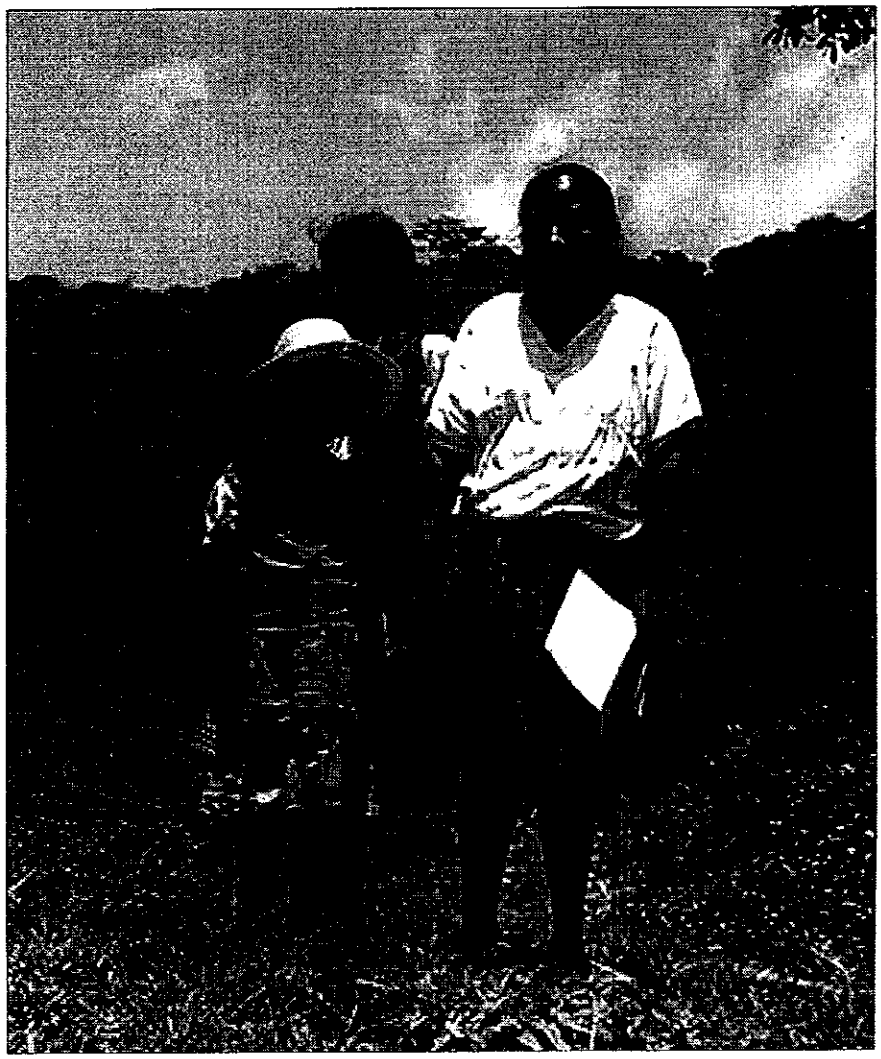
Nicaragua's seed industry needs a market information. MAG-FOR can play a critical role in collecting and publishing market information.

In July 2000, PROMESA demonstrated to MAG-FOR a prototype seed MIS system providing internal controls and information on seed regulatory and market transactions. PROMESA is encouraging MAG-FOR to publish non-proprietary seed market information on a website that will eventually be turned over to CONASEM. We expect the MIS system to be approved in January, the website to be designed in February, and both to be in operation in March 2001.

Ideally, regional seed associations (RSAs) should maintain the market information system. But RSAs are still too weak to be relied upon for this service. Alternative market information providers include CONASEM and MAG-FOR. If CONASEM is not established before the end of the seed project, the MIS system will be turned over to MAG-FOR.

Plan for Next Quarter

- Assist MAG-FOR in implementing its new seed information system;
- Design seed market information website; and
- Advocate for formal agreements between INTA and regional seed associations to provide market information to MAG-FOR.



GROUP III - COMMERCIAL SEED SECTOR GROWING

One of PROMESA's primary objectives is to increase small farmers' access to improved seed through private market channels. Access is currently restricted by several factors, including: small farmers' tendency to save rather than purchase seed, lack of effective rural distribution systems, and the high price of certified seed, compared to farm-saved seed or grain used as seed. Large farmers tend to access seed through local distributors who sell imported hybrids and locally-produced, open-pollinated (OP) varieties. Nicaragua's major seed distributors sell mostly imported maize and sorghum hybrids to relatively large farmers, but they also sell a growing volume of locally-produced OP beans, rice, sesame, maize and sorghum varieties to small farmers.

PROMESA's strategy for increasing small farmers' access to improved varieties has two components. The first involves creating commercial linkages between the major seed distributors, and NGOs, farmer organizations, and private farmers by:

- Importing 2,000 quintals of improved maize and bean seed through the distributors for use in the Mitch response;

- Including distributors as co-sponsors of on-farm variety demonstrations and field days held throughout the country, putting the small farmers in direct contact with the distributors; and

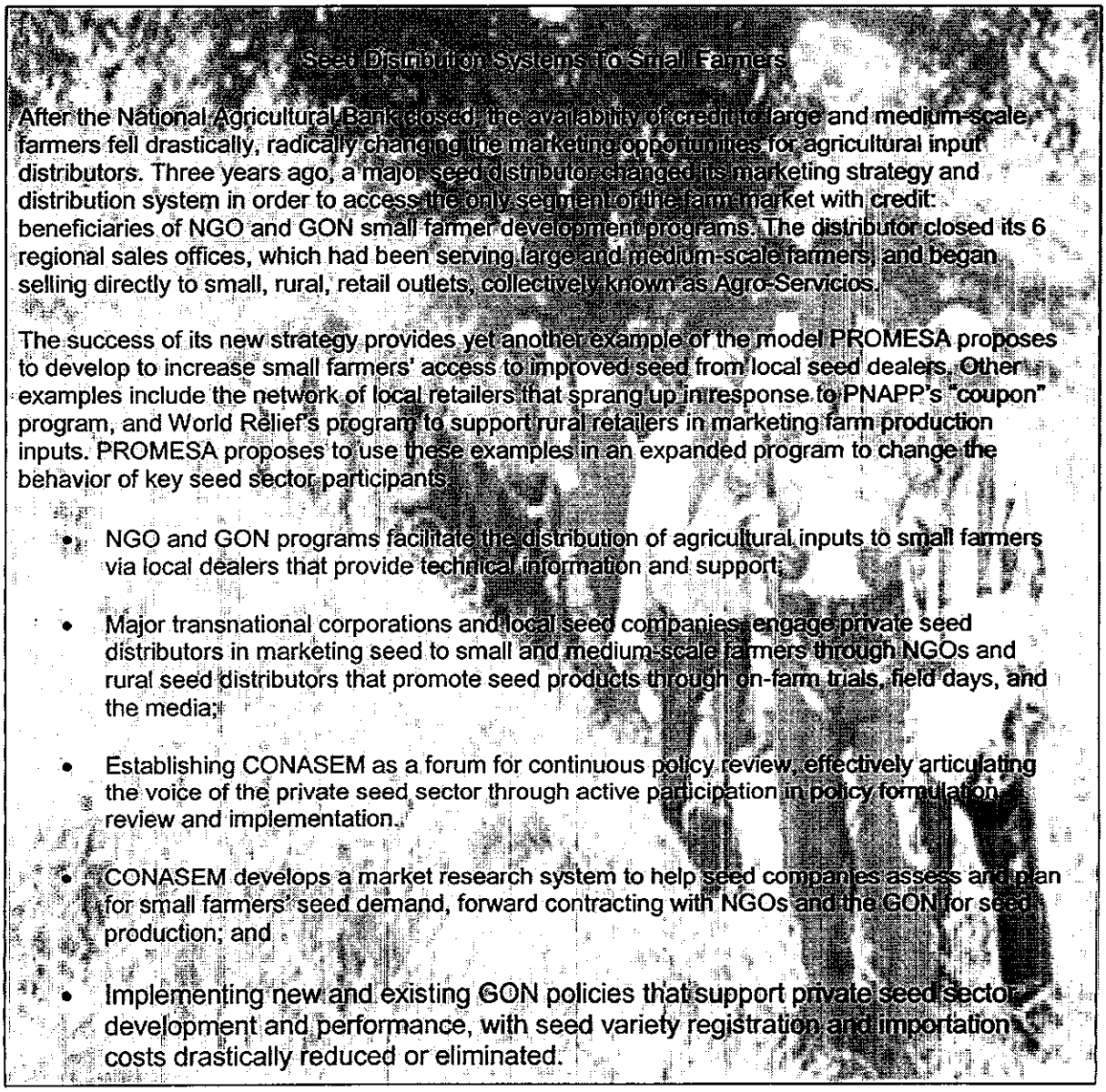
- Holding seed markets to stimulate business relationships between distributors and NGOs who provide improved seed to small farmers.

These programs have stimulated the interest of the commercial seed sector in the small farmer market, and resulted in an expansion of their distribution systems in order to reach small farmers. This has been an important step in setting the stage for futureseed marketing activities.

The second component of PROMESA's strategy to increase small farmers' access to improved varieties is to improve programs to market locally-produced OP seed by providing:

- Technical support to regional seed trade associations. The members of ASORESEM (Asociacion Regional de Semillas), for example, include seed producers and distributors in Leon and Chinandega where most of the maize, sorghum, soybean, and peanut seed is produced. ASORESEM helps its members market certified seed to NGOs and establish new retail outlets in rural areas to sell directly to small farmers;

- Seed production and marketing assistance to 15 new seed companies producing seed, under contract with NGOs, small farmer development programs; and
- Market information on the demand for INTA's registered seed. As a result of these efforts, local seed production and marketing systems are developing to provide small farmers with more imported and locally-produced, high-quality seed in the future.



Seed Distribution Systems to Small Farmers

After the National Agricultural Bank closed, the availability of credit to large and medium-scale farmers fell drastically, radically changing the marketing opportunities for agricultural input distributors. Three years ago, a major seed distributor changed its marketing strategy and distribution system in order to access the only segment of the farm market with credit: beneficiaries of NGO and GON small farmer development programs. The distributor closed its 6 regional sales offices, which had been serving large and medium-scale farmers, and began selling directly to small, rural, retail outlets, collectively known as Agro-Servicios.

The success of its new strategy provides yet another example of the model PROMESA proposes to develop to increase small farmers' access to improved seed from local seed dealers. Other examples include the network of local retailers that sprang up in response to PNAPP's "coupon" program, and World Relief's program to support rural retailers in marketing farm production inputs. PROMESA proposes to use these examples in an expanded program to change the behavior of key seed sector participants:

- NGO and GON programs facilitate the distribution of agricultural inputs to small farmers via local dealers that provide technical information and support;
- Major transnational corporations and local seed companies engage private seed distributors in marketing seed to small and medium-scale farmers through NGOs and rural seed distributors that promote seed products through on-farm trials, field days, and the media;
- Establishing CONASEM as a forum for continuous policy review, effectively articulating the voice of the private seed sector through active participation in policy formulation, review and implementation;
- CONASEM develops a market research system to help seed companies assess and plan for small farmers' seed demand, forward contracting with NGOs and the GON for seed production; and
- Implementing new and existing GON policies that support private seed sector development and performance, with seed variety registration and importation costs drastically reduced or eliminated.

3A. Private Seed Company Investment Increased

3A-a. New International Joint Ventures Established

Planned for this Quarter

- Assist potential investor in assessing investment opportunities for vegetables and flower plugs.

Accomplishments

- Assisted foreign investor in assessing marketing opportunities for vegetables and flower plugs.

Discussion

The continued growth of Nicaragua's seed industry depends on increasing investment. Both domestic and foreign investment will respond similarly to market conditions and policy environments. Private investment is increasing, indicated by the formation of new seed producer organizations, new variety registrations, and new joint ventures with foreign investors. In 1999, PROSELA (El Salvador) began distributing hybrid maize seed through UCOOM, a seed cooperative in Leon. In 2000, Monsanto established a seed sales outlet in Managua and Cargill Seed made Ramac its new seed distributor.

Institutional bottlenecks continue to constrain investment. To attract investment, Nicaragua's seed industry needs credible systems for protecting intellectual property rights, including rights over proprietary varieties. PROMESA was instrumental in advocating for the plant variety protection (PVP) law passed in 1999, and developing procedures to implement it. But until the system is operating and tested, foreign seed companies will remain reluctant to release their proprietary varieties in Nicaragua.

Foreign investment may increase once CONASEM is established and begins advocating for better seed policies. Meanwhile, PROMESA will continue working with MAG-FOR to expand seeds by promoting certified seed and helping seed companies extend distribution systems and increase seed processing capacity. We will also help potential investors in assessing opportunities for joint ventures, new sales agents, distributorships, sales offices, contract seed production, and direct investment in local seed companies.

Plan for Next Quarter

- Assist potential foreign investor assess the feasibility of establishing a plug business to serve Nicaragua's vegetable and ornamental plant industries.

3A-6: New Domestic Seed Enterprises Established

The growth in Nicaragua's seed industry depends on domestic seed companies producing open-pollinated varieties that are not sold by international seed companies. PROMESA assists modern seed producers in the Occidente, many of whom have large, irrigated farms and access to credit, by supporting to ASORESEM (Associacion Regional de Semillas del Occidente).

Most of the certified seed producers in northern and central regions, however, are small farmers organized into cooperatives, foundations or associations, many of which are affiliated with INTA or UNAG. PROMESA provides technical and financial support to these producers by buying seed from these organizations at harvest, paying for seed processing and storage, and reselling the seed – at cost - to the organizations subsequent sale to farmers when the planting season begins.

Nicaraguan Seed Producer Organizations Established Since 1999

1. AGRONEGSA
2. APROSUR
3. ASOPROL
4. ASORESEM
5. Associacion de Productores de Semillas: Carazo
6. Associacion de Productores de Semillas: Concepcion
7. COMUSAL
8. Coop – El Sauce
9. COOPPMAT
10. FUSODEVIMA
11. PIDA-UNAG
12. UCOOM

If the project is extended to a fourth year, PROMESA will continue to assist in establishing new seed producer organizations[1] in areas where seed supplies are inadequate. New candidates for our support include cooperatives in Masaya and Diriamba currently producing seed for their own members using artisanal methods.

Plan for Next Quarter

- Provide market information and marketing services to seed organizations;
- Assist ASORESEM in representing seed producers in the National Seed Council (CONASEM); and
- Assist seed organizations in strategic planning, program coordination, and access to credit.

[1] These organizations include cooperatives, foundations, and farmer associations in western, northern, and central regions.

3A-c. Seed Processing Capacity Increased

Planned for this Quarter

- Complete assessment of seed processing capacity.

Accomplishments

- Major farm association gets funding to construct a new seed processing plant in Chinandega; and
- Abandoned plans to conduct a feasibility study for a new seed processing facility on the basis of the study results summarized below.

Discussion

The seed processing capacity assessment of 5 basic grain and oilseed processing facilities in the Occidente determined that they have a combined annual processing capacity of 345,000 quintals, a monthly drying capacity of 25,900 quintals, and a total cold storage capacity of 45,000 quintals.

The study determined that refurbishing and proper maintenance of existing equipment is needed to correct: improperly calibrated machinery and scales; faulty drying systems; poorly organized storage facilities; inadequate sanitary conditions; and lack of proper ventilation and humidity control in the cold storage rooms. In addition, investment in additional equipment is needed to increase the cold storage capacity, which is insufficient to store projected maize and soybean production.

The study also concluded that all facility personnel need training in seed handling, quality control, and maintenance of equipment.

The study concluded that with refurbishing and proper maintenance of the existing equipment, and minor investment in additional equipment, the processing facilities possess sufficient processing capacity to meet the needs of the region. Therefore, PROMESA will not conduct a feasibility study for a new seed processing facility in the Occidente.

Plan for Next Quarter

- Determine whether to conduct financial analyses of the feasibility of establishing a new seed laboratory or crop research facility in the Occidente.

3E. Seed Producer Organizations Sustainable

National seed sales increased rapidly in 1999 after Hurricane Mitch, but failed to reach projected levels in 2000 due to widespread drought in Primera. Seed production increased in 2000. If weather conditions are favorable in 2001, we expect seed sales to increase dramatically.

PROMESA will use the combined seed sales of a selected group of small seed organizations to monitor changes in the seed market as a whole. Depending on data availability, PROMESA will also track seed sales of other organizations.

Sales of Certified Seed (lbs.)

	1998	1999	2000	2001
Seed Companies				
APROSUR	0	8,000	23,580	30,000
Assoc. de Semillas de Jerezo	0	42,000	30,000	50,000
Assoc. de la Concepcion	0	2,100	2,700	2,000
COMUSAL	0	0	2,450	5,000
COOPEPAMAT	132,400	190,400	256,240	300,000
Coop. El Sauce	0	0	3,650	10,000
FUSODELVIMA	0	0	2,450	10,000
PIDA UNAG	0	0	2,100	20,000
Total	132,400	249,500	341,870	455,000

Planned for this Quarter

- Conduct case studies of seed producer organizations to provide the basis for a systems-approach to seed production, processing, marketing, and financial control;
- Produce 600 quintals of seed of improved black bean varieties;
- Assist seed companies develop seed marketing plans; and
- Encourage MAG-FOR to rely on the assessments of private seed technicians to certify seed.

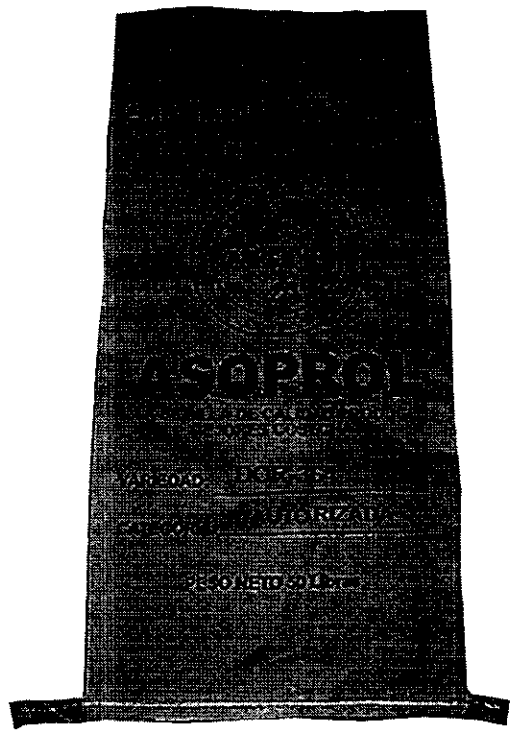
Accomplishments

- Procured and processed 800 quintals of black bean seed;
- Planted 30 manzanas of black beans for seed production; and
- Established production plans for 1,130 manzanas of black bean

Discussion

PROMESA provides technical assistance to twelve seed producer organizations, including cooperatives, foundations, and producer associations. Next quarter, this assistance will include conducting cost accounting analyses of selected seed producer organizations to provide case studies for the business-planning workshop cited below. Most are located in western northern, and central regions, and produce certified seed of

various open-pollinated crops including beans, potatoes, maize, sorghum, sesame and soybeans. Most of these organizations are members of UNAG. Several receive funding from CLUSA's Financiera Agricola. Despite this assistance, many of these seed organizations remain weak, requiring additional technical assistance, financial support, and training. To ensure the sustainability of these services, PROMESA is attempting to institutionalize its support services in AGRONEGSA, UNAG's new business development unit.



We expect some of the weaker organizations to consolidate or merge. For example, FUSODEVIMA is likely to specialize in seed multiplication, relying on ASOPROL for processing and marketing. PIDA-UNAG in Esteli, and UNAG's cooperative in El Sauce probably will also specialize in seed production, and rely on AGRONEGSA for processing and marketing. This industry shakeout will result in fewer, but stronger, seed producer organizations.

Plan for Next Quarter

- Conduct workshop on an integrated approach to seed production, processing, marketing, and organizational development.

3B-a Seed Producer Organizations Producing Certified Seed

Planned for this Quarter

- Evaluate performance of partner organizations.

Accomplishments

- Assisted partner organizations set targets and develop strategic plans.

Discussion

Several small farmer organizations, including UNAG's Bancos de Semillas, started producing seed in order to ensure a reliable supply of seed for their members. Other organizations were established to exploit economies of scale in seed production[2]. Immediately after Hurricane Mitch, PROMESA began contracting small farmers to produce bean seed. As this practice spread to other organizations, seed demand increased and more small farmer organizations recognized the potential profitability of seed production. Some decided to switch from artisanal to certified seed production. Others decided to specialize in seed production, and others in seed marketing.

[2] Some seed crops, including beans and potatoes, are conducive to small farmer production systems, while others are produced more efficiently on large farms. Even small producers, however, gain from economies of scale in seed processing and marketing.

Planned for Next Quarter

- Conduct second Annual Certified Seed Fair for seed producers and NGOs;
- Conduct first Annual Registered Seed Fair for INTA to sell to seed producer organizations;
- Design training seminars for seed producer organizations to develop business plans;
- Seek agreements with UNAG to provide long term support to associations of small seed producers; and
- Advocate for cooperative agreements between INTA and seed associations.

3B-5 Small Farmers Producing Certified Seed

Most small farmers producing certified seed are loosely affiliated with seed producer organizations registered at DGS[3]. By incorporating these small seed producers as members, registered seed organizations can increase their sustainability and effectiveness as gremios. APROSUR and COOPPMAT have agreed, in principal, to incorporate small bean seed producers as new members, but have not defined the membership terms or timetable. PROMESA will assist the boards of directors of these organizations in defining the requirements for membership and in explaining the benefits of this program to their existing members.

Leon RSA

Planned for this Quarter

- Identify potential new seed distributors;
- Promote ASORESEM membership among non-member producers.

Accomplishments

- Identified 6 potential new seed distributors in northern and central regions; and
- Two new seed producers joined ASORESEM.

Discussion

ASORESEM identified 25 potential distributors interested in distributing ASORESEM seed. Of the 25, 15 were eliminated because they were only willing to accept the seed on consignment, without assuming any risk. The other 10 are ready to negotiate payment and marketing terms, which have yet to be determined. In the end, ASORESEM identified six potential distributors. ASORESEM prefers to sell on a cash basis, but is willing to extend up to 45 days credit to established distributors. ASORESEM is also willing to extend credit to new distributors on the basis of a bank guarantee, with ASORESEM assuming 50% of the interest on the guarantee.

As a result of recruiting efforts, a farmers' cooperative composed of 20 producers will join ASORESEM in January 2001.

[3] Following Hurricane Mitch, PROMESA contracted with farmer organizations to produce bean seed. Subsequently, several NGOs adopted this practice. PROMESA provides direct technical support to several of these organizations, and assists MAG-FOR in training small seed producers to meet certification standards.

Plan for Next Quarter
- Determine whether to conduct feasibility studies for a new seed laboratory and crop research center in the Occidente;
- Assist ASORESEM in establishing new seed distributors before the Primera planting season; and
- Conduct a cost accounting case analysis of ASORESEM in preparation for a business-planning workshop.

APROSUR (Carazo RSA)

Planned for this Quarter
- Ensure access of small producers of flowers and ornamental plants in Carazo and Catarina to ARAP's technical assistance; and
- Plant 30 manzanas of black beans for seed production.

Accomplishments
- Organized small flower and ornamental plant producers to participate in ARAP's flower show in Metrocentro;
- Signed agreement with INTA to market black bean seed produced by small farmers in Carazo; and
- Planted 34 manzanas of black beans for seed production.

Discussion
In an effort to improve coordination between its agricultural projects, USAID decided that Chemonics/ARAP will be responsible for the flower program. PROMESA's role will be limited to monitoring the program in order to ensure that small flower producers have fair access to ARAP's technical assistance.

Planned for Next Quarter
- Conduct study tour to Tropical Flower Show in Florida;
- Assist APROSUR (Asociacion de Productores de Semilla del Sur) in incorporating flower and bean seed producers as members;
- Advocate for MAG-FOR to waive all testing requirements for certified flower seed from Costa Rica; and
- Harvest black bean seed.

3B.3 Private Seed Producers Producing Certified Seed

Planned for this Quarter

COOPPMAT (Matagalpa)
- Plant 25 manzanas of black beans for seed production; and
- Import potato seed for EAGE.

Accomplishments
- Planted 30 manzanas of black beans for seed production in Matagalpa;
- Harvested 300qq of black bean seed; and
- Abandoned plans to import potato seed for EAGE for the reasons summarized below.

Discussion

With financing from ARAP, EAGE is conducting a potato production program to introduce new varieties for validation trials. The program includes importing potato seed to plant 40 manzanas for table potato production and 10 manzanas for potato seed multiplication. EAGE had originally contracted with COOPPMAT, which is one of two organizations registered in Nicaragua to import potato seed, to import the seed. COOPPMAT identified 7 American varieties suitable for production in Esteli, Jinotega, and Matagalpa. ARAP, however, considered the price of the American potato seed too high and opted to purchase Canadian potato seed through other channels.

Planned for Next Quarter

- Sign contract with INTA to market 1,200qq of red bean seed produced by small farmers in Jinotega.

UCOOM (Leon)

- Design a seed distribution system to small farmers in northern and central areas.

UNAG Bancos de Semillas

- Conduct survey of members in selected Bancos de Semillas, and organize a pilot seed-marketing database.

IV. Start-up, Management, and Administration

Planned for this Quarter

- Review project budget.

Accomplishments

- Developed a strategic plan to guide future seed sector development activities.

Plan for Next Quarter

- Third farm survey measures changes in the use of improved varieties and certified seed; and
- Conduct a seed sector analysis.

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
SAGAR	Secretaria de Agricultura, Ganadería, Ambiente, y Recursos (Mexico)
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.