

AN INTENSIVE REVIEW  
OF THE PRIVATE AGRICULTURAL  
ORGANIZATIONS PROJECT

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## PREFACE

This report on the proposed Private Agricultural Organizations Project (PAOP) was prepared for USAID/Bolivia by a team provided by Checchi and Company under Indefinite Quantity Contract No. PDC-1406-I-06-4088-00. The preliminary design of the PAOP, as set forth in the Project Identification Document, called for the strengthening of a select group of Private Agricultural Organizations through training, technical assistance, equipment, and small grants, all of which would be directed through a consultancy group to be established under the Project. The Checchi team was engaged to (a) evaluate the preliminary design and its underlying assumptions, and (b) conduct the various analyses which USAID/Bolivia needed to prepare the final project design and Project Paper.

The team consisted of Donald R. Jackson, Agricultural Economist/Team Leader; Theodore W. Cook, Cooperatives Specialist; and Ivo J. Kraljevic, Anthropologist. Field work in La Paz, Santa Cruz, and Cochabamba was carried out over a six-week period between March 31 and May 3, 1986. A draft report was submitted to USAID Project Manager prior to the team's departure from Bolivia. This final report takes into account Mission comments on that draft.

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## Section I

### Project Rationale and Description

#### A. Country Setting

The agricultural sector of Bolivia can be characterized by three markedly distinct ecological divisions: the Altiplano, the Intermountain Valleys, and the Tropical Plains. The principal crops of the Altiplano include traditionally cultivated foodstuffs such as potatoes, barley, quinoa, broad beans and some wheat. Sheep, goats and cameloids are kept as livestock. For the most part the land is farmed by individual 'campesinos' on small-scale plots (mini-fundio), although some communal farming is still practiced. The Altiplano includes large portions of the departments of La Paz, Oruro, and Potosi.

The intermountain valleys are at a lower elevation where crops such as corn, wheat, potatoes and vegetables predominate. Here the land tenure patterns include mini-fundio to medium sized farms. Significant intermountain valleys can be found in the departments of Cochabamba, Chucquisaca, Tarija and Santa Cruz. The tropical plains, for the most part located in the departments of Santa Cruz, Beni and Pando, represent Bolivia's agricultural frontier. The latter two departments are still relatively uninhabited and isolated, and where cattle ranching predominates. The agricultural land of Santa Cruz and Tarija is generally flat with soils of varying fertility. This has resulted in the cultivation of crops such as cotton, sugar cane, soybeans, corn, rice, fruits and vegetables, as well as poultry and dairy production. Farm size ranges from extensive large-scale farms to small-scale plots normally stemming from colonization efforts; either spontaneous or organized.

Agriculture is the most important sector in the economy supplying 20 percent of the gross national product, and providing 47 percent of the nation's working force with employment. Nevertheless, in the opinion of many, this potentially important sector has suffered from abject neglect over the years due to the dominance of the mining sector and the relative ease with which agricultural foodstuffs and raw materials were able to be imported. These factors, combined with the frequent occurrence of climatic disasters (droughts and floods), has meant that agriculture has traditionally been viewed as being non-economic by most observers; from government planners to private sector investors. This in turn has meant that the infrastructure necessary for the sustained growth of the sector is almost totally lacking.

Bolivia's legitimate agricultural export sector includes only two crops of any significance: sugar and coffee. Both of these exports, however, are regulated by strict international commodity agreements which determine both quantity marketed and

price. Little growth, if any, in these markets is expected in the near and medium terms.

## B. Project Setting

### 1. Agricultural Production and Its Potential

Due to an almost total lack of investment in agriculture on the part of both the public and private sectors the actual production of agricultural commodities is nowhere near its potential. This results in unit costs for most commodities being far higher than would normally be the case. In the past this has resulted in governmental price controls on many agricultural commodities and/or the promotion of imports which has been a further disincentive to farmers to invest in agriculture. Essentially, Bolivia is faced with a downward spiral in its production capabilities; low levels of production and high unit costs, leading to disinvestment and even lower yields.

Nevertheless, as explained above, the agricultural sector of the country is not homogeneous with each region demonstrating different problems and potentials. For example, the altiplano after countless generations of intensive cultivation and population pressure suffers from a general lack of soil fertility, although this can vary greatly from one ecosystem to another. Severe erosion in some areas and natural disasters (drought, floods and frost) are additional factors which limit the agricultural potential. Likewise, the tropical plains which are relatively flat, are not universally suitable for agriculture and are often susceptible to flooding and high concentrations of destructive disease and insect vectors. Indeed, while it is thought by many that the future of Bolivia's agriculture lies in its tropical plains, careful planning and vast amounts of infrastructure will be required if they are to develop to their full potential.

### 2. Agricultural Marketing and Potential

The marketing of most agricultural commodities in Bolivia is chaotic and disorganized. An established system of prices, delivery dates and quality standards is non-existent. This results in frequent market gluts and shortages, as well as high post-harvest losses. Likewise, market information is unavailable forcing farmers to make planting decisions based only on the experience of past year's.

Further frustrating farmers is the fact that many commodities are sold through monopsonistic markets (one, or few buyers). Barley, for conversion into beer, can often only be sold to the local brewery. Rice is primarily sold to the National Rice Company (ENA) at predetermined prices due to a scarcity of storage facilities in the private sector. Liquid milk can generally only be sold through public sector owned processing facilities (PIL) at prices determined by the costs of reconstituting powdered milk donated by European countries.

Wheat and grapes are likewise sold to a reduced number of mills and wineries which are thought to act in concert when establishing price. Sugar cane producers also face a consolidated front in terms of their market. In this case the National Sugar Board sets the price its mills will pay for cane as well as the quantities it will receive. These prices are then followed by the few remaining private sugar mills.

Tantamount to the problem of controlled markets and prices is the generalized lack of marketing infrastructure in the country. A lack of proper storage capacity for most crops further exacerbates market gluts and shortages. The absence of adequate farm-to-market roads precludes the production of many perishable crops in most regions. Additionally, a lack of wholesale, or central markets, further complicates the problems.

Lastly, the most insidious problem facing farmers in the marketing of their products is related to the relatively high unit production costs making competition with imported commodities often impossible without price supports or other concessions. Given recent government policy changes these practices appear unlikely for the future.

### 3. Agro-industry and its Potential

At present the agro-industrial sector is small and generally limited to primary commodity processing in selected crops (i.e., cane into sugar, wheat into flour, and soybeans into oil). Little further processing is performed apparently due to the availability of cheap imports, a limited domestic market, and consumer tastes and preferences.

### 4. Agricultural Exports and their Potential

Currently, Bolivia's only legitimate agricultural exports of significance are sugar and coffee. Both face a controlled international market which is subject to frequent gluts and eroding prices. The stimulation of other export crops will depend on lowered unit production costs through economies of scale, and being able to produce to the health and quality standards of the international market. This project has as a long term goal the expansion of exportable agricultural surpluses. Nevertheless, in the short run, and over the life of this project, production for the domestic market will be the primary goal. Only once the domestic market is supplied with commodities of a quality and price commensurate with world market conditions can Bolivia hope to become a net agricultural exporter.

### C. Problem Statement- The Constraints and Opportunities in the Agricultural Sector

The process of modernizing agricultural production and marketing requires an increasingly broader and more sophisticated

set of support services. A partial list of these services includes credit, proper and timely input supply, mechanization services, market information, agricultural research and extension, environmental protection advice and political representation on policy issues affecting agriculture.

For the average Bolivian farmer, in most regions of the country, these services are not available. The institutions financed and operated by the public sector are chronically under-financed and extend into areas, in many cases, better left to the private sector. In instances where farmers have depended upon public sector services and/or marketing channels, such arrangements have tended to be inefficient, bureaucratically cumbersome, and often politically manipulated.

The number of private firms providing agricultural inputs and services is presently quite limited in most regions of the country. While some private sector channels are being created through the growth and development of agro-industries, such entities are presently insufficient--and are likely to remain so for, at least, the medium term--to provide adequate services or market outlets to farmers.

On the organizational side there are three types of agricultural organizations existing in Bolivia: 'campesino' unions, service cooperatives, and producer associations. In general terms, the unions and the cooperatives date from the 1952 agrarian revolution, are geographically organized, and include primarily 'campesino' farmers. The associations are, for the most part, commodity based and include mainly urban-based, farmer members. Of these three organizational types the unions have proven to be only marginally successful in providing services, with lobbying for price and other concessions having been their principal activity in the past. With few exceptions agricultural cooperatives have generally not been able to provide services on a sustained basis once outside assistance has been withdrawn. Additionally, until recently a majority of the associations were not actively involved in providing services other than lobbying and group representation. Many are just beginning to see the merit of increased agricultural production through the provision of specific services.

This project will seek to promote and strengthen 'private agricultural production organizations' (PAFOs), throughout the country. For project purposes this term is used to define an organization established by farmers to provide services to members in support of the production and marketing of various agricultural commodities. It is also a normal part of this definition to include that the services are provided on a fee basis sufficient to assure the long-term sustainability of the organization.

At present, the most effective producer associations are in the Department of Santa Cruz; the department which is characterized by a land base favorable to larger and more

homogeneous farms, and which are somewhat more capital intensive relative to other parts of the country. These organizations benefit from the leadership of a cadre of experienced agriculturists, but presently offer only a limited number of services due to a scarcity of working capital and a lack of technical and administrative expertise. Outside of Santa Cruz, the producer associations are at an even more incipient stage of development.

An initial survey of private agricultural organizations was undertaken during the design phase of this project (See the Institutional Annex). Stemming from this survey, and upon receiving requests from the targeted organizations, further organizational analyses will be performed under this project to determine organizational weaknesses and the most appropriate interventions for their resolution. No entity presently exists in Bolivia with the resources and organizational capabilities to assist existing producer organizations to improve their structure and the delivery of services, yet the need exists, and the potential benefits of such assistance are substantial.

#### D. The Need for the Project (Project Rationale)

While agriculture is, and always has been, the backbone of the Bolivian economy in terms of GDP and employment generation, the mining sector has received the majority of public and private resources. This appears to have been due to its ability to produce relatively immediate results through income and foreign exchange generation. With the decline in the mining sector due to falling world prices for most of the country's mineral resources this situation is changing with more, and more, emphasis now being placed on agriculture.

Nevertheless, the capacity of either the public or private sectors to stimulate agricultural development is almost completely lacking. Agricultural support services and infrastructure are currently extremely weak and will require unique programs for their stimulation and development. USAID/Bolivia therefore proposes the establishment of an assistance mechanism which will provide training, technical assistance and access to financial resources for agricultural development. Due to the extremely weak, and often politicized public sector agencies working in agriculture this mechanism will necessarily work through the private agricultural production organizations for project implementation. This thrust in supporting private activities rather than public ones is completely consistent with the current GOB policies of decentralization and divestment away from government control and sponsorship.

## E. Project Description

### 1. Goal

The goal of this project is to increase income on farms and ranches through increased yields, expanded production, and increased marketed surpluses, including exports.

### 2. Purpose

The purpose of this project is to strengthen and expand the capacity of private agricultural producer organizations in their ability to provide services to members. Sub-purposes designed to accomplish the main purpose include:

- the stimulation of local technical assistance capabilities (consulting firms, etc.) which can be provided on a fee basis to individuals and organizations;

- improving the capacity of PAFOs to lobby in their own behalf, and to influence policy;

- increasing communication and information exchange between and among the PAFOs and the rest of the agricultural sector;

- increase the integration between 'campesino' and 'non-campesino' groups through association for their common good;

- the stimulation of private agricultural firms to improve and increase services to the PAFOs; and,

- increasing the awareness and use of sound environmental practices.

### 3. End of Project Status

The end of project status (EOPS) as a result of the above stated purpose and sub-purposes are as follows:

- the PAFOs will be efficiently providing a broader set of services to members;

- PAFOs memberships will be fully supporting the provision of these services through fee payments or production discounts;

- PAFOs will be able to support the costs of project service delivery;

- PAFOs will have increased influence over policy issues affecting them;

-Regular issuance of an agricultural organization newsletter perceived as useful by FAPOs leadership

-increased cooperation and service delivery between private sector agricultural firms and the FAPOs; and,

-increased demand for, and use of, environmental information.

#### 4. Project Inputs

Project provided inputs will be in three general areas including training, technical assistance and access to financial support; either in the form of credit, or direct grants. The project will also support a technical assistance team over a three year period which will analyze FAPOs needs and coordinate the provision of Project assistance.

##### a. Training

Leaders, members and administrative and technical personnel from the FAPOs will be offered the opportunity to participate in short-term training programs organized by Project staff. It is envisioned that these training programs will be of several types and will deal with a wide variety of disciplines. The types will range from technical demonstrations on the farms of FAPO members, to classroom workshops and seminars, and to field visits to appropriate locations within Bolivia as well as to countries in the surrounding region.

During Project Paper design interviews with a large number of potentially appropriate FAPOs suggested the need for training in the following disciplines: organizational structuring and administration, finance management, production technologies, marketing, post-harvest handling of commodities, and extension methodologies. It is envisioned that the major portion of training expenses will be grant funded, although the possibility of cost-sharing by the FAPOs will be explored (ie., the FAPOs paying per diem and travel expenses for members sent to resident courses, etc.).

Project staff will review the Organizational Development Strategies (ODS), for training requests from the various FAPOs. Quarterly training schedules will then be drawn up in an attempt to coordinate the needs of several FAPOs at the same time. Where possible, the training needs of several FAPOs will be responded to in joint seminars and workshops. The Training Coordinator on the Project staff will be responsible for determining the schedule of training activities and for the selection and hiring of training personnel. These personnel will be selected from 'short lists' prepared by Project staff from the pool available in Bolivia, the Region, and from the U.S.

##### b. Technical Assistance

The Technical Assistance Component of the Project will function as a clearing house for technical assistance requests from the various participating PAPOs. A directory of suppliers of technical assistance, in Bolivia, in the region, and in the U.S., will be prepared by Project staff as one of their first activities. This directory will continuously be updated over the life of the Project as new needs are requested and sources identified.

Specific disciplines contained in the directory will be based on those needs identified during Project Paper preparation, as well as others requested by the PAPOs over the life of the Project. A representative list of these technical assistance needs collected to date includes:

- Organizational structuring;
- Administration, including; accounting, record keeping, financial management, inventory control and computerization;
- Commodity specific production technologies and farm management;
- Marketing systems, including post-harvest technologies, storage, transportation, quality control and standards, and pricing policy; and,
- Credit management, disbursement, recovery and the management of guarantees.

To be eligible for technical assistance under the Project a PAPO will first have to have submitted a formal request detailing its needs and its organizational development plan. Based on initial selection criteria, these requests will then trigger a visit by Project staff members who will perform an organizational assessment, and with the PAPOs personnel design an Organizational Development Strategy (ODS). If an organization does not fulfill the initial selection criteria, they will be informed of this along with possible suggestions of where to go for assistance, other than through the Project.

These ODSs will then be evaluated by Project staff according to a second set of selection criteria. At this point Project staff will place the PAPOs requesting assistance into one of two categories: those which are organizationally/technically sound and needing only specific well-defined assistance (primary organizations); and, those which are less organizationally or technically sound requiring longer term, more continuous assistance (secondary organizations).

Based on the ODSs the Project staff will then establish technical assistance schedules for the various organizations (10 primary and 20 secondary organizations have been specified for budgetary purposes in the Project). Based on these schedules the

Project staff will then contact the appropriate source of technical assistance, and make arrangements for it to be supplied to the organization.

Part of the design of the ODS will include an assessment of the organization's ability to pay for the requested technical assistance. In some cases the assistance will have to be provided by the project as a grant, while in other cases the organizations will be totally capable of reimbursing the Project for the service. In still other cases it is envisaged that some organizations will begin by sharing part of the costs and will then, over time, gradually become responsible for its full value.

Of critical importance to the success of this component will be an attempt on the part of Project staff to make the technical assistance as relevant and cost effective as possible. This will necessarily mean that much of the technical assistance will come from local and regional sources familiar with the same types of problems and the scale of operations.

One type of technical assistance envisioned under the Project, which will not necessarily be PAPO-specific, concerns the need for specific commodity and policy studies. One of the primary problems facing a majority of the PAPOs interviewed during Project Paper preparation was a complete lack of information concerning the various systems (production, marketing, processing) which confront PAPO members. Likewise, in other cases PAPO members often find themselves frustrated by a lack of information concerning governmental policies which affect them significantly (ie., import policies, price control policies, etc.). The Project therefore proposes to commission approximately six Commodity Studies and four Policy Studies to be completed over the life of the Project. Again, local and regional experts will be sought for the execution of these studies.

Additionally, through an arrangement with the Bolivian Environmental League (LIDEMA), which is currently being assisted by USAID/Bolivia under another activity, environmental training and technical assistance will be offered to all targeted organizations. Since it is not normally an immediate priority item for most of the PAPOs, funding for these environmental programs will be covered out of the grant funds provided by the Project.

Lastly, as an additional form of technical assistance the Project will arrange for the publication of a regular newsletter concerning PAPOs, their members and services offered. It is envisioned that the initial readers of this newsletter will be the leaders and managers of the PAPOs, although a wider readership might be expected once it achieves acceptance.

#### c. Financial Support

Although this is not a credit project per se, financial

resources will be made available through two mechanisms: operational support grants; and, access to P.L. 480 refinancing credits through an appropriate Intermediate Credit Institution (ICI, any financial institution such as a bank, credit union, or financiera).

In the first case, monies will be made available on a grant basis to PAPOs demonstrating potential viability but lacking initial start-up capital and/or administrative capabilities. The amount of these grants will be limited to US \$ 25,000 per organization and will go to pay for such items as administrative staff, offices, computerization services, vehicles and other non-productive investments. Care will be given during the design of the ODSs so that these grants are not perceived as operational subsidies, but are rather geared towards the stimulation and provision of productive services on the part of the organizations receiving them.

In the second case, Title III, P.L. 480 funds will be set aside for loaning to PAPOs for productive, income-generating projects, normally related to service delivery to members. These loans will originate with the design of a project by the PAPO itself, or by a hired consulting service. (At the discretion of the Project staff, the costs of these project designs may be grant funded.) The PAPO will then present the project to any of several ICIs for their consideration and possible financing.\*

If one of the banks agrees to finance a project, it will be allowed to discount up to 70 percent of its value with P.L. 480. The bank will nevertheless be responsible for repayment of the entire loan. Interest charged on the 70 percent portion will be limited to 15 percent and the loan will carry a maintenance of value clause. The banks will be allowed to charge their normal interest rates (which are currently 6 percent per month). Required bank guarantees are expected to be for two to three times the value of the loan, and are expected to include urban property or other similar readily convertible collateral.

It is most probable, however, that a portion of the PAPOs will not have the sufficient guarantees necessary to fulfill the ICI's terms. In other cases the higher interest rates charged by the ICIs on their 30 percent portion would make some projects uneconomic, while in still other cases an ICI might simply not have enough liquidity to put up the 30 percent in spite of being

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\*The term 'financiera' is used here to denote the financial institutions created under the DDC project within the Departmental Development Corporations. As of this writing, one financiera has already been established and has been made independent of its corporation (Santa Cruz), and one more is soon to be established (Chucquisaca). The other Corporations all have 'Unidades Crediticias Financieras' (UCFs), which are newer, and less experienced than the 'financieras' and which are still under the control of the Corporations.

faced with a well conceived project. In these cases, and having already been turned down by a bank, the FAPO could then resubmit the project application to the local financiera, or UCF, for 100 percent financing. The same sound financial, technical and economic criteria will still apply during the project approval process. Nevertheless, since the UCF/financiera staffs are better equipped to work with and promote development projects it is felt that they can accept lower guarantees through a better understanding of their client groups and their needs. UCF approval of a project can also be made contingent upon Project-provided technical assistance, thus further reducing the risks involved.

Financial reflows resulting from the repayment of these loans will be turned over by the respective ICIs to the revolving funds managed by the UCFs/Financieras for onlending to other organized FAPOs.

#### 5. Implementation Mechanism

During intensive review several alternative implementation mechanisms were considered. These included: a governmental agency such as the Ministries of Agriculture or Planning, the establishment of a national level Agricultural Chamber over the life of the project, the Agricultural Chamber of Santa Cruz, various non-governmental institutions, and the Departmental Development Corporations Project through the Unidades Crediticias Financieras (UCFs) and the Departmental Development Corporations.

A governmental ministry, or institution, was ruled out almost immediately due to their low levels of resources, ineffective service delivery, and politization. A national level chamber would have to be established from scratch, and almost imposed from above, since there does not appear to be much consensus among the departmental chambers as to how it would be formed, what services it would offer, and how it would be funded. Additionally, as is demonstrated in the Social Soundness Analysis, there exists a polarization in the Bolivian agricultural sector which distinguishes between 'campesino' and 'urban-based farmers' with the latter tending to belong to the chambers in far greater numbers than the former.

The Camara Agrícola del Oriente (CAO) in Santa Cruz is well established and is perceived as being valuable to its members. Nevertheless, if it were to be relied upon as the implementation mechanism for the entire project there is little likelihood that many resources would find their way outside of that department. No non-governmental organizations were found which have the national scope required, or the non-political, productive orientation necessary for a project of this type.

The implementation mechanism of the DDC project, on the other hand, represents an alternative which is nationwide in scope, independent of government budgets and influence, and

geared to work with both the private banking system and the UCFs/Financieras. Furthermore, it represents a mechanism which is established, well-known, and staffed by competent and experienced personnel. On the down side, the DDC mechanism is transitory, established for the life of the project (The present project is due to terminate in December, 1986, although a second phase is currently in the design stage which would extend it for another three years.). Nevertheless, it is the goal of the DDC project, and its follow-on phase, to prepare the UCFs/Financieras to the point where they will be able to take over most of the functions of the projects, either on an individual basis or through the establishment of a national level financiera.

The proposed implementation mechanism for the PAPO Project is therefore to 'piggyback' on many of the already established components of the DDC Project. This would especially be the case in terms of:

- client identification (in the case of this project, organized groups);
- project design (as described above); and,
- the provision of credit (through the banks and the UCFs/Financieras).

The additional training and technical assistance components would have to be added, although some efficiencies will be gained due to the fact that the second phase of the DDC Project will also include these components in one form or another.

The administration of the two projects would be kept separate, although the offices will be contiguous to improve communication between the two staffs. Each project is expected to have its own coordinator and staff, but considerable trading of staff between the projects is anticipated. Indeed, many of the business and organizational management skills which the PAPOs will require are presently available through the DDC Project.

It is estimated that this implementation mechanism would require a total of fourteen permanent staff members (including support staff) the first year, and twelve in the second and third years. One of these would be the Project Manager, a Personal Services Contractor working within USAID/Bolivia. The others would be Contract Firm employees, hired through an institutional contract with a U.S. development assistance firm or organization. Additionally, 300 person/months of short-term consultancies will be provided over the life of the project. These consultancies will be in the general areas of: organizational design, administration and management, marketing, extension methods, environmental issues, and other technical fields. Lastly, several Commodity Studies and Agricultural Policy Papers will be commissioned by the Project.

## Section II

### Technical/Financial Analysis

This Technical/Financial Analysis treats the following issues:

- a discussion of the actual and possible services which could be provided by the PAPOs to their members, and an evaluation of their comparative potential payoffs;

- an analysis of the present delivery mechanisms for agricultural services compared to those recommended for the Project;

- recommendations concerning the provision of technical assistance under the Project, its sources and financial self-sufficiency;

- recommended criteria for the determination of services to be offered by the PAPOs;

- recommended criteria for the selection of services to be offered by the Project; and;

- recommendations concerning the method for providing PAPO members with environmental education programs.

#### A. Possible Services

A variety of inputs/services are presently offered by many of the PAPOs to their members and most are desirous of adding additional ones. On the other hand, many other organizations are barely beginning to establish themselves in the service delivery business. The principal criteria for a PAPO offering a service under this Project will be that it will increase the individual member's production and income, and that it will also generate income for the organization. Following are five 'needs groupings' of agricultural services which were identified during Project Paper preparation. They appear to be country-wide in their origin with little, or no, obvious variation among the Departments.

##### 1. Marketing

Case 1. Market Information Members market their produce individually but depend on a PAPO for information. This is the most frequent case at present. The information can be formal, although informal information exchange is the most common. All groups require this type of service although actual effectiveness ranges from good to poor. The main problem is that market

information for most crops is almost non-existent in the country. The Commodity (6) and Policy (4) Studies to be performed under the Project are, for the most part, to provide an in-depth analysis of the markets for selected crops, plus other related policy issues. It is also envisioned that the PAPO Newsletter could contain articles on marketing, including price and quality control information.

Case 2. Group Marketing Members market all, or part, of their produce through a PAPO. Another variation of this is where members deliver their produce to a processor under the rules and regulations of a PAPO. The actual services provided are wide-ranging and can include: transportation, weighing and grading, credit advances, storage, primary processing and wholesaling. For most organizations offering these services, and for several more hoping to do so, group marketing is the only answer, given the vast inefficiencies involved in doing it individually. Technical assistance, training and credits for service implementation in these disciplines would be offered to the PAPOs under the project.

## 2. Financial Access

Case 1. Guarantor The PAPO serves as a conduit for ICI approval of individual loans based on guarantees provided by the PAPO. The availability of short and long-term credit is often dependent upon the borrower's ability to provide collateral. In many cases the members of the PAPOs cannot satisfy these requirements and the organization (either collectively using the assets of the PAPO, or individually using the personal assets of several of the members) has guaranteed a line of credit. To many PAPO members this represents the only credit source available.

Case 2. Credit Lending The PAPO, through the use of its own funds, or as a recipient of outside funds, acts as a financial institution to its members in the granting and collecting of credit. This service is often the result of a PAPO's relationship with an outside donor which made credit funds available. It often does not exist with enough funds to resolve all member credit needs since interest rates are often below those charged by banks. While most members might find this service worthwhile due to lower interest rates, lower guarantee requirements, and more lenient repayment schedules, it is sometimes a service which is not an income earner for the organization. If, during the design of the Organizational Development Strategy, this service has the potential of being run on an economic basis, it should receive Project support. If, however, it is decided that the service is a drag on the organization, and cannot be made to function correctly, Project aid should be considered a low priority.

### 3. Input Supply

This service normally begins with the bulk purchase of a large quantity of agro-chemicals, often imported directly. These are then provided to members on credit, or for sale at cost plus expenses. At times the FAPOs charge a fee for this service, while at other times the fee is included in the interest rate or price charged. As is the case with credit, Project support for these services will be related to their actual, or forecasted, economic viability. In many cases, this FAPO service has filled a niche where the private sector was not functioning, or was functioning at exorbitant prices. In some of these cases, private sector firms have entered the market at a later date and have begun to 'out compete' the FAPO. The Organizational Development Strategy should consider the potential competition from private sector firms in assessing the relative worth of this service and its ability to generate income for the organization.

### 4. Technical Assistance

The FAPOs tend to provide technical assistance to their members through both formal and informal means. The former would entail the hiring of advisors in specific fields (agronomy, horticulture, animal husbandry and medicine, accounting, etc.), whose salaries are paid out of general revenue, or from outside grants. The latter, on the other hand, involves certain FAPO members with advanced skills demonstrating them to other members. The provision of technical assistance, while often being invaluable to members, is the most difficult to measure in economic terms since it is very difficult to devise a collection mechanism which will be fair to all members. Farmer-members are often reluctant to pay for a service whose results are not immediately, or clearly, measurable. Project support should therefore be directed towards making the technical assistance more relevant, and of a higher impact so that members would be more willing to pay. Alternatively, it could be directed towards the strengthening of other services for which fees could more easily be charged.

### 5. Representation

Perhaps the least understood, but potentially most effective service a FAPO can offer is in the area of representation, negotiation and lobbying. Government policies and private sector practices can often run counter to the best interests of FAPO members. If they are not organized to speak with one unified voice, their needs and desires will most likely go unmet. The Commodity and Policy Studies called for in this Project will aid the FAPOs in representing their memberships. Additionally, technical assistance will be provided to allow the FAPOs to become more professional and administratively efficient, thereby affording them a more respectable image.

## B. Delivery Mechanisms

### 1. Existing Agricultural Organizations

a. Private firms--Existing agricultural service firms are of two types: those providing sub-project design services, normally for a fee plus a percentage of the sub-project value, and those providing specific technical assistance stemming from the sale of a particular product (tractors, baby chicks, seed, etc.). These firms do exist in Bolivia, but they are few and far between. There also appears to be a 'missing mechanism' which links the client with the technician; quite often one does not know of the existence or the needs of the other. It is an intended purpose of this Project to promote and encourage this sub-sector through the letting of a large number of short-term consultancy contracts for the provision of technical assistance to PAFOs, as well as for the preparation of the Commodity and Policy Studies.

b. PAFOs--The Institutional Annex will detail the vast range of services being provided by the many PAFOs likely to be included in the Project. They include: market information and group marketing, input supply, credit, technical assistance and representation. For the most part these organizations are weak and unable to reach their full potential. Almost all can be improved in most regards.

c. Agricultural Service Cooperatives--At one time many more agricultural service cooperatives existed in Bolivia than is the case today. Those which succumbed appear to have done so due to undercapitalization, poor leadership, and loose administration. The remaining ones appear to demonstrate at least some degree of outside support or subsidies. Further emphasis on profitability and income generation is needed in the cooperative sub-sector.

d. Public Sector Organizations--These organizations fall into two categories: those involved in traditional governmental agricultural services such as research and extension; and, those which are 'business ventures' which have been taken over, or were established by the government. It is reported that the former group of services is all but non-functional, while the latter are inefficient and almost always run at a loss (rice milling and storage, the sugar mills, the milk processing facilities, etc.).

### 2. Organizational Type and Appropriate Services

There is not much hard evidence as to which services are the most appropriate for which type of PAFD. Proper fit is rather an issue of local competence and perceived worth of the service by members relative to alternative sources. The true efficiency and viability of a PAFD's service delivery is the organization's

ability to be flexible and to enter and exit the provision of various types of services as its abilities are proven, or disproven, and to respond to member's changing needs.

Obviously, where there is overlap of services, or strong competition from private firms, it will be wise to study the relative advantages of a PAFD continuing in a particular line. If this is the case, possibilities should be explored of contracting-out the service to a private firm, or entering into agreements which provide preferential treatment to PAFD members.

### 3. PAFD Income and Self-Sufficiency

According to field research, PAFDs in Bolivia earn their income from several sources, including:

- Membership fees for a fixed time period (ie., X Pesos per month);
- Commissions on amounts of produce sold through the PAFD, or to a processor with which the PAFD has a discounting arrangement;
- Fees based on potential use of services (ie., number of chickens, hectares of grapes, head of dairy cattle);
- Markups on inputs or other items sold through the PAFD;
- Direct user fees for specific services provided;
- Donations from outside sources.

The type of income generating/cost covering mechanism selected should depend on the type of service offered. Efficiency of collection should be a factor, as well as having it as closely tied to service delivery as possible so that members see the direct relationship between service and cost. For example, discounts and price markups at the point of sale are respectively the most efficient for marketing and input supply services. Technical assistance, on the other hand, is normally financed either out of general revenue, or as a check-off against produce marketed through the organization. When credit is provided through a PAFD, a fixed share of the ICI spread should be collected by the organization, although this is rarely done.

## C. Technical Assistance Consultancies and their Fees

### 1. Technical Assistance Requirements of the Project

Implementation of the PAFD Project will require a long-term technical assistance team and support staff of fourteen people in the first year and twelve in the following two years. (Terms of Reference for the seven lead positions can be found in the

Technical Annex to this paper.) It will also require a short-term consulting pool of 300 person months. These figures are based on a minimum target population of 30 PAPDs being assisted over a three-year life of the Project, plus an analysis of technical assistance needs collected during Project Paper preparation. Furthermore, the Trainers employed in the Training Component will come from this Short-Term Technical Assistance pool as well.

a. Long-Term Positions

- USAID Assistant Project Manager--U.S. Personal Services Contractor, for three years, to be located within USAID/Bolivia and responsible for day to day liason between the Mission and the Project, as well as for Project administration and PAPD selection;
- Four (4) Organizational Analysis/Development Experts--Contract Firm Employees, located in the Project Office and in charge of performing the institutional analyses of the selected PAPDs, designing their Organizational Development Strategies, and performing follow-up activities with the organizations; (They will form two teams composed of representatives from complementary disciplines; one will be contracted for only the first year of the Project, while the other will be contracted for all three years. One of these will be designated Chief of Party for the technical assistance contract team.)
- Resource Procurement Expert--Contract firm employee, hired for three years, located in the Project Office and in charge of identifying, contacting and contracting with sources of short-term technical assistance as requested in the ODSs;
- Deputy Resource Procurement Expert--Local hire, hired for three years;
- Training Coordinator--Local hire, hired for three years, responsible for organization and supervision of Training Component;
- Deputy Training Coordinator--Local hire, hired for three years, responsible to the Training Coordinator;
- Communications Expert--Local hire, hired for two years, responsible for PAPD Newsletter, publicity, and audio-visual presentations;
- (3) Project Secretary--Local hire, one bilingual, responsible for normal secretarial functions;
- Project Accountant--Local hire, responsible for Project record keeping;

-Office Support Person--Local hire.

The following breakdown of estimated short-term technical assistance will be required: (Contained here is a combination of the person months required for both the Technical Assistance and the Training Components of the Project.)

Task	Discipline	Person/Months
Commodity Studies (6)	Agricultural Economics	24
Policy Studies (4)	Agricultural Economics	24
Newsletter	Mass Communications	6
Organizational Redesign	Organizational Development	6
Administration/Management	Business Administration	60
Marketing	Agricultural Economics	60
Extension Methods	Agricultural Extension	20
Storage/Post-Harvest/Trans.	Specialists	20
Environmental Issues	Environmental Studies	20
Technical Fields	Agronomy, Horticulture, Soils, Appropriate Tech., Agro-Processing, etc.	60
	Total	300

While these short-term technical assistance consultants/trainers will be sought from the most appropriate and cost effective sources possible, it is estimated that the origin of this assistance will be approximately one-third from within Bolivia, one-third from the Region, and one-third from the U.S. It is also envisioned that some of the local expertise will come from the two Agricultural Chambers (Santa Cruz and Tarija) which already have substantial experience in their organization and operation, and whose services will be in demand in the other departments.

For purposes of calculation, one person-month per consultant, per PAPO has been used, although it is conceivable that the consultancies will range from one week to three months. It is also most likely that some consultancies will cover several PAPOs, while in other cases one PAPO will require return consultancies for the same subject matter. It is further estimated that the Commodity Studies will each require two people for two months, while the Policy Studies will each require two people for three months.

## 2. The Charging of Fees for Project Services

The vast majority of the PAPOs contacted during Project preparation were in agreement with a policy requiring payment for Project-provided services. In following up on this desire the Project will provide technical assistance and training on a cost basis to assure its proper utilization. Indeed, the setting of fees and the duration of the consultancies should be part of the

Organizational Development Strategies to be performed by Project Staff.

In calculating the fees charged, several considerations are offered:

-Since the consultants will be coming from three general sources; Bolivia, the Region and the U.S., three different cost levels will be incurred by the Project. These costs could be passed on to the PAPOs in their entirety, or the same prorated percentage could be charged for all three groups. This would have the tendency of stressing the local, less expensive, assistance which is a stated goal of the Project;

-A minimum daily fee per consultant should be established so as to lessen potential tendencies towards poor utilization of the technical assistance;

-Travel, living expenses, and other related costs should be paid by the Project so as to make the foreign consultants somewhat more price competitive with the local ones;

-The ability to pay of an organization should be judged as a function of the probability of the technical assistance resulting in increased income for the PAPO. For example, if the technical assistance is directed at improving the accounting system of the organization, it should be billed out at a lesser rate than if it were directed at improving member cropping methods; and,

-Lastly, the fee structure should be perceived as being fair and just, and applied according to clear, well understood guidelines.

#### D. Services to be Offered by the PAPOs

The services offered by a PAPO should be based on the needs of its membership balanced with the organization's ability to provide the services in an economic manner. Nevertheless, some services such as representation, and many forms of technical assistance, might be considered if they can be supported by other, more economic, services such as input supply and marketing. Also in considering which services to offer, thought should be given to potential competition, and if the service could not be arranged for outside of the organization and through a private firm. The Technical Annex describes a methodological framework for selecting the services most appropriate for a PAPO to provide to its members.

#### E. Technical Assistance and Training to be Offered by the Project

The Organizational Development Strategies, which are essentially a contract signed between the Project and each FAPD, should establish the technical assistance priorities to be provided by the Project. This priority ranking should be based on an analysis of the FAPD's present services to determine which are functioning well, which are in need of assistance, and which might be added in the future. Once this stage is reached, the strategy should lay out the specific types of technical assistance to be provided. This time, the ranking should be based on the priorities of the members, combined with the organization's ability to absorb, and pay for, the assistance.

#### F. Environmental Education Activities

An additional function of the Organizational Development Strategies will be to identify specific environmental issues affecting the members of the FAPDs, or the FAPDs themselves. Based on these issues, Project staff will then contract with the 'Liga del Medio Ambiente' (LIDEMA), or the 'Capacidad del Uso Mayor de la Tierra' (CUMAT) for the necessary technical assistance required. Both of these national level organizations are currently being partially supported by USAID/Bolivia. Since this assistance will not immediately result in perceived benefits to the FAPD members, it will most likely not have been requested, and will therefore, be provided free of charge.

#### G. Summary

After having conducted an extensive examination into the Technical/Financial feasibility of the Project, it is the opinion of the design team that it is indeed feasible, especially when compared with the alternative methods, or implementation mechanisms available to farmers throughout the country.

## Section III

### Social Soundness Analysis

This social analysis treats the following issues:

- a description of the social categories of agricultural producers and their types of private agricultural producers organizations (PAPOs);

- a description of the direct and indirect beneficiaries and an estimate of their numbers;

- a description of the participatory approach of the Project, its potential benefit spread, and its replicability;

- an analysis of the main constraints to Project benefit spread and recommendations on how to deal with them;

- an analysis of the potential negative effects and recommendations on how to minimize them; and lastly,

- an analysis of the social feasibility of the Project.

#### A. Social and Organizational Composition of the Agricultural Sector

##### 1. The Groups

Three social categories of agricultural producers can be differentiated on the basis of their production strategies, their market participation, and their socio-cultural characteristics. The largest category is made up of independent campesino (peasant) producers. Of the 2,800,000 rural dwellers comprising the 1978 census, the vast majority were defined as campesinos. They are of Quechua, Aymara, Guarani, and other ethnic origins. Over the past thirty years 'campesino' producers have been gradually shifting from a subsistence to a market oriented production strategy as they become increasingly integrated with the rest of the nation. They are small-scale, labor intensive producers located mostly in the densely populated altiplano and intermountain valleys. Farm size is limited ranging from .5 to 5.0 hectares.

A second set of agricultural producers is the result of the population density in the altiplano which has induced a growing number of campesinos to migrate to the sparsely populated tropical lowlands for settlement there. These agricultural producers are known as colonos (settlers) which indicates a process of socio-economic, as well as geographic mobility. They number approximately 130,000 families in four settlement areas in

the lowlands.

Colono settlement in these lowland areas involves a market-oriented production strategy. In each settlement area one or more crops are produced for the market, while others are grown for family subsistence. Although colonos have far larger parcels of land (20 to 50 hectares) than campesinos, they face similar types of agricultural development constraints including: a lack of markets, limited or non-existent credit, a lack of inputs and services, deficient or non-existent infrastructure, high transportation costs, and in the past, unfavorable agricultural policies.

The newest, but most influential, category of agricultural producers is made up of urban-based (mostly professional) farmers, who in increasing numbers are turning to selected high-technology, capital-intensive agricultural activities as supplementary sources of income. These 'non-campesino' producers, located mostly in areas with good transportation near cities and towns, also face agricultural development constraints including: a lack of market information, access to financial resources, a lack of technical assistance, and unreliable input supplies.

## 2. The Organizations

At the primary level, and reflecting the order in which they emerged, agricultural producers are organized in the following types of organizations (PAPDs).

Sindicatos (agrarian unions) are the most widespread type of organization among 'campesinos' and 'colonos'. Created to implement the agrarian reform and to get access to land in the settlement areas, sindicatos have been primarily lobbying organizations frequently manipulated by governments and political parties. More recently, and as a result of the need for increased campesino participation in the marketplace, sindicatos are seeking ways to turn their existing organizations into service-oriented ones. To this end several sindicatos have created agrarian development corporations (CORACAs) to provide production services to their members.

Cooperatives are the second most common agricultural organization. Although a large number of cooperatives have been modeled after the sindicatos, there are a limited number of well established cooperatives in different regions of the country providing services to members. The membership of cooperatives tends to be more heterogeneous, including non-campesino, urban-based producers among their members.

Federaciones de Productores are found in the settlement areas among producers of commercial crops. These are formed around a single crop, normally as a response to a single buyer for the commodity, and function mostly as regulating organizations. They also negotiate prices and provide some services to members.

Asociaciones de Productores are the newest form of PAFOs. The members are predominately urban-based producers, although most of them include campesino producers as well (there are at least two campesino-dominated producers associations: the National Coffee Producers' Association and the Potato Producers' Association of Cochabamba). Their distinctive feature is their specialization in a single commodity, and their service orientation. They also officially represent all producers of a given crop in a region. Although initially formed as lobbying organizations, most offer some production and marketing related services to their members.

## B. Project Beneficiaries

The Project will benefit a minimum of 30 PAFOs selected from all types of producer organizations described above. PAFo selection criteria emphasizes an organizational structure that is geared to service delivery and has the greatest potential of benefit spread. PAFOs with these characteristics can potentially benefit all producers of a given crop in a region. Direct benefits will go to active members, however, all producers of a given crop will receive indirect benefits regardless of their participation in a PAFo. It is estimated that the 30 selected PAFo's targeted under this Project will have a total membership of approximately 24,000, and that the number of indirect beneficiaries will be approximately double that figure.

Other beneficiaries will be individuals and/or consulting firms employed by the PAFOs through Project assistance. Linking PAFOs to national sources of technical assistance will generate employment for these professionals, making them direct beneficiaries as well.

## C. Participatory Approach

The participatory approach of the Project is based on a direct relationship between the needs of the individual producers and the services offered by the PAFOs. Producer incentives to form and support an organization depend on the capacity of the organization to respond to members' demands.

The Organizational Development Strategies to be designed as an initial step in aiding a PAFo will be joint efforts between each targeted PAFo and the Project Staff. The organizations will take the initiative in proposing specific assistance activities which will then be approved and supported by the Project.

Successful PAFOs can be replicated throughout the sector and among all producer categories. This is being demonstrated by the current proliferation of associations throughout the country, imitating the successful model of some associations in Santa Cruz.

#### D. Constraints to Project Implementation

Three types of constraints can affect a PAPO's potential to become an effective service delivery organization.

The first is the long history of political manipulation of rural and agricultural organizations, especially in the case of sindicatos. In the past, the provision of resources and services to these organizations has been used to manipulate the political behavior of members.

The current free market government policy, the growing market-orientation of campesinos, and the lack of governmental services and resources has created favorable conditions to induce campesino producers to seek independent, service oriented, organizations. This type of organization is less subject to political manipulation by outsiders. The Project will assist the PAPOs in their attempts to become independent and service oriented.

The second constraint is related to the socio-economic and cultural characteristics of the members of these organizations. Low income, non-Spanish speaking, agricultural producers in isolated rural communities, are less likely to have the resources and/or the skills needed to operate an effective PAPO, than would the urban-based professionals. The Project will offer different levels of assistance, and will tailor its support to the needs and characteristics of each PAPO. Outside individuals, consulting firms, or private voluntary organizations may be contracted with to provide managerial and technical assistance to disadvantaged PAPOs.

The third and most important constraint is related to the 'openness of membership' of each PAPO. Closed organizations, where membership and contributions are limited and unrelated to services, are common, not only in the agricultural sector, but throughout Bolivia. The Project's selection criteria have been designed to deal with this constraint. As such, the Project will exclude closed organizations, and motivate producers to seek a more open and effective organizational structure open to all producers of a crop in a given region.

#### E. Potential Negative Effects

The design of the Project, with its response to demand approach, tends to favor 'non-campesino' dominated 'Asociaciones de Productores'. The highly educated, high-income producer members found in this type of PAPO have the resources and skills that will allow them to quickly benefit from the Project's resources. Potentially, 'campesino' and 'colono' dominated PAPOs may not only be excluded from the benefits of the Project, but by not improving their productivity, they will become unable to

compete in the market. Recognizing this potential negative effect, the Project will emphasize the selection of open PAPOs.

#### F. Social Feasibility of the Project

The role of past governments in determining the prices of agricultural commodities, and in the provision of agricultural resources and services has been the main incentive for farmers to organize and form PAPOs. The main function of these PAPOs in the past has been lobbying and representation. In the past they have been lethargic organizations, only activated occasionally in an attempt to try to influence the allocation of government services and resources to each subsector, region, or organization. The past five years of generalized crisis in the country, have had a considerable impact on the incentives of producers to join and support PAPOs, as well as, on their expectations of what their organization should do for them.

Some of the factors which have served to stimulate the resurgence of PAPOs as service organizations are: the government's lack of resources to provide services to the sector, as well as, its free market policy; the lack of private sector service firms; the lack of employment opportunities in the urban public and private sectors; the growing market participation and integration of campesino producers; and the selective entry into agricultural activities by a growing number of urban-based professionals.

These factors contribute to making service-oriented PAPOs not only viable, but one of the few short-term and immediate solutions to the serious problems confronting all agricultural producers. These factors also make the Project socially feasible.

## Section IV

### Institutional Analysis

This analysis describes the organizational and administrative capabilities of FAFOs in general based on a random sample of 32 organizations throughout the country. This includes: the pre-qualification process, the selection of the FAFOs to be included under the Project; the design of the Organizational Development Strategies; and the division of FAFOs into the Primary and Secondary categories. A detailed analysis of the 32 organizations interviewed during Project Paper preparation is found in the Institutional Annex.

#### A. FAFO Pre-Qualification

Once the implementation team is constituted, announcements will be made through the public media calling for 'expressions of interest' on the part of Private Agricultural Producers' Organizations desiring assistance under the Project. In order to somehow limit the requests to established, functioning organizations, several qualifying criteria should appear with the announcements. As such, it is recommended that for consideration under the Project a FAFO have:

- service to farmer/members as a primary activity;
- Personeria Juridica, or other form of legal status;
- an office, either owned or rented;
- an open policy to all producers of the same crop, or region, regardless of acreage, or production;
- at least one staff member, paid out of the FAFO's own resources; and,
- be actually providing some services to its members.

Nevertheless, it is envisioned that even with these pre-qualifying criteria, far more organizations will respond to the announcements than the thirty contemplated under the Project. Since these requests will most likely be received over-time Project staff will not be able to compare them against one another in order to make their selection. Additionally, assistance to the organizations will have to be time-phased over the three-year life of the Project with some receiving priority in early assistance, while others will be asked to wait. (It is estimated that ten FAFOs per year will be assisted under the Project.) Therefore, in order to select the organizations which will be included under the Project, and to determine the order in which they will be dealt with, selection criteria will have to be established along the lines of those presented in the Institutional Analysis of this Project.

#### B. The Selection Process

Once the Project has received a significant quantity of

'expressions of interest' from responding PAPOs the staff will have to select those which will be visited by the Organizational Analysis/Development teams for the preparation of the ODSs. The selection criteria used in this process will have to be carefully designed to identify the precise strata of organizations targeted by the Project. It is not the intention of the Project to create new organizations, nor to assist organizations which are so weak as not to be offering viable services to its members. On the other hand, it is also not the intention of the Project to assist only organizations which are functioning well and only require specific fine tuning at the margins. The target population is therefore an 'in between' group of organizations which demonstrate potential for improving services to members, but face identifiable problems in their implementation. The criteria used in the selection process at this stage will be:

- Crop/Agricultural Activity: (priority given for the following:)
  - \*Export Potential
  - \*Import Substitution
  - \*Non-Traditional Crops
  
- Organizational Experience: (ranked: high, medium, low)
  - \*Success levels of present service delivery
  - \*Assesment of organizational and administrative capabilities to implement new, or improved services
  
- Organizational Viability:
  - \*Minimum order in accounting/administrative systems
  - \*Practice/ability of charging for services
  - \*Level of subsidies supporting the organization
  - \*Ability of the organization to pay for Project services

### C. Organizational Development Strategies

Once the ten candidate organizations are selected each year the staff will schedule them for the first phase of Project assistance; the design of the Organizational Development Strategy (ODS). This phase will be carried out by the two Organizational Development/Analysis staff members who will spend one to two weeks with each PAPO. The ODS will include a description of the organization, its members, services, and shortcomings. Additionally, and most importantly, it will include a strategy for project assistance identifying and scheduling the specific services which will be received. The services selected will be directly tied to improving the organization's services to members, and therefore member's production and/or income.

The ODS will be prepared jointly with representatives of the PAPO, and will serve as a contract between the Project and the organization. It will contain an analysis of the fees which will

be charged by the Project, and a plan for charging members for its services. (A potential outline for the ODSs to follow can be found in the Technical Annex.)

#### D. The Primary and Secondary Selection Process

The three-year goal of the Project is to assist a minimum of 30 PAPOs in improving service delivery to members. Ten of these will be considered to be in a Primary category, while twenty will be from a Secondary category. This distinction is made based on the conclusion that some organizations will receive on-going services from the Project over a period of, at least, one year and possibly longer. It is also estimated that this group will receive several types of Project assistance over a broad range of topics. The secondary group, on the other hand, will only receive short-term, specific assistance in certain services. While their lines of communication with the Project will always be open, they will for the most part be left alone once the short-term Project assistance is terminated.

The determination as to whether a PAPO is placed in the Primary or Secondary category will be made at the time of the preparation of the Organizational Development Strategy. Criteria to be used will include:

- the desires of the PAPO membership as expressed in the ODS;
- the viability of the services to be provided as described in the Technical Annex;
- the ability of the PAPO to pay for the Project-provided services, or the ability of the Project-provided services to generate income which would enable the PAPO to pay for the services; and,
- the logistical convenience of Project staff, by region or commodity.

## Section V

### Administrative Analysis

This analysis describes the operational procedures of the Project; who will do what, and how they will do it. This includes: the administrative arrangements for Project implementation, the operation of the Project Management Unit, the relationship between the GOB and the Project, and the implementation of the training, technical assistance and financial components.

#### A. The Administrative Structure of the Project

The Project will be headed by a U.S. Personal Services Contractor hired by USAID/Bolivia for a three year period. This person will be housed in the Office of Rural and Private Sector Development of the Mission and will be the Assistant Project Manager for this Project, the DDC 2 Project, and the Agro-Industrial Project.

The rest of the staff will be hired through an institutional contract between the Ministry of Planning and Coordination (MPC), USAID/Bolivia, and a U.S. private firm, non-governmental organization (NGO), or Title XII University. Competitive bidding will be conducted through this contract for the four Organizational Development/Analysis Experts, and one Resource Procurement Expert. The remaining nine positions will be filled in-country by the Project staff. The Contract Firm will also back-stop the Project team in procuring the 300 person/months of short-term technical assistance.

The Project will be housed along with the Project Management Unit of the DDC 2 and Agro-Industrial Projects. Indeed, all three projects will relate to the same government representative, who will serve as the Project Coordinator, and who will oversee the day to day management of the Project in a counterpart relationship with the Chief-of-Party of the Contractor Team. While the three projects will maintain their own internal lines of authority below the Coordinator, it is fully intended that there will be considerable sharing of both personnel and clients.

#### B. The Training Component

As the ODSs are prepared and a pattern of training needs begins to emerge, the Training Coordinator will begin to organize the courses to be offered along subject lines. Instructors will then be contracted with, and dates and places will be set. While the subject matter will vary widely from accounting to pruning

methods and grain storage, emphasis will be on practical, hands-on teaching methods appropriate to local conditions. The ODS will also establish how much each PAFD will be charged per participant.

### C. The Technical Assistance Component

Based on the technical assistance needs specified in the ODSs, the Resource Procurement staff will begin to search for appropriate candidates to be provided through the Project. Ideally, two or three candidates would be identified in each case. Their particulars (experience, training, etc.), would then be presented to the PAFD for their ultimate selection and approval. This practice is suggested for three reasons: the PAFDs are paying for at least part of the assistance; it will make the consultant more responsible to the organization, rather than the Project; and, it will give the PAFD members a greater sense of obligation to utilize the assistance well.

The sources of the technical assistance will be local, regional, and from the U.S. Non-honorarium expenses (travel, per diem, and other related costs) will be borne by the Project, but the PAFDs will be charged up to 100 percent of each consultant's honorarium depending on its 'ability to pay' which will be established by the ODS. The monies collected from the PAFDs will be used to establish a Technical Assistance Fund within the the respective UCF or Financiera.

Since one of the Sub-Purposes of the Project is to stimulate the local consulting industry, the Bolivian 'pool' of consultants will be referred to first. Technical ability will be highly rated, but so will other factors such as experience in the region, knowledge of local conditions and conventions, and language ability.

### D. Financial Access

The identification of credit needs will be another function of the ODS. Through the Project and the PL-480 program PAFDs deemed to require it will have access to two types of financial resources: Strengthening Grants of up to US \$ 25,000, and credit of up to US \$ 1,000,000.

#### 1. The Strengthening Grants

These grants will be made to enable the PAFDs to start-up new services, improve existing ones, modernize office management, and improve their facilities. It is the intention of these grants to pay for items which will strengthen the organization, but which are not directly related to a service for which members can be charged.

## 2. The Credit Fund

Credit funds will be available for PAPOs to improve their services through implementing projects which will be beneficial to their members. Technical assistance can be obtained through the Project for the design of these sub-projects, although the UCF/Financiera staffs would also be a source of technical assistance for organizations unable to pay for the Project's technical assistance.

The PAPO would then take their project to a cooperating Intermediate Credit Institution (ICI), which would consider its technical and financial viability. If the ICI agrees to finance the loan an agreement would be drawn up specifying the terms and guarantees. The ICI would then be able to discount up to 70 percent of the value of the loan through the local UCF or Financiera. If, on the other hand, the terms specified by the ICI are more than what the PAPO can provide the project can be represented to the local UCF/Financiera for further consideration. If the UCF/Financiera staff consider that the project meets specified technical and financial criteria it can approve the loan and provide 30 percent of its own money with the remaining 70 percent being provided by the PL-480 program.

As the loans begin to be repayed the ICI will deposit 70 percent of the principal payment with the local UCF or Financiera which will establish a revolving fund for further lending to other PAPOs.

### E. Commodity and Policy Studies

The implementation of the Commodity and Policy Studies will be performed through the same mechanism as the provision of technical assistance. Once the Project receives a request for the studying of a particular commodity, or policy the appropriate consultants will be sought and hired. Since these studies will not be directly service-related, nor immediately income generating, they will be grant funded.

### F. Conclusion

Having considered several other potential administrative mechanisms, the Project Design Team agrees that the one described above is, at the same time, administratively feasible and the best choice for effective Project implementation.

## Section VI

### Economic Analysis

The following Analysis examines the economic rationale of the Project and its design. As such it considers the potential of the most significant crops of the country, the feasibility of charging for Project services, and the cost effectiveness of the overall project itself.

#### A. Commodity Analysis

Bolivia's agricultural sector is primarily oriented to the domestic market with only sugar and coffee being exported in significant quantities, and with any regularity. Given the vast ecological variation within the country there also exists a great diversity of crops produced. Following is a regional breakdown of the principal agricultural activities:

##### -Altiplano

-Potatoes, barley, quinoa, broad beans, wheat, sheep and cameloids

##### -Intermountain Valleys

-Corn, potatoes, wheat, vegetables, coffee, poultry, and dairy

##### -Tropical Plains

-Cotton, sugar cane, rice, corn, soybeans, fruits and vegetables, poultry, and cattle

These crops are analyzed below with particular reference to their actual and potential markets, both for domestic consumption and for export, particular technological problems, and their potential for agro-processing or industrialization.

##### -Potatoes

This crop is a staple of the Bolivian diet. As such, it is produced and consumed extensively throughout the country. Yearly supply and demand appear to be in balance with small amounts of the crop being exported to, and imported from neighboring countries depending on seasonal and varietal shortages. Not much potential exists for expansion of the export market due to the high cost of transportation for potatoes, plus extensive production throughout the

region.

-Barley

Barley has two active markets, a smaller one for human consumption, and a larger, more technified one through the breweries and the beer industry. The human consumption market is in balance and is not thought to be capable of supporting an increased supply. The brewery market is much more structured and often involves futures contracts for farmers willing to produce certain varieties for specific harvest dates. Nevertheless, many producers for this market complained of price setting between the brewer's resulting in the costs of production often being higher than net returns.

-Quinoa

This is an indigenous crop which is little known outside of the Region. Since it is high in nutritional value its production is currently being stressed by governments of the Region and international donors alike. At present the limit to expanded production lies in its labor intensive nature which tends to make it expensive relative to competing commodities. Additionally, its processing for home consumption is somewhat difficult, making it less appealing for the urban consumer. Production for the export health food market might be explored if the production and processing problems can be overcome.

-Broad Beans

Commonly called 'habas' (fava beans is a common translation), this leguminous crop is an important part of the diet of many Bolivians. It is primarily grown in the Altiplano where it is semi-resistant to frequent frosts. Its production and marketing potential is currently unassessed, although given its low price in the marketplace one might assume that its demand is currently being met.

-Wheat

This crop has been produced in Bolivia for several generations, although in recent years it has suffered from government pricing policies based on the availability of 'free' donated wheat from the U.S.. USAID/Bolivia has recently entered into an agreement with the GOB to pay wheat farmers the 'real' price of their product so as to stimulate further production. Faced with the potential of this increased local production, USAID/Bolivia is also planning to gradually reduce the FL-480 wheat imports. At present the market

for locally produced wheat is very limited with millers preferring the more uniform, quality consistent, imported wheat.

#### -Corn

This native South American crop is produced for 'on the cob' human consumption, but more importantly for livestock feed in the poultry and cattle industries. It is grown in the lower parts of the intermountain valleys, as well as on the tropical and sub-tropical plains. There is some indication that when grown under proper technical conditions this crop can turn a profit, especially if an export market can be found in neighboring countries.

#### -Coffee

Coffee is a crop which is currently marketed internationally under an International Marketing Agreement. This essentially means that both price and quantity are limited by exogenous factors. The domestic market for coffee is limited, with a good deal of competition coming from Brazil. The international market is currently on the upswing, although this situation can change from year to year.

#### -Fruits and Vegetables

Bolivia produces a great variety of fruits and vegetables based on its diversity of ecological zones. These crops tend to be of relatively higher unit values due to their perishable nature, and also appear to be an area for future expansion within the local market. Nevertheless, markets can easily become saturated, and large amounts of produce are lost due to relatively inelastic demand. Consumer education in many of these new crops will have to go hand in hand with production increases.

#### -Cotton

Cotton is a relatively new crop which was introduced after the opening of the lowland Santa Cruz area. It holds a potential in the export market, although unmechanized harvesting and relatively high labor rates will have to be dealt with if Bolivia is to become competitive internationally.

#### -Sugar Cane

Sugar cane is another relatively new crop which was introduced after the opening of the Santa Cruz area. Unfortunately, due to a lack of mechanization, the practice of not utilizing necessary levels of

inputs, and inefficient, oversized processing facilities, Bolivia produces sugar far above the world market price. Some of this expensive sugar finds a market under the U.S. Sugar Quota at preferential prices, but this market was recently cut in half due to worldwide quota reductions. There is presently a three to four year domestic supply of refined sugar in storage in the country.

#### -Rice

Another one of the lowlands crops, rice is presently farmed by a majority of small individual farmers, many of whom are settlers from the Altiplano. This crop suffers internally from inadequate storage and milling facilities, and externally from strong competition from Brazil and Argentina. Price is currently negotiated between the Federation of Rice Producers' Cooperatives and the National Rice Company. By latest estimates the price paid is only 65 percent of the costs of production.

#### -Soybeans

The production of soybeans has formed part of the Santa Cruz 'boom' over the past two decades, and has been closely linked to the rise in the poultry and cattle feeding industries. The market is currently controlled by one public and three private firms who reputedly work in concert in establishing price. An export potential does exist, although minimum export amounts will require further investment in storage capacity.

#### -Poultry

The poultry industry has vastly expanded over the past twenty years to the point where Bolivia is now self-sufficient in meat and eggs. Profitability over the past years has encouraged greatly expanded production to the point where market saturation is a possible issue, at least for certain local markets. As elsewhere in the world, poultry production lends easily to economies of scale. This has meant that the industry has become increasingly the domain of the large producer.

#### -Beef Cattle

The cattle industry is centered around the relatively isolated lowland grass areas of Beni and Santa Cruz. The fact that these areas are often inaccessible to road transportation means that air transportation must be used, which greatly raises costs. If this problem can be addressed, Bolivia could become

an exporter of beef.

#### -Dairy Cattle

The dairy industry suffers from strong competition from reconstituted powdered milk which is donated by several Western European countries. Over the years this has led to an overall decapitalization of the industry, and dairying is now a losing economic proposition. The government owned Milk Processing Corporations (PILs) have recently been turned over to the Departmental Corporations which are attempting to sell them to the various milk producers' associations. The associations, on the other hand, are very reluctant to buy into the plants due to the outdated and poorly maintained equipment which they contain. A reduction in the imports of 'free' powdered milk is an additional concern of the dairy producers.

In summary, the above listed crops can be organized into priority groupings. Those appearing to have the highest potential return on the Project's investment are fruits and vegetables, if certain marketing problems can be resolved, and quinoa, if production can be reoriented towards the export sector. A second grouping would include rice, wheat, corn and soybeans whose costs of production will have to be reduced if locally produced commodities are to compete with imported ones. Cost reduction methods will include Project services in production technologies, post-harvest handling, including storage, and marketing.

#### B. Project Self-Sufficiency and the Charging for Services

The Project will seek to establish a mechanism which will continue to provide services to the country's PAPOs after its role is completed. Since the UCFs/Financieras have been chosen as the future institutional home for Project related activities, preparing them for self-sufficiency will be an intrinsic part of the Project's approach. As such, fees will be charged for Project services from the beginning. These fees will be established based on an ability to pay principal, combined with a particular service's ability to generate income for the organization. All PAPOs, regardless of economic and social standing, will pay a minimum daily fee to ensure serious and efficient utilization of the services. Organizations able to pay higher rates will be so charged.

Nevertheless, it is felt that travel, per diem and other related costs should be borne by the Project in an attempt to bring closer together the fully burdened rates of the national, regional and U.S. consultants. Furthermore, it is felt that the costs of providing assistance concerning environmental issues will need to be covered by the Project. This is due to the fact that environmental issues are not seen as being related to the

issues of production and income generation. Essentially, the free service will act as a 'carrot' in the dissemination of this important information.

### C. Project Cost Effectiveness

This Project seeks to work through private agricultural producer organizations as a way to stimulate agricultural production and farmer incomes. Past attempts at achieving the same goals have been directed primarily at public sector institutions. These attempts, for the most part, proved unsuccessful in achieving long-term sustainability, and effective service delivery to farmers. These problems are further exacerbated by the fact that Bolivia needs to depend on its agricultural sector more than at any time since its colonization. Falling income from the mining sector and other economic maladies are causing the GOB to take dramatic steps in reorganizing the country's economic order, stimulating production, increasing employment, and earning foreign exchange. This includes the relaxing of price controls and other policies which have, in the past, tended to act as a drag on agricultural production. In a parallel move the government is also in the process of privatizing many of the agro-industries which it had operated in the past. This is being done in an attempt to improve their efficiency, and through this, their services to the sector. This Project fits in with this philosophy perfectly providing support and assistance in its implementation.

As designed, the Project encompasses three components: training, technical assistance and access to credit. Worldwide experience in projects of this type would indicate that issues of cost effectiveness would be inversely related to the time it takes for the benefits of the services to take effect. As such, credit availability, when properly provided, will result in the most rapid return on investment. This would be followed by technical assistance and then training. Since it is agreed that all three components are essential Project cost effectiveness will depend on the length of time involved before measuring results.

At this time given the 'Process Design' of the Project it would be very difficult to analytically measure its cost effectiveness. Nevertheless, it is felt that the approach presented in this Project has an excellent chance of achieving its goals given the current policy climate of the government combined with the disposition of farmers throughout the country to improve their state.

## Technical Annex

This Technical Annex to the Private Agricultural Producer Organizations Project Paper includes the terms of reference for the Contract Firm Employees to be hired under the Project, an outline for the preparation of the Organizational Development Strategies, and a methodological framework for the selection of services to be offered by a PAFO to its members.

### Terms of Reference

Terms of Reference are suggested for the following seven positions: the Government Representative/Project Coordinator, the USAID Assistant Project Manager, the four Organizational Analysis/Development Experts (including the Chief of Party), and the Resource Procurement Expert.

#### -Government Representative/Project Coordinator-

Soon after Project start-up the GOB will officially name its representative to the Project who will serve as its coordinator in a counterpart role with the Chief of Party of the Technical Assistance Team and the USAID Assistant Project Manager. He/she will be responsible for the day-to-day operation of the Project, its organization and administration. Furthermore, he/she will provide the link between the Project and the GOB in the exchange of information, and the coordination of activities. He/she will be responsible to the Minister of Planning and Coordination.

Qualifications for this position should include ten years experience in directing assistance programs of this type. Extensive experience in the agricultural sector, and knowledge of banking criteria and methods of credit extension.

#### -USAID Assistant Project Manager-

This person will be a Personal Services Contractor located within the Rural Development and Private Sector Office of the USAID/Bolivia Mission. He/she will be USAID's representative to the Project, and will also perform this role for the DDC 2 and Agro-industrial Projects. He/she will work under the guidance of the USAID Project Manager and the Director of the Rural Development and Private Sector Office. His/her duties will be to serve as a Project monitor rather than in its day-to-day management.

This person's qualifications should include ten years experience in directing programs of this type, a Ph.D. in an appropriate field (agricultural economics, banking and finance, organizational development, business administration, etc.), and a minimum FSI rating in Spanish of 4.

**-Organizational Analysis/Development Experts (4)-**

These four people will be the principal links between the Project and the producer organizations. In teams of two, they will perform the initial PAPO selection, prepare the Organizational Development Strategies for those organizations selected, and provide continuous follow-up in the implementation of the ODSs. One of these four staff members will be designated as Chief-of-Party by the Contract Firm. As such, he/she will be responsible for the day-to-day administrative liason between the Contractor and the Project's field staff.

As there are going to be two teams of two staff members each, the areas of their specialization should be varied. All should have a minimum of five to eight years experience in organizational strengthening projects of this type, and all should have a Spanish competency of 4 on the FSI scale. Disciplines should range from economics and business administration to organizational development and agricultural extension.

**-Resource Procurement Expert-**

This person will play the central role in the identification of technical assistance personnel for provision to the producer organizations. He/she will be responsible for the development of the Technical Assistance Roster, as well as for matching the technical assistance requirements identified in the ODSs with the availability of experts within Bolivia, the region and in the U.S. He/she will be back-stopped by the Contract Firm's head office.

This person should have at least five to eight years experience with the provision of technical assistance in developing Latin American countries. He/she should be knowledgeable in a wide variety of technical areas including agriculture, organizational development and business management. He/she should have attained a minimum of a 3+ on the FSI Spanish rating.

# Organizational Development Strategy

(Suggested Outline)

## I. Description of Organization

- age, number of members, legal status, services offered, crops, economic activity, other significant details

## II. Key Indicators

- Relative 'openness' and 'closedness'
- Service delivery; need, profitability
- Long-term viability, subsidies, economic condition of PAFD
- Percentage of full-time farmers as members
- Production potential for agricultural commodities
- Quality of leadership
- Market potential for agricultural commodities
- Others to be identified

## III. Needs/Solutions

- Current Shortcomings
- The Organizational Development Strategy
  - Training
  - Technical Assistance
  - Financial Support
  - Steps the PAFD must take
- Preliminary scheduling of Project assistance

## Service Selection

The selection of the most appropriate services for PAPOs to offer their members will be the subject of careful deliberation at the time of the preparation of the DDSs. The following methodological framework is therefore presented as a guide to Project implementors. It is based on a three tiered approach: the first containing criteria which can be applied in an inclusive/exclusive (yes/no) situation; a second containing criteria which will need to be based on quantifiable, or semi-quantifiable information, and a third utilizing traditional financial/economic analysis. Examples of the types of criteria follow:

### -Level 1-Exclusive Criteria

Criteria	Yes	No
Is the Service:		
Production Oriented		
Self-funding		
If subsidized, there is a definite cutoff		
Unavailable elsewhere		
Past PAPD experience with the Service		
Others to be identified		

### -Level 2-Ranking Criteria

Criteria	Proportion	
	Required	Acheived
Quantitative estimate of:		
Proportion of Members to be served	80 %	
Proportion of Cost of Service		
Delivery which can be charged		
to members	50%	
Potential: Production Increase	10%	
Price Increase	10%	
Relative Improvement over Alternative		
Sources for Service	20%	
Proportion of Members to be served		
who are full-time farmers	90%	
Others to be identified		

### -Level 3-Financial/Economic Criteria

During the preparation of the QDSs, some degree of financial/economic analysis will be applied to the process of deciding which services are to be provided by a PAPO. This could involve standard methods of comparing alternative services through the use of traditional internal rate of return and cost/benefit calculations. Nevertheless, it is not recommended that specific, prestablished cut-off percentages, or ratios be used in either eliminating, or including one service, or another. These indicators are most commonly used to measure and compare the present values of benefit and investment flows stemming from similar potential investment alternatives. Given the diversity of the PAPOs to be included under the Project, each type of service, agricultural activity and region of the country would offer a different set of inputs for calculating benefits and costs. This, in turn, would result in the indicators not necessarily being comparable.

Additionally, since the PAPOs are, for the most part, service organizations, they would be thought to be maximizing economic efficiency at the point at which the maximum service is being provided at a minimum cost, and the organization is covering its operating expenses, depreciation and other costs. This would be different in the case of the firm which would tend to maximize profits.

In the case of a PAPO, the measurement of the benefits stemming from the delivery of many types of services is often very difficult, or impossible to quantify. This would tend to skew a selection process which is based on these these types of indicators. For example, a technical assistance program which provides an extension agent to give regular lectures and field demonstrations would receive very different scores than a marketing program which guaranteed the PAPO a check-off from members sales. Likewise, an improved accounting system would measure up very differently when compared with a storage facility.

Ex-ante analysis in these cases is often difficult and will depend on the comparability of the potential services being selected. This would therefore be limited to choosing between two alternative methods of providing a particular type of service, rather than choosing between two types of services. For example, these type indicators could be used to choose between two market improvement projects such as the construction of rice storage facilities, or the opening up of an export marketing division. They should not, however, be used to choose between a rice storage facility and a small-scale irrigation project.

Lastly, in cases where it is appropriate to use these indicators they must be compared to something else fixed in the economy. This is usually referred to as the discount rate or the opportunity cost of capital, and is often compared to the

internal rate of return. The choice of this rate is often arbitrary, being pegged to some international indicator such as the Prime Rate in New York. In an attempt to make these calculations more relevant in the case of this Project, the discount rate should be based on the Central Bank of Bolivia's prime rate for dolarized accounts. This is urged since potential instability in the peso could cause calculations in local currency to become outdated too quickly to be of any use.

Following is a brief methodological framework for the calculation of these indicators. Considered are the calculations of Net Present Worth, Benefit/Cost Ratios, and Internal Rates of Return.

#### -Net Present Worth

The calculation of net present worth estimates the amount that discounted benefits (the present value of future benefits to be received over the life of the project), exceed discounted project costs. It is calculated by:

- Determining the incremental benefits and costs for each year over the useful life of the investment using cash flow analysis;

- Establishing a discount rate for comparison purposes;

- Determining the present worth of the incremental costs and benefits by discounting each annual cost and benefit at the discount rate; and,

- Subtracting the present value of incremental costs from that of the incremental benefits.

If the resulting figure is positive, the investment is normally thought to be financially viable. If it is negative, it is not thought to be viable. If it is zero, it is thought that the investment's rate of return is equal to the discount rate.

#### -Benefit/Cost Analysis

The benefit/cost ratio of an investment measures the efficiency with which the investment uses resources, and considers the present worth of the gross incremental benefits divided by the present worth of the gross incremental costs. Rank ordering investment possibilities according to benefit/cost ratios gives highest priority to the investment which uses resources most efficiently. It is purely a financial indicator and does not consider benefit distribution or spread. It is calculated by:

- Determining the incremental benefits and costs of the investment for each year of its potential life;

- Discounting the annual incremental benefits and costs to determine their present worth; and

- Dividing the present worth of the gross

incremental benefits by the present worth of the gross incremental costs.

Usually, if the resulting ratio is less than 1.0 the investment is discarded as a possibility. If, on the other hand, it is greater than 1.0 the investment can be further considered; normally by comparing it to other similar type investments.

#### -Internal Rate of Return

The internal rate of return is another efficiency measure which reflects the payoff of potential investments in terms of percentage returns on outlays. There is no analytical solution to its calculation and a trial and error method must be followed. Additionally, it can not be used if there is a positive cash flow during all years of the life of the proposed investment. It is calculated by:

- Determining the potential incremental benefits and costs over the life of the investment using cash flow analysis;

- Estimating the discount rate for a first trial computation;

- Computing the net present worth of the investment using the trial discount rate, (when the net present value is zero, the internal rate of return equals the discount rate);

- Reselecting alternative discount rates until the net present value calculations result in one positive and one negative value; and,

- Interpolating between the discount rates to arrive at a net present value of zero. This 'interpolated' discount rate then becomes the internal rate of return.

The calculation of these rates can then be used to compare similar types of investment alternatives.

## SOCIAL SOUNDNESS ANNEX

### PRIVATE AGRICULTURAL PRODUCER ORGANIZATIONS (PAPOs)

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## I. SOCIAL COMPOSITION OF THE AGRICULTURAL SECTOR

### A. Background

Up until 1953, the agricultural sector in Bolivia was in the hands of a small elite that controlled not only the land, but also the labor of large number of Indians. This small elite produced all the agricultural goods for the urban and mining centers. The Agrarian Reform of 1953 distributed the hacienda lands among the Indians thereby putting an end to an era. Since then, 'campesinos', (Indians before 1953) have been the producers of food for the growing urban centers.

The Agrarian Reform, plus a series of educational, political, and social reforms initiated after 1953, set in motion social and economic change processes which have kept the rural areas in a constant state of flux. Large numbers of campesinos have moved to the cities, as well as to the sparsely populated lowlands. Large numbers of these rural peasants have become traders, truckers, unskilled and skilled urban workers, members of the armed forces, teachers and professionals. However, despite all of this considerable social, cultural, economic, and geographic mobility, an estimated 48% of the total population of the country still resides in the rural areas, and the majority of these rural residents are agricultural producers.

Adding to the complexity and heterogeneity of the agricultural sector in the 60's, a new category of agricultural producer began to gradually appear in the previously campesino-dominated agricultural activities and regions. This new category has been made up of urban-based professionals. The agricultural endeavors selected by these urban-based producers were, and are, for the most part based on relatively high technology, and tend to be capital intensive. More recently, limited non-agricultural employment opportunities have further induced an ever growing number of urban residents to turn to selected agricultural activities as a way of supplementing their incomes.

It is against this background that the current private agricultural producer organizations must be analyzed to appreciate their potential as mechanisms in the attainment of the Project's Goals and Objectives. In the pages that follow, the actors composing the agricultural sector are briefly described, and their agricultural organizations analyzed in terms of their potential as sources of production related services.

#### 1. Campesinos (Peasants)

Approximately 48% of Bolivia's population, or 2,800,000 individuals, live in the rural areas. The vast majority of this population are classified as campesinos. They are located mostly in the Altiplano and high valleys of the densely populated one-third of the country (in parts of the Departments of La Paz, Cochabamba, Chuquisaca, Potosi, Oruro and Tarija). A large part of these campesinos are of Quechua and Aymara ethnic origin, and

include a substantial proportion of non-Spanish speakers.

A production strategy primarily oriented towards satisfying family needs, as well as employing family labor, has characterized this segment of the population, which until recently lived in isolated and difficult to reach rural communities. Over the past thirty years, as the urban areas have grown, and various rural development programs have reached many rural communities with roads and other services, most campesinos have begun to market increasingly larger portions of their production. Additionally, the size of land-holdings, as well as proximity to a market, and the type of crop produced, have been determining factors in campesino participation in the market economy.

Today, campesino agricultural production continues to be the main source of food in Bolivia (with some notable exceptions, such as poultry, eggs, beef, and soybeans), and is the only source of employment for the vast majority of rural dwellers. Despite the fact that campesino agriculture has evolved considerably in the past thirty years, it is still characterized by low levels of productivity, labor intensive technologies, and the inadequate usage of modern inputs. A complex set of severe limitations has impeded a greater development of campesino agricultural production. Among the most notable are:

- limited demand (no export potential), for "traditional" campesino crops;
- politically determined prices, which rarely cover production costs;
- fragmented and miniscule land-holdings, due to high population growth;
- inadequate or no-existent technical assistance; and,
- high transportation costs.

These limitations have not only impeded the development of campesino agriculture, but have also provided strong incentives for the migration of vast numbers of rural dwellers to urban areas, and to new settlement areas in the lowlands.

## 2. Colonos (Settlers in the Lowlands)

Colonos are the second largest category of agricultural producers in the sector. In 1978 their number was estimated at around 65,000 families settled since the late 50's in four regions: the Alto Beni in La Paz, the Chapare in Cochabamba, Bermejo in Tarija, and Northern Santa Cruz. Since then, their numbers have probably doubled as the original areas expanded and new ones opened.

Success by these settlers in areas where commercial crops are produced (sugarcane, soybeans, rice, and coca), as well as the fact that land parcels of up to 50 hectares could be obtained, has induced a growing number of campesinos to migrate to the lowlands. The success of the colonization movement can be measured by the fact that fully two-thirds of all settlers are "spontaneous". That is, they have moved under their own initiative, with no support or aid from the government. Colonization has, in fact become, not only a geographic move, but also a socio-economic and cultural one. These settlers often insist in being referred to as 'colonos' to differentiate themselves from campesinos.

The 'colono' agricultural farming system is a mix of commercial and subsistence agriculture. Each colonization area has been developed around the production of one or more commercial crop(s): The Alto Beni produces cacao and rice; Santa Cruz, sugar cane and rice; Bermejo, sugar; and the Chapare, coca. A Colono's strategy is to produce one or more commercial crop(s) for cash, and additional crops as needed for subsistence. The Chapare with its coca production is perhaps the clearest example of the commercial orientation of the colono. The extremely high incomes obtained from coca production have led to specialization in one crop, rapid adoption of modern inputs, technology innovation, etc. The Chapare has, in effect, become a net importer of food, including rice, which prior to coca's dominance was its main commercial and subsistence crop.

Other colonization areas continue to rely on one or two commercial crops. Colonos face great difficulties in developing their agricultural production basically for the same reasons that affect the highlands: a lack of markets, high transportation costs, almost non-existent infrastructure, and a lack of technical assistance and agricultural inputs.

### 3. Non-Campesino Farmers

Non-campesino farmers constitute the third and newest category of producers in the sector. There is no estimate of their numbers, however, they are a small but influential minority. Their presence varies considerably from region to region. They are most notably present in the Eastern lowlands (Santa Cruz, Beni, Pando) and in Tarija and Cochabamba.

Non-campesino involvement in agriculture is especially visible in high-value, non-traditional crops, and most notably in commercial crops and livestock. Urban professionals predominate among the non-campesino farmers. They are normally found near cities and towns in areas with good roads. (The exception to this being livestock production in the Beni, where there are no roads, and where everything travels by airplane.)

Non-campesino involvement in agriculture is highly selective

and is normally reduced to profitable non-traditional crops. Non-campesino farmers tend to specialize in one crop using relatively high technology and capital intensive production systems. However, since for most non-campesino farmers, agriculture is a new activity, their effectiveness and productivity levels vary considerably. Furthermore, their commitment to agriculture is also questionable given the fact that for a considerable number, agriculture is a part-time supplementary activity.

#### 4. The Role of Women

In almost no cases are women members of the vast majority of PAPOs considered to be within the target population. This can best be attributed to social custom deeply imbedded in the culture. Nevertheless, it is widely known that women make up a substantial portion of the agricultural work force; especially in the campesino sector. As such, the Project will follow a policy of biasing its activities towards 'open' organizations which allow for anyone to be a member who is a producer of a particular crop, or is from a particular region.

#### B. Social Mobility: the "Peasantization" of the Cities and the Gentryfication of the Countryside

Since 1953, the main avenues of social and economic mobility for the campesino has been migration to the urban and colonization areas. In 1976 (date of the last census) one out of every four Bolivians had migrated. Two-thirds, or approximately 750,000 individuals, had moved to an urban area. The majority were from rural communities and towns, although urban to urban migration was also considerable. The remaining third of the migrants were absorbed by colonization areas in the lowlands.

Accompanying this migration to the cities, which often took the patterns of migration from dispersed rural community to a rural town and finally to a city, was a strategy of economic diversification. The most common activities were petty commerce and transportation for the first generation, and a trade or professional occupation for the second. Some colonos also eventually ended up in an urban area, although their route took them from a rural community to a colonization area and then to a city.

During these years (1950-1980s) there was a notable lack of campesino investment in agriculture, probably motivated by the norm of below-cost, politically determined prices for agricultural products. Those campesinos who had capital, invested it in commerce, transportation, or urban properties rather than in agriculture. Gradually, during this same period there evolved a pattern of urban residents moving into rural areas in search of opportunities in agricultural production.

This process, which can be called the 'gentrification of countryside', began in the 60's.

After the Agrarian Reform of 1953 and up to the 60's, urban-based farmers were few and were mostly found in the lowlands. In areas of strong campesino presence, they were almost non-existent, although many urban residents, whose properties had been affected by the Agrarian Reform, maintained uncultivated parcels of land left to them by the reform process. Since the 60's non-campesino farmers have begun a gradual return to agricultural activities. The development of agro-industries and commercial crops with generous government assistance motivated many urban residents to return, or to enter, the agricultural sector as producers. The development of the dairy industry, initially in Cochabamba, and later on in other departments, as well the poultry and eggs industries further stimulated non-campesino involvement. The technology level of these types of productive activities, as well as the capital needed, favored non-campesinos who were quick to seize the new opportunities.

The economic crisis of the last few years, as well as the contraction of employment opportunities in the public and private sectors of the cities, have been powerful incentives for the urban professional to look for opportunities in the agricultural sector. The consensus today is that selected agricultural activities are one of the few areas for potential growth and comparatively high incomes.

Although the involvement of urban-based producers in agricultural activities is having positive affects on the production levels of some activities, as well as helping to create a consensus of the importance and significance of the sector for the national economy, there is a real danger that if the benefits of this increased investement in agriculture do not spread to campesinos, the sector will become increasingly polarized with potential confrontations among the different socio-economic groups.

## II. THE RATIONAL OF PRIVATE AGRICULTURAL PRODUCERS ORGANIZATIONS (PAPOs)

### A. Incentives to Associate

The main incentive for individual agricultural producers to organize is their need to have access to production related services and resources that can not be obtained individually. Past governments' dominant role in determining the prices of agricultural goods and in the provision of services and resources motivated producers to form organizations whose main function was lobbying. The majority of these organizations were dormant, activated occasionally to try to influence government's policies and/ or the allocation of services and resources to the sector, subsector, or organized group.

The current government's policy of leaving agricultural prices to the market, combined with its lack of resources to provide services, is forcing many producers and their organizations to seek alternative ways to satisfy their needs. Presently, the most appropriate alternative to many of them appears to be the producer organizations.

## B. Types of PAPOs: Primary Level (Local)

### 1. Sindicato (Farmers' Union)

The 'sindicato' is the oldest and most widespread type of agricultural producers organization. It is found at the local level in almost every rural community. They are also organized at the regional, provincial, departmental and national levels. The membership in the sindicatos is predominantly campesino. Their strength, as well as their capacity to deliver services, varies greatly from one to another. Promoted originally as the organizational structure to implement the Agrarian Reform, the sindicato's role has normally been that of a lobbying group to the government. A recent development by sindicatos has been the formation of Campesino Agrarian Development Corporations (CORACAs) as their specialized agricultural development service organizations. The CORACAs are in their formative stages and their strength and individual capacity varies; however, with their service orientation, they have the potential of becoming effective service delivery organizations for the campesino sector.

### 2. Agricultural Cooperatives

Agricultural cooperatives are the second most common form of PAPO. They are found at the local (communal) and regional levels (federations). Although a large number of local cooperatives are similar in structure and function to the sindicato, especially in some colonization areas, there is a small number of well established service cooperatives in different regions of the country affiliated to a Federation or Central of Cooperatives.

The membership of the cooperatives tends to be more heterogeneous than that of the sindicato, including many non-campesino producers as members. Cooperatives normally attempt to offer multiple services, and some in the past have been heavily subsidized by external donors. Some of the cooperatives visited (see Institutional Annex) are narrowing their services and are searching for mechanisms to cover the costs of these services.

### 3. Federaciones de Productores

Federaciones are found among the producers of commercial crops in the colonization areas. These federations were normally

formed to negotiate prices with a single buyer but have evolved into regulating organizations which allocate benefits and costs among the producers. They are almost always compulsory organizations, financed through obligatory membership fees. Since the price and the profit margins of the commodities have often been protected by government sanctioned agreements, these organizations at times offer social-type services rather than production related services.

#### 4. Asociaciones de Productores

Asociaciones are newest form of PAFD in the sector. Their members tend to be predominately urban-based farmers, although most include some campesinos as well. This is especially the case in the lowlands. There are, at least, two campesino dominated asociaciones: the Potato Producers Association in Cochabamba, and the National Coffee Producers Association with offices in La Paz.

The distinctive features of the asociaciones are their specialization in a single commodity and their service orientation. Initially formed as lobbying groups, most asociaciones offer, or are attempting to offer, production and marketing related services to their members. The strength and capacity of an individual asociacion varies and depends on its ability to elicit member contributions by offering needed services. Most asociaciones offer limited services and their main accomplishments thus far have been in the area of lobbying.

With some notable exceptions, the asociaciones are incipient organizations with a potential yet to be realized. Charismatic leadership, as well as the newness of the organizational form and its potential are currently their main strengths.

#### 5. Secondary Level PAFDs

Secondary level PAFDs, or organizations of primary level groups, are commonly the level at which service delivery is found due to considerations of economies of scale. Local unions and cooperatives rarely exceed 100 members and average 30 to 60 members. Among campesino producers, the regional union (Central Sindical) is the likely level where services can be delivered, and many of the CORACAs are being located at this level. An estimate of the number of producers affiliated at the regional level of a given organization is from 800 to 1,000. Even larger numbers of producers are organized in Cooperative Unions, or Federations.

Producer Federations and Associations are larger at the primary level. These usually claim to represent all producers of a crop in a given region which can number in the several thousand. Active membership in these organizations is almost always a small percentage of the total claimed. However, associations do not necessarily need full membership participation to be effective, or to provide certain benefits to all producers of a crop regardless of their participation in the

association. For example, the price of a commodity negotiated by an association usually affects all producers of that crop.

Producer associations are organized into agrarian chambers (Camaras Agropequarias) at the Departmental level in Santa Cruz and Tarija, and are in the process of being organized in Oruro, Potosí and Chuquisaca. Except for Santa Cruz, the agrarian chambers are incipient organizations with relatively few members.

### III. THE POTENTIAL OF PRODUCER ORGANIZATIONS

There is, among all agricultural producers, a growing awareness of the need to find a way to obtain production related services. The lack of alternative services, whether from the government, or from private sector firms makes PAFOs one of the immediate alternatives and motivates producers to organize them. All four types of farmer organizations described above have the potential of becoming effective service delivery organizations. Whether PAFOs can realize their potential depends on their ability to deal successfully with a series of constraints.

The capacity of a PAFD to effectively deliver services varies with the socio-economic and cultural characteristics of the members of the organization. Low income, illiterate Quechua, Aymara or Guarani speaking campesinos, living in isolated rural communities are less likely to have both the resources, and/or the managerial and technical skills needed to create an effective PAFD, than are non-campesino, urban-based professionals. The political clout, or lobbying effectiveness of campesino organizations is also likely to be less effective than that of urban professionals in influencing the allocation of resources both from the Project and from other sources. Finally, the long history of political manipulation of rural and agricultural organizations, especially campesino unions, constitutes one of the most serious constraints to open and efficient agricultural organizations.

Although this potential constraint is important in its limitations to the potential of PAFDs, it is their organizational structure that is of fundamental importance. Structurally, PAFDs can be distinguished as open and closed organizations, based primarily on the relationship between the services provided, and the mechanisms used to recruit members and distribute costs and benefits.

#### 1. Open Organizations

Open organizations are those that attract and keep members through the services they offer. If the services are efficient and competitive, the producers have an incentive to support their organization voluntarily. Open organizations are open to all producers of a crop in a given area. Members' benefits are allocated in proportion to their contributions. This allows for heterogeneous membership and provides incentives to the larger

and better-off producers to support the organization. Proportional benefit distribution also permits a 'free rider' effect, which can be important in benefiting smaller marginal producers. Mechanisms for member contributions being tied to the services provided contribute to the efficiency and competitiveness of the organization, and to responsive leadership and management. Open organizations can be found among all four types of existing PAPOs.

## 2. Closed Organizations

Closed organizations are those that restrict membership and use compulsory mechanisms to obtain member contributions. Closed organizations often have control over the number of producers, the acreage in production, and the price which a producer receives. They are the result of either government protection or a producers' monopoly. The main service these organizations provide is the protection of the privileged position of the producers of a given crop. Since prices and profit margins are often fixed, there is little incentive to provide production related services. In effect, the services provided by these organizations are normally of a social nature (schools, clinics, etc.). They are believed to have entrenched and unresponsive leadership and management, whose main functions are to negotiate prices and profit margins with a single buyer and to seek protection from the government. Closed organizations are common and are found in all four types of PAPOs.

## IV. SELECTION CRITERIA FOR PAPO SELECTION

The following criteria are based on a composite of positive social and organizational characteristics observed among the different PAPOs visited during intensive review. They are meant to contribute to the selection of PAPOs with the potential to become effective service delivery organizations reaching as many potential members as possible. The criteria are:

1. The organization should be open. Membership in the organization should be open to all producers of one crop in a given area. Organizations should tailor their services to a heterogeneous group of producers.

2. Incentives to join and support an organization should be based on the services the organization offers. These services should be narrowly defined to provide for the production and marketing needs of members.

3. The benefits of belonging to an organization should be higher than the costs. The benefits or services offered should have a comparative advantage over similar services available elsewhere.

4. Members' benefits should be allocated in proportion to their contributions. This allows for heterogeneous membership

and provides incentives among the larger and better producers to support the organization. Proportional benefit distribution permits a 'free rider' effect, which can benefit smaller, marginal producers.

5. The mechanism to obtain member financial contributions should be based and tied to the services provided. A common mechanism used is to charge the full cost of service delivery.

## LIST OF PERSONS CONTACTED

### Chuquisaca

Acción Cultural Loyola-ACLO  
Javier Velasco-Director  
Asociación de Productores de Hortalizas-ASOPROHL  
Oscar Alvarez-Gerente  
Agrocentral  
Felix Paniagua Zambrano-Gerente  
Camara Agropecuaria de Chuquisaca  
William Torrico  
Gonzalo Selame  
Jaime Selame  
Corporación de Desarrollo de Chuquisaca-CORDECH  
Edmundo Zelada-Asesor  
Armando Serrudo-Gerente UCF

### Cochabamba

Asociación de Apicultores  
José Carlos Blanco Antezana-Presidente  
Asociación Departamental de Avicultores-ADA  
Willy Soria-Presidente  
Asociación de Floricultores  
Carlos Hinajosa-Presidente  
Alfonso Saavedra-Asesor  
Asociación de Productores de Leche-APL  
Mario Mercado-Presidente  
Asociación de Productores de Papa-APP  
Marta de Garcia-Asesor CeDeAgro  
Rodolfo Arce-ARADO  
Cooperativa Integral de Servicios de Punata  
Guido Delgadillo-Presidente  
Emilio Canno-Gerente  
Secretaría de Desarrollo del Tropico Boliviano  
Oswaldo Antesana

### La Paz

American Institute for Free Labor Development-AIFLD  
Richard Oulahan-Director  
Jaime Vásquez-Advisor  
Liga del Medio Ambiente-LIDEMA  
José Lorini-Presidente  
Javier Lopez-Secretario Ejecutivo  
Ministerio de Asuntos Campesinos y Agropecuarios-MAACCA  
Alejandro Pacheco-Subsecretario de Asuntos Campesinos  
P.L. 480 Secretaria Ejecutiva  
José Sanjinés-Subsecretario Ejecutivo  
Reynaldo Marconi-Jefe Departamento Económico

## Oruro

Central de Cooperativas Aroma  
Alberto Quiroga-Presidente  
European Economic Community  
Rudy Solleneck-Director

## Potosi

Camara Agropecuaria de Potosi  
Juan Aitken  
Jaime Acuña  
Jorge Torres  
Gustavo Diaz

## Santa Cruz

Camara Agropecuaria del Oriente-CAD  
Mario Melgar Peredo-Vice Presidente  
Ovidio Roca Avila-Asesor General  
Centro de Investigación Agrícola Tropical-CIAT  
Roberto Baldomar-Sub-director  
Corporación Regional de Desarrollo-CORDECRUZ  
Juan Galvez-Ayudante de Presidencia  
Asociación Departamental de Avicultores-ADA  
Juan Alberto Rojas-Gerente  
Asociación de Horticultores y Fruticultores-ASOHFRUT  
Renato Leigue Rivera-Presidente  
Juan Carlos Alvarez-Gerente General  
Asociación de Productores de Algodón-ADEPA  
Ernesto Antelo-Gerente  
Asociación Nacional de Productores de Maíz y Sorgo-  
PROMASOR  
Melgior Daeny Gonzalez-Gerente General  
Federación Nacional de Productores de Oleaginosas-  
ANAPD  
Mario Moreno-Gerente General  
Federación de Ganaderos de Santa Cruz-FEGASACRUZ  
Fredy Teodovich-Gerente General  
Federación Nacional de Cooperativas Arroceras-FENCA  
René Santo-Presidente  
Bernabe Yupanqui-Tesorero  
Roberto Castro-Asesor; AIFLD  
Financiera de Desarrollo, S.A.-FINDESA  
Karin Steinback-Gerente

## Tarija

Acción Cultural Loyola-ACLO  
Jose Felix Gutierrez  
Marcos Vandervelt  
Asociación de Avicultores  
Omar Krayacich-Presidente  
Ricardo Valdimir-Asesor

Asociación de Cafeteros (nine different groups)  
     Francisco Montero-Presidente, 15 de Abril  
 Asociación Departamental de Lecheros de Tarija  
     José Bazoberry-Vice-Presidente  
     Jaime Lujan  
     Heliodoro Macillo  
 Federación de Ganaderos del Gran Chaco  
     José Sanchez Moreno  
     José Romero  
 Asociación de Productores de Algodon del Gran Chaco  
     Pastor Grajeda-Presidente  
     Edgar Rodo-Gerente  
 Asociación de Productores de Oleaginosas y Granos-APOGRA  
     Alberto Quiroga-Presidente, Yacuiba  
     Mario Magro-Representante  
     Eduardo Sanjines-Presidente, Villamontes  
 Asociación de Viticultores-ASOVIT  
     Jorge Vito Blacut-Presidente  
     Santiago Sfarcich  
     Hugo Muñoz  
 Camara Agropequaria de Tarija-CATAR  
     René Paz-Presidente  
     Jaime Castellanos-Vice-President  
 Camara Nacional de Diputados  
     Hon. Manuel H. Garcia Mealla- Diputado  
 Cooperativa Integral Campesina-COINCA  
     Esteban Fernandez-Presidente  
     José Sigler-Gerente  
 Cooperativa Integral del Gran Chaco-  
     Never Pacheco-Gerente

## INSTITUTIONAL ANNEX

The possible criteria to be used to select which PAPOs to include in the Project are many, i.e., size, form of organization, financial autonomy, member composition, location, and crop characteristics, among others. It is suggested that there be three levels of selection, the first being that all PAPOs meet some minimum standards in order to pre-qualify, and then priority consideration be given to those PAPOs whose principal products have certain production and demand characteristics. Finally, there are some more discretionary, albeit important, factors to consider in order to make the final PAPO selection.

On the first level, in general, the Institutional Summary matrix shows that most of the PAPOs interviewed meet the minimum standards suggested for pre-qualification. As noted above in the chapter on Institutional Analysis, however, there are issues of quality to consider. Some organizations have higher success levels than others in their present service deliveries. Some have greater capabilities of implementing new or improved services, better organized accounting systems, or more efficient income collection methods. Even here, though, some flexibility of judgement must be recommended, as it is not the Project's intention to work only with the best prepared groups. The importance of the quality of each characteristic varies within the context of each organization, with the quantity and complexity of the demands made on it. All of the groups but one have already obtained legal standing, but the exception has applied and is now going through the process. While this group would currently be ineligible for credit, it could still be assisted by the Project in many other ways until final legal approval is given. While 25 of the 29 cases have their own offices, a more detailed examination of the other 4 groups may show that this is not a decisive factor. Something similar may well be the case with reference to having at least one paid staff member--the dynamism and dedication of one or more volunteers may be more promising than the halfway efforts of poorly paid staff members. The important characteristic of openness has some ambiguities. The CAO and CAMAT accept only one organization in a given line of production in order to discourage divisiveness. At least one of the older groups, the poultry producers' group in Cochabamba, has evolved to what is probably a natural stage of consolidation in an industry with notable economies of scale, following a similar trend in the poultry industry all over the world. Certainly, the CAO and CAMAT should not be excluded from the Project, and even the poultry group in

Cochabamba might notably benefit, given its level of maturity, from very precise TA in some production areas. So, even the minimal standards proposed must be used with caution and commonsense.

The second level of PAPO selection should be based on criteria concerning certain strategic characteristics of their principal products. By far the most critical, and most often overlooked, factor in deciding which production activities to encourage is the relative elasticities of production and demand of the different products. Unless more potatoes can be profitably produced, i.e., find enough consumers willing to pay the required price, then more potato production should not be promoted. The best technical assistance in the world cannot be successful if the product can't be profitably sold. Some products, compared to others, have more technical possibilities of reducing costs through more efficient factor use (some products are more responsive to better soil analysis and more accurate fertilizer recommendations, improved seed varieties tailored to local conditions, etc.) or through economies of scale. Obviously, these favored products can lower their costs of production while increasing output, and are better able to meet the need to lower prices to consumers in order to convince them to increase their purchases. On the other hand, of course, some products have a greater price elasticity of demand than others. To the extent that a given price decrease in tomatoes will encourage a greater increase in demand than will a similar price decrease in potatoes, then the Project should work with tomato PAPOs rather than potato PAPOs. Production specialists need to study the current technical production conditions in Bolivia of all the crops to be considered and compare these to the reasonable technical changes which could likely be introduced, given Bolivian factor costs and expected prices. On the demand side, import and export studies will provide information to show which products might be quickly expanded without greatly lowering prices. Beyond this, if there are no local data on price elasticities of domestic demand, international data should give some idea of which products are more promising than others, i.e., meats, milk, fruits, and some vegetables will probably have a more price elastic demand than sugar and potatoes. So, other things being equal, the Project will give priority to PAPOs whose principal products have the greatest likelihood of increasing output at profitable prices.

On the third level, there are several factors to be considered. Labor-intensive products should be given preference over capital-intensive ones. Smallholder groups should be preferred over groups dominated by urbanites. Larger groups will be preferred over smaller groups. Cost-effectiveness of the use of Project personnel and TA specialists favors having the PAPOs close together, producing the same crops, and having similar problems. Obviously, a PAPO with a unique product in a distant province and over bad roads would be comparatively expensive to service. There are

real logistical advantages to having several PAPOs close together, and there are advantages to having several PAPOs with the same products (and probably similar TA needs, using the same in-depth product studies, and accumulating expertise). Further factors to consider are whether the Project, in spite of the above, should select a mix of PAPOs with different levels of competence and different kinds of needs in order to gain more experience more rapidly. Timing of Project intervention is critical. Knowledge and use of agricultural calendars will permit selection of those PAPOs whose activities allow Project personnel to work with them at different times of the year. In order to help make the final choices, it may be convenient to prepare more detailed matrices and to group the PAPOs by different characteristics, i.e., by estimated production and demand elasticities, by import substitution potential, by export potential, by labor intensities, by capital requirements, or by whatever other factors seem appropriate.

In summary, the selection of target PAPOs is a process. The first two levels of criteria, while certainly requiring judgement in weighing the different factors, and requiring time to develop new information to help in this weighing, will finally select those PAPOs with the most chance of production and economic success. The pre-qualification minimum standards give a first approximation to those groups with which the Project will find it most feasible to work. The second-level criteria will show which products are the most promising. The third level criteria are different, representing value or political choices more than economic ones. Used consistently, this procedure will reduce personal biases, making the bases of selection clear and promoting objectivity in identifying those PAPOs with the most likelihood of working successfully with the Project and fulfilling its objectives.

It is important to note that the PAPO descriptions are based almost solely on interviews with representatives of the these groups. In most cases, the information could not be checked with other sources to confirm the accuracy of the facts or the reasonableness of the opinions expressed. In the few instances where our opinions are given, these are identified as such. The two overwhelming, constantly reiterated themes were the needs for technical assistance and credit. The Institutional Summary matrix, which follows, shows this clearly. Every organization, without exception, said they needed TA. Every organization, but one, said they needed the help of a marketing specialist, while all but four asked for production assistance (usually for quite specific problems which they have already identified), and all but six believed they needed help in administration/management. There are even nine groups with computers or planning to buy one soon, and all requested aid in improving and expanding their present, limited use. In credit, all but one said they needed working capital, and something over half wanted investment capital. Some of the latter have specific projects in mind, but lack

feasibility studies or need help in better defining and planning projects.

Some of the figures can be deceptive if one is not aware of the quality differences mentioned above. FENCA has a single, all-purpose, poorly paid "cooperative technician," while CAO has 18 professional staff members. This must be kept constantly in mind when interpreting the figures. More detailed information is given in the individual case descriptions.

The Institutional Summary matrix follows.

INSTITUTIONAL SUMMARY

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
1. CAO	2	(10)	x	x	x	x	x	x																														
2. ADA	1	249	x	x	x	x	x	x	x																													
3. ASOFRUT1	3250		x	x	x	x	x	x	x	x																												
4. BENCA	2	8880	x	x	x	x	x	x	x																													
5. ANAPU	1	1660	x	x	x	x	x	x	x																													
6. ADLPA	1	50	x	x	x	x	x	x	x																													
7. PROMAGRI	1076		x	x	x	x	x	x	x																													
8. FEGASACH2	7880		x	x	x	x	x	x	x																													
9. CABAT	2	(11)	x	x	x	x	x	x	x																													
10. ASOAN	1	100	x	x	x	x	x	x	x																													
11. ASOLECHI1	25		x	x	x	x	x	x	x																													
12. COINCA	2	350	x	x	x	x	x	x	x																													
13. ADEPACH	1	150	x	x	x	x	x	x	x																													
14. ASOVIT	1	660	x	x	x	x	x	x	x																													
15. ASOVAL	1	100	x	x	x	x	x	x	x																													
16. ASOVAL	1	100	x	x	x	x	x	x	x																													
17. ASOVAL	1	100	x	x	x	x	x	x	x																													
18. CAP	2	(4)	x	x	x	x	x	x	x																													
19. CAP	2	(15)	x	x	x	x	x	x	x																													
20. ASOVAL	4400		x	x	x	x	x	x	x																													
21. ASOVAL	1	377	x	x	x	x	x	x	x																													
22. ASOVAL	1	56	x	x	x	x	x	x	x																													
23. COINDECO2	5000		x	x	x	x	x	x	x																													
24. ASOVAL	1	1200	x	x	x	x	x	x	x																													
25. ASOVAL	1	100	x	x	x	x	x	x	x																													
26. APP	2	40000	x	x	x	x	x	x	x																													
27. ARADO	1	2200	x	x	x	x	x	x	x																													
28. ASOVAL	1	24	x	x	x	x	x	x	x																													
29. ASOVAL	(10)		x	x	x	x	x	x	x																													
TOTALS	75710		29	25	24	24	27	26	15	1	0	7	3	1	9	6	17	10	11	20	7	14	10	0	17	9	5	11	1	20	16	25	28	27	9			

PAP0 description

- 1. Name
- 2. Organizational level
- 3. No. members
- 4. Personeria juridica
- 5. Has office
- 6. At least 1 paid staff member
- 7. Providing some member services
- 8. Open to all producers of crop
- 9. Financially self-supporting
- 10. Predominately smallholders

LOCATION--DEPARTMENT

- 11. La Paz
- 12. Oruro
- 13. Cochabamba
- 14. Chuquisaca
- 15. Potosi
- 16. Tarija
- 17. Santa Cruz

PRODUCT CHARACTERISTICS

- 18. Labor intensive
- 19. Capital intensive
- 20. Mechanized operations
- 21. Manual operations
- 22. Domestic demand limited
- 23. Domestic demand elastic
- 24. Export potential
- 25. Imported currently
- 26. Processing required
- 27. Animal product
- 28. Fruits and vegetables
- 29. Field crop
- 30. Other

## NEEDS

31. Working capital needed
32. Investment capital needed
- Technical Assistance Needs
33. Production
34. Marketing
35. Administration/management
36. Computer

## ACRONYMS

CAO: Camara Agropecuaria del Oriente  
ADA: Asociacion Departamental de Avicultores  
ASOHFRUT: Asociacion de Horticultores y Fruticultores  
FENCA: Federacion Nacional de Cooperativas Agroceras  
ANAPO: Asociacion de Productores de Oleaginosas y Trigo  
ADEPA: Asociacion de Productores de Algodon  
PROMASOR: Asociacion Nacional de Productores de Mais y Sorgo  
FEGASACRUZ: Federacion de Ganaderos de Santa Cruz  
CAMAT: Camara Agropecuaria de Tarija  
ASOGAN: Asociacion de Ganaderos del Gran Chaco  
ASOLECHE: Asociacion de Lecheros (Tarija)  
COINCA: Cooperativa Integral Campesina  
ADEPACH: Asociacion de Productores de Algodon del Chaco  
ASOVIT: Asociacion de Viticultores  
ASOAVI: Asociacion de Avicultores  
ASCADE: Asociacion de Caneros de Bermejo  
APOGRA: Asociacion de Productores de Oleaginosas y Granos  
CAP: Camara Agropecuaria de Potosi  
CACH: Camara Agropecuaria de Chuquisaca  
AGROCENT: Central Local de Cooperativas Agropecuarias  
ASOPROHL: Asociacion de Productores de Hortalizas y Legumbres  
ADACQCH: Asociacion Departamental de Avicultura (Cochabamba)  
COINSECO: Cooperativa Integral de Servicios Cochabamba, Ltd.  
ASOPROLE: Asociacion de Productores de Leche  
ASOAPI: Asociacion de Apicultores  
APP: Asociacion de Productores de Papa  
ARADQ: Accion Rural Agricola de Desarrollo Organizado  
ASOFLOR: Asociacion de Floricultores  
CENAROMA: Central de Cooperativas Aroma

## INDIVIDUAL PAPO DESCRIPTIONS, BY DEPARTMENT

### SANTA CRUZ DEPARTMENT

1. Name: Camara Agropecuaria del Oriente
2. Personeria juridica: October, 1966
3. No. members: 10 organizations.
4. Budget: The CAO budget comes from contributions from its member organizations, but many of them are in arrears. It has some profits from its import and sale of inputs, but the former volume has fallen.
5. Area covered: Dept. of Santa Cruz.
6. Principal products: Member organizations produce cotton, soybeans, wheat, maize, sorghum, rice, fruit, sugar cane, milk, cattle, pigs, and poultry.
7. Services to members: Representation of members' interests before local and national government bodies and other groups, negotiating lines of credit for member groups, preparing feasibility studies, providing technical assistance, serving as a forum for discussions of common problems and desirable policies, helping market members' output, and importing inputs and machinery.
8. Brief description:

CAO is composed of ten associations, specialized by products, as noted above in Section 6. CAO accepts only one organization per agricultural product, even when more than one organization exists in that line (there are 4 sugarcane producers' groups).

The Board of Directors of CAO is composed of the presidents of the member associations, who elect a president and vice-president. The Board names a general manager. There are 18 salaried professionals on the staff. CAO occupies rented offices and has reasonable equipment.

CAO's professionals are spread thinly. This does not permit real specialization in exportation, say, with someone thoroughly knowledgeable about Brazilian import procedures, fees, and taxes; seasonal production and price trends; consumer preferences about product varieties, sizes, and colors; legal and customary processed product specifications; a directory compiled over time of reliable Brazilian import agents and brokers; and any other information which may facilitate Bolivian agricultural exports.

CAO's budget has declined recently, under the effects of the current economic crisis in Bolivia and due to legal changes contained in the Decreto Supremo No. 21060, of August 1985, which abolished many of the previously established fees for agricultural organizations. A CAO service called the Almacen Central Agricola y Pecuaria (ACAP) imports and sells inputs used by the members' farmers. The volume handled by ACAP

has declined, due to reduced credit available, and the profitability of the service has fallen.

9. Needs: TA for carrying out in-depth product studies, serious feasibility and marketing studies, Help in preparing a monthly or quarterly publication describing and analyzing production and price developments, import/export information, and other subjects of interest to its member organizations. CAO needs more professional staff to permit more specialization by product and activity.

1. Name: Asociacion Departamental de Avicultores (ADA)
2. Personeria juridica: 23 April 1977.
3. No. members: 144, plus 1 group (Okinawa) with 105 members.
4. Budget: ADA has its own budget, provided by income received under terms of Decreto Supremo No. 16826, from poultry feed mills and baby chick producers. ADA gives 10% of its income to CAO because the latter has more political weight.
5. Area covered: Dept. of Santa Cruz.
6. Principal products: Poultry eggs (brown) and broilers, as well as poultry feed and baby chicks.
7. Services to members: Technical assistance, marketing, sanitary and medical products, representation before governmental agencies, aid in soliciting credit.
8. Brief description: ADA's membership is open to individuals and groups, having accepted 24 new members in 1985 (10 broiler producers, 13 egg producers, and 1 fertile egg producer; 6 were Japanese, to judge by their names), to add to their existing 225 members, for a total of 249 at the end of 1985. Its members include not only poultry producers, but also hatcheries and feed mill companies. ADA's income in 1985 was about US\$25,000 (as measured by the year-end peso/US\$ exchange rate). Almost three-quarters of this came from feed mill payments, one-fifth from hatcheries, and the rest from farms producing their own feed. All of these pay a percent of the value of their output. Poultry farmers, then, do not make direct payments to ADA, but they do support it indirectly through higher prices for their main inputs of feed and chicks.  
In 1985, ADA successfully negotiated an IDB credit of US\$40,000, distributed among 36 members, to import chicken feed and equipment.  
Also in 1985, ADA remodeled their offices, installed a small telephone switchboard, and almost completed the construction of a pathology laboratory to aid in diagnosing poultry diseases.  
Their annual report contains a complete accounting of all funds received and disbursed, including a detailed list

of all income sources, the names and amounts received by each of the 36 recipients of the IDB credit, names of new members admitted, and details of other activities. Santa Cruz produces about 7 million eggs/month (75% going to La Paz), Cochabamba about 3.5 million, and Tarija perhaps 0.5 million. The ADA representative interviewed said he had 32,000 hens, half in cages and half on the floor. (Opinion: There have been serious poultry disease problems in the Santa Cruz area recently, and there are many other problems to resolve, but the ADA gives the impression of a strong, purposeful, open organization, still expanding and improving its services to its members.)

9. Needs: Production and laboratory TA.

1. Name: Asociacion de Horticultores y Fruticultores (ASOFRUT)
2. Personeria juridica: April 1981.
3. No. members: 14 groups with 3250 members.
4. Budget: Each member pays US\$2.50/year, plus a profit is earned on the sale of imported inputs and nursery plants (fruit trees and pineapple), and a small spread is levied on credits negotiated by the association.
5. Area covered: 6 provinces of Santa Cruz (Florida, Cabellero, Vallegrande, Andres Ibanez, Sara, and Nuflo de Chavez).
6. Principal products: Tomatoes, onions, bell peppers, lettuce, carrots, cucumbers, locoto (a hot pepper), cauliflower, peas, potatoes, pineapples, apples, citrus, and bananas.
7. Services to members: Negotiate credit, sell inputs, market output, and technical assistance.
8. Brief description: The association is quite young, but has worked actively in the various services it offers. Technical assistance is provided at a 2 ha demonstration farm, although there is also an "egresado agricola" at each of the 12 input stores. There is a unit in charge of the purchase and sale of inputs, managing the 12 local stores scattered through the main farm areas. (The ASOFRUT manager says that the inputs sold by CAO's ACAP are no longer competitively priced, in part due to the present extensive contraband and tax avoidance in which CAO cannot participate.) There are 16 salaried people. ASOFRUT has rented offices, well equipped, including a Wang hard disk computer which cost US\$7000 (machine, custom program, and training). ASOFRUT has just taken over a vegetable packing plant called PETOSAN (Productores de Tomates de San Isidro), located in San Isidro, and a plant for producing marmalade in Samaipata. These plants do not have an auspicious history, belonging originally to CORDECRUZ, are over-dimensioned, and never operated either for a

long time or profitably. The ASOFRUT president and manager say they have no technicians capable of operating such plants, they know nothing about acquiring inputs or selling the outputs, but believe somehow they will be an asset to the association. CORDECRUZ did not give the association a marketing study justifying the purchase of the plants, nor apparently will they be able to provide any technical assistance. (Opinion: This is an example of a possible conflict of interest between a regional development agency which has a white elephant on its hands and an eager but inexperienced local organization which can be persuaded to take it over.) In addition to the above, ASOFRUT is looking at a private packing plant near Montero, closed for four years now, which may be available for rent or purchase.

ASOFRUT is considering other ideas. They already have two shortwave radios, in San Isidro and Santa Cruz, and would like to have one in each locality. They are promoting the idea of a wholesale market in Santa Cruz. They are going to install "model" retail stands in existing markets, starting with a single one soon, which will stress cleanliness, graded products, packaged in sizes for individual sale. There is need for refrigerated storage.

They have just completed negotiating a loan with the JDB for 80 tractors. Each tractor, delivered April 5, 1986, went to a group of ten farmers, so 800 members will benefit. Each group has from 20 to 30 ha. The Brazilian manufacturer has agreed to set up a repair shop, completely equipped, and to train two farmer/mechanics for two months. This shop will be located at the San Isidro demonstration farm. ASOFRUT signed as guarantor. There has been a delay of almost two years since the initial conversations.

The computer is already being used for many purposes and will soon have the results of an extensive survey carried out with a two-page questionnaire for each member. This survey covers farmer and farm characteristics, crops and cropping techniques, soils, climate, energy, labor used, machinery, transport, distance, credit, marketing, etc. These data can then be sorted and related to many factors.

The principal products of ASOFRUT's members are positively income elastic and their demand should increase with economic development. Many of them require considerable skill to produce and should have the help of well trained extension agents.

9. Needs: ASOFRUT needs technical assistance in many fields, in administration, agriculture, marketing, and in the processing plants recently acquired.

1. Name: Federacion Nacional de Cooperativas Arroceras (FENCA)
2. Personeria juridica: August 1964.
3. No. members: 200 cooperatives with average of 40 members each, total of 8000.
4. Budget: All rice producers are legally required to pay FENCA 1.5% of their production value, but this is difficult to collect now since the roadside customs stations (trancas, aduanillas) no longer deduct it. The rice mills can discount this, but they do not always cooperate.
5. Area covered: Santa Cruz, Chapare, Caranavi-Beni.
6. Principal products: Rice.
7. Services to members: Expedite land titles, negotiate prices paid by mills, rent storage space, credit, sell inputs.
8. Brief description:
 

FENCA has its own offices, with a minimum of personnel, including one "cooperative technician." The President functions as manager. Most of the members are migrants from the Altiplano, 90% of them live in Santa Cruz Dept., and all have smallholdings, averaging about 10 ha, with about 5 ha in rice.

FENCA is the largest CAO member, but also the poorest. They feel they get few benefits from CAO except help in political and legal matters and in soliciting credit. They believe they are discriminated against by other CAO members because of their geographic and campesino origins.

FENCA has a very weak administration and is ineffective operationally.
9. Needs: FENCA needs TA in every aspect of its operations. They have recently contracted for a feasibility study for a rice mill in the Montero area. The study has some useful data, but is essentially a sales document to be presented for a bank loan. Nevertheless, if further study should show the mill to be feasible, TA could be centered on it. The members are interested in diversifying their crops, but need TA to do so.

1. Name: Asociacion de Productores de Oleaginosas y Trigo (formerly Asoc. Nacional de Productores de Oleaginosas, and still known as ANAPO)
2. Personeria juridica: 1978.
3. No. members: 1640, including 20 to 25 firms with 4 to 5 individuals each.
4. Budget: Members are to pay 1.5% of the value of their production to ANAPO. This was formerly collected at the roadside customs stations but now they are dependent on the oil processing mills to discount this. The mills are not very cooperative, however, and a better system has to be devised. They have a 3% profit

- on sale of inputs.
5. Area covered: Dept. of Santa Cruz. They formerly considered themselves to be national (i.e., including Tarija, the other producing region, with about 5% of national soybean production vs. 95% in Santa Cruz), but they believe their problems and interests do not coincide enough to justify this.
  6. Principal products: Soybeans, with small amount of wheat.
  7. Services to members: Inputs, negotiation of storage space, prices, and credit; representation of members' interests.
  8. Brief description: ANAPO has its own offices (rented), with 11 employees, including 8 professionals. Its membership is unusual, being composed of a majority of international immigrants (Mennonites, Japanese, Russians, and Peruvians), as well as some Bolivians. ANAPO recently bought a seed processing plant. Because they have not been able to negotiate a satisfactory price this year with the oil mills, they are renting silos and investigating exports to Brazil. They would need a large credit to finance this. ANAPO retains 70% of its income, contributing 15% to the CAO and 15% to CIAT.
  9. Needs: Devise a new means to replace lost revenues. TA in administration and exports.

1. Name: Asociacion de Productores de Algodon (ADEPA)
2. Personeria juridica: Yes.
3. No. members: n.a.
4. Budget: ADEPA legally becomes the owner of cotton as soon as it is baled and markets it to industrial users. Producers contribute US\$1/100 lbs, amounting to US\$66,000 in 1985. The association earns a little by depositing the sales receipts in interest bearing accounts for a few days while producers' statements are being prepared. The 1985 budget was for US\$120,000, but income was just more than half this amount. The sale of domestic cotton has been very depressed because of imports from Paraguay. ADEPA contributes 10% of its income to CAO.
5. Area covered: Dept. of Santa Cruz.
6. Principal products: Cotton.
7. Services to members: Technical assistance for production, research ties with CIAT, inputs, negotiating credit.
8. Brief description: ADEPA members produce most of Bolivia's cotton, with small farms having up to 50 ha, medium ones up to 200 ha, and larger ones above that. Modern cotton production began about 1969, with most of the early output exported. Currently, the capacity of domestic cotton gins and mills far exceeds the actual use, perhaps by 3 to 1.

9. Needs: ADEPA needs more extension agents (4), more on-farm research, more and cheaper credit.

1. Name: Asociacion Nacional de Productores de Maiz y Sorgo (PROMASOR)

2. Personeria juridica: 1978.

3. No. members: 1096; they have some cooperative members and branch groups in Cochabamba, but no details were available.

4. Budget: PROMASOR charges 3.5% commission for marketing members' products; members pay 1.5% to PROMASOR on what they market themselves. This year they have received a 30% advance from interested grain buyers because the bank is no longer giving warrant credit and because production is low this year, so buyers are eager to assure supplies.

The 1.5% commission was formerly a legal obligation, but the D.S. No. 21060 abolished this, and while members still agree to pay it, in fact many of them ask buyers not to deduct it.

5. Area covered: Dept. of Santa Cruz.

6. Principal products: Maize, sorghum, soybeans.

7. Services to members: Marketing, storage, credit negotiation, production TA, inputs.

8. Brief description: PROMASOR is a partner in a silo company and has a paid technician in charge of storage. Members have about 40,000 ha of maize this year, while last year they had 64,000 ha; there is a lot of variation from year to year. Eighty percent of the maize is used in poultry feed. There are 15-20 maize buyers. Last year's heavy maize production caused PROMASOR to make arrangements to sell to Peru, but a change there in import taxes made that unprofitable, and they contacted Brazilian buyers. A sudden increase in domestic prices finally made it possible to sell everything locally. Fertilizers are not used, but herbicides are. All work is mechanized. Imported seeds are used. Production averages 3 MT/ha.

They have a paid extension agent and a storage man (with MS from US), plus other help, but they also depend on a lot of volunteer work. This is no longer efficient, and many members are aware of it, so they need to hire more professional staff.

About 75% of the members have less than 50 ha, 20% have from 50 to 200 ha, and 5% have over 200 ha.

They think CAO functions well, especially in macro aspects of credit, in legal matters, and, in negotiating prices before D.S. No. 21060 came into effect.

9. Needs: They have an Apple PC, but they need help to take better advantage of it. Production and storage TA would

be useful to bring their people up to date. They are very interested in minimum tillage. There is a legal change being studied to require the use of other grains in bread flour, and they need information on this.

1. Name: Federacion de Ganaderos de Santa Cruz (FEGASACRUZ)
2. Personeria juridica: Yes.
3. No. members: 5000, grouped in 22 branches.
4. Budget: FEGASACRUZ receives legal fees for providing documents required for slaughtering animals (since 2 March 1984). Formerly, all cattlemen had to belong to FEGASACRUZ, in practice, because they needed certificates issued only by FEGASACRUZ in order to move or sell cattle, but this was abolished by D.S. 21050.
5. Area covered: Dept. of Santa Cruz.
6. Principal products: Cattle.
7. Services to members: Slaughter certificates, inputs, TA, negotiating credits, representation of members' interests, and a market price bulletin. The most distant member branches have radios supplied by the Federation. Their input prices are no lower than those in commercial firms, as they believe these firms are indispensable for their members; the Federation's input services are there only to avoid abuses or scarcities. Not all members agree with this policy. The Federation was able to lower the price of 100 tractors (purchased under an IDB credit) by 30%. The Federation has people in the slaughterhouse to control members' livestock.
8. Brief description: FEGASACRUZ is one of the older, more powerful PAOs. Its members have some 1,300,000 head of cattle, with 97% of them having fewer than 300 head, 2.3% of the members from 300 to 2500 head, and 0.7% over 2500 head.
9. Needs: TA in administration and production (they would like to have two or three cattlemen from Colombia come here for 30-60 days as consultants, for example). They have had computers (since 1982), but feel they could be used for much more than the present routine accounting.

#### TARIJA DEPARTMENT

1. Name: Camara Agropecuaria de Tarija (CAMAT)
2. Personeria juridica: 1983.
3. No. members: 8 associations.
4. Budget: CAMAT will charge 0.5% of the IDB loans it recently negotiated for its members. The sugarcane producers

have offered 0.25% of the value of their production. Prior to this, CAMAT has collected voluntary donations for small items, as travel, stationary, and communications.

5. Area covered: Dept. of Tarija.
6. Principal products: The member groups produce grapes, sugar cane, cotton, soybeans, grains, fruit, milk, beef, pork, and poultry.
7. Services to members: Negotiating credits, representation of members' interests.
8. Brief description: Although legally constituted in 1983, CAMAT was inactive until late 1984 when it was learned that the IDE had initiated a farm machinery credit line. This stimulus and the eventual success in getting the loans approved have dynamized CAMAT and its members into appreciating its many possible functions. (Opinion: Although CAMAT is largely a paper organization up to now, with no offices of its own, no employees, and no capital, it has some officers and member groups who know the Santa Cruz chamber and its successes and who seem determined to move ahead.)
9. Needs: TA for organization, for feasibility and other studies, and for advising on the planned computer system. It needs offices and some paid, full-time professional staff. CAMAT would like to form its own internal savings and loan society. It needs investment and operating capital funds.

1. Name: Asociacion de Ganaderos del Gran Chaco
2. Personeria juridica: 1976.
3. No. members: 100.
4. Budget: The Asociacion receives, by law, the equivalent of one kg of meat (about US\$.70, currently) for every animal slaughtered in the Chaco or transported out of the region.
5. Area covered: Chaco.
6. Principal products: Cattle.
7. Services to members: TA for improved pastures and animal health, negotiating prices and transport costs.
8. Brief description: The average member has 150-200 head of cattle, while the largest has over 1000.
9. Needs: The most urgent and the most important is credit. They need TA in administration and production.

1. Name: Asociacion de Lecheros (of Tarija)
2. Personeria juridica: 1976.
3. No. members: 65.
4. Budget: The PIL discounts 2% of the value of members'

deliveries; for February, for example, this amounted to US\$100, but it is this high for only a few months and falls to almost nothing during the winter.

5. Area covered: Tarija.

6. Principal products: Milk.

7. Services to members: Inputs, including concentrates, as they have funds to buy them. PIL provides veterinary services.

8. Brief description: The members interviewed see little future for milk production in Tarija unless the seasonal forage scarcity and the low price of milk are favorably resolved.

The price of milk is the only agricultural price still subject to price controls (currently \$450,000 pesos/liter delivered to PIL and \$600,000/liter to the public, about US\$.22 and .30, respectively) and it must be increased if milk production is to continue. PIL, Tarija, has a capacity of 50,000 liters/day, but the producers have never delivered more than 1,000 l/day. PIL depends on donated, imported powdered milk, which is much more profitable than buying local fresh milk.

9. Needs: Their greatest immediate, and chronic, need is for a fund to buy forage and concentrates. These products are often scarce here, and transportation is so expensive that these should be purchased in quantity.

Powdered milk donations from other countries should stop, as the GOB and PIL will never foster local production so long as they can get milk for free and then sell it.

1. Name: Cooperative Integral Campesina (COINCA)

2. Personeria juridica: 1975.

3. No. members: 350 families in 22 communities.

4. Budget: Much of its income over the years has come from grants from religious groups and international donors, as ACLO and the Inter-American Foundation. They are currently expecting a loan from the Confederacion Nacional de Cooperativas de Ahorro y Credito. They also had profits from their wine making until last year, when they produced no wine because of internal, organizational problems.

5. Area covered: Valley of Tarija (15 communities), O'Connors province (2 communities), and Sud Cinti province in Chuquisaca (5 communities).

6. Principal products: Wine, potatoes, chickens.

7. Services to members: Sells inputs (tools, fertilizers, and "remedies"), negotiates credits, buys some grapes for its winery from members (about 30% of their production), negotiates prices for members' grapes sold to other wineries.

8. Brief description: COINCA was organized by ACLO. Of the 22 communities, 11 (with about 80 families) produce grapes, 7 have poultry produced as collective enterprises, while the other 4 have potatoes. For some years, they have had "bad administration," with charges ranging from incompetence to corruption. A year ago, the entire Board of Directors was changed and a new manager was hired. They also have an accountant, a warehouse man, and an enologist. They own their offices and the winery.
9. Needs: To expand their winery capacity from the present 50,000 liters/year to 250,000 l/year. This was based on a feasibility study done by the Dept. of Planning of CODETAR. This study did not include a marketing section. They need TA for their organization and administration and for their members' production. They also need a rotating fund for operating capital.

1. Name: Asociacion de Productores de Algodon del Chaco (ADEPACH).
2. Personeria juridica: Yes.
3. No. members: 158.
4. Budget: Members pay US\$2/qq fiber (representing about 8% of the current price). In addition, members receiving loans have to deposit \$1 in a savings account for each \$5 they request.
5. Area covered: Chaco.
6. Principal products: Cotton.
7. Services offered to members: Sale of inputs, negotiating loans, and marketing output.
8. Brief description: ADEPACH members have from 0.4 ha to 54 ha of cotton, with 60 having 1-4 ha, 32 with 4-10 ha, and 7 with over 10 ha. Production ranges from 1.6qq fiber/ha to 23qq/ha. Preston Pattie, Chemonics Seed Project head, made a study for ADEPACH on the feasibility of their taking over the cotton seed component. (Proyecto T-059 of MACA and USAID, titled Proyecto de Refortalecimiento Institucional del Programa de Algodon.) ADEPACH lost a lot of their capital during the recent inflation chaos. For example, they made a sale of cotton priced in US\$, but before it was settled, the GOB issued a decree prohibiting the use of US\$ prices, and they were paid in pesos at the official exchange rate, which was then far below the free market rate.
9. Needs: TA for a seed processing plant, for cotton production, for possible diversification into jojoba production on vast marginal lands, for an IBM computer they bought, and to learn how to prepare feasibility projects (they're interested in a wheat mill, an oilseed mill, and a maize derivatives plant). They believe the Chaco rainfall is increasing and need TA to verify this,

and, if true, the whole agricultural system there would need to be changed. They need a rotating fund of US\$4 million for operating capital (they have US\$100,000 of their own to put in).

1. Name: Asociacion de Viticultores (ASOVIT)
2. Personeria juridica: 1980.
3. No. members: 660.
4. Budget: Inputs are sold at a 5% profit (using a PL480 loan to finance input imports); members pay 0.5% of their production value.
5. Area covered: Tarija (460 members), Nor Cinti province in Chuquisaca (200 members).
6. Principal products: Grapes.
7. Services to members: Sale of inputs (including tractors, fumigators, etc.), TA (salaried enologist and volunteer agronomist members), negotiate credits and grape prices.
8. Brief description: Grapes have been grown here since the expulsion of the Jesuits from their missions in Paraguay (1767?). ASOVIT has their own offices (rented) and an accountant/secretary and other permanent office personnel, plus temporary help as needed. Most members cultivate about 1-1.5 ha, with the range from 0.25 to 20.
9. Needs: Some members are forming a cooperative in order to manage a winery, an activity which the association can not legally do. They will need TA for this. They need a phytopathologist for a laboratory they want to set up. (USAID had a lab years ago in Cochabamba which might still be serviceable.) They would need TA for starting up the lab, as university graduates are very theoretical and lack experience. This lab might be more general and used for all the regional crops, perhaps belonging to the CAMAT; they say. They need administrative TA and short-term production TA for specific problems.

1. Name: Asociacion de Avicultores (de Tarija)
2. Personeria juridica: 1970.
3. No. members: 183.
4. Budget: Although all members have agreed to contribute a certain % of the value of their production to the Asociacion, in fact, only 15-20 actually support it. The monthly quota is the equivalent of one kg of poultry meat or two dozen eggs.
5. Area covered: Tarija.
6. Principal products: Eggs and meat.
7. Services to members: A veterinarian volunteers free service and other experienced members also volunteer to help.

Seven members are paying the expenses of a pathologist coming from Santa Cruz and an expert poultryman from Salta (Arg.) to give talks during several days.

8. Brief description: The origin of the poultry industry in Tarija was a USAID loan in 1978 to set up 60 poultry houses, with 2000 chicks each, and a feed mill. AID has recently given another 40 loans, done without ever consulting the Asociacion at any time. Some members have experimented with producing chicken "sausage" and selling cut-up chicken pieces instead of whole birds, thinking of specialized markets for the more expensive pieces, as well as for the cheaper ones. The former board of directors stayed in place for years, and did nothing. The new board was elected 3 months ago.

None of the poultry projects here has considered marketing before starting up. Thus, the slaughter house only has cold storage for about one day's output. There has been no consideration of packing, processing, or transportation.

Minimum production to be a member is 2000 broilers or hens. The largest producer has 8000 broilers. Currently, 8000 chicks arrive weekly from Santiago de Chile, via LAN to La Paz and Lloyd from there to Tarija. These imports are due to the sanitary problems in the Santa Cruz hatcheries and their temporary closure.

No one in the area is a professional poultryman, depending solely on poultry for a living. Many are professionals in other fields, as doctors, lawyers, accountants, as well as farmers and others.

9. Needs: Generalized short courses for members would improve productivity and lower costs. More specialized courses are also needed to raise them to the level of international care. They need a loan for operating capital to start up a pharmacy of poultry products. They need a Technical Dept. which would have reliable, up to date information, indispensable when they try to analyze problems or consider something new. They need TA in processing and in marketing (probably available in Salta, they believe). The current feed mill is totally inadequate, run by CODETAR, oversized and overstaffed. The present slaughterhouse should be replaced by a new one. The feed mill can be salvaged, with the addition of greater silo capacity.

1. Name: Asociacion de Caneros de Bermejo (ASCABE)
2. Personeria juridica: 1972.
3. No. members: 1200.
4. Budget: Members pay quotas based on their cane production.

5. Area covered: Bermejo.
6. Principal products: Sugar cane.
7. Services to members: Medical care, community facilities, road construction, and sale of inputs.
8. Brief description: There are several associations of cane producers near Bermejo, totaling about 1550 members. There has been talk of creating a federation of all the groups, but it has never seemed very urgent. Sugarcane productivity per ha is falling, from 120 mt/ha some years ago to 50-60 mt/ha now. The drop has been dramatic in the last 4 years, with sugar mills that formerly worked 7 months to process 600,000 mt now working only 4-5 months to process 400,000 mt. There were formerly national sugarcane goals, with strict individual production limits, ranging from 0.5 ha to as much as 40 ha. ASCABE has its own offices, employees, buildings for health clinics, shops, etc. It has heavy road building equipment and has built and maintains hundreds of km of roads.
9. Needs: A computer would be very helpful. TA for cane production. Operating capital is critical. They want to diversify out of cane, but need TA to study the alternatives. TA is needed to study the increased rainfall of recent years and, if necessary, to recommend flood control measures and crop changes.

1. Name: Asociacion de Productores de Oleaginosas y Granos (APOGRA)
2. Personeria juridica: Yes.
3. No. members: Over 300.
4. Budget: Commission of 0.5% on credits, 1% of harvest value.
5. Area covered: Chaco.
6. Principal products: Soybeans, maize, wheat.
7. Services to members: Negotiate credits, inputs.
8. Brief description: A producers' association existed for some years before APOGRA, from about the time the oil mill began operating in 1978. There is still only a single mill, belonging to the GOB, and working at about 5% of its capacity. APOGRA has always tried, but also always unsuccessfully, to get the production credits to arrive on time. Until this year, the Banco Agricola has been the only bank in the Chaco. A co-op member of APOGRA, with its own personeria juridica, has handled the credits, as well as importing and selling inputs. APOGRA is considering taking over these activities. A recent IDB machinery loan was used to buy 8 harvesters for some large producer members, but this will also help small producers as it will relieve the pressures on the CODETAR harvesters that do custom work. The large

producers naturally always tried to get priority for these CODETAR machines, but now they will have their own equipment. At least 80% of the members cultivate fewer than 10 ha.

The Chemonics seed project has worked well in this area.

9. Needs: Production credit and TA. APOGRA is willing to pay for TA.

## POTOSI DEPARTMENT

1. Name: Camara Agropecuaria de Potosi (CAP)

2. Personeria juridica: 1973.

3. No. members: 4 associations, with 1600 individuals.

4. Budget: CAP earns a profit (15% gross) on the drought recovery operations which it handles. Each association should pay US\$30/month, but they haven't required it this year because of the above income.

5. Area covered: Dept. of Potosi.

6. Principal products: Its members produce milk, livestock, fruit, potatoes, and grains.

7. Services to members: Negotiate credits, sell seed potatoes.

8. Brief description: The Chamber was formed first and the associations later. The potato producers are a majority, with 900 members, while the fruit producers total 400, grain producers 250, and cattlemen 50. Almost all the producers are small. The CAP officers volunteer their time, except for the salaried member who serves as manager. CAP has rented offices, with a manager, project administrator, accountant, and secretary. The member associations are based on products, rather than geographical areas, because the individual farmers believed they would be more efficient, even though many of them with diversified production would need to belong to more than one association.

CAP could work with AgroCentral, but ACLC is too politicized. CAP officers believe that a chamber should be primarily technical and serve as a negotiating body for its members in seeking credit, favorable laws, etc. Their services to members have been slight so far, but they hope to improve. They expect final approval soon (after 3 years of effort) on loans for 50 tractors, which will go to groups of 5, who cultivate a total of 25-30 ha. The CAP is serving as guarantor, as well as individuals in each group who have urban property. The tractor titles will be in the names of these people. They are going to install a soils laboratory, as they know their soils are deteriorating, and now they have to guess about the correct fertilizers to use.

9. Needs: Investment and operating funds, pathology and soils

laboratories, professional staff, and TA for many production problems. CAP needs to create alternate income sources, i.e., the sale of inputs and marketing services. They need in-depth product studies because now they can only speculate about the feasibility of expanding potato production, for example, in which members are quite interested, because they lack reliable data.

#### CHUQUISACA DEPARTMENT

1. Name: Camara Agropecuaria de Chuquisaca (CACH)
2. Personeria juridica: 1984.
3. No. members: 15 provincial and cantonal associations with 7000 individuals.
4. Budget: Profits from input sales and association quotas provide funds to pay a manager, accountant, 2 assistants, and a secretary. Each association pays \$60 million pesos/month (equivalent to US\$30), plus \$4 million/month (US\$2) for each individual member. Some charge their own members the equivalent of 1 kg of potatoes or whatever the local product is. CACH is going to charge 1% of the credits it gets for its members.
5. Area covered: Dept. of Chuquisaca.
6. Principal products: Potatoes.
7. Services to members: Input sales (only to members), credit negotiation.
8. Brief description: CACH has a very different conformation from that of CAO in Santa Cruz, being based on regional associations instead of product specialties. Production here is very diversified. CACH was founded with the purpose of financing agriculture needs, including mechanization, marketing, and processing. Mechanization is indispensable, they say, to modernize the backward agriculture in the Dept. The Chamber was originally born as an association of individuals, but interest spread so rapidly, the idea of the Chamber was suggested and quickly accepted. Many of the original members had been excluded from the cooperatives because they were considered too big. They urgently require working capital of US\$113,000,000 as a minimum, according to a study made for the government of Rumania, and CACH says this may be too little. CACH has managed only one loan, so far, for working capital, from the F/Banco Central. There is a problem with the loan: when capital is limited, is it better to provide it in worthwhile quantities among a small number of people or to give a little bit (gotas) each to thousands? CACH also negotiated a

machinery loan (tractors, pickup and light trucks) from Argentine funds resulting from their gas purchases from Bolivia. Bolivian commercial banks handle these funds, demanding mortgages, etc., which many CACH members cannot satisfy. For its own good name, also, CACH must be careful about which members use these credits, as it cannot afford to have many defaults. This machinery loan will benefit 766 members, since each vehicle will be used by a group of 5 people.

The CACH favors a national chamber, but if this isn't possible, they will foster a regional, southern chamber, with the principal purpose of defending against a new agrarian reform law.

9. Needs: TA in administration, project feasibility studies, marketing, production (including irrigation, perhaps drip, and fruit production, especially peaches). An office is needed, as the present one is lent by the Camara de Comercio. They need a computer to keep track of the data on inputs and loans, plus all the activities they are planning.

1. Name: Central Local de Cooperativas Agropecuarias (AGROCENTRAL)

2. Date of formation: 1974.

3. Members: 16 communities, with about 4400 individuals, plus one cooperative (COINCA) with 32 communities and 450 members.

4. Budget: They received one US\$10,000 grant on formation, and since then have received small, continuous subsidies from the church, as well as different grants and subsidies from the InterAmerican Foundation, the Swiss Office of Technical Cooperation, the International Red Cross, Misereor, Caritas, Treveris, and others.

5. Area covered: Dept. of Chuquisaca.

6. Principal products: Potatoes, barley, wheat, fruits.

7. Services to members: Education; marketing, production, and administrative TA; shortwave radio contact, input sale, negotiate credits, providing transportation, accounting.

8. Brief description: The church formed several cooperatives in the 1960s and formed AGROCENTRAL in 1974 to oversee them and to help them market their products, buy inputs, negotiate credits, learn from each other's experience, and to provide TA in administration and production. Some communities have separated over the years, for conflicts of interest or personal motives, and some have returned later, following a change of opinion or the election of a new board of directors.

Their salaries are very low, i.e., their agronomist earns US\$60/month (they used to have two, but one quit), their three promotores tecnicos are paid US\$27/month.

In some ways, the brewery works better than AGROCENTRAL, giving production advances, providing field agronomists, and in general promoting production.

AGROCENTRAL used to be more interested in education, helping with administration, and selling consumer needs, but they are shifting more to production and marketing. Part of the explanation is that for a long time the sale of basic consumer items at low prices was a very visible, concrete motive for participating in the organization, but now that contraband (and the accompanying tax evasion) has become so widespread, AGROCENTRAL can no longer compete in price, and many members are drifting away. AGROCENTRAL is now looking for other services that would attract members.

Too many campesinos have looked at AGROCENTRAL as a cow to be milked for whatever could be got, but this attitude must be stopped. If it persists, the communities will never progress and will never become independent. Too many cooperatives elect priests or rural teachers as their president, and these tend to dominate the meetings.

9. Needs: TA in administration, production, marketing. Their promotores tecnicos were prepared by agronomists for production assistance, but the training for marketing was by people from the Education section, who may have prepared them well ideologically but probably poorly in marketing. They have no accurate data on their individual members, as areas farmed, crops and cultural practices, etc. They would like to carry out a census.

1. Name: Asociacion de Productores de Hortalizas y Legumbres (ASOPROHL)
2. Personeria juridica: Approved in Chuquisaca Dept., now pending in La Paz.
3. No. members: 397, plus one cooperative with 70 members.
4. Budget: Profits (15% gross) on input sales. Sales prices are indexed to members' crops, as one bag of fertilizer = X kg of potatoes. Two years ago CARE gave US\$21,000 for a revolving working capital fund, but a lot of this was lost with the inflation before they started indexing loan values.
5. Area covered: Region near Sucre. They have no vehicle to go farther.
6. Principal products: General horticultural crops.
7. Services to members: Production TA, inputs, short courses.
8. Brief description: The purpose of ASOPROHL is to help the small vegetable producer to be more productive, through TA, credit, helping market. They pay US\$120/month for an

agronomist. They plan to get a motorbike soon. They do not give credits to members who do not depend on agriculture for their living. The rate of repayment for the first year's loans was 78%, and is something over 50% so far on the loans now coming due with the current harvest.

ASOPROHL is a member of the Chamber, but the Chamber officers did not inform ASOPROHL of the meeting with us. The Chamber is very closed and is run by a small group of friends, who are individual members of the Chamber. The Chamber purchase of Argentine equipment was at prices far higher than in Brazil.

The rate of repayment of the first year's loans was 78% and something over 50% so far on the last loans, with harvest not yet over.

9. Needs: TA for ASOPROHL and for its members, in administration and in production. Working capital and a vehicle are needed.

#### COCHABAMBA DEPARTMENT

1. Name: Asociacion Departamental de Avicultura (ADA)
2. Personeria juridica: 1970.
3. No. members: 56.
4. Budget: A Decreto Supremo of 1979 provides for payments of 1.5% of the value of broiler chicks, 3% of the value of chicks for egg production, and 1.5% of the value of poultry feed to the poultry associations of Bolivia. Some 30% of ADA's income is from profits on input sales.
5. Area covered: Dept. of Cochabamba.
6. Principal products: Poultry eggs and meat.
7. Services to members: Inputs (medicines, sometimes baby chicks), TA (ADA pays two MACA veterinarians of the Servicio de Sanidad Avicola, and is sponsoring a Peruvian pathologist and a nutritionist who are soon coming here for a week of talks, courses, and farm visits).
8. Brief description: Founded in 1970 by a fusion of two existing cooperatives, one for eggs and one for broilers, ADA today owns its own offices and other buildings and the lots on which these stand. All commercial poultry producers (5000 or more broilers or 2000 or more hens) here belong to ADA. Poultry production in Cochabamba has been consolidating in fewer and fewer hands, until today 4 large firms control most of the output. Decapitalization due to the recent inflation broke many small and medium producers. The large firms with their own feed mills were able to get warrant loans on stored feedstuffs and pay back the loans with pesos worth only a fraction of their original

value. Today, almost all the small producers are working under contract for one of the big four. Some medium producers are also working under contract, while others remain independent.

ADA members include hatcheries and feed mills in addition to poultry producers, as such; the big four firms are vertically integrated, from breeding flocks and hatcheries, through feed mills to production and processing. There are some obvious possible conflicts of interest, as, for example, when ADA supports the prohibition of baby chick imports from Chile, directly benefiting the hatcheries and harming the far more numerous producers who have to pay more for the local chicks. There was formerly a national poultry association, but the Santa Cruz association withdrew and the national association fell apart. There will be a national poultry congress in Cochabamba, May 1-2, and ADA will try to revive the national association again. ADA has recently started a TV advertising campaign in Cochabamba to promote the consumption of broilers and will soon begin with eggs.

ADA tries to bring 2-3 poultry experts annually, working through such drug firms as Ciba Geigy. The last Latin American Poultry Congress was attended by 26 members of ADA, and usually at least one member goes to every international event of interest.

There have never been any poultry marketing studies. USAID/CODETAR started the Tarija project without consideration of the increased production effects. When Tarija lowered prices to try to penetrate the Oruro and Potosi markets, Cochabamba immediately met them. Cold storage facilities are almost totally lacking in Bolivia now, but ADA or individual Cochabamba firms are considering building them in producing areas and in the principal consumer markets, as well as buying refrigerated trucks.

Cochabamba producers have a climatic advantage over the Santa Cruz producers, but the latter have the considerable advantage of nearby corn and soybean production. Many Cochabamba firms have been diversifying over the last 2-3 years, buying into Cruceno poultry firms for an estimated US\$5 million.

There is a serious lack of reliable statistics in Bolivia.

9. Needs: Production TA is always needed. ADA needs working capital to buy inputs, especially feedstuffs for medium producers who make their own feed and have so far managed to stay independent of the big firms.

1. Name: Cooperativa Integral de Servicios Cochabamba, Ltd.

(Punata).

2. Personeria juridica: 1977.
3. No. members: 33 cooperatives, with 5000 individual members.
4. Budget: Profits are earned on milk and input sales.
5. Area covered: Valley and Altos around Punata.
6. Principal products: Potatoes, maize, barley, milk, vegetables.
7. Services to members: Sale of inputs, credits, marketing (especially, milk, for which they have a refrigerated, 3000 liter holding tank, since 1980).
8. Brief description: The cooperative has benefitted greatly from USAID, from its inception under AID auspices, through the loans from AID over the years, and from TA provided by the Robert Nathan project. AID helped with a working capital fund in 1977-78, but the inflation years almost wiped it out. They think they have learned to cope better now, as all credits are now indexed to the borrower's crop for which the credit is requested, but this can also be dangerous with wild price swings. At least, the borrower is now sharing the risk of changes. The last 3 years they have been working with PL480 and the Central Bank, but the amounts cover only a small part of their needs. Only 2000 members are considered eligible for credit. Requirements for credit are that one have been a member for a minimum of 3 months and have a savings deposit equal to 20% of the amount of credit requested, in addition to depositing 10% of the credit granted. Credits are given only to small campesinos, not to large producers or to storekeepers or truckers, for example, who can nevertheless be members of the co-op. New member requirements are that the person not only live in the area and have land, but he must also work the land personally. The Co-op has 12 people on salary, all of them children of co-op members. (There were formerly 18, but they have had to cut back because of the economic situation.) Children of members are preferred now because experience has shown that employees with no family ties to the community are much less stable and have a higher turnover. PIL formerly had a veterinarian stationed with the Co-op, but the economic crisis caused them to drop him. Although a lot of maize is produced in this area, it is used only for chicha and human consumption. Hybrid corn used in poultry feed comes entirely from Santa Cruz.
9. Needs: TA for production and to prepare feasibility studies. FENACRE can do studies, for which they charge, but the problem is that marketing is an indispensable part of every project, and FENACRE is not interested in that aspect. A computer is needed, as they are now swamped under filing cabinets. They have an "old" IBM computer acquired a few years ago from PL480 in some way, but it appears not to be used. They say its screen is very tiny--it is about 4"--and its capacity very

small. It was used, nevertheless, for about 2 years, but the operator trained to use it left the job, and there was no one to take over. This is one of the reasons they now prefer children of members.

1. Name: Asociacion de Productores de Leche (Cochabamba).
2. Personeria juridica: 1961.
3. No. members: 1200.
4. Budget: 2% of the value of deliveries to PIL.
5. Area covered: A radius of 25 km around the PIL plant.
6. Principal products: Milk.
7. Services to members: Importation of equipment, pharmaceuticals, semen (from Atlantic Breeders and American Breeders, US firms) for artificial insemination; TA is occasionally offered via classes on irrigation, fertilizers, forrages, etc.
8. Brief description: All the milk producers around the city of Cochabamba belong to this association. (Although at another point, they said that a co-op of producers, fomented by PIL, was formed about 5-6 years ago--the Asociacion de Productores de Leche de Cochabamba, which separated from the Association.) The recent drought and subsequent lack of forage has dropped the number of dairy cows here from the former 20,000 head to the present 10,000.

PIL is the great enemy of milk production in Bolivia. For years, the association has fought for better prices for producers, but PIL has a conflict of interest with its mandate to promote national dairy production. Only 15% of the milk consumed in Bolivia is fresh milk produced in the country, while the rest is imported powdered milk, often donated. If powder is to continue to be imported, some percent of the sales income should be paid to the milk producers' associations. PIL should be transferred to the Corp. de Desarrollo and the producers given some participation in its operation.

Of the 1200 members, 92-3% deliver less than 120 liters per day, 5-6% from 120 to 250 liters, and 2-3% over 250 liters. They currently receive the equivalent of US\$.23 per liter, and the price should be at least 10% higher.

The association has two artificial inseminators with the necessary equipment, a manager, secretary, cashier, file clerk, and two other employees.

9. Needs: TA for production and milk processing. Milk prices must be decontrolled, increased, or the producer must be helped with more credit and cheaper inputs.

1. Name: Asociacion de Apicultores (ASOAPI)
2. Personeria juridica: 1983.
3. No. members: 60.
4. Budget: Initial membership fee of US\$10, plus a monthly quota of a few cents (US) per hive.
5. Area covered: Valle Alto, Valle Central, city of Cochabamba, and Chapare.
6. Principal products: Honey, royal jelly, pollen (?).
7. Services to members: Imported inputs (1000 queen bees and some families, equipment, and drugs).
8. Brief description: Some 80% of the production of honey is in the hands of campesinos, generally using very primitive hives and equipment. A private firm, Apiarios Riviera, made up of members of ASOAPI and using modern production methods, has a contract with Sigma Laboratories in Cochabamba to deliver royal jelly, pollen, and propolis. Sigma is soon going to offer a product for burns, scrapes, etc. After a one and a half year delay in completing all the requirements, the association got a US\$100,000 loan from USAID, but it was eventually discovered that one of its clauses stated that it could not be used for "live animals," i.e., bees, so it was dropped. One member has requested a loan for US\$30,000 from the Banco Ganadero to increase his production, and a Sr. Javier Tello, of "La Reina," another private company, has solicited US\$60,000. None the members is really more than an amateur in technique. They urgently need TA in production and health measures before some disease breaks out. The association sponsored a short course in royal jelly production. There is an association of beekeepers in Sucre, promoted by CARE, a beekeeping project for campesino mothers in Cochabamba, and another project in San Isidro (Santa Cruz?). There are about 500 hives around Cochabamba. The largest producer has about 60-70 hives, while the majority have only a single hive. Very few people are devoted exclusively to beekeeping in this area. Many commercial producers have their hives in Cochabamba during the spring and summer, but move them to the Chapare for the fall and winter. They have tried leaving them there all year, but the bees have serious problems in the rainy season. This year, they are going to build a little overhanging roof on the hives left there.
9. Needs: TA for advice on processing and quality control equipment, bee-carrying capacity of different floral areas, prophylactic measures, general production, and marketing. They need investment credit.

1. Name: Asociacion de Productores de Papa (APP)
2. Personeria juridica: 1977.
3. No. members: 40,000 individuals in 360 communities.
4. Budget: The APP has no budget and depends on CEDEAGRO for its small operational expenses. CEDEAGRO receives help from religious sources and from the Canadian government (CIDA).
5. Area covered: Dept. of Cochabamba.
6. Principal products: Potatoes.
7. Services to members: Inputs, TA, negotiate credit, marketing.
8. Brief description: APP was formed during the Banzer regime when syndicates were prohibited, aided by CEDEAGRO, a church-based group, which continues to collaborate with it and to handle much of the administrative work. In fact, it is impossible to analyze the APP without simultaneously including CEDEAGRO, as it is the motor which keeps APP going. In addition to church aid, CEDEAGRO receives major financial support from the Canadian government. It has 5 agronomists, 1 educational specialist, 1 economist, and 1 psychologist. APP members are really the communities, not individual persons, as it is the community that decides whether to join APP. If the decision is favorable, then everyone in the community must participate. CEDEAGRO works with the campesino syndicates, acting somewhat as their economic arm. In every participating community, a collective enterprise is required, be it a potato plot, poultry, cattle, or the like. If the land used by the group is private, and not voluntarily ceded, rent is paid to the owner. Although labor is required of everyone, workers are paid going wages. Any resulting profits are used as the community decides. Input stores have been organized in many communities, small irrigation projects have been carried out in a few instances, classes have been taught showing how to calculate and use production cost data (as deciding between alternative crops, say, or the profitability of a proposed irrigation project), and some production TA has been provided. The input stores sell their products at cost, with the explanation given to us that prices were increased, they would then be the same as those in private businesses, and the APP would lose part of its attraction to campesinos. Attempts have been made to help with marketing in about 30 communities, but without real success to date. Transportation is a great problem, with transportistas conspiring among themselves to keep rates high. (Opinion: Although there is some tendency in CEDEAGRO/APP to blame the economic system and the unscrupulous middleman, there is also a semi-realization that it is really potato overproduction that is the principal cause of low prices and that crop diversification is necessary.) They have participated in meetings about forming a

chamber, but there is nothing beyond endless discussion about how to decide which groups get how many votes. They doubt that a campesino group will have any power in a chamber dominated by non-campesinos.

9. Needs: APP needs tractors and trucks more urgently than anything else. However, the need to diversify production also requires TA to determine which crops are most feasible (probably fruits and flowers, among others) and then to help with the many production details (varieties, irrigation, inputs, techniques) and marketing. CEDEAGRO has no budget for any TA beyond their own limited staff. This has been one of their continuing worries, and they have sought help from various sources. They have contacted a merchant who handles fruits and flowers and requested his help, and while this can be very useful, especially at the beginning, it is also probably limited in its possibilities. They have contacted academic specialists, but these tend to be somewhat theoretical and unwilling to really study the different farm details and the practical, operational aspects of their recommendations. They have contracted with the firm of a Mr. Galindo to make a study for a dam, and he has been very cooperative, charging a reasonable price and indicating a willingness to work with them in the future. Too many specialists have no social conscience and charge prohibitive rates. As a concrete example of their TA needs, one village produces lots of cherries and has a potential for more, but deficient and expensive transport makes marketing difficult; the village is experimenting with production of a liqueur, but strictly by trial and error, as no one knows anything about the proper technique. A short-term specialist could make all the difference between success and failure. CEDEAGRO and APP would gladly work with any organization which has TA.

1. Name: Accion Rural Agricola de Desarrollo Organizado (ARADO).
2. Personeria juridica: 1964.
3. No. members: 2200.
4. Budget: Three sources: marketing members' output, selling seed potatoes, and selling other inputs. Marketing the output is not very profitable, but selling seed is quite profitable. ARADO has no grants or subsidies.
5. Area covered: Dept.s of Santa Cruz, Cochabamba, and La Paz.
6. Principal products: Potatoes.
7. Services to members: Eight agronomists and 7 assistants, with vehicles, provide production TA. Five trucks and storage facilities are used for marketing.

8. Brief description: Many ARADO members also belong to the APP, since they cover some of the same area. These APP members tend to be the more individualistic and entrepreneurial ones. Neither CEDEAGRO nor the syndicates oppose ARADO or try to prevent their members from joining it.

The IDB has lent ARADO working capital (6 month loans) to finance the seed and other inputs. In exchange for input credit, the member has to deliver 70% of his production to ARADO to market, assuring credit recuperation and some basic amount to market. IDB also financed the purchase of the 5 trucks and storage facilities, with a 40 year, low interest loan. ARADO has participated in talks for some years now about forming a chamber, but the debates center about how the representation and votes will be decided and whether one method or another favors the dairymen or the poultrymen more. The chamber here should be similar to the one in Santa Cruz, but narrow, personal interests must first be overcome.

9. Needs: Production TA and a computer system.

1. Name: Asociacion de Floricultores
2. Personeria juridica: Applied for, pending.
3. No. members: 24.
4. Budget: US\$50 entry fee, plus US\$10/month.
5. Area covered: Valle Central and Valle Alto.
6. Principal products: Roses, carnations, tuberose (nardo).
7. Services to members: Bulking small individual deliveries to get economies of scale for air shipment rates, customs procedures, and handling by distributor in Miami, Florida; informal TA among members.
8. Brief description: This association was formed for two related motives, one to negotiate loans and the other to increase flower production (by improving TA, getting loans, recruiting new producers). The original members have been growing flowers and exporting them for some years, but realize the important scale economies which can only be achieved through markedly increasing the number of producers. They are partners in a distributing firm in Miami, Bolivian Flowers. There are 4 other flower exporting firms in Bolivia. Of the present 24 members, 12 requested and received loans from PL480. Flower production is capital intensive and requires many imported inputs. The Bolivian customs code did not contemplate several items needed for flowers, and the Association managed to get liberation for them. The 12 members who received the loans are now devoting full time to raising flowers, while the other 12 are going ahead very slowly on their own, on a part time basis.

A group of 6 campesinos has formed Asociacion de Floricultores de Punata and are requesting credit from PL480. The leaders of the Association being described here believe this is the most promising avenue for quickly increasing production, and they have tried to encourage other campesinos to grow flowers. They have been buying nardos (tuberoses?) from campesinos for some time and have tried to promote interest in them. For example, they have given fertilizer at a nominal price, in exchange for a later delivery of a certain number of flowers. The Asociacion in Punata is going to be accepted as a group member in the Association discussed here, paying only the fees of a single member. The main difficulty in greatly expanding campesino production of flowers is the heavy investment required. One of the problems in financing this is that CORDECO presently demands a minimum of 2000 sq meters of flowers to be eligible for their help, but the Asociacion believes this is too much for a campesino to start and that the minimum should be reduced to 500 sq meters. This lowers the loan needed and lowers the risk of the novice flower grower. The Asociacion is trying to get CORDECO to agree.

Bolivian growers are competing with Colombian flower production now and believe they can do so even better in the future when they have increased production. Their most important flower at present is the rose, as the climate in Cochabamba is more favorable than in Colombia and the rose from here lasts several days longer. The main variety grown here, Samantha, has good demand in the US and receives a premium price. The demand is such that Bolivian growers will not be able to fill it for many years.

A Dutch flower specialist from the seed/plant supplier came to Cochabamba, paid both by the supplier and by the Asociacion. However, they need more frequent and varied assistance in soils, especially, and in phytopathology. There are good specialists in these fields in Colombia.

LAB currently gives them the regular cargo rate instead of charging the usual rate for perishables. They need a cold storage unit now to hold their flowers in better conditions while awaiting flights, but this will become indispensable as production increases. At some point, when they are able to charter flights, they will need to hold flowers longer, as these flights will be less frequent than the present scheduled flights.

9. Needs: TA, investment and operating credit.

## LA PAZ DEPARTMENT

1. Name: Central de Cooperativas Aroma
2. Personeria juridica: 1967.
3. No. members: 800.
4. Budget: Member contributions.
5. Area covered: Aroma province, La Paz Dept.
6. Principal products: Member co-ops produce livestock, quinoa, potatoes.
7. Services to members: AIFLD has carried out several courses for members.
8. Brief description: Although founded originally in 1967, with 18 cooperatives as members, for various reasons it languished for many years. In 1984, it contacted AIFLD, and the latter has arranged courses in accounting, administration, etc. Now, the Central has just hired a manager and has plans for projects in livestock improvement, quinoa promotion, and mechanization.
9. Needs: Production, marketing, and management TA, and credit.