

IBTA/CHAPARE'S ESSENTIAL FUNCTIONS AND THEIR COSTS

**LATIN AMERICA AND THE CARIBBEAN AGRICULTURE AND NATURAL
RESOURCES MANAGEMENT TECHNICAL SERVICES PROJECT (LAC TECH II)**

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FINAL REPORT

Submitted to:
U.S. Agency for International Development
La Paz, Bolivia

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Introduction

The Cochabamba Regional Development Project (CORDEP) is designed to increase investment, productivity, and employment in licit agricultural activities within Cochabamba and, thus, contribute to the reduction of Bolivia's economic dependence on coca. Among other activities, CORDEP finances the functions of the Bolivian Institute for Agricultural Technology for the Chapare (IBTA/Chapare), the public agricultural research organization responsible for Cochabamba's humid tropics. IBTA/Chapare's dependence on CORDEP is total: CORDEP finances 100 percent of IBTA/Chapare's costs. As CORDEP draws to a close, therefore, the sustainability of the essential functions of IBTA/Chapare is a matter of concern.

In November of 1996, LAC TECH II consultants James T. Riordan and David L. Tacker traveled to Bolivia under LAC TECH II Delivery Order No. 7. The objective of their assignment was to identify the essential functions of IBTA/Chapare and estimate the recurrent costs required to carry them out. USAID spelled out three tasks for the team to perform: first, to identify those functions that are essential for IBTA/Chapare to perform for the foreseeable future; second, to categorize the essential functions into private goods, public goods, and partially public goods; and, third, to estimate the recurrent cost requirements of IBTA/Chapare's essential public and partially public goods. Annex A contains the full scope of work for the delivery order.

During the assignment, the team conducted a review of background materials available on IBTA/Chapare and met with IBTA/Chapare staff, USAID personnel, the Executive Director of the Project, farmers' associations, local businessmen, DAI Project staff, AGROCAPITAL, and authorities on capitalization. For a complete list of people contacted, see Annex B. The team worked primarily in CORDEP offices in Cochabamba, but also visited the IBTA/Chapare research and production facilities at La Jota, Chipiriri, and Villa Tunari. At the beginning and end of the assignment, it consulted and received guidance from interested parties in La Paz.

The team wishes to express its appreciation for the openness of virtually everyone with whom it made contact. It owes a special debt of gratitude to the management of IBTA/Chapare. Their constructiveness, objectivity, and non-defensiveness deserve not only mention, but commendation.

In accordance with the scope of work, the following three sections of this report correspond to the major tasks performed:

- Section 1 identifies and defines IBTA/Chapare's essential functions;
- Section 2 categorizes IBTA/Chapare's essential functions into "private goods," "public goods," and "partially public goods"; and

- Section 3 estimates the recurrent cost requirements of IBTA/Chapare's essential public and partially public goods and recommends actions for IBTA/Chapare to take to install an appropriate cost-accounting system.

In addition, the team offers a fifth section for IBTA/Chapare's and the Mission's consideration. Although IBTA/Chapare currently produces planting material, the production of planting material does not fall among the organization's essential functions and, thus, strictly speaking, falls outside the team's scope of work. Nevertheless, the Project depends heavily for its success on the availability of planting material in the region. Accordingly,

- Section 4 explores organizational options for the production of plant material in the future.

1. IBTA/Chapare's Essential Functions

Although IBTA/Chapare is involved heavily in production activities, a general consensus appears to exist that it has three essential functions: research, pre-extension, and pre-production.

Research

The research conducted by IBTA/Chapare is confined almost exclusively to the La Jota research station. The research in question is applied research, that is, testing, refining, and applying the results of original research elsewhere to the distinctive environment of the Chapare. As a practical matter, much of the work involves trials of different varieties of crops of interest.

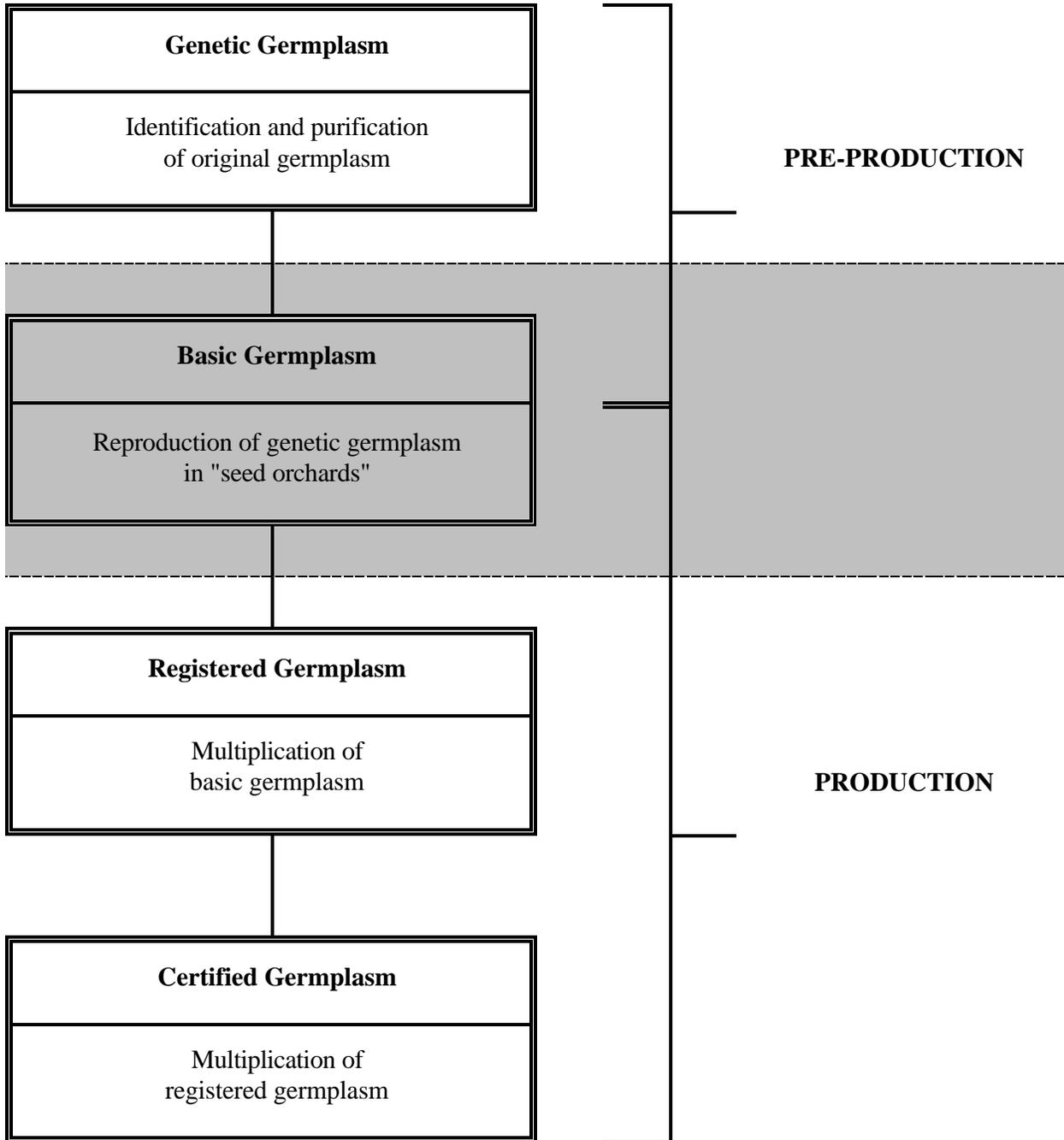
Pre-extension

IBTA/Chapare conducts pre-extension by training extension intermediaries. In other words, IBTA/Chapare wholesales proven technology to entities that retail it in turn to farmers. Most of the intermediaries are non-governmental organizations supported by Planning Assistance under the Project. The pre-extension courses and seminars offered by IBTA/Chapare are the organization's primary vehicle for disseminating its research.

Pre-production

"Pre-production" refers to the production and maintenance of basic, high-quality plant material. There is a gray area where pre-production ends and production begins (see Figure 1). Since the production of basic germplasm takes place in "seed orchards" (*huertos madre*), it is tempting to equate preproduction with seed orchard production. In fact, there are two kinds of seed orchards. The first is a strategic seed orchard, that is, one that guarantees the availability in country of high quality germplasm. It is this kind of seed orchard, which sometimes is called a germplasm bank, to which preproduction refers. The second kind of seed orchard is commercial, that is, one dedicated to the multiplication of planting material for commercial production. The creation and maintenance of the first kind of seed orchard is an essential function of IBTA/Chapare; the second is not.

Figure 1. **THE RELATIONSHIP BETWEEN PRE-PRODUCTION AND PRODUCTION OF PLANTING MATERIAL**



For two of IBTA/Chapare's priority crops -- banana and pineapple, the laboratory at La Jota provides uniform-quality plant material for commercial as well as for strategic seed orchards. Although it serves

a purpose beyond pre-production, it is essential for pre-production and, thus, part and parcel of IBTA/Chapare's essential functions.

Currently, the priority crops for IBTA/Chapare's research, pre-extension, and pre-production activities are banana, pineapple, palmheart, black pepper, passion fruit, and three annual crops (rice, corn, and beans). In the future, crops likely will change in priority. Some crops currently on the high-priority list may drop from the list altogether, and others may enter. IBTA/Chapare also has designated integrated pest management for high-priority focus in its essential activities. Integrated pest management would appear to merit high priority for the foreseeable future.

2. A Breakdown of IBTA/Chapare's Essential Functions into Private, Public, and Partially Public Goods

Whether a good is public or private can not be decided deductively, but is a function of institutional arrangements. In one situation, a good may be public; in another, private. As a recent article put it,

[W]hether a good is public or private depends on technology, transaction costs, and the institutions of the economy. At the same time, while there is no a priori argument for government intervention, there is also no a priori argument for *laissez faire*. Each case must be decided on the pragmatic principle of what works best in the real world.¹

At the moment, none of IBTA/Chapare's three essential functions is a private good. In neither research, pre-extension, nor pre-production can IBTA/Chapare expect to recover all of its costs by charging private clients. Nor is complete cost recovery likely for the foreseeable future.

Under current institutional arrangements, IBTA/Chapare's research, pre-extension, and pre-production activities not only are not private goods; they are completely public goods, that is, goods and services for which it can expect to recover virtually none of its costs from private clients. Under the Project, farmers, either directly or through their associations, have become accustomed to receiving IBTA/Chapare services for free. In coming years, IBTA/Chapare probably can recover increasing but, realistically, still relatively small proportions of the costs of its research, pre-extension, and pre-production activities. Opportunities for cost recovery include:

- Conducting applied research for private clients willing to pay at least part of the cost (Winnex has indicated a willingness to do so to assure that IBTA/Chapare focuses its research on production problems of interest to the firm);
- Charging producer associations the variable costs of pre-extension events; and

¹Roy J. Ruffin, "Externalities, Markets, and Government Policy," Economic Review, Federal Reserve Bank of Dallas, third quarter, 1996.

- Charging buyers increasing proportions of the full costs of the pre-production vitroplants they purchase for commercial seed orchards.

Although it is not one its essential functions, IBTA/Chapare currently engages in the production of planting material. The shortage of basic quality planting material presently is a, if not the, major constraint to alternative development in the region. As a consequence, the Project asked IBTA/Chapare to step temporarily into the breach, which it has done. Potentially, at least, production of planting material is a private good. Accordingly, Section 4 looks at options for expanding both the supply of and the demand for planting material in the Chapare and how IBTA/Chapare might contribute to that expansion.

3. Recurrent Cost Requirements of IBTA/Chapare's Essential Functions

IBTA/Chapare's current accounting system complies with the provisions of Bolivia's SAFCO Law, that is, the legislation that regulates financial reporting by public institutions. Nevertheless, the system is not very useful from a management standpoint. The Director General of IBTA/Chapare has no accurate measure of just how much each of the institute's essential functions costs and just how much is directed to each of its priority crops. Without such information, there is no objective way for him to assess the cost effectiveness of the organization's activities and, if necessary, take corrective action -- a basic requirement for organizational efficiency and sustainability. In other words, IBTA/Chapare currently has administrative accountability for its budget, but cannot exercise program accountability. IBTA/Chapare needs a "management accounting system," that is, one that can track costs closely and relate them to organizational activities. It is important to emphasize, however, that the costs of installing and maintaining such a system must not outweigh its benefits. If a system is too burdensome and takes too much of management's time to maintain, then it must be downsized to a more user-friendly scale even if the information produced becomes less detailed..

The only inputs that IBTA/Chapare is currently able to relate directly to its various activities are direct costs other than labor. It is able to do this by a management intensive review of the costs incurred over the year. Depending on the assumptions one makes, direct costs other than labor make up, at most, no more than a third of total costs. IBTA/Chapare does virtually no cost accounting. In its draft budget for 1997, the organization allocates all of its projected costs among both its essential functions and its priority crops, but the lion's share of the assignment of costs is based, first, on gross estimates of labor used in different activities and, second, on formulas that prorate indirect costs among the organization's activities.

Despite the weakness of the data on costs, it is possible to derive indicative ballpark estimates of IBTA/Chapare's underlying cost structure under alternative assumptions. In Annex C, the cost structure of IBTA/Chapare is illustrated under two sets of assumptions. The first uses the prorating conventions found in the 1997 draft budget. This alternative, Alternative 1, excludes production and probably overstates the full costs of research, pre-extension, and pre-production activities, and understates the full costs of production activities. The second alternative, Alternative 2, prorates overhead and administrative expenditures among production as well as among research, pre-extension, and pre-production activities. To the extent that IBTA/Chapare runs its production activities as a separate "profit center" next year, this

alternative may understate the full costs of research, pre-extension, and pre-production activities and overstate the full costs of production activities.

One reason for the relatively high administrative costs that emerge from this analysis is the way IBTA/Chapare is organized geographically. Although almost all its technical work takes place in the Chapare, IBTA/Chapare maintains a large office in Cochabamba. The office serves several purposes. First, it minimizes the number of professionals the organization must shuttle back and forth between Cochabamba and the Chapare. Services and infrastructure in the Chapare do not compare with those in Cochabamba and, thus, it is difficult to recruit qualified personnel to live and work in the region. To be able to draw from the Cochabamba labor pool, IBTA/Chapare "ferries" technical agricultural staff back and forth between Cochabamba and the Chapare each week. In contrast, the organization's cadre of accounting and administrative personnel live in Cochabamba and work in the Cochabamba office. Second, the Cochabamba office serves a public relations function. IBTA/Chapare often is deluged with visitors -- foreign businessmen, government officials, donor representatives, etc. Logistics aside, attending to visitors takes up scarce management time. Although many visitors travel to the Chapare, the Cochabamba office provides a convenient base for servicing them. Third, the Cochabamba office serves as a valuable connection to the rest of the CORDEP Project, particularly to the offices of PDAR and USAID. Overall, the cost of maintaining administrative capacity in a location separate from the rest of the organization is substantial. Moreover, vehicles and drivers are required not only for travel between Cochabamba and the Chapare, but also for travel within the Chapare itself -- among La Jota, Chipiriri, and Villa Tunari, and elsewhere in the region.

In addition to shedding light on IBTA/Chapare's cost structure, the team attempted to value the planting material that IBTA/Chapare projects to produce in 1997 and, thus, see whether the organization's production unit could cover its costs at current market prices. The attempt was stymied on two counts. First, the market for planting material in the Chapare is extremely thin. Thus, price data are shaky, to say the least. Second, accurate estimation of the cost side of the equation depends on cost accounting, which, as discussed above, does not take place. In consultation with IBTA/Chapare and USAID Project personnel, therefore, the team concluded that the presentation of the results of this analysis could be misleading and possibly counterproductive. For purposes of this assignment, therefore, the decision was made not to pursue this line of inquiry any farther. As dependable information becomes available in the future, however, an exercise along these lines would be useful.

In the absence of cost accounting and a valuation either by the market or by a third party of IBTA/Chapare's essential functions, estimation of the recurrent cost requirements of those functions ultimately comes down to judgment. For 1997, IBTA/Chapare proposes a budget of slightly more than \$1 million. There are reasons to believe both that this figure is too low and that it is too high:

- On the one hand, the budget makes no allowance for replacement of deteriorating capital. Additionally, it may be necessary to beef up the integrated pest management operation more if it is to play effectively the key role envisioned for it (see below).

Section 3. Recurrent Cost Requirements of IBTA/Chapare's Essential Functions.

- On the other hand, the budget fails to reflect the fees that users presumably will begin to pay for IBTA/Chapare services in the coming year. It also accepts the current operating structure as given -- and, thus, fails to reflect efficiency gains that IBTA/Chapare presumably can capture as the pressure to do more with less continues in the future.

On balance, a \$1 million annual operating budget would appear to be a reasonable medium-term "equilibrium" target for the recurrent costs that IBTA/Chapare will need to incur to conduct its three essential functions over time.

If IBTA/Chapare is to manage its resources efficiently in the future, it will need to know how its expenditures on inputs (costs) relate to its outputs. To relate inputs to outputs, it will be necessary for the organization to begin to develop an internal cost accounting system. Key elements of putting such a system in place include:

- Time Sheets. Labor costs make up over one half of IBTA/Chapare's budget. Consequently, even if it takes time to install a complete cost accounting system, it would make sense for IBTA/Chapare personnel to begin using time sheets as soon as possible. Specifically, the team recommended upon its departure in November that IBTA/Chapare pilot-test time sheets in December as a prelude to using them throughout 1997. If this consultancy results in only one thing, let it be the use of time sheets. Though simple, they are a potentially powerful management tool. A first crack at a time sheet is included as Annex D.
- Assignment of internal accounting codes to major activities. In order to assess the cost-effectiveness of its various activities, IBTA/Chapare will need to develop codes for costs identified specifically with those activities. It also will need codes to keep track of indirect costs, that is, costs that cannot be traced to a specific activity.
- Cost Accountant. IBTA/Chapare will need to hire an additional person to work with the current accounting staff to install and maintain a cost-accounting system, supported by occasional outside technical assistance. A scope of work for this position is included as Annex E.

From its discussions with IBTA/Chapare staff and other Project personnel, it is unclear to the team whether the staffing proposed for integrated pest management will be up to the task. Integrated pest management lies at the heart of IBTA/Chapare's "guarantor" role. As production expands in the region, the potential for damage from the introduction of disease-laden planting material is enormous. An adequate monitoring system is essential to identify and resolve disease problems in their early stages. A consultancy may be in order to review the proposed integrated pest management program and suggest possible improvements, including expansion. Development Alternatives Inc. has prepared a draft scope of work for such a consultancy (see Annex F).

One final point. In conformance with the philosophy of managing for results, it is recommended that in the future IBTA/Chapare define its essential functions, not in process terms, but in results terms. For instance,

- The draft 1997 budget refers to conducting research. From a management perspective, it would appear preferable to define what the research will lead to -- for example, documentation of the experiments conducted and their implications for the practices farmers adopt in the Chapare.
- The draft 1997 budget refers to conducting training. From a management perspective, it would appear preferable to define what the training will lead to -- for example, extension of technological practices to farmers and, ultimately, their adoption of same.

4. IBTA/Chapare and the Production of Planting Material in the Future

Although the production of planting material is not an essential function of IBTA/Chapare, it is essential for the Project. Last year, USAID asked IBTA/Chapare to give more importance to this function, which it has done. Given the shortage of planting material in the region, this section discusses the advisability of IBTA continuing to do so, and under what conditions.

Of the land at IBTA/Chapare's disposal, approximately 20 hectares in La Jota, approximately 85 hectares in Chipiriri, and approximately five hectares in Villa Tunari either are dedicated currently to the production of planting material or are apt for that purpose. It would appear wise to exploit those holdings to meet as much as possible of the need for planting material in the region.

There are at least four organizational options for managing the production of planting material on the holdings in question:

- Direct IBTA/Chapare management. The pros of this option are two. First it obviates the need to make an abrupt break institutionally with the past. Second, it dovetails well with the desire of IBTA/Chapare management to take a more entrepreneurial, commercial posture. The con of this option is its lack of cost-effectiveness: as a public entity, IBTA/Chapare is hamstrung operationally; moreover, as the market for planting material becomes more commercial, it would find it difficult to compete. As gross as it may be, a comparison of IBTA/Chapare's costs with current market prices suggests that lack of competitiveness would be a severe problem. As much as IBTA/Chapare's efficiency has increased in the last few years -- and it definitely has, it still is a public sector entity subject to rigidities that do not affect its private sector counterparts. As desirable as this option may appear in some ways, therefore, on balance it does not appear advisable.

An additional consideration has to do with IBTA/Chapare's presumed role as "guarantor" of high-quality planting material in the region. The more that it engages in commercial production itself, the greater the potential distraction from its core mandate and the greater the likelihood of conflict-of-interest problems.

- Private sector management under sale arrangement. The pro of this option is that it puts the responsibility for commercial activity squarely in private hands. The con of this option is that IBTA/Chapare loses its say once and for all over the holdings in question.²
- Private sector management under rental arrangement. The pro of this option, like the previous option, is that it puts the responsibility for commercial activity squarely in private hands. Presumably it also is a relatively straightforward option to carry out. The con, again, is that IBTA/Chapare has no input into how to use the land. Unlike the previous option, however, it allows the holdings to revert to IBTA/Chapare when the rental agreement ends.
- Private sector management under capitalization arrangement. In principle, this option would allow IBTA/Chapare to have an input into resource allocation decisions, but management would pass where it should be, to private hands. It also would offer the advantage of attracting additional capital to the holdings.

Figure 2 summarizes the pros and cons of the different options in tabular form. It also outlines the steps required to implement them. Although it may be the least straightforward to carry out, the team recommends capitalization as the preferred option. On balance, the benefits accruing from capitalization appear to outweigh the transaction costs of pulling it off. In addition, there is ample anecdotal evidence to suggest that private parties indeed are interested in entering the plant material production business (especially if CORDEP and its successor activity continue as a firm source of demand!). Short of capitalization, a long-term lease arrangement would appear the best alternative.

Although the decision to capitalize presumably can be made in the near future, the capitalization process itself will take time. It therefore appears that a year of transition is in order. During the transition, it is recommended that IBTA/Chapare reorganize and streamline the staffing of the production unit, patterning it on private sector operations, including the introduction of separate cost accounting.

At the moment, CORDEP is the principal source of demand for planting material in the Chapare, and IBTA/Chapare is the principal supplier. In short, the market is very thin and, potentially, at least, subject to manipulation. In coming years, it is essential that the market mature, that effective demand for planting material broaden and the number of suppliers expand. In particular, it is essential that as the Project pushes capitalization forward, it not lose sight of this broader challenge and simply wind up replacing a monopoly supplier of planting material in the public sector with a monopoly supplier in the private sector.

²An additional advantage of this and the following option is that they would generate revenues that IBTA/Chapare presumably could use to underwrite at least a portion of the costs of its essential public good functions. Unfortunately, it is not altogether clear that IBTA/Chapare has a right to those revenues. In addition to IBTA/Chapare, the local Prefecture, the Ministry of Government, and IBTA's national headquarters all may want to stake claims. In addition, USAID may want to dip its oar in the water, particularly given the major investment it has made in IBTA/Chapare in recent years.

Three recommendations are offered of actions for the Project to take to contribute to the development of a mature market for planting material:

- First, shift from agreements denominated in quantities to price-based contracting;
- Second, offer similar contracts, including performance incentives, to all parties;
- Third, shift purchasing gradually to producer associations and reduce the subsidy involved. One way to shift purchasing to the associations would be through vouchers. Under such a system, CORDEP would distribute vouchers for planting material to producer associations. The associations would use the vouchers to purchase planting material from whomever they chose -- private producers as well as IBTA/Chapare. After the sales, producers would present their vouchers to the Project for payment. Shifting the subsidy from the supplier to the consumer in this way not only would furnish incentives for additional producers to enter the planting material production business; it also would introduce a healthy dose of competition among providers. Over time, the associations also could be asked to pay increasing percentages of the value of the vouchers and, thus, pick up more of the real cost of planting material, expanding effective demand.

Figure 2. **PLANTING MATERIAL PRODUCTION OPTIONS**

Options	Pros	Cons	Steps to Implement
Direct IBTA/Chapare management	Continuity with past; dovetailing with management's desire to become more entrepreneurial	Likely lack of cost-effectiveness and competitiveness; distraction from "guarantor" role	<ol style="list-style-type: none"> 1. Reorganize production unit under business manager as separate "profit center" 2. Realign and streamline unit's personnel structure 3. Introduce separate cost accounting 4. If possible, secure release from restrictive public sector regulations to permit flexibility and rapid response in business decisions
Private sector management under sale arrangement	Management squarely in private hands	Permanent loss of IBTA/Chapare input into resource allocation decisions	<ol style="list-style-type: none"> 1. Clarify institutional and legal framework to sell 2. Appraise property for public offering 3. Conduct public offering 4. Transfer property
Private sector management under rental arrangement	Management squarely in private hands	Temporary loss of IBTA/Chapare input into resource allocation decisions	<ol style="list-style-type: none"> 1. Clarify institutional and legal framework to lease 2. Appraise property for rental 3. Negotiate with potential lessee(s) 4. Execute lease(s)
Private sector management under capitalization arrangement	Management squarely in private hands; attraction of additional capital; maintenance of role for IBTA/Chapare	Possible complexity of carrying out	<ol style="list-style-type: none"> 1. See through passage of legislation authorizing capitalization 2. Appraise property for capitalization 3. Convert IBTA/Chapare into mixed capital corporation (SAM) 4. Issue new shares in SAM in public bidding 5. Award new share issue to highest bidder 6. Upon execution of share subscription and administration contracts, convert SAM legally into corporation

ANNEX A

SCOPE OF WORK

ANNEX A

SCOPE OF WORK

BACKGROUND

The goal of the Cochabamba Regional Development Project is to increase investment, productivity, and employment in licit agricultural activities as Bolivia transforms its economy from dependence on coca to alternative economic activity. This activity supports the Mission's Economic Opportunity and Access Strategic Objective and Intermediate Results Package.

CORDEP's purpose is to develop alternative sources of income and employment for people within the Department of Cochabamba and its areas of influence. CORDEP has two major strategies: to help farmers produce crops for established markets, and to bring together buyers and producers.

CORDEP consists of three interrelated components: marketing, capital resources, and sustainable agricultural production. Since its inception in June 1992, CORDEP has maintained a strong market-driven orientation. Decisions on issues such as crop research and extension, crop production, and the location of farm-to-market road construction are based on information provided by the marketing component.

ARTICLE I - TITLE

Cochabamba Regional Development Project

ARTICLE II - OBJECTIVE

Identify the essential functions of IBTA/Chapare in consultation with producer's associations, actual or potential clients, the Government of Bolivia, donors and other interested parties and estimate the recurrent costs required to carry them out.

ARTICLE III - STATEMENT OF WORK

USAID/Bolivia and other interested parties, including the World Bank and Agrocapi, currently are exploring options for long-term financing of the functions of IBTA/Chapare that are essential to the development of the region and for which monies from private parties cannot be expected to cover all costs. To date, however, no firm definition has been made of what these goods and services are, nor of their recurrent costs. The proposed consultancy would fill this void.

TASKS

The consulting firm would perform four tasks:

- ! First, in consultation with producer's associations and other actual or potential clients, the Government of Bolivia, donors, and other interested parties, identify those functions that are essential that IBTA/Chapare continues to perform for the foreseeable future.

- ! Second, conduct an inventory of IBTA/Chapare's essential functions, categorizing them in three groups:
- a) completely "private goods," that is, goods and services for which IBTA/Chapare can be expected to recover all costs by charging private clients, the consultant should identify or analyze how the suggested goods and services can be privatized, estimate the volume and dollar sales that might be expected, and identify essential staff positions and staff functions.
 - b) completely "public goods," that is, goods and services for which IBTA/Chapare can be expected to recover virtually none of the costs from private clients: and
 - c) partially "public goods," that is, goods and services for which IBTA/Chapare can be expected to recover a portion of the cost from private clients.

In conducting the inventory, attention would be paid to the possibility that private parties --producer associations, for example-- may not be willing to pay for certain goods and services now, but may be willing to do so as they mature technologically or organizationally.

- ! Third, estimate the recurrent cost requirements of IBTA/Chapare's essential public and partially public goods, that is, the costs net of payments by private parties that IBTA/Chapare would need to meet on a regular basis in order to continue to perform its essential functions indefinitely. In making these estimates, it might be necessary to take two wrinkles into account.
- i. The technical capacity of IBTA/Chapare may need to be upgraded to perform some functions effectively.
 - ii. Government cost accounting conventions may need to be dissected or even developed to isolate the real costs required for future planning. Develop a draft scope of work and an annual work plan for an administrative cost account which may be assigned to IBTA/Chapare.

ARTICLE IV - ILLUSTRATIVE LEVEL OF EFFORT

Two key personnel individuals will be required:

- ! The first, an expert in institutional development in agriculture, would be the team leader. He/she would assume lead responsibility for tasks one, two and four.
- ! The second individual, an expert in cost accounting for government and non-governmental organizations, would be responsible for task three and provide necessary input for task-four.

The work anticipates a 17 person day level of effort for the Agricultural Development Specialist and a 20 person day level of effort for the Administrative/Accounting expert. The following is a tentative schedule subject to minor changes.

ARTICLE V - SECURITY AND HEALTH

The regional security office (RSO) advises that the cities of La Paz, Santa Cruz and Cochabamba are all rated medium terrorist threat areas by the Department of State. Trinidad and Chimore are rated high terrorist threat areas. USG employees are urged to exercise caution while traveling and working in Bolivia. Security measure such as varying times and routes and avoiding predictable patterns should be taken. *Personnel going to the Chapare area should check with the RSO before departure.*

Infectious hepatitis, amoebic dysentery, bacillary dysentery, giardiasis, cholera, rabies, and typhoid are endemic in Bolivia. Yellow fever and malaria are present in tropical areas of Bolivia. The usual sanitary precautions concerning food and water should be observed, and all immunizations should be up to date prior to arrival in country. Gamma globulin and typhoid vaccine are recommended for all adults. Yellow fever vaccine is mandatory for all personnel traveling to tropical areas. Rabies pre-exposure prophylaxis (not low-dose intradermal injections) is recommended for all personnel who plan to spend considerable time outdoors on foot. The Embassy Health Unit can advise those traveling to tropical areas about malaria prophylaxis on a case-by-case basis (the precautions and need for medication are determined by the duration of travel, the extent of exposure, and drug allergy history).

ARTICLE VI - DELIVERABLES

1. An oral presentation of the principal findings to the Economic Opportunity Strategic Objective Team, the ARD Regional Coordinator, IBTA/Chapare's General Director, PDAR's Executive Director and others as appropriate.
2. Five copies each of the final written evaluation in English and Spanish (approximately 50 pages), to be delivered to USAID/Bolivia by December 31, 1996.

Both deliverables will consolidate the findings of the first three tasks described in the Scope of Work in a format conducive to future decision making.

DOCUMENTS TO BE CONSULTED

Project Agreement
Proposed Annual Operating Plan for 1996-1997

ARTICLE VII - PERFORMANCE PERIOD

A. The effective date of this delivery order is the date shown in Block 7 of the cover page, and the estimated completion date is December 31, 1996.

B. Subject to the prior written approval of the Mission COTR, the contractor may be authorized to extend the estimated completion date of this delivery order, provided that such extension does not cause the elapsed time for completion of the work, including the furnishing of all deliverables, to extend beyond 60 calendar days from the

original estimated completion date in the delivery order. The contractor must attach a copy of the Mission COTR's approval for any extension of the term of this delivery order to the final voucher submitted for payment.

C. It is the contractor's responsibility to ensure that the Mission COTR's approved adjustments to the original estimated completion date do not result in costs incurred which exceed the ceiling price of this delivery order. Under no circumstances shall such adjustments authorize the contractor to be paid any sum in excess of the delivery order.

ANNEX B

LIST OF PERSONS CONTACTED

ANNEX B

List of Persons Contacted

Jorge Aldunate	Chapare Coordinator, Office of Agriculture and Rural Development, USAID/Cochabamba
Raymond Baum	Director, Office of Agriculture and Rural Development, USAID/La Paz
Alvin R. Bunker	General Manager, AGROCAPITAL
René Carlos Caballero	Head, Plant Production Unit, IBTA/Chapare
Severo España	Director General, IBTA/Chapare
Charles Foster	Manager, Agribusiness and Investment Unit, Development Alternatives Inc., Cochabamba Regional Development Project
Charles Hash	Office of Agriculture and Rural Development, USAID/La Paz
Ramiro Iriarte A.	Technical Chief, La Jota Experiment Station, IBTA/Chapare
Elvira Lupo de Velarde	Executive Director, Reordering Unit, Ministry of Capitalization
Gerónimo Meleán E.	Executive President, National Fund for Alternative Development, National Secretariat for Social Defense, Ministry of Government
Harry Peacock	Regional Chief, Office of Agriculture and Rural Development, USAID/Cochabamba
David Picha	Consultant, Chemonics International
Hernán Rios	Accountant, IBTA/Chapare
Enrique Rivas Winners	General Manager, WINNEX S.R.L.
Jack Rosholt	Chief of Party, Development Alternatives Inc., Cochabamba Regional Development Project
Carlos Sarabia Blanco	Executive Director, Regional Alternative Development Program
Miguel Zambrana	Co-owner, WINNEX S.R.L.

ANNEX C

UNDERLYING COST STRUCTURE OF IBTA/CHAPARE

ANNEX C

A Look at the Underlying Cost Structure of IBTA/Chapare's 1997 Annual Budget Under Two Alternative Assumptions

The following cost breakdowns use the information from the draft budget that IBTA/Chapare submitted to USAID for approval in early November, 1996. In the budget, IBTA/Chapare breaks its costs down by functions to the best of its ability. Using the organization's allocations of direct and indirect costs, the team examined the cost structure of the organization under two alternative assumptions. Direct costs are costs that can be identified specifically with, or traced to, a given activity. Indirect costs are costs that cannot be identified specifically with, or traced to, a given activity. In the case of IBTA/Chapare, these indirect costs can be divided into overhead and administrative costs.

Assumption 1. This alternative uses the prorating conventions found in IBTA/Chapare's 1997 draft budget. Production is **not** included as an essential function of the organization, but is treated as an independent unit. Overhead (indirect) and administrative costs are therefore spread across only the three essential functions of IBTA/Chapare, which results in substantially higher overhead and administrative rates than under the assumption below.

Assumption 2. This alternative also uses the prorating conventions found in IBTA/Chapare's 1997 draft budget. The difference is that production **is** included as a function of the organization, and overhead and administrative costs are spread among all four of IBTA/Chapare's functions (the three essential functions plus production). Overhead and administrative rates are therefore much lower than under Assumption 1 because of the broader base over which they are applied.

ANNEX C - Alternative Under Assumption No. 1					
Budget by Crop and Function					
(In U.S. dollars - without production)					
	FUNCTION				
	Pre-		Pre-		
CROP	Production	Research	Extension	Total	
Banana	186,009	45,350	19,456	250,815	
Pineapple	101,239	48,905	24,689	174,834	
Palm Heart	39,875	43,270	20,272	103,417	
Black Pepper	31,769	32,993	20,587	85,349	
Annual Crops	69,097	50,996	12,131	132,223	
Passion Fruit	24,274	19,848	11,521	55,643	
Integrated Pest Mgmt.	0	187,012	117,446	304,458	
Other Technical Areas	35,272	14,392	5,298	54,962	
TOTAL	487,534	442,766	231,400	1,161,700	
Pre-Production Budget by Crop and Cost Category					
(In U.S. dollars - without production)					
	COST CATEGORY				
	Direct Costs	Direct	Indirect	Administrative	
CROP	Other than Salaries	Salaries	Costs	Costs	Total
Banana	51,088	34,935	59,711	40,275	186,009
Pineapple	16,101	30,719	32,499	21,921	101,239
Palm Heart	3,238	15,203	12,800	8,634	39,875
Black Pepper	0	14,692	10,198	6,879	31,769
Annual Crops	12,496	19,459	22,181	14,961	69,097
Passion Fruit		11,226	7,792	5,256	24,274
Integrated Pest Mgmt.					
Other Technical Areas	16,312		11,323	7,637	35,272
TOTAL	99,235	126,234	156,503	105,562	487,534
Research Budget by Crop and Cost Category					

(in U.S. dollars - without production)					
	COST CATEGORY				
	Direct Costs	Direct	Indirect	Administrative	
CROP	Other than Salaries	Salaries	Costs	Costs	Total
Banana	7,740	13,233	14,558	9,819	45,350
Pineapple	5,439	17,178	15,699	10,589	48,905
Palm Heart	5,986	14,025	13,890	9,369	43,270
Black Pepper	2,767	12,491	10,591	7,144	32,993
Annual Crops	9,140	14,444	16,370	11,042	50,996
Passion Fruit	7,086	2,093	6,371	4,298	19,848
Integrated Pest Mgmt.	15,038	71,449	60,033	40,492	187,012
Other Technical Areas	4,563	2,093	4,620	3,116	14,392
TOTAL	57,759	147,006	142,132	95,869	442,766
ANNEX C - Alternative Under Assumption No. 1					
Pre-Extension Budget by Crop and Cost Category					
(in U.S. dollars - without production)					
	COST CATEGORY				
	Direct Costs	Direct	Indirect	Administrative	
CROP	Other than Salaries	Salaries	Costs	Costs	Total
Banana	2,835	6,163	6,246	4,213	19,456
Pineapple	5,255	6,163	7,925	5,346	24,689
Palm Heart	2,948	6,427	6,507	4,389	20,272
Black Pepper	3,605	5,916	6,609	4,458	20,587
Annual Crops	3,160	2,450	3,894	2,627	12,131
Passion Fruit	2,878	2,450	3,698	2,495	11,521
Integrated Pest Mgmt.	5,628	48,687	37,701	25,430	117,446
Other Technical Areas		2,450	1,701	1,147	5,298
TOTAL	26,309	80,706	74,282	50,103	231,400
Total Costs (without production):	183,303	353,946	372,917	251,534	1,161,700

Direct Costs	537,249	(includes direct salaries)			
Indirect Costs	372,917	69.41%	(Overhead Rate)		
Administrative Costs	251,534	27.64%	(Administrative Rate)		
Separate Production Budget by Crop and Cost Category					
(in U.S. dollars - without production)					
	COST CATEGORY				
	Direct Costs	Direct	Indirect	Administrative	
CROP	Other than Salaries	Salaries	Costs	Costs	Total
Banana	217,582	127,064	0	0	344,646
Pineapple	51,136	29,863	0	0	80,999
Palm Heart	58,177	33,974	0	0	92,151
Black Pepper	31,204	18,223	0	0	49,427
Annual Crops	5,842	3,412	0	0	9,254
Passion Fruit	5,382	3,143	0	0	8,525
Integrated Pest Mgmt.	0	0	0	0	0
Other Technical Areas	16,410	9,583	0	0	25,993
TOTAL	385,733	225,262	0	0	610,995

ANNEX C - Alternative Under Assumption No. 2					
Budget by Crop and Function					
(In U.S. dollars - with production)					
FUNCTION					
CROP	Pre-Production	Research	Pre-Extension	Production	Total
Banana	132,805	32,379	13,891	532,076	711,151
Pineapple	72,282	34,917	17,627	125,048	249,875
Palm Heart	28,470	30,894	14,473	142,266	216,103
Black Pepper	22,682	23,556	14,699	76,306	137,243
Annual Crops	49,333	36,410	8,661	14,286	108,690
Passion Fruit	17,331	14,171	8,226	13,161	52,889
Integrated Pest Management	0	133,521	83,853	0	217,375
Other Technical Areas	25,183	10,276	3,782	40,129	79,370
TOTAL	348,086	316,123	165,213	943,273	1,772,695
Pre-Production Budget by Crop and Cost Category					
(In U.S. dollars - with production)					
COST CATEGORY					
CROP	Direct Costs Other than Salaries	Direct Salaries	Indirect Costs	Administrative Costs	Total
Banana	51,088	34,935	27,938	18,844	132,805
Pineapple	16,101	30,719	15,206	10,256	72,282
Palm Heart	3,238	15,203	5,989	4,040	28,470
Black Pepper	0	14,692	4,772	3,218	22,682
Annual Crops	12,496	19,459	10,378	7,000	49,333
Passion Fruit		11,226	3,646	2,459	17,331
Integrated Pest Management					
Other Technical Areas	16,312		5,298	3,573	25,183
TOTAL	99,235	126,234	73,226	49,391	348,086
Research Budget by Crop and Cost Category					
(In U.S. dollars - with production)					
COST CATEGORY					

	Direct Costs	Direct	Indirect	Administrative	
CROP	Other than Salaries	Salaries	Costs	Costs	Total
Banana	7,740	13,233	6,811	4,594	32,379
Pineapple	5,439	17,178	7,345	4,954	34,917
Palm Heart	5,986	14,025	6,499	4,384	30,894
Black Pepper	2,767	12,491	4,955	3,342	23,556
Annual Crops	9,140	14,444	7,659	5,166	36,410
Passion Fruit	7,086	2,093	2,981	2,011	14,171
Integrated Pest Management	15,038	71,449	28,089	18,946	133,521
Other Technical Areas	4,563	2,093	2,162	1,458	10,276
TOTAL	57,759	147,006	66,502	44,856	316,123

ANNEX C - Alternative Under Assumption No. 2

Pre-extension Budget by Crop and Cost Category					
(In U.S. dollars - with production)					

COST CATEGORY

	Direct Costs	Direct	Indirect	Administrative	
CROP	Other than Salaries	Salaries	Costs	Costs	Total
Banana	2,835	6,163	2,922	1,971	13,891
Pineapple	5,255	6,163	3,708	2,501	17,627
Palm Heart	2,948	6,427	3,045	2,054	14,473
Black Pepper	3,605	5,916	3,092	2,086	14,699
Annual Crops	3,160	2,450	1,822	1,229	8,661
Passion Fruit	2,878	2,450	1,730	1,167	8,226
Integrated Pest Management	5,628	48,687	17,640	11,898	83,853
Other Technical Areas		2,450	796	537	3,782
TOTAL	26,309	80,706	34,755	23,443	165,213

Production Budget by Crop and Cost Category					
(In U.S. dollars - with production)					

COST CATEGORY

	Direct Costs	Direct	Indirect	Administrative	
CROP	Other than Salaries	Salaries	Costs	Costs	Total
Banana	217,582	127,064	111,931	75,498	532,076

Pineapple	51,136	29,863	26,306	17,744	125,048
Palm Heart	58,177	33,974	29,928	20,187	142,266
Black Pepper	31,204	18,223	16,052	10,827	76,306
Annual Crops	5,842	3,412	3,005	2,027	14,286
Passion Fruit	5,382	3,143	2,769	1,867	13,161
Integrated Pest Management					
Other Technical Areas	16,410	9,583	8,442	5,694	40,129
TOTAL	385,733	225,262	198,434	133,844	943,273
Total Costs	569,036	579,208	372,917	251,534	
Direct Costs	1,148,244	(Includes direct salaries)			
Indirect Costs	372,917	32.48%	(Overhead Rate)		
Administrative Costs	251,534	16.54%	(Administrative Rate)		

ANNEX D

SAMPLE TIME SHEET

Sample Instructions for the Time Sheet

- A) Enter your name and the current month.
- B) For each day worked, choose the codes that correspond to the activities carried out and enter the number of hours worked in each case.
- C) Make sure the sum of the hours worked in different activities each day does not exceed the total permissible work hours for that day.
- D) At the end of each month, calculate the sum of the entries in each row, including the total row. Make sure the sum of the row totals equals the sum of the column totals.
- E) Sign the time sheet and give it to your supervisor for approval.

Possible Codes for the Time Sheet

Below are possible time codes. IBTA/Chapare's management and accounting staff will need to make final decisions on what codes to assign to what labor categories. Considerations will include the current General Ledger and projected growth in the number and detail of codes in the future. In most cases, it is anticipated that codes will correspond to General Ledger subcodes and be four or five digits long.

01	Pineapple: Pre-Production	44	Annual Crops: Production
02	Pineapple: Research	51	Passion Fruit: Pre-Production
03	Pineapple: Pre-extension	52	Passion Fruit: Research
04	Pineapple: Production	53	Passion Fruit: Pre-extension
11	Banana: Pre-Production	54	Passion Fruit: Production
12	Banana: Research	60	Integrated Pest Management
13	Banana: Pre-extension	70	Other Technical Services
14	Banana: Production	80	General Administration
21	Palm Heart: Pre-Production	81	Public Relations
22	Palm Heart: Research	82	Vacation
23	Palm Heart: Pre-extension	83	Sickness
24	Palm Heart: Production	84	Holiday
31	Black Pepper: Pre-Production		
32	Black Pepper: Research		
33	Black Pepper: Pre-extension		
34	Black Pepper: Production		
41	Annual Crops: Pre-Production		
42	Annual Crops: Research		
43	Annual Crops: Pre-extension		

ANNEX E

**SCOPE OF WORK AND INITIAL WORK PLAN
FOR A COST ACCOUNTANT FOR IBTA/CHAPARE**

ANNEX E

Scope of Work and Initial Work plan for a Cost Accountant for IBTA/Chapare

Background

There are two main purposes of an accounting system:

- internal reporting to managers to influence behavior concerning cost management and the planning and control of operations; and
- external reporting through financial statements to outsiders and government authorities.

IBTA/Chapare does a good job reporting externally, but does not produce reports that are useful internally in managing its operations.

IBTA/Chapare's current accounting system complies with the provisions of Bolivia's SAFCO Law, that is, the legislation that regulates financial reporting by public institutions. The accounting system does not, however, give managers information on costs in a form useful for making programmatic decisions. IBTA/Chapare's draft workplan for 1997 allocates costs among the organization's priority crops and activities, but direct costs other than labor -- costs that make up, at most, no more than a third of total costs -- are the only costs for which management can quantify a direct relationship between inputs and outputs. For labor, the figures presented represent management's best guess as to how much will be required in different activities. As a result, the lion's share of the overall allocation of costs is based, first, on gross estimates and, second, on formulas that prorate indirect costs among the organization's different activities.

IBTA/Chapare needs an internal accounting system that is a "management accounting system," that is, one that can track costs closely and relate them to the organization's activities. Cost accounting is the collection and reporting of information on the relationship between costs incurred and the acquisition or production of products and services, and is essential for making decisions concerning future activities and strategy. In other words, the function of cost accounting is to collect and report information on what costs have been in the past so that management can make informed decisions about the future.

Objective

The cost accountant will assess the current status of internal cost accounting within IBTA/Chapare and design and implement a cost accounting system that will improve the ability of senior management to gauge the cost effectiveness of the organization's different activities. Not only will the cost accountant design a cost accounting system for IBTA/Chapare's essential functions; he/she also will design a separate system for the organization's production activities. The purpose of tracking costs systematically is not to develop a "neat and tidy" system for accounting's sake; rather, the purpose is to have at hand a system that will help IBTA/Chapare's managers do a better job managing, that is, making decisions about the allocation of resources.

Suggested Qualifications of the Cost Accountant

At a minimum, the cost accountant will have the following credentials:

- A degree in Cost Accounting (preferred) or General Accounting
- Minimum of three years work experience in general ledger accounting
- Minimum of one year work experience in cost accounting
- Experience in using spreadsheet style software programs and accounting software

Activities

At a minimum, the internal cost accountant will perform the following tasks to develop a cost tracking and monitoring system. The guiding philosophy here is that the system should not impose an excessive administrative burden upon the organization. A simple cost-effective approach can be far superior to a complete and ultramodern modular internal accounting system.

1) Work with IBTA/Chapare's current management and accounting staff to develop a simplified chart of accounts with separate cost codes for all activities. If possible, the codes should match subaccount codes in the general ledger that IBTA/Chapare currently maintains. If the accounting staff does not see this alternative as feasible, then the cost accountant will assist the staff in developing a separate code list. The list of activity codes will allow the separate internal system to break costs down by activity. A simplified version of the code list will be circulated among all staff so that they can use it in complying with the administrative systems and procedures required for tracking costs (see below).

2) Establish a monthly time sheet system for IBTA/Chapare. Time sheets will allocate the time of personnel according to the cost codes mentioned above. The cost accountant will use the simplified chart of accounts to train staff to fill out their time sheets. He/she will monitor the time sheet system, identify problems and inadequacies in the time sheets and chart of accounts, recommend needed changes, and act to implement those changes. Incentives will be introduced to ensure that all employees of the organization fill out time sheets every month. Some organizations have found it necessary to link pay directly to time sheets: if an employee does not fill out his/her time sheet, he/she does not get paid for the time period in question

In a modern accounting system, a separate time sheet module is added to the basic accounting software to simplify and mechanize reporting. In the case of a small organization like IBTA/Chapare, such an addition probably would not yield benefits commensurate with the costs involved. Hours can be tracked each month on a simple spreadsheet that can calculate costs automatically by activity. As management and the accounting staff see fit, the spreadsheet can be used either as input to general ledger sub-accounts or as separate input to an internal reporting system.

3) Design a system of expenditure logs and purchase order forms to be used to track direct costs other than salaries according to the simplified chart of accounts mentioned above. Eventually, purchase order forms will be used each time a purchase of materials or services is made or when a check is to be issued (for payment of an item ordered, reimbursement, etc.). Expenditure logs can be used to track long distance/international phone calls, postage costs, vehicle mileage, etc. Several of these systems already are in place -- for example, the mileage tracking system. Nevertheless, existing systems will need to be modified to track costs by the different functions of the organization.

Introduction of this system is less important than the introduction of the time sheet system mentioned above. IBTA/Chapare appears to have a handle on its direct costs other than salaries, and it seems to be able to break them down by activity. Still, putting a regular system in place to track those costs monthly would provide management more detail, convenience, and transparency.

- 4) Work with outside technical expertise to design a method that can take the cost information generated by the new internal cost accounting system to calculate an accurate overhead rate that IBTA/Chapare can use to price its various services.
- 5) On a monthly basis, the cost accountant will do the following:
 - a) Monitor costs against the annual budget of the organization. Provide monthly updates to the Director General and management staff, thereby giving them greater control over resources. The performance reports will furnish information on progress made in the organization's activities and compare budgets with actual costs incurred. Variances observed in the reports then can be used as feedback to help management make decisions about ongoing activities.
 - b) Support measures to lower the organization's overhead rate and force cost-consciousness by systematic budget monitoring and reporting.
 - c) Assist the technical staff in making budgetary and staff utilization decisions by closely monitoring costs in relation to the completion of specific outputs.

Time Frame for Tasks

First priority will be given to the time sheet system. Other cost tracking systems then can be introduced depending upon the information needs of management. The first year could look as follows:

- | | |
|-------------------------|--|
| Month 1 - | Activity 1 and 2: Establish time codes and develop time sheet. Design time sheet collection system and implement on a trial basis (be sure to include detailed instructions for staff). Work with management to design a reporting format that will use the new information collected. Implement a spreadsheet system to track hours for all personnel. |
| Month 2 - | Activity 2: Use feedback from the trial to modify the time sheet system as needed. Obtain feedback from management on the utility of the reported information and modify the reporting format accordingly. Move from trial time sheets to implement an actual system. Train staff in its use. |
| Month 3 -
and Onward | Activity 5: Maintain time sheet system and insure accurate reporting of information to management. |
| Starting
Month 4 - | Activity 3: Implement if desired by management. It will be important to gauge the workload of the cost accountant before starting this activity. Design a system of expenditure logs and purchase order forms to track costs other than salaries by organizational function. Implement first on a trial basis and then, with modifications resulting from the trial, on a permanent basis. |
| End of
Year 1 - | Activity 4: Utilizing the information gathered by the cost accounting measures implemented above, calculate an overhead rate for the organization that can be used to price goods and services provided by IBTA/Chapare. |

Plant Production Unit

Slightly different measures will be necessary for the plant production unit. If the unit is to be a self-sustaining entity, it must have the capacity to monitor independently the expenses and income associated with all the services and products it provides. Monitoring will be essential to determine whether charging market prices will cover costs and, thus, make the production of the plant material in question sustainable. The question to ask continually is, "What can be done to contain costs and operate more efficiently?" Independent management personnel will need to be hired for the new unit, particularly a business manager (see Annex I for a scope of work for this position) and a cost accountant/assistant. Billing procedures will need to be established, records on clients will need to be kept, marketing strategies will need to be implemented. Much more attention will need to be given to tracking revenue than is currently the case. Revenue from specific activities and sales will need to be matched against the costs of those activities and sales to determine profitability. The business manager will help to determine exactly what information is needed and in what form it should be provided.

ANNEX F

DAI DRAFT SCOPE OF WORK FOR IPM CONSULTANCY

(Hard Copy Only)

ANNEX G

DOCUMENTS CONSULTED

ANNEX G

Documents Consulted

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ANNEX H

INFORMATION FROM MINISTRY OF CAPITALIZATION

(Hard Copy Only)

ANNEX I

**SCOPE OF WORK
MANAGER FOR THE PRODUCTION UNIT OF IBTA/CHAPARE**

ANNEX I

Scope of Work

Manager for the Production Unit of IBTA/Chapare³

Background

IBTA/Chapare is a publicly funded agricultural research organization in the Chapare region of Bolivia. If the production unit of the organization is to function eventually as a privately managed entity, it is incumbent on IBTA/Chapare to begin the transformation by managing the production unit in a sustainable manner consistent with private sector principles. A necessary first step is the addition of a business manager to the unit.

Qualifications/Background

The business manager for production will have the following qualifications and experience:

- Formal degree in business preferred
- A minimum of ten years managing a successful agricultural business including
 - Experience in marketing
 - Experience developing and maintaining budgets
 - Experience managing a medium-sized staff of at least 10-15 people
 - Experience in accounting norms and procedures
 - Experience in tropical plant/fruit production

Objective

If the production unit is to operate more like a private sector entity, the business manager for production must spend his/her first year fulfilling the responsibilities listed below. Specifically, the manager will aim to reform the unit into an operation that, at a minimum, will pay for its operations out of proceeds from the sale of basic planting material to the CORDEP Project and other public and private sector entities.

Since farmers in the Chapare have become accustomed to receiving planting material for free, it is unrealistic to expect that the plant production unit will be able to cover its costs from direct sales to farmers in the near future. In the short run, the CORDEP Project is likely to continue to be the plant production unit's primary client. One of the manager's primary responsibilities in the initial year, therefore, will be to establish contracts with CORDEP for the provision of planting material to the Project at going market prices.

³This Scope of Work assumes that the production unit stays within IBTA/Chapare and reports directly to its Director General. Alternatively, the unit might report directly to the Executive Committee of CORDEP. The latter alternative would give greater autonomy to the production unit and allow it to operate more like a private firm responsible to a Board of Directors.

The other side of the coin is cost containment so that the unit can pay for all production costs with the revenues generated by the sales to the Project.

These two tasks will constitute the basic course of action for the production unit manager. If necessary, he/she will restructure the unit to maximize quality production while minimizing costs of production.

Responsibilities

The business manager will be responsible for the following:

- Set work priorities for the unit. Delegate the responsibilities listed below as necessary and establish lines of authority that will support the autonomous functioning of the unit. Assign tasks as appropriate to accomplish the goals of the unit.
- Establish an annual budget and work plan, including projected revenues as well as projected costs. The budget will be broken down into specific manageable activities and have benchmarks and monthly targets to meet.
- Establish annual plans and goals for the production staff. Work to routinize production.
- Monitor compliance with the tasks set for staff members.
- Establish marketing priorities:
 - Identify new markets
 - Assess market potential and establish pricing strategies
 - Establish and nurture contacts with intermediaries on both the input and output sides of the business
- Negotiate and enter into contracts.
- Make decisions about physical plant and investment.
- Work with the production unit accountant to establish administrative feedback mechanisms to insure that the manager has the information needed to assess whether the unit is meeting its monthly targets.
- Prepare reports for the Director General of IBTA/Chapare that assess progress toward goals. Present proposals to the Director General for major changes to the production unit.
- Restructure staff as necessary to accomplish all of the above, including, if necessary, hiring and replacing staff.