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# Private Sector Agricultural Organizations in Nicaragua: Problems and Opportunities


*Prepared by:*
David Fedderjohn, VOCA
Charles Oberbeck, NCBA
James Roof, ACDI

Agricultural Cooperative Development International
50 F Street, NW, Suite 900
Washington, DC 20001

Phone: (202) 638-4661
Fax: (202) 626-8726


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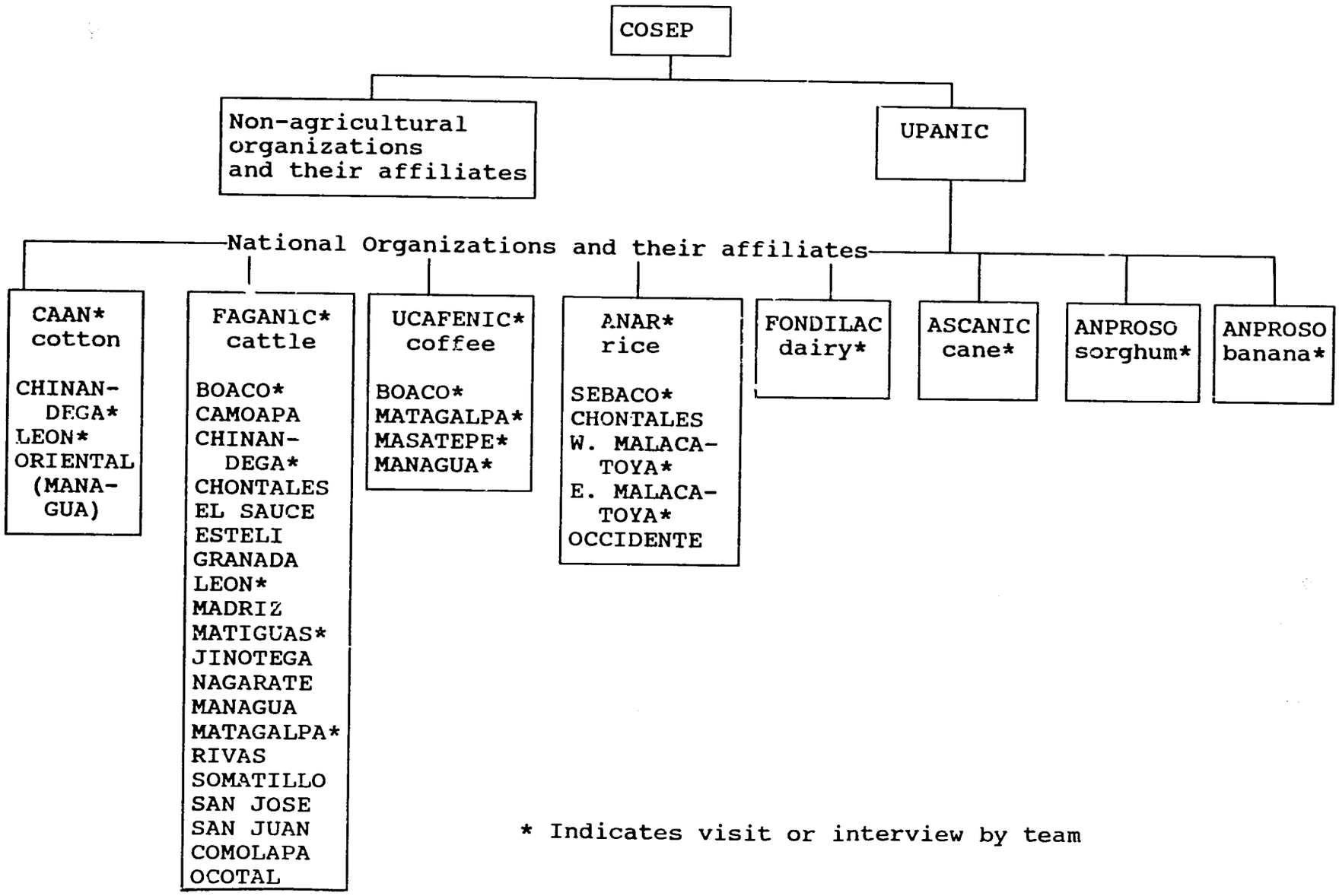
PRIVATE SECTOR ORGANIZATIONS
IN NICARAGUAN AGRICULTURE




* Indicates visit or interview by team

## ACRONYMS

| | |
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| ACDI | Agricultural Cooperative Development International |
| ANAR | Nicaraguan Rice Growers Association (affiliated with UPANIC) |
| BCN | Central Bank of Nicaragua |
| BID | Inter-American Development Bank |
| BND | National Development Bank |
| CAAN | Federation of Nicaraguan Cotton Producers (affiliated with UPANIC) |
| CORCO | Eastern Regional Cooperative of Coffee Growers, (affiliated with UNAG) |
| COSEP | Supreme Council for Private Enterprise (of which UPANIC is a member) |
| FAGANIC | Nicaraguan Federation of Cattlemen's Associations (affiliated with UPANIC) |
| FECANIC | Nicaraguan Credit Union Federation |
| FNI | Nicaraguan Investment Fund (established by USAID) |
| FONDILAC | Dairy Industry Development Fund (affiliated with UPANIC) |
| FUNDE | Nicaraguan Development Foundation (non-governmental, affiliated with COSEP) |
| GON | Government of Nicaragua |
| MAG | Ministry of Agriculture |
| NCBA | National Cooperative Business Association |
| PROEXAG | Agricultural Export Promotion, an AID regional project (administered by ROCAP) |
| UNAG | National Union of Farmers and Cattlemen (established by the former Sandinista gov't) |
| UNCAFENIC | National Union of Nicaraguan Coffee Growers (affiliated with UPANIC) |
| UPANIC | Agricultural Producers Union of Nicaragua |
| VOCA | Volunteers in Overseas Cooperative Assistance |

## I. BACKGROUND AND PURPOSE OF THE REPORT

This report is the product of a fact-finding mission to Nicaragua financed by AID/Washington, through a grant to Agricultural Cooperative Development International (ACDI). The National Cooperative Business Association (NCBA) and Volunteers in Overseas Cooperative Assistance (VOCA) joined ACDI in carrying out this study in October and November, 1990. The initial purpose of this study was to obtain an overview of the current agricultural situation in Nicaragua and examine the organizations currently functioning in the sector as possible vehicles for programs aimed at reviving the productivity and quality of rural life in the country.

The team received an initial orientation from the agricultural and rural development staff of USAID/Nicaragua and maintained regular contact with the Mission during the approximately four weeks of its visit. From the outset it was clear that Mission priorities for agricultural recovery and development were focused principally on the private, commercially oriented farming population. Accordingly, the team centered its attention on learning about the current status and prospects for significant improvement in the private agricultural sector. Of principal interest were the commodity associations organized in Nicaragua since the mid-seventies for purposes of representation, as well as for providing direct services in support of the production and marketing of agricultural products.

While ACDI, NCBA, and VOCA have extensive experience in assisting cooperative enterprises, it was soon evident in the course of the study that the term "cooperative" frequently denotes collective farms or communes in Nicaragua. These enterprises, formed under the initiative of the previous government, are organizations whose objectives and operations are quite different from the service functions and businesslike norms that characterize the expertise of U.S. cooperative development organizations. The "cooperatives affiliated with UNAG[1] were highly subsidized, closely identified with the Sandinista party structure, and ineffective in delivering services to the producer. Even though statistics indicate that a sizeable number of these collective, government-sponsored "cooperatives" exist in Nicaragua and maintain a significant political presence, it was considered prudent by the team to concentrate its efforts in getting to know those organizations whose orientation and objectives for concerted action were more typical of cooperative practice.

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[1] The National Farmers' Union was founded by the Sandinista government in 1981 and charged with coordinating the agricultural cooperatives.

## II. METHODOLOGY

Field work included visits to 13 of 36 associations affiliated with UPANIC.[2] The associations visited by the team represent coffee, cotton, rice, dairy, and livestock producers in Matagalpa, Boaco, Chinandega, Leon, Matiguas, Masatepe, Managua, and Rio Blanco. The team also met with each of the national level umbrella commodity federations, and evaluated UPANIC itself in some depth.

In addition, the team visited 3 private cooperatives of a group of about 10 that were formed before 1979 and identified by FUNDE, FECANIC, and BND as functioning cooperatives. Visits to each organization were in-depth, with active participation by the directors, managers, and various members. Those interviewed were frank and forthcoming. Finally, interviews were also conducted with such related organizations as FUNDE, FECANIC, MAG, FNI, and BND.

As mentioned above, the team did not visit the UNAG affiliated cooperatives. A preliminary analysis of reports and interviews with USAID, the Nicaraguan Development Foundation and the National Development Bank indicated that the UNAG sector was highly dysfunctional. The UNAG collectives are dependent on high levels of subsidy and technical support, and the so-called "service cooperatives" have served merely as channels of high-risk credit (which often became "forgiven debt"), not as effective organizations. While there may be exceptional cases that were missed, the team decided that concentrating on the private sector organizations would prove more valuable.

[2] The Agricultural Producers Union of Nicaragua. Just as the cooperatives in the previously parastatal, or "Sandinista," sector are affiliated with UNAG, most of the private sector organizations are affiliated with UPANIC.

## III. FINDINGS

A number of problems were noted in the interviews and field visits that were conducted. These problems have contributed to the poor performance of Nicaraguan agriculture over the last decade. As illustrated by Tables II and III:

- Cotton production is down from a peak of about 8 million quintals to about 2 million, and the value of exports has fallen from about $128 million to about $28 million.
- Coffee production has fallen from 1.2 million quintals to about 700,000, and value of exports from $165 million to about $90 million.
- The cattle herd has fallen from about 3 million to 1 million head, and value of exports has fallen from $93 million to about $20 million.
- Irrigated rice production declined from 1.8 million quintals to about 700,000.

In short, only basic grain production has seen significant increases, with corn production nearly doubling in ten years. This increase was facilitated by the shift in land tenure from larger producers more focused on export crops, to smaller producers with more experience in growing basic grains. Also, as a matter of policy, UNAG cooperatives shifted production from export crops to basic grains.

In this section, the constraints contributing to this poor performance are discussed, and some opportunities for addressing them are identified. Special attention is given to the role that UPANIC and its affiliates can play in reactivating Nicaraguan agriculture.

### A. Current Problems and Constraints

The private sector farms are decapitalized and considerably less than optimally productive. Manifestations of this extreme decapitalization include:

- Deteriorated buildings, installations and basic physical infrastructure like fences, roads and processing facilities
- Unserviceable farm machinery and vehicles

- Abandoned and overgrown permanent crops (pastures and coffee groves, particularly)
- Reduced breeding herds, nursery plantings, and seed production capability
- Loss of human capital in the form of managers, foremen and skilled workers

Farmer income is down, and the associations themselves are running at a much lower level of activity than they were previously. The problems that they face and that they themselves articulate are different from crop to crop and from region to region, but in general, consist of:

**1. Policy Issues.** A predominant policy concern is the land issue. The government has announced its intention to return to their former owners lands "illegally confiscated" by the Sandinista government. Which lands this will include, and how this process will work remains a major concern of a large number of agricultural producers. This policy question was, by far, the one most frequently raised by those interviewed.

Another crucial policy issue that attracts universal attention and concern is the expectant shift away from state intervention in and monopolization of most phases of agricultural production and marketing. State agencies and parastatals monopolized the importation of inputs; marketed these inputs; controlled credit; established a system of excessive tariffs, taxes and regulations; set agricultural prices; and monopolized the marketing and exporting of many crops. As a result of these distortions, production costs were reportedly very high. This effective taxation of the agricultural sector is illustrated by the case of agri-chemicals.

Agri-chemicals in Nicaragua were at one time the cheapest in Central America (due in part to an overvalued currency that made imports cheaper), and it was common to find them on farms in Honduras and Costa Rica. As policies changed, chemical imports were monopolized, prices went up under the Sandinistas, and the agricultural sector was caught in a price squeeze. To alleviate some of this pressure, loans were made available to the UNAG cooperatives at a negative real interest rate, and cooperative debt was frequently forgiven. With today's recent change in government, the cost structure still appears to reflect the distortions and inefficiencies of the past, but there no longer is an offsetting "subsidy" to relieve the price squeeze.

While the costs of inputs have increased, the farm gate prices for export commodities have been very low during the last several years, due to both inefficiencies and price policies of the state monopolies. Beef prices dropped to less than $80 for a 400kg steer at one time, and have only recently increased to $320 for the same animal. Coffee prices also appear to have been at least 20% lower than what the international market would indicate.

**2. Access To New Technology.** The private sector has been isolated from exposure to new technology from virtually all normal channels: international research institutions, informal and commercial contacts with farmers or agribusinessmen outside Nicaragua, public research and extension within Nicaragua, and farmer trials and experimentation, which have declined in the process of decapitalization.

As a result, Nicaraguan agriculture has missed out on a range of possible advances. Improved varieties of coffee, rice, or pasture grass have not been introduced, and the country's livestock has deteriorated genetically. Nicaragua has remained ignorant of innovative pest management practices; experiments in adapting a variety of cultural practices -- density of planting, fertilization, and shade regulation in coffee production, for example -- to local conditions; and knowledge of possible alternative crops like the non-traditional exports that have emerged in the last ten years.

**3. Access to Credit.** The private agricultural sector is both decapitalized and illiquid. It is difficult for producers to access either working capital or investment credit for three reasons:

- a lack of funds,
- an inadequate financial system,
- and a lack of information and skill on the part of the farmer in developing a financial plan and securing a loan.

While the first is the limiting factor, there was also evidence that funds available in the Central Bank and FNI are not

being lent because of inefficient BND policies[3] and because of the lack of understanding by farmers of how to access the lines of credit. For example, members of the Cotton Association in Chinandega were frustrated in their attempts to import goods according to the terms of an AID-backed credit program for farm equipment credit for machinery.

**4. Weak Market Structures and Linkages.** Private market channels have not existed in many cases for several years. As a result, supply does not meet demand in much of the agricultural sector. The most visible sign of this is the unavailability of machinery, spare parts and supplies: from FONDILAC's broken-down milk processing machines to the empty shelves of the cattle associations that once were stocked with vital veterinary medicine. Unworkable market structures also affect the supply of important services. Where associations once coordinated the scheduling of cattle slaughter, for example, many were unable to do this in recent years.

A fairly sophisticated and efficient private sector market system existed prior to 1979. For example, it was apparently very common for input suppliers to sell on open lines of credit against expected production, and for buyers or processors (such as slaughterhouses) to advance money or co-guarantee credits to farmers. At the same time, commercial supply stores were a primary source of technical information and buyers were offered a variety of options on the terms of sale.

These market services have been non-existent in the hands of the state monopolies, where even the simple control of weights and measures has been a problem. And it will be some time before the market provides these services again. In the current environment, where private businesses are developing again but where market relationships have not been clearly defined, the few private firms that are emerging as importers/ suppliers are not prepared to offer services such as credit in the near future.

**5. Lack of Adequate Human Resources.** The private sector still maintains a few competent and impressive technicians and managers, but this top layer is thin. Below it, the level of training in technical and managerial skills is low due to both

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[3] A number of people intervened expressed a strong suspicion of subterfuge by individuals within the BND who maintain sympathies with the Sandinista and, accordingly, do not want AID funds to work as intended.

the flight of trained people and the lack of training opportunities for those who have stayed in the country.

**6. Uncertainty and Insecurity.** Perhaps the combination of all of the above, but also a real problem in itself, is the sense of uncertainty, insecurity and lack of control that was frequently expressed by those interviewed. How stable is the government? What actions will it take to return some of the land confiscated under Sandinista rule? How far will it go in liberalizing the economy? This intangible problem becomes tangible as it inhibits the investment of private capital in the rehabilitation of farms and productive enterprises.

### B. Working with the Private Sector Organizations

Because of the structural and political problems of the UNAG "cooperative" system, the team was impressed with the notion of focusing on the private sector commodity organizations as a vehicle for reactivating Nicaraguan agriculture. After all, private commercial farmers produce a large percentage of each crop (see Table II):

- 40 % of coffee,
- 50% of cotton,
- 30-50% of rice, and
- 50-70% of beef.

There is also a likelihood that the pattern of land distribution (see Table I) will become more like earlier patterns. The government has spoken of returning some land to previous owners, and a number of "cooperatives" are likely to fail in the absence of subsidies from the government. As this happens, the private sector's share of both land and production will increase.

If, as predicted, the private sector becomes an effective catalyst for revitalizing Nicaraguan agriculture in general, the UPANIC associations offer great potential for revitalizing Nicaragua's private agricultural production and commerce. This is true for a number of reasons.

**1. Key crops.** The crops represented by the UPANIC affiliates are those that have suffered the greatest decline in production and value over the last 10 to 12 years, and three of

them represent major sources of foreign exchange and employment (coffee, cotton, beef). Focusing on coffee, cotton, livestock, and rice as principal targets for assistance is justified by: a) the need to increase export earnings, and b) the productive potential of these crops, as proven by historical data.

**2. Broad-based membership.** UPANIC affiliates also represent the great majority of private, commercial farms. Because of financial and organizational constraints, a complete census of membership has not been maintained, but it is apparent that at the local level, associations represent a good majority (60-90%) of commercial farmers. National level associations account for a slightly smaller percentage.

The question remains as to whether the associations will expand membership significantly to include farmers who have been associated with Sandinista cooperatives during the last ten years. The possibility of this type of expansion will probably vary by crop and region, but will always be limited by the pace of political reconciliation in the country as a whole. Several of the coffee and livestock associations indicated that they would like to increase membership, but it was also clear that they would not open their memberships to "perceived enemies."

Naturally, there is a higher level of antagonism in areas of armed conflict or where land is still under dispute. Even in these areas, however, there was evidence of some reconciliation. In its visit to the Matagalpa Coffee Growers Association, the team was told that several of the current members are ex-Sandinistas. And Jorge Salazar was once president of this association![4] Likewise, the Masatepe Coffee Growers Association indicated that they have had a history of providing services to small farmers who are not in the association, and that they would continue to do so regardless of political affiliation or type of farm operation.

**3. Cohesion and proven sustainability.** The associations were formed under their members' own initiative and have provided self-sustaining services for 12-15 years. The UPANIC network is financially weak, but is based on grassroots support and a history of sound managerial practices. The associations were

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[4] Salazar was a founder of UPANIC, and an outspoken critic of Sandinista policies. He was assassinated and is considered a martyr by many in the private sector, the former opposition movement, and the resistance.

formed out of a strongly perceived need to defend and serve the interests of the group. This has created a cohesion that is unusual for this type of private farmer in Central America.

Almost all of the associations were formed around a very practical idea of sustainability - ie matching their services and income flow. They typically maintain a small business which generates a modest margin of income and provides the members a service (supply store, marketing service, certified seed production, cotton gin, etc).

**4. Earlier project success.** There was evidence that the previous AID support to some of these groups was well-received and effectively utilized until their operations were limited by political strife.

### C. Potential Opportunities For Assistance

Although the associations are financially weak, they are generally very cohesive and possess strong leadership, good representation, and experience in providing self-sustaining services. These associations (along with a few selected private sector cooperatives) could be strengthened to address the problems outlined in Section B as follows:

**1. Policy Issues.** The associations and their umbrella federations are organized representatives of the interests of the private sector in negotiating policy changes. Their lobbying effectiveness could be enhanced in several ways:

- increased membership,
- improved services that could expand and solidify membership and broaden representation at the national level, and
- improved understanding and articulation of member farmers' needs and predicaments.

One or two associations have begun to conduct member surveys to better define the problems faced by local farmers. Strengthening the associations' ability to conduct these surveys would help to ensure that the policy changes they seek are based on informed analysis. At the national level, the ability of UPANIC and the umbrella federations to understand and influence the policy environment could be enhanced by outside support of formal sectoral studies.

**2. Technology Transfer.** Several of the associations visited have had extension agents or technical service capabilities. The Matagalpa livestock association had three veterinarians on its board of directors. The coffee association in Masatepe is generally credited with having introduced modern coffee technology into the country in the early 70's. The rice growers association (ANAR) developed a seed certification program, and with AID assistance managed a successful research and extension program.

The technology transfer services of the associations are very limited at present, but could be expanded through:

- logistical and salary support to develop adaptive research and extension programs,
- short term TA in support of research and extension,
- travel to seminars, courses, meetings, international research centers, and production areas of other countries, and
- support for increased farmer training and publications.

The Masatepe Coffee Association is a good example of what could be done through a strengthened program of research and extension. As mentioned, the association introduced modern coffee technology to Nicaragua. Before the revolution, they maintained two extensionists on their staff, but those positions had to be eliminated in recent years. Nevertheless, they have continued to conduct at least two intensive, week-long seminars each year. The courses are directed at both members and non-members, and address basic grain as well as coffee production. They also sponsor a program of seed certification for corn, bean, and coffee seed. The association helps coordinate several on-farm trials which are conducted at the farmer's expense. These include varieties and cultural practices, including the use of citrus for shade and diversified production. They have recently begun a small asparagus trial with assistance from PROEXAG. With financial and technical assistance, the association could easily expand its services to have a major impact in the region in coffee, diversified crops, and basic grains. Other local associations could do the same.

**3. Access to Credit.** Credit is a significant problem, and it is unlikely that the associations could serve as delivery systems in the short run. They express a preference for private

commercial banks or *financieras*. Perhaps a network of rural banks, like the one that has been successful in the Philippines, is a viable option. Individuals within the associations might become involved in the development of private banks, however. The associations could play a major role in facilitating the development of a new system, by coordinating information to members. A good example of this function is developing right now with the loan funds that are available for equipment and machinery imports. Communications through the BND are ineffective, and associations are turning to UPANIC for assistance in channeling problems and information requests to the FNI.

**4. Strengthened Market Linkages.** Many of the associations have maintained some sort of business enterprise. Most are quite modest, like small supply stores for members, but there are also association-run cotton gins, seed production farms, and dairy processing facilities. Several of the associations have been bargaining agents for their members, as in the sale of livestock to a slaughterhouse.

These business ventures serve several purposes for the associations in addition to generating operating income. They provide a secure supply of specialized products, such as veterinary medicine; they keep the association informed as to the real costs and margins earned by other competing commercial (or state) businesses; and they allow the association to keep the door open to expanding the business if necessary.

This market presence could be very important in the transition to new, private agricultural trade. Associations have community leaders among their directors, represent a large share of the market (either as buyers of supplies or sellers of commodities), and have enough experience to enter into full scale commercial businesses if necessary. The cotton and livestock associations of Chinandega have considered setting up a joint venture supply and equipment store to serve the region, for example. Strengthened associations might provide better market information to members, link potential investors with local opportunities, develop new terms of sale or contracts, or go into business (alone or in partnership).

**5. Training.** Several associations mentioned training opportunities and scholarships for members as a high priority. Training is needed at all levels, from long term foreign study to short courses given locally.

### D. Other Considerations for Assisting UPANIC Associations

**1. Direct assistance to UPANIC.** The team was impressed by the strength of the associations at the local level, and that the national level organizations tend to be more political in nature. UPANIC, itself, serves primarily a lobbying and coordinating function. This relationship should be maintained, and direct assistance to UPANIC should be designed to strengthen its existing role without adding new functions, such as direct provision of TA or management intervention into the programs of local associations.

**2. Assistance to Cooperatives not affiliated to UPANIC.** The team visited three independent cooperatives (see page 36), and found at least one that would be an excellent channel of services and assistance to farmers. There is no apparent reason why these cooperatives should not be eligible for assistance on equal terms as an association.

**3. Demand-Driven Assistance.** It makes good sense to provide financial and technical assistance to the associations/ cooperatives based on their individual requests and plans. This would imply screening and selecting requests, and making a series of individual sub-grants rather than designing a preconceived program of assistance at a national level. The advantages are that the individual needs of the associations could be met and that the resulting programs would more likely be integrated into normal association activities and, therefore, be sustainable in the future. Having a demand-driven program, however, emphasizes two management activities: helping the associations to develop reasonable work plans and assistance requests, and selecting the best of these for actual assistance. The tighter the budget relative to the demand for assistance, the more important is the establishment of a clearly articulated selection process, including pre-established selection criteria.

**4. Priorities by Crop or Region.** The team was not able to arrive at a consensus as to which crop or region deserves priority over the others. Coffee is attractive because of the employment it generates and the fact that it is produced in conjunction with other crops. Beef cattle represents one of the largest traditional farm enterprises for Nicaragua, and FAGANIC is the best organized and strongest national association. Cotton is a high national priority, and could be a quick foreign exchange earner. Rice is also a good crop with a strong association. All of the associations are considering diversification possibilities.

Section IV deals in greater detail with coffee, rice, livestock, and dairy, but due to the limitations of this assignment it was impossible for the team to conduct the type of comparative analysis that would lead to a definitive prioritization. Furthermore, given the market distortions and changing circumstances of the country, it is the team's opinion that this type of analysis is not only difficult to conduct, but its conclusions are likely to be valid for only a short time.

**PRIVATE SECTOR AGRICULTURAL ORGANIZATIONS IN NICARAGUA: PROBLEMS AND OPPORTUNITIES**
**November, 1990**

## IV. ORGANIZATION-SPECIFIC OBSERVATIONS AND RECOMMENDATIONS

### A. UPANIC

**1. History.** UPANIC began in 1979 as a union of three commodity federations -- the Federation of Nicaraguan Cotton Producers (CAAN), the Federation of Nicaraguan Livestock Producer Associations (FAGANIC), and the National Union of Coffee Producers (UNCAFENIC) -- primarily to protest Somoza policies as they affected these specific commodity interests. As a fairly powerful voice in opposition to the Somoza regime, the original Sandanista Government constitutionally recognized UPANIC's existence and its membership in the Supreme Council of Private Enterprise, (COSEP).

COSEP also includes members from other private sector interests such as retailing, industry, housing, and importing. It lobbies the government on behalf of the private sector. It exercised this role visibly during October by participating in a *concertacion* with representatives from the government, labor and the Sandinistas. COSEP refused to sign the document proposed by the *concertacion*. Chief among its objections was the *concertacion*'s refusal to adopt a measure calling for the return of all lands unduly confiscated by the Sandinista government.

As the Sandanista Government began instituting a series of repressive measures against private sector operators and their organizations in 1979 and 1980, other groups rushed to join UPANIC since it still had legal standing in the eyes of the government. These included the Rice, Banana, Cane, Sorghum, and Dairy sectors. Early on their concerns centered on GON takeover or rigid control of private sector importing and exporting firms and processing facilities such as slaughter houses, coffee mills, sugar mills, etc. They complained that escalating costs and operating margins of government operations were destroying farmers income and production incentives.

The murder in 1982 of UPANIC's popular president Jorge Salazar by the Sandinista Government Police not long after he convened a national meeting of private farmer members of UPANIC, signaled the need for UPANIC to scale back activities and operations to a minimum. UPANIC had originally planned and in some cases activated programs of organizational, management and technical assistance, legal advice, and wholesale farm supply services to base level associations, working through their federations. The reactivation of the group is just now beginning.

**2. Organization.** The Executive Secretary, Rosendo Diaz, is retained by the Board of Directors and reports to the current President, Ramiro Gurdian. As for support staff, UPANIC employs two secretaries, a chauffeur (it has one vehicle - an old Jeep), a watchman, cleaner, part time accountant, and part time legal counsel. The office facilities have potential but are run down, needing paint, plumbing, general cleaning, new phones, and basic office equipment.

At present, President Gurdian serves as the public voice of UPANIC and also makes some day to day decisions concerning it's internal operations. Diaz appears to have responsibility for some day to day operations, scheduling meetings, speech writing for the President and both external and internal written communications and public relations.

A 28 person Board, with one vote each, is the sole governing body of UPANIC. The national coffee, cotton, and livestock federations, as original founders representing major commodities, each name six delegates. Others name two. The member federations appoint their delegates annually and they must be farmers or farm owners in the private sector. They receive no compensation or reimbursement for expenses.

This board meets weekly or when convened. The same group serves as representatives of the membership at annual meetings when bylaw changes, budget setting, and other official business is handled. Election of the executive committee for 1 year terms occurs annually. Bylaws to determine detailed voting provisions, such as required majorities for votes on specific issues, are in the process of extensive revision to reflect the increased permissiveness of the new government.

**3. Finances.** Bylaws require member federations to pay $30 per month per delegate. Because of "exchange problems", this has been reduced to $10 and will soon go to $15, and as soon as possible, back to $30. To raise money in the interim, President Gurdian made an arrangement to sell several UPANIC vehicles to member associations on a monthly time payment basis since dues do not cover expenses. In addition, both the President and Diaz occasionally cover current account shortfalls prior to receipt of dues. In January 1991, the European Community Private Trade Council will quietly begin a subsidy donation for an indeterminate time of $800 per month earmarked as salary supplements for paid staff. Present salaries are as follows: Rosendo Diaz, $350/ month; secretaries, $120/ month; driver, $60/month; and cleaners/guards, $40/ month.

Diaz formerly earned $1,500 per month for full time work. He now has a board approved compensation arrangement allowing him to buy and sell inputs for and outputs from Association members and their constituent farm level associations. He is also a paid consulting expert in the current matter of reclaiming land illegally expropriated by the previous government. He states that all of this other activity detracts from his primary role with UPANIC and still does not provide him an adequate compensation. He jokes ruefully (and with what appears to be some truth) that he works full time for UPANIC and half time in his other activities.

UPANIC, as a matter of Board policy, conducts no other fund raising activity. Partly because of the very tenuous relationship with the previous government (private, unreported, foreign assistance was illegal) and partly as a policy of President Gurdian, there is currently no long term or annual budget. Income and expense projections are reviewed on a month to month basis and arrangements are made to break even. It was stated that UPANIC continues to lose money (it has survived by decapitalizing), but balancing a budget is not a priority of the President. Many Board members are, however, concerned that a sounder financial system is needed.

**4. Activities.** Apart from gathering for weekly meetings, UPANIC lobbies GON officials and ministries to solve problems at the request of a commodity federation or it's individual association members. Besides the current heated issue of reclaiming confiscated properties, member associations are petitioning the GON to either privatize export and import entities and state-owned agro-industrial processing entities and/or force them to operate with competitive and rational costs and margins. Note that this is a continuation of complaints raised at the onset of the Sandinista government. Members forward specific complaints, petitions, and explanatory analyses through UPANIC to appropriate GON offices. For reasons likely related to the delicate and unresolved political situation UPANIC has not yet resorted to the use of open meetings, or "manifestations" to publicize issues and complaints.

When necessary, UPANIC turns to COSEP for backstopping and to get problems and issues on the GON legislative agenda. COSEP dues are $100/month.

### B. General Characterization of the UPANIC-affiliated Commodity Associations

The following observations are taken from visits to 13 commodity associations during the last two weeks of October, 1990. This sample of organizations visited represents the more active and organized associations affiliated to UPANIC and located in the principal production zones of the country.

**1. Leadership.** The leadership of the associations is informed and articulate on issues concerning the commodity producers they represent. Their current concerns are primarily political in nature; they see their principal function as the defense and representation of farmers' interests in an adverse yet admittedly improving environment for private agriculture. Many leaders appear to have other professions or occupations besides farming and give the impression that they are something of "leading citizens" in their respective communities. Judging from appearances, they are relatively well-to-do and many have had educational opportunities outside of Nicaragua.

**2. Issues.** Items noted of current concern and interest to the associations include:

- Apprehension on the matter of security of land tenure and the possible return of confiscated farm properties
- Disgust with and criticism of governmental intervention (monopolies) in marketing, credit and input supply
- Adverse cost-price relationships contributing to limited or negative profitability of farming
- Criticism of farming practices being sponsored or tolerated by government on collective and corporate farms and favored status being given these enterprises by government in the distribution of scarce credit and inputs administered by state agencies
- Lack of availability of appropriate machinery, equipment and supplies necessary to rehabilitate and restore productive capability on their farms

**3. Services.** The current service capability of the associations is weak and limited in scope. Small stores carrying an assortment of hardware, veterinary supplies, consumer items and pesticides, do not appear to be important in local commerce

nor operated in a businesslike manner. This is in contrast to a period of the early eighties when many, with AID assistance, had the capability to sponsor technical and training assistance, applied research and important supply service functions.

**4. Organization.** The associations and their respective federations are a very diverse group. For example, the sorghum, banana and sugarcane associations are currently inactive. Only three commodity groups--cattle,dairy and rice--have permanent central offices in Managua. On the other hand, the cattlemen's association, FAGANIC,is much larger and stronger in terms of finances and numbers of members than all of the other commodity associations combined. It has an active, professional staff, excellent installations in Managua and a checkoff system of dues which practically guarantees an income stream to carry overhead and service programs. Diversity in commodity groups is also noted in the membership base of producers. There are only 12 banana growers/entrepreneurs in the country and only a few dozen commercial rice growers. By contrast, cattlemen and coffee producers number in the thousands.

With the exception of the cattlemen's associations and their federation, it is a safe generalization that the commodity associations and their central offices are poor. Dues income is almost nil in most of the associations and often the organizations are running on very modest budgets, frequently generated by modest commercial activities which generate feeble current margins. The offices are modestly equipped and sometimes shared by two commodity groups. This is the case, for example, in the Matagalpa where the cattlemen and coffee growers share facilities. In recent years, some of the associations have had to liquidate assets in order keep functioning.

**5. Outlook.** Despite extreme bitterness toward the past regime, whose policies depleted membership and production, the associations show signs of recovery and optimism. Membership has risen modestly during the past months. Leaders sustain the position that, given a fair environment of opportunity and profitability, they can "catch up" to previous (1979) levels of productivity and again compete in Central American and other international markets. The conditions of recovery most often mentioned were reliable and fair markets, adequate and appropriate credit, and access to modern production technology.

### C. The Coffee Associations

According to Ministry data (or estimates) coffee is currently being grown on some 100,000 manzanas. The expected yield in 1990-91 is about 700,000 cwt.. This would place the country well at the bottom of productivity in Central America. The crop is grown in a wide variety of farms ranging from very small plots in tiny farms, to large, commercial plantation type operations. As seen in Table II, the most significant producer groups are the cooperatives (UNAG) and the large private growers (over 200mz), with about 41% and 34 % of production respectively.

Coffee technology apparently got something of a boost during the mid-seventies with the threat of coffee rust and programs designed to introduce improved varieties and production techniques. Following the revolution of 1979, the crop being raised on private farms declined as farmers abandoned plantings or gave them minimal maintenance. Marginal plantings were abandoned completely in some cases and subsequently lost to shade trees and weeds. Virtually no renewal and substitution of varieties were practiced during the eighties.

The abandonment or decapitalization of coffee farms was due to both the threat of confiscation and the decreased profitability. The reasons cited for declining profitability of coffee under the Sandinistas are: high costs of inputs, low product prices, and low labor productivity. The first two are generally attributed to the state monopolies. The reason for decreased labor productivity was not readily apparent, but the cited reason was the political climate.

From brief observation and descriptions, the best coffee growing regions of the country are Jinotega (not visited) and Masatepe. Jinotega has the best growing conditions of altitude and moisture and is capable of growing quality hard, high-acid coffees. Masatepe is lower and constrained by a six-month dry season. Matagalpa and Boaco regions are characterized by very small plots on diversified farms yet comprise a large number of producers. Some coffee is grown on the higher hills surrounding Managua and the association of this area appears to be comprised of part-time farmers living in the city and a few others with plantations scattered in microclimate areas of the country.

In developing assistance to the coffee sector in Nicaragua, one of the immediate questions that arises is whether to target assistance primarily at the large private growers or the smaller

UNAG farmers. The judgement of the team is that the private associations might be effective vehicles to achieve both an aggregate increase in production (which will have desirable employment and foreign exchange impacts) and to improve conditions on a significant number of small farms, due to: 1) increased small farm membership in the associations and 2) spread effects of technology transfer programs.

A visit to the CORCO cooperative in Masatepe indicated that the UNAG cooperatives were a loose and ineffective means of organizing small farmers. The manager of this UNAG affiliate was to the point of closing the cooperative (the next day). The principal problem, in his view, were the heavy subsidies passed on through the cooperative, in the form of cheap supplies, negative interest rates, and easy debt write-offs. The cooperatives did not, in effect, operate as service organizations but were, instead, credit channels and political support groups. There was little or no effective technical assistance in CORCO.

The private UPANIC associations in Masatepe and Matagalpa both represented more successful farmers and were stronger organizations. The Matagalpa association was much larger in the past, but has been virtually inactive for several years. The Masatepe association, while smaller, has remained more active and has been for many years one of the technological leaders in coffee in the country.

The Matagalpa association had over 7000 members in the late 70's, organized into numerous local groups. They provided credit and technical services in the manner of a service cooperative (although not called a cooperative for political/legal expediency). They are best known as the association over which Jorge Salazar presided. The association is, at present, trying to reactivate its membership, and has about 1500 members. They estimate that they could grow to represent production of about 30,000 manzanas (450,000 - 600,000 cwt, equivalent to 65-85% of current total national production).

The Masatepe association was founded in 1976 with about 30 members, and has grown to 120 members at present. Their members own about 1600 manzanas of coffee (an average of about 13 mz), which produced over 18 cwt/mz in 1989, or about 30,000 cwt.. This represents about 33% of regional production, and about 5% of national production. They were formed without any assistance, and have never received financial assistance or borrowed money (as an association). Their capital has grown from $20,000 to about $150,000 (mostly in the form of inventories).

The Masatepe association has been limited in its ability to grow over the last several years by adverse policies of the Sandinista government, but has nevertheless maintained several service programs, including:

- input sales,
- technical assistance,
- training courses,
- certified seed production,
- collection and sale of basic grains, and
- research in crop diversification.

Input sales were originally set up through volume discounts with commercial distributors, who also provided credit terms that were passed on to members. The margin (3%) earned on the sales provided the association with operating income, with which they maintained two full time extensionists and managed their other activities. Although sales and income have declined under Sandinista policies, as recently as 1986 they sold 13,000 cwt of fertilizer and 10,000 liters of chemicals.

Their technical assistance programs were some of the strongest in Nicaragua (and probably Central America), with two full time employees plus two PhD 's on the board of directors. They are generally credited with introducing improved varieties and modern production technology into Nicaragua.

Training and technical assistance provided by the association has been provided to both members and to community farmers, and has included coffee production, basic grains, and diversified crops. Financial limitations during the last several years have made it necessary to limit the number of courses given, but they have still had at least four 1-week long seminars per year on corn and bean production and coffee technology.

The seed production and certification program is also more limited than in the past, but includes corn, beans, and coffee seeds, and benefits to the community as a whole. The program is sponsored and managed by the association, with a margin of profits retained to offset costs. The seed is produced on individual farms (many of which are small) under the supervision

of association personnel. Quality control tests are conducted by the University, and the seed is distributed by the association.

The association, likewise, manages several collection centers (*centros de acopio*) for corn and beans to permit member small farmers to sell their grain in larger volumes. Finally, the team visited several on-farm research trials being managed by the association. These included coffee varieties, shade tree varieties, cultural practices, and crop diversification (fruit trees and asparagus).

The association has grown and has maintained these programs during the last eleven years, but the growth and the effectiveness of the programs has been severely restricted. The effects of the Sandinista policies on the association include: 1) potential new members were attracted into UNAG cooperatives where they received preferential subsidies, 2) coffee income to the farmers decreased dramatically and the financial base of the association declined, and 3) the traditional commercial relationships of the association were broken, as the government created a state monopoly on input importation and distribution. Association representatives are very optimistic about their ability to increase membership and provide improved services if new policies are successfully introduced.

### D. ANAR --The National Association of Rice Growers

Although the team had only a brief visit with the rice growers at their offices in Managua, the organization represents some interesting insights and options for future activities with commodity associations.

The board is a sharp group, close to their crop and active in the association. They meet regularly under the capable leadership of the president Mario Hanon. The manager is Gustavo Narvais. Originally, the group had about 75 members; now they have about 40. All of the members specialize in the production of irrigated rice in the area of Malacatoya, located at the southeast extreme of Lake Nicaragua, not far from Tipitapa. It is interesting to note that the association recently changed its name and acronym to eliminate the "R", indicating "irrigation" because the irrigated rice business was previously very much identified with Somoza.

According to the men interviewed, rice used to be an important commercial crop and export earner for the country. Somoza-owned farms were huge at one time, comprising about half of the irrigated acreage of the country. They were not very efficient according to the team's sources and have now been converted into state-run (subsidized) enterprises. About three-fourths of the rice produced in the country is grown under irrigated conditions and about half of this by members of the association. This fraction varies, however, according to weather conditions from one year to another. In wet years, rice grown in such places as Chinandega and Rivas makes a decent yield; in dry years (such as 1990) the irrigated crop is about the only one to amount to much, comprising about two-thirds of the national crop.

One aspect of the rice growers group which most interested us is the fact that the association has formed two businesses in support of the interests of its members. "COARSA" is a modest rice mill and bargaining entity which assists members to sell their product in the local market. Milling and retail sales of rice amount to some 3% of the local consumption market. It was originally started and capitalized on the basis of land area in irrigated rice of each participating member. It has not been--nor was it ever intended to be--a profit maximizing operation. It was created and continues to operate more as a symbol of the organization and as a normative force in the marketplace. "ANASEMILLA" is an enterprise dedicated to variety trials and production of improved and certified rice seed. The plant and

400 manzana farm are located in Tipitapa. It seemed that the installations are not being used anywhere near their capacity at the present time. Again, this was never operated with the idea of producing a profit so much as it was a service for producers.

With the assistance of AID, the association operated a program called "TECNOANAR" until the Sandinista regime made life impossible for them in '82. Briefly, they had an $80.000 grant with which they bought 4 vehicles and hired a group of technicians to work on some of the problems of the crop. Also they published a "Rice Bulletin" for producers. One of the major achievements of the work was in the soil fertility and fertilizer area with the result that they cut their costs of fertilization while maintaining yields. The local technician who led the work was Eduardo Marin, who according to the directors, was an excellent professional in his field. They also still remember two important courses he directed for growers.

Directors encountered by the team with were emphatic in saying that rice technology in Nicaragua is obsolete, way behind the modern world. "We're disconnected, abandoned", they say. Previously, the best source for their technology and genetic materials was CIAT but they haven't had contact with them in a meaningful way for some time.

The men are bitter about events which affected them during the previous regime. One of the most damaging was the importation "by the Russians" of the equivalent of two years' production of rice which went onto the local market. This understandably ruined the rice business for local growers. They say that currently only about 30-40% of the acreage formerly in rice is now in production. Nicaragua no longer competes in Central American markets whereas before the country was a major supplier, particularly to Costa Rica and El Salvador. This is principally because of rising costs of production.

According to those interviewed, what is most needed to get commercial rice going again is:

- Reliable credit
- Access to technology; visits to international fairs and seminars, etc.
- Reviving the seed plant, new materials for trials and reproduction, and training for growers on how to use new techniques

- Research on new methods for preparing rice for better market penetration; value added processing such as parboiling.
- Reduced electric rates (for irrigation pumps)
- Replacement of lost and worn-out rice machinery ("of western manufacture")
- Vehicles

### E. FAGANIC and the Livestock Associations

This section reports on visits to 4 livestock associations; in Matagalpa, Rio Grande, Boaco, and Chinandega, and meetings with the national Federation of Associations of Nicaraguan Livestock Producers, or FAGANIC, and the National Brahman Breeders Association at their joint office in Managua. FAGANIC has 19 member associations, including those visited. I also visited a group of small producers in the process of forming a new association with the help UPANIC in the seacoast town of Masachapa.

**1. Overview.** Livestock raising has long been the most important single commercial agricultural enterprise in the country. The Brahman people estimate that one third of the total work force depends on the sector for 50% or more of their total income. The private sector producers represented by the member associations of FAGANIC account for well over 75% of the country's commercial production.

In the last 10 years the national livestock herd has diminished from over 3,200,000 head to about 1,000,000. All of the presentations made to us by the associations stated the same reasons for this decline:

- land, equipment, and animal confiscation of not only the largest, but the most productive medium size properties.
- rapidly increased costs of animal health medicine and other specialized supplies due to prices charged by the state importing monopoly.
- falling cattle prices due to excessive margins and fees charged back to producers by the state-owned slaughter house monopoly.
- refusal to allow purchases of imported equipment and other inputs by private sector ranches and associations.
- credit rationing, giving heavy priority to State controlled entities.
- a rapid deterioration of the quantity and quality of animals on the Sandinista properties due to rapid slaughter of breeding animals, conversion of pasture land to small parcels for basic grain production, and bad management.

- deterioration of the quality and size of the labor force due to competition from free food handouts, military conscription, and propaganda efforts.

- cattle and fencepost stealing from private ranches ignored by Sandinista police.

These events convinced ranchers it would not be in their best interests to increase or even maintain the size of their herds. Sell off of breeding animals became necessary to preserve a basic ranch economic structure.

Some of these factors are still in place, including the problems with labor, stealing (rustling), high input costs, and unmet credit needs. Recent liberalization of livestock selling prices, privatization of some agro-industries, and a promise to consider the return of some confiscated properties has improved producers' outlook, although they remain concerned over the future political stability of the country. This concern still has an inhibiting effect on carrying out plans to increase livestock numbers.

FAGANIC's officers expressed their hope that pressure be placed on the Chamorro government to clean up the stealing problem and police complicity in it. Since the economic and living conditions on the Sandinista ranches and farms are rapidly collapsing, as foreign socialist country help evaporates, the stealing problem will become more severe without strong action.

The rancher members of the livestock associations average about 1,200 acres, with 600 to 800 head of cattle and about 5 employees. The median size is considerably smaller. The associations range from 200 to over 1500 members. Most of the associations earn operating revenues from margins on the sale of animal health and basic living supplies in small stores located around their membership territories. Some also arrange for members to have animals slaughtered at municipal slaughterhouses and sell meat at association stores, with margins providing income to the associations. Dues or checkoffs have not been widely used in the last 10 years for local association support.

At the federation level, FAGANIC is partly supported by a slaughterhouse checkoff on member animals sold. The Federation offices are large and impressive. The Federation expects the imminent return of a shopping center they own, the rent from which will be used to finance field programs.

The team held meetings with three types of organized groups in the livestock business; local associations, their national federation (FAGANIC), and the national Brahman Breeders Association. The latter, while members of FAGANIC, are larger, more well-to-do producers, and are interested in the future sale of breeding stock, not just meat. They presented a well-prepared action plan for technical assistance in livestock.

**2. Credit.** Several local associations voiced a need for a credit program to finance retention of breeding calves and cows. A producer would borrow money for living expenses or working capital so he wouldn't have to slaughter female animals. The association at Matiguas presented us with a partial feasibility study illustrating a rapid herd buildup and loan repayment ability. This group had also almost finished a complete member survey, allowing for an estimate of member acceptance of their program, and a projection of the aggregate herd size response.

Other local associations felt credit should be used more for renovating ranch facilities, such as wells and ponds, treatment sheds and dipping troughs, and pasture renovation machinery, including tractors and mowers. Severe depopulation of the national herd has left most pastures overgrown and in some cases unusable. In a tropical environment with fast growing vegetation, pasture renovation becomes a more difficult and expensive factor than in temperate climates.

Most local associations expressed a need for more short term credit at the association level to allow purchase of more and better animal health supplies. All these groups, along with the FAGANIC leadership, stated that individual rancher credit should be made available only in concert with programs of on ranch technical assistance to help insure viability of any credit program.

Both FAGANIC and the National Brahman Association were somewhat more restrained in the matter of on-ranch credit. While admitting some was needed, they stated that if loan funds are invested in projects that raised and stabilized prices over the long term, producers will take self-help measures to increase herd growth and eventual output. Currently, the calf weaning rate in Nicaragua is only about 35%, and should be 75 to 80%. This is due to poor blood lines, not enough bulls, endemic sickness in cows, and animal mineral deficiencies. Rather than credit programs, they emphasize technical assistance for a faster response to this problem. They would prefer to see some credit

used to finance importation of new bulls for breeding, for reconstruction and renovation (in cooperation with the Ministry of Agriculture) of a pasture improvement station both for experimental and seed propagation, and for a national breeding and animal health center whose services would include artificial insemination.

The national groups' priority need is a loan to buy back the state-owned slaughter house, or better yet, to build a new, modern, farmer-owned and managed plant. It would serve as a major competitive benchmark in establishing a rational price for meat for export and local use. Financing would be secured with a Federation-wide checkoff from member sales to all buyers. The Brahman people stated that if any AID credit or technical assistance line is restricted in size or rationed, this project would adequately substitute for other programs, for the reason explained above.

**3. Technical assistance and commodity needs.** The local associations stated they need intermediate term help in reestablishing effective on-farm technical assistance programs, including vehicles (Jeeps), one small truck per association for equipment and supply deliveries and salary supplements. They believed that as new programs became known and accepted by the producers, new members and higher dues would allow them to become self-sustaining within a few years. They would emphasize education in breeding, calf retention, animal health to increase the weaning rate, and pasture management.

The national associations echoed a strong need for local technical assistance and commodity support. However they felt strongly that the program should be managed from FAGANIC's headquarters. They have drawn up a system proposing an optimal number of animal technicians (*zootecnicos*) and pasture management technicians (*agronomos*) for each association. Two veterinarians and a highly trained agronomist would supervise the field staff and assist with meetings, demonstrations, publications, radio programs.

The national federations made a number of general recommendations regarding assistance:

- Any AID assisted program must run for at least three years, no matter how big or small. They were emphatic on this, apparently having had bad experience with previous, short-lived foreign assistance programs.

- If the size of the AID grant program to the livestock sector is, as they expect, to be limited or rationed, they believe it should be spread wide but thin rather than concentrated in a "show" or demonstration project. They believe their membership is prepared to perform considerable self help, and a demonstration of support, country-wide will have a more dramatic effect. They also want to use it to garner wide political support.

- FAGANIC would like any program grants to be on a matching fund basis, with the agreed FAGANIC and local association matching percentage to increase each year. In this way they believe the work will get more support and force it onto a self sustaining basis much more readily.

- They would like to see money spent in Nicaragua, rather than on scholarships to other countries.

- If there is AID loan or grants for the purchase of breeding stock in the USA, let FAGANIC or the Brahman Association make them, not the US Government. They had some bad experience with so called "low bidders". If this is not possible, money should be used locally.

- They would strongly support an AID supported (and funded!) ecology initiative encompassing reforestation, particularly in the Pacific Coast region. They want fence posts and shade for animals besides recognizing the broader advantages of reforestation.

- They would have no problem seeing UPANIC as the location for the overall AID project management team but would object to UPANIC itself having any role in rationing and/or allocating funds within the livestock sector. This was an unsolicited answer to an unstated question. It must be on their minds.

**4. Notes and Comments.** The livestock people appeared well prepared to discuss issues, problems, solutions and contingencies in a rational manner. The merits and priorities of their proposals may be subject to debate by donor agencies, but at least FAGANIC stands ready to collaborate on presentation of formalized plans, if asked. I can at least concur with them that there seems to be a large measure of economic and political leverage available from what might be a conservative level of assistance to this industry.

### F. FONDILAC-The Dairy Association

Contacts: President, Lic. Danilo Machado
General Manager, Edgar Lacayo

*Fondo Desarollo de Industria Lactea* (Dairy Industry Development Fund) is a registered association with a wholly-owned operating subsidiary, Nicaraguan Milk Producers Company, doing business as "La Selecta". Both entities generally do business in a cooperative manner but were called "associations" to escape the absorption of "Cooperatives" by the Sandinista government. The dairy plant and the offices of FONDILAC are at the same location on the road to the airport in Managua's industrial district. The same 13 man Board of Directors heads both entities. The interview was exceptionally cordial, helpful, and well presented by Srs. Machado and Lacayo.

**1. History.** FONDILAC was started in 1965. By 1978 it had 414 members supplying raw fluid milk to 4 milk plants in Managua. Because of difficulties with the previous government, (a number of smaller members left to associate with Sandinista organizations, and 104 medium size members had their farms confiscated), membership is now about 153. About another 1,200 milk producers are associated with FONDILAC through purchases from farm supply points or occasional milk deliveries, but these producers are mainly *ganaderos*, or meat producers. They have no vote or financial participation. FONDILAC also serves, through its membership in UPANIC, as the voice representing the private sector dairy farmer interests. La Selecta was purchased from the Somoza family in 1968. Initially, many members of FONDILAC bought between 2 and 6 shares of stock, based on productive size, as a right to sell their milk through their own plant. These were the equivalent of preferred stock. Other members of FONDILAC, which was and is a non-profit member service organization, continued to sell milk to other dairy plants in Managua.

Just before the 1979 revolution, operations at La Selecta peaked at about 18,000 to 25,000 gallons per day. Current operations are limping along at 6,000 to 7,000 gallons per day. Of interest is the fact that the Sandinista Government in about 1982 examined the records of FONDILAC, targeted the 104 largest producing members for confiscation, took most of the cows for meat for the State institutions and destroyed or abandoned the dairy production facilities. This can be partly verified by examining national milk production statistics.

**2. Operations.** Both FONDILAC and the La Selecta company establish policy using the one person - one vote system. Earnings in La Selecta have always been retained in the La Selecta company with no devolvement, but are carried as book credits in the members' names, in proportion to milk supplied.

They classify members today as medium to small. About 10% are "medium", producing 100 to 150 gallons/day. The rest are "small" producing 3 to 100 gallons. They have 4 collecting stations with refrigerated holding tanks, in Rivas, Managua, San Jose de los Remates, and Boaco. Veterinary and dairy supply stores are also operated at these points. Cows are milked once a day, with most milk brought uncooled immediately to the receiving point for cooling.

By late morning and early afternoon milk is taken in 2400 gallon tankers from the receiving plants to La Selecta for immediate processing into the evening. All packaged product, in 250cc and 1 liter bags in conventional milk cases, is loaded at dawn out of the cold room into insulated 16 to 20 ft. vans for wholesale distribution. This rapid pass through helps relieve a little, but certainly not all, of the shelf life problem arising from unsanitary raw milk supplies and processing.

**3. Operating practices and problems.** On farm milking and sanitation practices are, as Sr. Lacayo puts it, "*muy rustico*." La Selecta pays a differential for milk of different quality based on the methylene blue test for time of acid formation as follows:

| | | |
|---|---|---|
| 4 hrs | $1.07 | / gallon (refrigerated on farm) |
| 3 hrs | .99 | / gal. |
| 2 hrs | .87 | / gal. |
| -2 hrs | .80 | / gal. (already slightly sour) |

The rapidity at which milk sours indicates the number of foreign bacteria in the raw milk supply, which in turn is an indication of the sanitary condition of production. Since pasteurization only kills pathogenic organisms and some non-pathogens, low quality raw milk, even though pasteurized, will have a short shelf life.

Our hosts emphasized several times that their immediate and highest priority is to implement a rigorous on-farm technical assistance program to improve raw milk quality and sanitation and boost production. Nicaragua has no regulations concerning raw milk sanitation.

The La Selecta plant is in very poor condition. Over the past 11 years with falling milk supplies reducing revenues and the refusal of the Sandanista Government to allow imports for this lone private sector dairy plant, management has had to resort to "patch up and run" operations. For example, as stainless steel pipes and valves have worn out in the pasteurized process line, they have resorted to the use of tygon tubing, normally used to unload raw milk from tank trucks. It is impossible to sanitize tygon tubing adequately for use on a pasteurized milk line. In the boiler room, Manager Lacayo remarked, "Pretty soon one of the 20 year old boilers will make the Momotombo Volcano look like a tea kettle." The critical French-made milk bagging machines are high quality, but need rebuilding immediately. According to the manager, if a line of credit (the payback of which would be easily covered by operating cost savings) is not made available within a year, it is likely the plant will have to close. I would have to concur.

The purchase or receipt of used dairy plant equipment from the USA or Europe is a dream of management. They have prepared and given to us a detailed technical equipment requirement list . They would also appreciate help in plant layout and product flow design to reduce losses and labor requirements.

**4. Marketing Environment and La Selecta's Position.** The city of Managua and nearby larger urban centers such as Masaya, Leon, and Granada have become increasingly deficient in dietary protein availability. In the last ten years fluid milk supplies have dropped from about 55,000 gallons per day to less than 30,000 gallons. La Selecta supplies 5,000 to 7,000 gallons of this, the GON-owned La Perfecta about 18,000 to 25,000, and the rest raw milk from street vendors. Even with the current economic problems facing the buying public, demand for fluid and related dairy products is unmet. Output from the two plants is quickly sold.

According to my hosts, the other plant, La Perfecta receives milk from FONDILAC members, State Farms and Sandinista "cooperatives", and some independents. It has recently benefitted from a $7,000,000 grant or loan from Finland, but production is dropping as the state sponsored suppliers degenerate.

Prices are as follows:

| Item | FOB Plant | Public |
|---|---|---|
| 1% fat, liter | $ .35 | $ .40 |
| 3% fat, liter | $ .44 | $ .50 |
| cream, 18% liter | $1.14 | $1.33 |

**5. Summary of technical assistance needs.** Virtually all active members have dual function farm operations, beef and dairy. Almost all dairy animals are crossbred beef and dairy, with Brahman/criollo/Brown Swiss the most common. In a FONDILAC survey, about 30% of active members expressed a desire to convert to 100% dairy. Most of these are in the south and central Pacific Coast region. These members want a program of directed assistance, including a vigorous restoration of FONDILAC's onetime artificial insemination (AI) program. They would be very interested in participating in the Heifer project and VOCA's Farmer to Farmer program, with preference to US farmers from warm areas (Florida, Georgia, etc.). They need information on animal feeding and housing, animal care, breeding, and sanitation.

Commodity needs include vehicles for technicians and AI staff, nitrogen tanks and nitrogen, some small, used, on farm refrigerated holding tanks and a small truck for feed deliveries. These and other items are listed in a pre feasibility study presented to the team. Staff needs include salary help for 2 AI technicians, 2 dairy extensionists, and a veterinarian. Management emphasized that a vigorous new program, with much visibility, would likely convince more than just the aforementioned 30% of members to specialize in dairy production. With a production base of less than only 4,000 lbs per cow annually, (compared to a US average of about 14,000 pounds), a rapid total output increase is probable.

Management also said that it would be important to carry out the proposed La Selecta plant renovation project in a parallel fashion with on farm technical assistance. The security of perceiving the continuing viability and increasing profit potential of their milk plant market would be the greatest impulse to investing in their own dairy operations in order to increase output and quality. Also, the plant would have to be ready to profitably handle supply increases.

Assistance to FONDILAC for La Selecta would be a relatively small but highly visible and effective component of an overall AID project. The membership area covers most of the country's farming area and the final output, more and better processed milk, would have a positive impact in urban life. Technology transfers from US sources may be more easily available, feasible, and with proven results than may be the case with straight livestock and most crops in a tropical environment. FONDILAC management stated they just need a start, and that a significant increase in production and plant profitability would sustain these programs.

### G. Three Cooperatives

In Masatepe, Chinandega and Leon the team visited 3 traditional farm service cooperatives. Although the first mainly serves coffee producers and the other two are primarily focused on cotton, they do have some similarities:

- They were all formed during the mid-seventies through programs of the BND
- They were conceived as "regional" in scope; that is they were intended to serve members from several communities
- All were beneficiaries of special, half-million dollar loans from BID, these were interest-free, 20 years later, in Cordobas.
- Farm credit has been an important part of their focus and their member clientele is made up of small-scale producers--one of the condition of the BID loans.

**1. Esquipulas.** This Leon cooperative was one of the most impressive groups visited by the group during its entire stay in Nicaragua. In a simple, low-key but highly disciplined fashion, this organization appears to be stable, effective and doing an excellent job for its membership. It is particularly interesting to note that this group has taken the old cooperative principle of "political neutrality" seriously and now has a mixed membership of private non-affiliated members plus a representation of those carrying UNAG cards. Currently about 400 members are working about 2400 Manzanas of cotton, the principal crop of the area and of interest to the membership.

The cooperative offers the following services:

- A machinery service for land preparation
- A credit service in which the cooperative helps members prepare applications and pools them for wholesale borrowing from the BND. Payments are made as disbursements and are forthcoming from the Bank. The cooperative is responsible (at risk) for collections from the members and payment of the loan.
- A supply service of inputs for cotton, operated at the gin site.

- A cotton gin, bought in '79, operates at a profit--enough to practically carry the overhead of the entire operation and subsidize other services as well (see below)
- 6 agronomists offering technical assistance in cotton and do the field work necessary for the credit program
- A doctor working part-time in the modest cooperative office providing free medical service to members.

In all, the cooperative regularly employs some 26 people and about twice this number during the cotton harvest season.

Cooperative people complained about the current credit problems in the BND--late disbursements and reduced financing amounts--but did not consider this to be as serious or threatening to producers as in some other groups interviewed.

The staff and directors interviewed appeared to be very competent, informed and positive about their organization. They had reason to be proud of their accomplishments.

2. **The Santa Ana cooperative** in Chinandega was started in 1971 and made its first big investment in a cotton gin in 1976 with a BID loan. It made money for a while but later the coop had bad luck with a helicopter spraying service (they "fell out of the air"). They have also tried a tractor service and in 1990 bought a cotton picker. They have 4 technicians assisting some 300 members with their cotton and production credit. The cooperative acts as an" agent" of the BND in that it helps members prepare loan applications, channels them to the Bank and serves as a "guarantor" of payment under an underwriting agreement with the Bank. The cooperative takes a 3% surcharge for this service.

The ginning business has gone downhill. Although the machinery appeared to be well maintained, volume has gone down from 14,800 bales in '76 to about 3,200 in 1990. The gin is operated as an agent of ANAL, the nationalized cotton marketing monopoly.

Cooperative spokesmen were particularly critical of the current situation in the BND. Credit requirements are being met late and incompletely, causing problems in critical insect control in the cotton. Government supplied fertilizer is also a problem in that the independent cooperative member gets only half the quota of that given to "friends"of the Sandinistas. They say

that credit problems started getting worse in '79 when the Ministry insisted that the cooperative accept members affiliated with UNAG as a sort of tradeoff for not being expropriated by the government. Now, about 30% of the membership is of UNAG origin and the cooperative no longer has an affiliation with UPANIC. The organization also has little affinity with the Cotton Growers Association of Chinandega although they maintain a nominal membership.

The overall impression of the cooperative is that they are having a very difficult time staying alive, relying mostly on the credit service to keep members interested and loyal. They had a long "wish list" to present to AID--or somebody: Helicopters, vehicles, tractors, etc. Diversified crops are of importance to some of the membership in certain sectors of the cooperative's market area. They mentioned sugarcane, grain sorghum and sesame as possible alternatives to cotton which the membership is struggling to keep going on very small plots.

**3. CORCO.** This Cooperative in Masatepe shall be described in the past tense; it was insolvent and on the eve of being unable to continue operations when visited in October, 1990. It has a good beginning in credit, coffee processing (in a rented facility), technical assistance and a farm supply store. Serving small coffee producers who also have basic grains on their farms, the coop was described as once having reached considerable size. It had 715 active members, several trucks, a coffee processing service, a staff of 20 and active sales of both farm supplies and consumer items. Today it is broke and only has a small piece of property to its name. Most of the losses were incurred in the credit program as the cooperative could not impose a system of repayment by members which reflected the devaluation of the currency.

During the eighties, the Sandinista government required the cooperative to restructure its operations and accept beneficiaries of the agrarian reform as members. The Ministry of Agriculture essentially took over the outfit as it had been identified as an undesirable form of cooperative. Apparently, the "R.L." feature of limited liability identifies cooperatives in Nicaragua as undesirable for the Sandinistas. This feature evidently connotes operations at a profit, AID, the American Embassy, etc.-- or at least that is the excuse given to make life difficult for them.) Credit and other operating policies were modified under the aegis of the Ministry to the point that nearly all business discipline was lost.

The manager, apart from lamenting the demise of the cooperative, had some interesting, if rough, observations on the current economics of coffee in the Masatepe region. According to him:

- Operating costs for a Manzana of " semi-technified" coffee are about $600/yr.
- At current prices, this means that it takes about 15 cwt. of dried coffee per Manzana to break even. The current average yield in the country is about half this.
- Labor rates are currently $1.60 to $1.75 per day as established by the Ministry of Labor. The situation of the coffee laborer is tough as demonstrated by the fact that:

  One day's labor will buy a pound of cheese

  Nearly 4 days are required to buy a work shirt

  Two days (at least) of work will buy one machete

  Corn costs about $10-$11.00 per cwt.

**PRIVATE SECTOR AGRICULTURAL ORGANIZATIONS IN NICARAGUA: PROBLEMS AND OPPORTUNITIES**
**November, 1990**

## Tables

1. Nicaraguan Land Tenancy, 1978 and 1989
2. Nicaragua: Distribution of Crop Production
3. Crop Production in Nicaragua, 1979-89
4. Value of Principal Ag. Exports, 1979-89

TABLE I
NICARAGUAN LAND TENANCY STRUCTURE
1978 AND 1989

| FARM TYPE/SIZE | 1978 AREA | 1978 % | 1989 AREA | 1989 % |
|---|---|---|---|---|
| PRIVATE SECTOR | | | | |
| above 500 mz | 2920 | 36 | 514 | 6 |
| 200-500 mz | 1311 | 16 | 725 | 9 |
| 50-200 mz | 2431 | 30 | 1401 | 17 |
| 10-50 mz | 1241 | 15 | 929 | 11 |
| below 10 mz | 170 | 2 | 137 | 2 |
| TOTAL | 8073 | 100 | 3706 | 46 |
| REFORM SECTOR | | | | |
| APP | 0 | 0 | 948 | 12 |
| CAS | 0 | 0 | 921 | 11 |
| CCS | 0 | 0 | 134 | 2 |
| OTHER | 0 | 0 | 1901 | 26 |
| TOTAL | 0 | 0 | 3904 | 48 |
| ABANDONED | 0 | 0 | 459 | 6 |
| TOTAL LAND | 8073 | 100 | 8073 | 100 |

APP = STATE OWNED FARMS

SOURCE: EL BRIGADISTA RURAL, UNAG - UNEM

TABLE II
NICARAGUA: DISTRIBUTION OF CROP PRODUCTION
BY FARM TYPE - 1987-88

| CROP | | REFORM SECTOR APP | REFORM SECTOR COOP | REFORM SECTOR TOTAL | PRIVATE SECTOR SMALL/MED | PRIVATE SECTOR LARGE | PRIVATE SECTOR TOTAL | TOTAL |
|---|---|---|---|---|---|---|---|---|
| COFFEE | | | | | | | | |
| | Area | 12.62 | 38.44 | 51.06 | 6.74 | 45.24 | 51.98 | 103.04 |
| | (%) | 12.25 | 37.31 | 49.55 | 6.54 | 43.91 | 50.45 | 100.00 |
| | Production | 151.10 | 347.43 | 498.53 | 53.62 | 287.46 | 341.08 | 839.61 |
| | (%) | 18.00 | 41.38 | 59.38 | 6.39 | 34.24 | 40.62 | 100.00 |
| COTTON | | | | | | | | |
| | Area | 23.00 | 18.00 | 41.00 | 3.00 | 40.90 | 43.90 | 84.90 |
| | (%) | 27.09 | 21.20 | 48.29 | 3.53 | 48.17 | 51.71 | 100.00 |
| | Production | 680.50 | 359.60 | 1040.10 | 73.70 | 1086.20 | 1159.90 | 2200.00 |
| | (%) | 30.93 | 16.35 | 47.28 | 3.35 | 49.37 | 52.72 | 100.00 |
| SESAME | | | | | | | | |
| | Area | 0.03 | 8.88 | 8.91 | 1.33 | 0.11 | 1.44 | 10.35 |
| | (%) | 0.29 | 85.80 | 86.09 | 12.85 | 1.06 | 13.91 | 100.00 |
| | Production | 0.29 | 57.70 | 57.99 | 9.30 | 0.73 | 10.03 | 68.02 |
| | (%) | 0.43 | 84.83 | 85.25 | 13.67 | 1.07 | 14.75 | 100.00 |
| RICE | | | | | | | | |
| | Area | 18.30 | 10.86 | 29.16 | 7.24 | 18.50 | 25.74 | 54.90 |
| | (%) | 33.33 | 19.78 | 53.11 | 13.19 | 33.70 | 46.89 | 100.00 |
| | Production | 575.50 | 228.10 | 803.60 | 118.90 | 579.90 | 698.80 | 1502.40 |
| | (%) | 38.31 | 15.18 | 53.49 | 7.91 | 38.60 | 46.51 | 100.00 |
| CORN | | | | | | | | |
| | Area | 13.41 | 98.04 | 111.45 | 144.60 | 5.18 | 149.78 | 261.23 |
| | (%) | 5.13 | 37.53 | 42.66 | 55.35 | 1.98 | 57.34 | 100.00 |
| | Production | 518.00 | 2774.00 | 3292.00 | 2731.00 | 136.42 | 2867.42 | 6159.42 |
| | (%) | 8.41 | 45.04 | 53.45 | 44.34 | 2.21 | 46.55 | 100.00 |

APP = STATE OWNED FARMS
COOPERATIVES = ALL STATE COOPERATIVES
LARGE = MORE THAN 200 MZ

AREA = 000 MANZANAS
PRODUCTION = 000 QUINTALES

SOURCE: MIDINRA

TABLE III
CROP PRODUCTION
NICARAGUA
1979/80 - 1988/89

| CROP | 74-78 | 78/79 | 79/80 | 80/81 | 81/82 | 82/83 | 83/84 | 84/85 | 85/86 | 86/87 | 87/88 | 88/89 | % CHANGE 80 - 89 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COFFEE | | | | | | | | | | | | | |
| AREA | 123 | 195 | 140 | 134 | 125 | 125 | 128 | 125 | 121 | 110 | 103 | 102 | -24 |
| PRODUCTION | 1115 | 1263 | 1228 | 1284 | 1328 | 1568 | 1069 | 1115 | 768 | 942 | 839 | 944 | -26 |
| COTTON | | | | | | | | | | | | | |
| AREA | 260 | NA | 64 | 134 | 132 | 129 | 167 | 164 | 123 | 91 | 84 | 57 | -57 |
| PRODUCTION | 8149 | NA | 1245 | 4878 | 4081 | 5070 | 5690 | 4608 | 3349 | 3289 | 2200 | 1561 | -68 |
| RICE | | | | | | | | | | | | | |
| IRRIGATED | | | | | | | | | | | | | |
| AREA | NA | NA | NA | 30 | 31 | 42 | 44 | 36 | 36 | 38 | 32 | 23 | -23 |
| PRODUCTION | NA | NA | NA | 987 | 1294 | 1744 | 1865 | 1506 | 1426 | 1355 | 1074 | 719 | -27 |
| DRYLAND | | | | | | | | | | | | | |
| AREA | NA | NA | NA | 16 | 27 | 21 | 19 | 18 | 14 | 16 | 22 | 33 | 106 |
| PRODUCTION | NA | NA | NA | 389 | 652 | 389 | 368 | 436 | 347 | 369 | 428 | 686 | 76 |
| SESAME | | | | | | | | | | | | | |
| AREA | 10 | 14 | 11 | 29 | 21 | 14 | 22 | 22 | 11 | 11 | 10 | 14 | -52 |
| PRODUCTION | 99 | 144 | 107 | 208 | 156 | 111 | 250 | 167 | 68 | 86 | 67 | 72 | -65 |
| CORN | | | | | | | | | | | | | |
| AREA | 345 | 372 | 240 | 231 | 294 | 234 | 266 | 270 | 188 | 225 | 261 | 318 | 38 |
| PRODUCTION | 4567 | 6112 | 3186 | 3995 | 4199 | 3602 | 4516 | 4581 | 4241 | 4703 | 6109 | 6571 | 64 |

AREA = 000 MZ
PRODUCTION = 000 QUINTALES

SOURCE: INSTITUTO NACIONAL DE ESTADISTICAS Y CENSOS

TABLE IV
VALUE OF PRINCIPAL AG EXPORT PRODUCTS
NICARAGUA
1979-1989

| PRODUCT | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | % CHANGE 79-89 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COFFEE | 159 | 165 | 136 | 124 | 153 | 121 | 117 | 109 | 133 | 85 | 96 | -40 |
| COTTON | 138 | 30 | 123 | 87 | 109 | 134 | 91 | 44 | 46 | 53 | 28 | -80 |
| SUGAR | 20 | 20 | 51 | 36 | 34 | 21 | 7 | 17 | 19 | 5 | 17 | -15 |
| BANANA | 6 | 8 | 21 | 9 | 15 | 12 | 16 | 15 | 14 | 15 | 13 | 117 |
| SESAME | 3 | 6 | 3 | 6 | 6 | 6 | 5 | 3 | 3 | 2 | 2 | -33 |
| TOTAL CROPS | 326 | 229 | 334 | 262 | 317 | 294 | 236 | 188 | 215 | 160 | 156 | -52 |
| BEEF | 93 | 58 | 23 | 33 | 31 | 17 | 11 | 5 | 15 | 19 | 48 | -48 |
| TOTAL VALUE OF AG EXP | 419 | 287 | 357 | 295 | 348 | 311 | 247 | 193 | 230 | 179 | 204 | -51 |

VALUE = MILLION DOLLARS

SOURCE: INSTITUTO NACIONAL DE ESTADISTICAS Y CENSOS