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Farmer Perspectives on the Economics and Sociology of Coca Production in the Chapare

by

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Acronyms

ADN	*Acción Democrática Nacional* (Democratic National Action)
ARADO	*Acción Rural Agrícola de Desarrollo Organizado* (Agricultural Rural Action for Organized Development)
ASAR	*Asociación de Servicios Artesanales Rurales* (Association for Rural-Artisan Services)
CEDEAGRO	*Centro de Desarrollo Agropecuario* (Center for Agriculture and Livestock Development)
CERES	*Centro de Estudios de la Realidad Economica y Social* (Center for Studies of Economic and Social Realities)
COLODAL	*Comité Local de Desarrollo Alternativo* (Local Committee for Alternative Development)
COMIBOL	*Corporación Minera de Bolivia* (Bolivian Mining Corporation)
CONADAL	*Comisión Nacional de Desarrollo Alternativo* (National Commission for Alternative Development)
CONALID	*Consejo Nacional contra el Uso Indebido y Tráfico Ilícito de Drogas* (National Council on the Unlawful Use of and Illegal Traffic in Narcotics)
COPECE	*Consejo Permanente de Coordinación Ejecutiva* (Executive Coordination Permanent Council)
COREDAL	*Comité Regional de Desarrollo Alternativo* (Regional Committee for Alternative Development)
CRDP	Chapare Regional Development Project
DAI	Development Alternatives, Inc.
DEA	(United States) Drug Enforcement Agency
DESFIL	Development Strategies for Fragile Lands

DIRECO	*Dirección Nacional de Reconversión Agrícola* (National Agricultural Reconversion Board)
IBTA	*Instituto Boliviano de Tecnologia Agropecuaria* (Bolivian Institute of Agricultural and Livestock Technology)
MACA	*Ministerio de Asuntos Campesinos y Agrícolas* (Ministry of Agriculture and Rural Affairs)
NAU	Narcotics Awareness Unit
NGO	Nongovernmental Organization
NEP	New Economic Policy
PDAC	*Programa para el Desarrollo Alternativo del Chapare* (Chapare Program for Alternative Development)
PDAR	*Programa para el Desarrollo Alternativo Regional* (Regional Program for Alternative Development)
PIDYS	*Plan Integral de Desarrollo y Sustitucion de Cultivos* (Intgegrated Development and Crop Substitution Plan)
PROCIPLA	*Programa de Control Integrado de Plagas* (Integrated Pest Management Program)
PRODES	*Proyecto de Desarrollo y Sustitución* (Development and Substitution Project)
SDTB	*Secretaría para el Desarrollo del Trópico Boliviano* (Secretariat for Development of the Bolivian Tropics)
SNC	*Servicio Nacional de Caminos* (National Roads Service)
SUBDESAL	*Subsecretaría de Desarrollo Alternativo y Sustitución de la Coca* (Subsecretariat for Alternative Development and Coca Substitution)
UMOPAR	*Unidad Mobilaria de Patrullaje Rural* (Rural Patrol Mobile Unit)
UPD	*Unidad de Producción Demostrativa* (Production Demonstration Unit)

USAID United States Agency for International Development

1. Introduction

By one estimate, about one-third of the world's supply of cocaine derives from coca grown in Bolivia, most of it in the tropical Chapare region of Cochabamba Department. Perhaps 90 percent of the coca grown there is destined for cocaine production (estimates from NAU/Bolivia). These sobering statistics have made the Bolivian Chapare a focus for United States narcotics control efforts for more than a decade.

The first United States-sponsored endeavor to reduce coca production in the Chapare through economic development began in 1977, with the *Proyecto de Desarrollo y Sustitución* (PRODES, Development and Substitution Project), a research project funded by the Bureau of International Narcotics Matters (U.S. Department of State). Out of PRODES was to emerge a proposal for a USAID project to implement crop substitution (see Painter 1990:2), but PRODES activities were largely suspended after the coup d'état of General García Meza in 1980. It was not until August 1983 that the government of Bolivia signed another such agreement with USAID, an agreement that established the Chapare Regional Development Project (CRDP).

The bulk of this report consists of analyses of farmer interviews conducted as part of an external evaluation of CRDP in August and September 1990 by a team from PRAGMA Corporation (Washington, D.C.). I conducted the interviews with peasant farmers in both the Associated High Valleys region (in small areas of Campero and Mizque Provinces) of Cochabamba, from where many farmers have migrated sporadically to work in Chapare coca fields since the late 1970s, and the Chapare itself, where coca has been an economic mainstay of the settler population over the same period.

In the following chapter, I discuss selected aspects of the geographic and institutional setting of CRDP; institutional issues are especially important to an understanding of the project's evolution and of some of the problems it has had. In Chapter 3, I analyze farmer interview material from the Associated High Valleys; the interview sample represents the so-called "floating population" of sporadic migrants to the Chapare. And I also take a look at some of the NGOs implementing CRDP activities in the high-valleys region. In Chapter 4, I analyze material from interviews with the Chapare's settler (*colono*) population. And in the final chapter, I draw conclusions, discuss important issues, and make recommendations for any future projects of this kind.

2. The Geographic, Historical, and Institutional Setting

2.1. Some Notes on Agroecology

Lying at the foot of the eastern range of the Andes, in northern Cochabamba Department, the Chapare borders on western Santa Cruz and includes part of southern Beni, especially the Isiboro-Sécure National Park--in all, an area of about 2.5 million hectares. CRDP has focused on roughly 450,000 hectares of this large area, in Cochabamba Department, where cocaine-destined coca production has until present been concentrated.

Soils in the Chapare tend to be highly acid and leached of nutrients. Annual rainfall over much of the zone is high, ranging from 4,000 to 7,000 mm per year. Over a two-year period (1966-1967), IBTA's Chimoré agricultural research station at La Jota experienced an average annual precipitation of 3,957 mm (Unzueta 1975:86, 282). This high annual rainfall makes the Chapare one of the world's wettest regions. These conditions alone place severe limits on the agricultural potential of much of the Chapare, especially of those areas at the immediate base of the Andes (Pool et al. 1986:8).

But the Chapare is not physically homogeneous. Because of significant agroecological variation across the region, the *Instituto Boliviano de Tecnología Agropecuaria* (IBTA) has divided the project area into seven subregions (sometimes called microregions), which are defined largely by agroecological criteria (soils are weighted heavily). These subregional divisions guide IBTA's research and extension work, for each subregion represents an agricultural, or development, potential: each is particularly suited for certain crops (or livestock) and not for others.

Subregions I and III are considered to have the highest potential, and so can accommodate the greatest range of crops. I encountered farmers in these subregions who had harvested the same plantain plot for 25 consecutive years without the use of fertilizers. In other subregions, though, a *platanal* would produce for no more than two or three years. *Platanal* duration seems to be a crude indicator of agricultural potential.

But the agroecological complexity of the Chapare does not end here, for subregions are mosaics of soils whose potential is superior or inferior to that of the soils around them. In this way, two neighboring farms may have substantially different soils and thus represent quite different agricultural potentials.

Coca, which has been cultivated in the Chapare for centuries, is an unusual crop. Although it fares better in some parts of the region than in others, it is adapted to virtually all of the Chapare's ecological zones, so if the price is high enough, a peasant family can maintain itself by growing coca in areas of otherwise low agricultural potential. It is for this reason, and because of the proximity of a vast reservoir of cheap migratory labor to harvest the crop (and of a North American and European market voracious and no less vast to purchase cocaine), that

the Chapare has emerged as one of the world's major production centers for cocaine-destined coca.

2.2. Human Settlement and Demography

Spaniards entering the Chapare in the second half of the sixteenth century in a futile quest for El Dorado knew the region as the "land of the Yuracarés," after the Amerindian group that occupied much of the area.[1] Many of the Chapare's toponyms today are of Yuracaré origin. Over the long years, most of the Chapare's indigenous inhabitants have either died or been displaced to other areas. A few Yuracarés still reside in the nearby Isiboro-Sécure National Park as well as in the remote forests of western and southwestern Beni.

Toward the end of the eighteenth century, the Franciscans founded a series of missions in the Chapare to evangelize local Indians, but these efforts were abandoned in the early years of the nineteenth century. The settlement of Todos Santos was founded in 1851, soon after the failure of a Franciscan mission there. The Franciscans renewed their efforts in the Chapare in 1904, founding the missions of San José, on the River Chimoré, and San Antonio, near the present town of Villa Tunari. The mission thrust was significant in that it established a geographical focus for later colonization.

In this century and before the Chaco War (1932-1935), the Chapare saw only modest colonization. Todos Santos, which boasted 500 families in 1920, became an important colonization center. A new wave of migrants entered the Chapare after the Chaco War. A road between Cochabamba and El Palmar was completed in 1937 and was extended to Villa Tunari in 1940 and to Todos Santos in 1942. But the River Chapare abruptly shifted course in 1946, thus isolating settlers there and causing them to relocate to the areas of San Miguel and Chipiriri.

After the Revolution of 1952 and the Agrarian Reform of 1953, the Bolivian government, supported by international development agencies, promoted migration to the eastern lowlands as a way of dealing with skewed land distribution and low production levels in the highlands as well as of developing the country's sparsely settled lowlands, thought (erroneously) at the time to have high agricultural potential. Colonization in the Chapare soon expanded toward the port town of San Francisco and toward northern Chipiriri, especially near the River Chimoré, where the government had initiated an extensive program of planned colonization. Soon afterward, a new flood of spontaneous settlers entered the Chapare, aided by an improved road into the region from Cochabamba as well as improved roads within the Chapare.

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[1]The material on human settlement is taken largely from Flores and Blanes (1984: 76-83).

In 1967, fifty-four *colonias*, or settlements, housed a total population of 24,381, and each was represented by a *sindicato*, or peasant union (an organizational form deriving from the Revolution of 1952) (Flores and Blanes 1984:82). A modern highway linking Cochabamba and Villa Tunari was completed in 1972, which further facilitated movement between the uplands and the Chapare.

According to the 1976 national census (the last one conducted in Bolivia), the provinces of Chapare, Arani, and Carrasco together supported a population of 142,470 (Flores and Blanes 1984:84). These Cochabamba provinces include the Chapare, and parts of the uplands as well. I would thus estimate the population of the Chapare at about 110,000 in 1976. This figure would include the rural settler population and the urban service population (probably not numerous at the time) residing in the area's small towns.

The ascension to power of General Garcia Meza through a bloody coup d'etat in 1980 marks the beginning of the boom period (1980-1985, though I loosely refer to the 1980s as the boom period in this report) and of a dramatic rise in human movement into the Chapare. Garcia Meza and members of his regime were clearly complicitous in the international drug traffic. From his coup until the election of a civilian government in late 1982, drug traffickers augmented their control over the Chapare and intensified coca production and cocaine processing there.[2] Development activities could not resume, even in a small way, until after the government sent troops in to regain control in late 1984 (Painter 1990:3).

By the end of 1981, the number of *colonias* in the Chapare had grown to 247, with 6,705 families and an estimated settler population of 83,525 (Flores and Blanes 1984:88-89). This growth represents an increase of 243 percent in the settler population (not in the total population of the Chapare, one should note) over a fourteen-year period, and a 357 percent increase in the number of *colonias*. The CRDP Project Paper estimates a population for all the Chapare of 12,000 families, or 60,000 persons (USAID 1983), for about 1982. Evidence would thus suggest that this figure is far too low.

Chapare population estimates for subsequent years vary considerably. United States narcotics control officials in Bolivia estimated the Chapare population at 300,000 or more before

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[2]It was during the Garcia Meza years that Sinahota grew famous as a drug commercial center. Only a tiny village with a few thatched cane huts at that time, Sinahota today boasts several adobe houses with roofs of tile or corrugated metal. Less than a decade ago, its small landing strip accommodated buyers of *pichicata*, or coca paste, from all over South America. Cash dollars circulated in large amounts in this flyblown jungle emporium, where Bolivians from Cochabamba and elsewhere came to purchase appliances, electronics products, and a wide assortment of other goods at low prices. It is said that more dollars circulated in Sinahota than in any other place in Bolivia at the time.

the advent of effective drug enforcement in about 1985. And other estimates ranged as high as 650,000 for the time (Pool et al. 1986:14). But these estimates seem to include the so-called "floating population" of workers (and others) that entered the Chapare sporadically in large numbers to work the coca fields and harvest the crop. With improved drug enforcement (after 1985), population estimates dropped to between 75,000 and 250,000 (Pool et al. 1986:14).

A study by USAID's DESFIL project in 1987 used three different procedures to estimate the Chapare population. Estimates ranged, depending on the procedure, from 196,000 to 234,000 inhabitants. The estimates were for the population associated with dwelling units, and so excluded sporadic migrants (Durana et al. 1987:1). According to a more recent estimate, the Chapare population in March 1990 was 91,000, 30 percent of which represented a "floating" subpopulation (Rivera 1990:9). This subpopulation includes three groups: day laborers and *partidarios*, coca stampers, and traders. The author of the estimate, noting a continuing "depopulation" of the Chapare, said that the 91,000 figure could further decline by 40 percent in months to come.

In truth, there are no reliable figures on the total Chapare population after about 1980, nor has it been feasible to generate them. Quite apart from the risks and rigors of conducting surveys in the remote Chapare during the period, the total population there has been notoriously unstable, and so the results of any survey would be rendered useless almost immediately. At any given time during the 1980s, the settler population has been complemented by a large fluid population of itinerant farm workers, merchants, and transporters. This uncharted (and unchartable) transient (more or less) population largely abandoned the Chapare as the farm price of coca declined precipitously beginning in August 1989.

A lack of understanding of this demographically dynamic situation has too often led officials in Washington to make unreasonable requests and demands of USAID/Bolivia with regard to Chapare population statistics. Such demands and requests frequently seem to have little reason behind them: what specifically, one must ask, would (or should) be done as a consequence of the availability of a given (reliable) statistic that could not (or should not) be done otherwise? Too often, this question cannot be satisfactorily answered by those who demand the figures. And the gathering of statistics--when they can be gathered, or when it makes even some sense to try--can be a time-consuming and very costly endeavor. There has already been too much redundancy in the gathering of information for CRDP.

One can with greater confidence classify human groups in the Chapare. Ignoring the army of itinerant merchants and sundry others there during the boom period, I would identify six groups in the Chapare in recent years:

1. *Colonos* who came before the coca era; some came as early as the 1940s but many came during the 1960s when the Chapare "officially" opened. And several came also in the 1970s before the coca era.

2. Those born in the Chapare.

3. Highland migrants who sporadically enter the Chapare during the off-season in the highlands; these migrants sometimes own land in the Chapare and will get a crop in there as well as in the highlands. This migration existed before the coca era and continues today.

4. Farmers who came to grow coca during the boom. Some of them seem to be leaving the Chapare today because of the drop in coca prices. It is not clear whether their departure is permanent.

5. Highland "floaters" who came to work coca or in coca-related activities during the boom years of the 1980s. This group is in many ways an extension of Group 3. They began to leave the Chapare (or to cease their sporadic migrations into it) with the decline in the price of coca (but not necessarily to return to whence they came). Today, they have largely (but not entirely) gone.

6. A long-standing "floating population" of landless *peones* and *partidarios* within the Chapare. The size of this population is an open question, but it would seem to be substantial. It, too, may be largely an extension of Group 3, consisting of those sporadic migrants who have elected to remain in the Chapare. Many in the current settler population seem to have their origins in this group.

Those persons in Groups 1 and 2 (and the subject of Chapter 4) have the greatest commitment to the Chapare. They are also quite numerous in the region today. My talks with Chapare settlers convinced me that my interview data from the upland provinces of Campero and Mizque may understate the size of Group 3, which I think is numerous. And those in this group will continue to go back and forth as they did before the coca boom. Group 5, the "floating population," has for the most part (but not totally) departed; this emerges clearly from the interviews in both the High Valleys and the Chapare.

It is Group 5 (the subject of Chapter 3) that swelled the ranks of the Chapare population during the boom years of the 1980s. Since without this enormous reservoir of cheap labor the Chapare coca boom could not have occurred, it is instructive to analyze the broader climatic, socioeconomic, and policy setting as it has affected this population.

The 1980s were a time of national economic turmoil and great hardship for the Bolivian rural population. The country's gross national product dropped 17 percent between 1980 and 1984 (Healy 1986:107), and the annual inflation rate reached 12,000 percent in 1984--the highest in the world and comparable to rates in the Weimar Republic between the world wars. In 1985, the international price of tin, a mainstay of the Bolivian economy since about 1900 (Klein 1982:158), fell by half (Crabtree et al. 1987:4).

Spurred by the International Monetary Fund, the Paz Estenssoro government in 1985 instituted the New Economic Policy, a series of draconian "structural adjustment" measures that

included wage freezes, price hikes, public-sector layoffs, currency devaluation, privatization, and budget balancing (an end to subsidies on food and fuel) (Crabtree et al. 1987:14; *Newsweek* 1989). By the end of 1986, 27,600 workers, or 70 percent of the work-force of COMIBOL, the state mining company that produced 70 percent of Bolivian tin before the 1985 crash, had lost their jobs. The tin era was over in Bolivia (Crabtree et al. 1987:2,6-7).

The astronomical inflation rates and a marked decline in the aggregate demand for food alone (many upland farmers had produced food for the mines) would have been a devastating shock to peasant communities throughout the highlands. But in 1983 and 1984 Bolivia experienced its worst drought of the century in parts of the highlands. The production of staples such as potatoes, corn, and barley declined sharply (Healy 1986:109), and entire herds of sheep and camelids perished, leaving many already-poor families destitute.

When I conducted farmer interviews in several communities of northern Potosí two years ago, the most pressing need was for water: for the crops, for the herds, and for human consumption. I witnessed hardship of a kind I had rarely seen during twenty years of working in rural Latin America. The story I had heard in northern Potosí was much the same as what I heard in Aiquile and Mizque.

There has been seasonal migration out of Bolivia's highland communities since the colonial period, when Indians were required to work by turns in the mines. Its destination has varied over the years. In modern times, migrants have gone to Buenos Aires (mostly in the 1950s) and to Santa Cruz (in the 1960s and 1970s) to harvest sugar and cotton. And cities such as Cochabamba and Santa Cruz also received a substantial number of temporary migrants, as they do today. But these earlier migrations differed markedly in scale and intensity from migration to the Chapare over the past decade. For in the 1980s it was to the Chapare that a large destitute population logically migrated in order to survive.[3]

The terms "push" and "pull" are casually used to describe the forces driving migration to the Chapare; but here the force of the "pull" was nothing as compared to that of the "push." It was desperation that drove peasants from their highland homes to the Chapare, not the international narcotics industry, which by an accident of time and place emerged in the Chapare as a temporary respite. For these highlanders, there was no alternative to the Chapare. The interviews in Aiquile and Mizque show clearly that residents would prefer to stay home if they could make a living there.

In the final analysis, this heavy sporadic migration from highland communities to the Chapare is in part a result of neglect and myopic development strategies on the part of the

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[3]By one estimate, as many as one in six Bolivian families earned a livelihood from coca and cocaine by 1985 (Crabtree et al. 1987: 84).

Bolivian government and international lending and development agencies. After the Revolution of 1952 and its companion agrarian reform, the government, with the help of liberal international funding, mounted an enormous campaign to develop the area of Santa Cruz. In the 1960s this same development mentality promoted the settlement of highlanders in the Chapare. When I worked in Bolivia in the late 1970s, eyes were focused on the Beni, and one continued to hear the old theme that the future of the country lay to the east.

Since 1952, then, Bolivian national society has been looking to its spacious (and for the most part, ecologically fragile) eastern lowlands to solve a whole range of highland problems. There have been no development efforts in the highlands comparable to those, say, in Santa Cruz. The drought and economic collapse of the 1980s, and the appearance of the international narcotics industry in the Chapare, painfully exposed this fallacy. In a word, the Chapare has become a focus for problems whose solution largely lies elsewhere.

2.3. The Chapare Regional Development Project: Institutional History and Problems

The Chapare Regional Development Project (CRDP) was born in August 1983, when the Government of Bolivia signed an agreement with USAID to recommence development activities in the Chapare after their suspension there during the Garcia Meza years. The government established the Secretariat for Development of the Bolivian Tropics (SDTB) in 1984 to coordinate the activities of CRDP. Based in Cochabamba, SDTB depended administratively on the Ministry of Planning.

CRDP began by working exclusively in the Chapare, where its key implementing agencies were the National Roads Service (SNC) and IBTA/Chapare, which was created and funded by USAID and which has remained administratively independent of the IBTA national structure. The overwhelming thrust of IBTA's work, then as it has been since, was agronomic: a search for crops that might serve as agronomic substitutes for coca; there was less interest in the economics of those substitutes.

The Chapare was a wild place when the project began. The Bolivian State had essentially been driven out by drug traffickers. Not until July 1986, with the arrival of a permanent United States military and DEA presence in Bolivia (with helicopters; Operation Blast Furnace was mounted against drug laboratories in the Beni at this time) was there some measure of control over the country's narcotics traffic. When the foreign advisory team from Experience, Inc. arrived in 1985, there had been no agricultural extension in the Chapare for two years.

For reasons of security, diagnostic surveys of farmers and conventional extension activities were infeasible. And as UMOPAR and the DEA became active in the Chapare, IBTA became associated in the minds of locals with the repressive police apparatus. Some farmers and union leaders saw IBTA personnel as spies. (By one report, UMOPAR police sometimes followed IBTA personnel into the rural areas, hoping for leads.) It became dangerous for researchers and extensionists to venture far from the two research stations (La Jota and Chipiriri), and some of them had their lives threatened. The few early promoters who

volunteered to serve as extension liaisons in their communities were sometimes ostracized, even physically assaulted, by fellow residents (see Chapare interviews J7 and C8).

In a landmark evaluation of CRDP conducted in September 1986 (Pool et al. 1986), evaluators cited a seeming inability to control coca production (such control having been a premise for successful project implementation), and therefore recommended a reprogramming of funds to improve socioeconomic conditions in the home communities of sporadic migrants to the Chapare. Several reasons argued for this alternative (see Painter 1990:4). First, it was not easy to find crops that could compete with coca in terms of profitability. Second, if such crops could be found, they would not support the same number of people as coca, so something would have to be done with the Chapare's surplus population. Third, the security problems of working in the Chapare were huge. And fourth, building and improving roads in the Chapare also favored the drug traffickers.

It was also true, as Painter well observes (1990:4), that a development effort outside the Chapare might open a "political space," and thus gain the sympathy of Bolivians and others who would not otherwise support U.S. activities in the Chapare because of their association with the repression and alleged corruption of UMOPAR (see Section 4.9)--not to mention the futility of conducting development efforts in an environment of high coca prices.

In June and July 1987, the Associated High Valleys component of CRDP was designed, and in November 1987 an agreement (Project Paper Amendment 2, sometimes called Amendment 7 since it carries that number in the bilateral agreement between USAID and the Government of Bolivia) was signed between USAID and the Bolivian government that officially took the project into the valleys. At the same time (in November), SDTB was renamed the Chapare Program for Alternative Development (PDAC--which in late 1989 was renamed again as the Regional Program for Alternative Development, PDAR, reflecting a desire to extend the program beyond the Chapare). But all this notwithstanding, there was a marked and destructive reluctance on the part of influential Bolivian and American authorities at the time to initiate development efforts in the uplands. I discuss this reluctance, and the serious problems it created for the project, below.

The year 1987 was also a time of basic administrative restructuring for CRDP. In July, the Bolivian government created the Subsecretariat for Alternative Development and Coca Substitution (SUBDESAL), placing it under the Ministry of Agriculture and Rural Affairs (MACA) and thus removing PDAC (or SDTB) from the Ministry of Planning. The executive order that created SUBDESAL (*Decreto Supremo* No. 21666) also established the National Council on the Unlawful Use of and Illegal Traffic in Narcotics (CONALID), an interministerial council charged with coordinating all anti-narcotics activities--economic development, coca eradication, interdiction, drug-use prevention, and user rehabilitation--outlined in the Integrated Development and Crop Substitution Plan (PIDYS). The subsecretary of SUBDESAL was named executive secretary of CONALID, which gave him extraordinary control over the information received and transmitted by the ministers as well as making him the chief interpreter of their policies (Painter 1990:8).

SUBDESAL's mandate was to oversee PDAC and coca-related development activities in the Yungas of La Paz Department. More broadly, its responsibilities were: to insure the intersectorial coordination required to implement CONALID policies; to act as national counterpart and to develop and administer international cooperation in the execution of PIDYS; and to technically direct projects and programs specified in PIDYS (Painter 1990:8).

But the new administrative structure was seriously flawed. The subsecretary of SUBDESAL also doubled as executive director of CONALID, and so was involved in a wide range of domestic and foreign policy issues and enjoyed wide arbitrary powers. The first subsecretary, to the detriment of CRDP and anti-narcotics programs in Bolivia, much abused those powers (a matter I discuss in more detail below). As several informed persons described this man, he was more interested in politics than in programs, he had a big ego and was power crazed, and he saw himself as the Bolivian drug czar. Furthermore, SUBDESAL had no system of financial controls in 1987, and funds are said to have been handled through this subsecretary's personal bank account, with only his signature required for disbursement. A relative served as SUBDESAL accountant. The Bolivian press at the time denounced the subsecretary for fiscal irregularities.

Subsequent administrative changes tended to curb the subsecretary's power (following Painter 1990:9). An executive order in July 1989 (*Decreto Supremo* No. 22270) defined PIDYS as the institutional framework within which the Bolivian government would implement development programs designed to eliminate cocaine-destined coca. This framework rested on the premise that coca producers must participate in the planning and implementation of alternative development activities. It further stipulated the participation of specific government agencies. And the vehicles for all participation were to be a series of alternative development commissions and committees at the national (CONADAL), regional (COREDAL), and local (COLODAL) levels.

In November 1989, another executive order (*Decreto Supremo* No. 22373) effectively relieved the SUBDESAL subsecretary of his duties as executive secretary of CONALID by creating the Executive Coordination Permanent Council (COPECE), with a National Executive Directorship. Under the structural changes initiated by these two executive orders, SUBDESAL was to plan alternative development activities, working through the PDARs (there is only one at present, but others are envisioned). The new arrangement curbed the power of lone individuals at the top and encouraged broad-based participation at the farmer level below (Painter 1990:10).

But as Painter points out (1990:10), how this participation is to be achieved must yet be worked out. In particular, the project must deal with the role in alternative development of the Chapare's peasant unions (*sindicatos*), which are among the strongest in Bolivia. This challenge emerges clearly in the Chapare interviews that are the subject of Chapter 4.

SUBDESAL seems to be functioning viably today; the administrative changes have definitely brought improvements. It receives funds for salaries and operating costs from PL-480,

subject to USAID approval. But it receives no USAID funds; CRDP project funds go directly to PDAR, where they are disbursed among the NGOs and other implementing entities.

SUBDESAL's leaders want to expand alternative development activities beyond the Chapare and the Associated High Valleys. They want to create PDARs to serve other regions, especially some of the poorest ones of Bolivia, origins of many migrants to the Chapare in recent years. They want to promote development in Bolivia in general as a way of moving the country away from the production of coca and cocaine. They are searching for other international donors and would like to create a multinational development fund. And they would like more control over CRDP activities--more control over the disbursement and allocation of project funds.

PDAR receives money only from USAID; there seems to be a fear among other potential donors of becoming associated with United States narcotics control efforts. There is also some concern that PDAR's structure may not enable it to handle funds from several sources. Only in September 1990 did PDAR institute a system for monitoring and evaluating its activities. And PDAR has some serious problems with coordinating the implementation of its several activity components (see Section 3.10.5). These weaknesses argue against expanding the geographical scope of PDAR at the present time.

But these weaknesses, and other serious problems that CRDP has had, are themselves largely the result of inept decisions taken by a series of Bolivian and American officials during the two-year period from July 1987, when SUBDESAL was created, until about July 1989. And those decisions, extremely pernicious to CRDP, may reflect a more fundamental weakness in United States and Bolivian anti-narcotics efforts.

It is alleged that CRDP did not begin in effect until early 1990. This is literally true in the Associated High Valleys, where there was no project-funded NGO implementation activity (that of PROCIPLA excepted) until that time. Yet the agreement that directed the project into those valleys was signed in November 1987 (and the agreement initiating CRDP was signed in August 1983). The allegation of late beginnings is figuratively true, though no less important, in the Chapare as well, for there high coca prices seriously impeded development efforts until about August 1989, when the price entered a free fall and by late November was below production costs, where it remained for almost eight months.

The subsecretary of SUBDESAL (the first one, whose tenure I discuss above) during the two-year period in question had no desire to work in the Associated High Valleys--yet he had made strong commitments to farmers there--and effectively blocked project efforts to do so until his departure from office with the change of Bolivian government in July 1989. Through a close alliance with the Deputy Chief of Mission (an alliance confirmed by knowledgeable sources in both Washington and Bolivia) at the United States Embassy, the subsecretary arranged to have the USAID project manager, who strongly favored development efforts in the valleys, removed in September (or thereabout) of 1988 and replaced by a man totally unqualified for the job. (The replacement was made head of the Office of Special Projects, under which CRDP operated

at the time.) The USAID director and the new AID project manager bowed to these pressures and transferred funds from the Associated High Valleys to the Chapare.[4]

PDAR (or PDAC) during this period was at sea. The subsecretary of SUBDESAL capriciously took important decisions regarding the direction of the project without consulting with those in charge of either PDAR or IBTA/Chapare. On 12 December 1988 USAID contracted with Development Alternatives, Inc. (DAI), a Washington-based consulting firm, to provide technical assistance to the project in the Associated High Valleys. But on 20 December the SUBDESAL director dismissed PDAR's entire technical staff, on a personal whim and without technical reasons (they had challenged some of his decisions, especially his decision not to work in the valleys, which was a violation of project agreements) (Painter 1990:7).

When the DAI technical advisory team arrived in Bolivia in January 1989, there was nobody in PDAR to work with and no support from the USAID project manager, who did virtually nothing. He refused, for example, to address marketing issues, the slighting of which in both the valleys and the Chapare was a major project weakness then, and continued to be so until August 1990 when a marketing specialist was hired. The advisory team was the only manifestation of CRDP in the valleys, and so they alone had to define project activities there.

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[4]The pressures exerted by Washington on USAID/Bolivia, and probably on the Embassy as well, to curb the narcotics traffic were enormous at the time. When I visited USAID/Bolivia on 4 August 1988, several days before the arrival of then Secretary of State Schultz, a deep unease pervaded officials, who anticipated being queried by Schultz regarding the results of USAID efforts to combat the drug problem. And those results were modest: Chapare farmers were not eradicating coca plants at an acceptable pace (the program to give each farmer $2,000 for each hectare of coca eradicated had begun only a year before), and they showed little interest in alternative crops.

One must observe that only a month before, average coca prices in the Chapare rose to their second-highest point over the four-year period between April of 1986 (when they were at the highest point) and July of 1990 (see the appendix for a chart of coca-price fluctuation in both dollars and *bolivianos*). When asked by USAID officials to comment on matters, I argued that development efforts in the Chapare were doomed by such high prices. But in 1988 this was not a popular argument in official circles.

There were USAID personnel at the time who challenged the figures on eradication reported to the U.S. Congress by the Embassy (figures provided by SUBDESAL's subsecretary) and who tried without success to get the Embassy to monitor the figures more closely. The strong pressures from Washington at that time may have produced a classic bureaucratic example of those at the bottom telling those at the top what they wanted to hear, to the career enhancement of those at both levels--but, alas, to the mystification and ultimate deepening of the problem at hand.

The period from July 1987 until July 1989 was little kinder to CRDP in the Chapare. Whereas the subsecretary of SUBDESAL favored a dormant project in the valleys, he favored an active one in the Chapare. At least on one occasion, he entered the Chapare and threatened recalcitrant sindicato leaders at gun-point. This was only one of several rash occurrences that further compromised the activities of IBTA/Chapare, whose position was tenuous in that remote area and whose objectives and motives were already suspect by reason of circumstance (see Sections 4.7 and 4.9).

A series of events occurred at mid-1989 that augured well for the project. A new government in Bolivia installed a new subsecretary to head SUBDESAL, and in July the project received a new USAID manager. On August 4, USAID released $200,000 U.S. for "high impact" subprojects. These might well have been called "high visibility" subprojects, for in the valleys they were so used, to try to recover the confidence of farmers--a confidence shaken by unfulfilled commitments made by the former SUBDESAL subsecretary--and thereby gain entry to the communities.

It was not until October 1989 that PDAR hired counterpart technicians to work in the Associated High Valleys. During the final months of that year, the DAI team--and PDAR technicians, once they were in place--were scrambling about the valleys designing "high impact" subprojects as well as preparing a project operating plan for 1990. It was all happening very fast--so fast, perhaps, that little thought could be given to coordination of project activities, either those executed directly by PDAR (water infrastructure projects) or those executed by NGOs. Today, as I mentioned above and further discuss in Section 3.10.5 below, the institutionalization of internal management procedures as well as the coordination of all project activities are major challenges for PDAR.

2.4. The Great Coca-Price Fall

Beginning in August 1989, the average price of a *carga* of coca (leaves are sold by Chapare farmers by the *carga*, or 100-pound lot of dry leaf) fell sharply. By November, the price had dropped to below the average production cost, where it remained for almost eight months, until about July 1990. Only two other times, in 1986 and 1988, during the four-year period between April 1986 and July 1990, had the farm-gate price fallen below the cost of production (see the appendix for a monthly charting of per-*carga* prices in both dollars and *bolivianos* during this period). But at both times the price remained below cost only briefly: for a month in 1986 and for four months in 1988. The price drop in 1989 in the Chapare, however, may portend fundamental and long-term changes in the international cocaine trade. There is at present much speculation and little agreement as to what those changes might be.

As I left the Chapare in early September 1990, the price was again drifting upward. On average, I would say it was at 150 *bolivianos* (at the time, the dollar was trading for about 3.20 *bolivianos*). But within a week after I left Cochabamba in mid-September, the price in one community near the Isiboro-Sécure National Park rose to 280 *bolivianos*. This can happen with a momentary rise in point demand, or demand in an area where the leaf is being processed into

coca paste.[5] A general upward drift at the time of my visit may have been mostly related to weather. From June to August is a relatively cool, dry time over much of the Chapare, so coca yields tend to be lower and the leaf price thus higher (assuming constant demand). From January to March, when leaf yields increase, the price tends to drop (again, at constant demand).

Price volatility over the long term is even more difficult to explain. One hears different explanations for the price drop in Bolivia beginning in August 1989 (which may or may not be for the long term). By one account, the drop is the result of anti-narcotics activities in Colombia, perhaps reinforced by the toppling of General Noriega in Panama. By another account, it is the result of entry into the market of new coca-growing sites, thereby redistributing the source of aggregate supply and reducing the demand for *Chapare* coca. And by yet a third account, more cynical but perhaps more realistic, the price decline is the temporary result of a market glut, an over-production of coca.

In the final analysis, all such dissention and speculation derives from a lack of knowledge: because of the clandestine nature of the international cocaine trade, too little is known about the socioeconomics of operations occurring after the coca crop leaves the farm and before it appears on American and European streets in the form of cocaine (or crack).

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[5]The Isiboro-Sécure National Park is a "red zone," or an area of coca-processing activity. With no roads, the densely forested park is less accessible to UMOPAR and the DEA. And coca-processing (the stamping of the leaves) occurs at night, when helicopters cannot operate. Today, coca farmers living in and near this park may have a somewhat better market for their product. And it seems that farmers have recently been drifting toward the park for this reason--and also because forests in and near there tend to be virgin, so that coca yields for the first few years following clearance tend to be good without the use of agrochemicals.

(If the aggregate demand for Chapare leaf is down, its production would probably be geographically concentrated in areas reckoned "safe." And if its farm-gate price is not high, then keeping production costs low would become all-important. The Isiboro-Sécure zone would satisfy the conditions of all parties.)

There was an armed confrontation between UMOPAR/DEA and drug traffickers on 24 September 1990 on the River Isinuta, near the town of Isinuta. The traffickers were part of an international network that transported coca paste from Isinuta to laboratories in Santa Cruz and the Beni, where it was crystallized. After the confrontation, private homes were raided in Cochabamba, Trinidad, and Santa Cruz, and ten airplanes were confiscated along with $100,000 in cash. The network, run out of a posh nightclub in Santa Cruz and estimated to be sending between five and ten tons of cocaine to the United States each month, was said to have the biggest operation yet discovered in Bolivia (Presencia 1990a, 1990b, 1990c). This was probably the operation that was purchasing coca in the community near the Isiboro-Sécure National Park where the price rose substantially a week after I left the Chapare.

Extreme price volatility at the farm level over the short term is alone a strong deterrent to coca production; the Chapare farmer interviews reveal this quite clearly (see Section 4.3).[6] According to one well-placed source, persons responsible for current United States drug interdiction efforts harbor no illusions about their ability to completely halt the flow of cocaine into the United States. Their policy is rather to reduce it by disrupting processing operations and supply lines.[7] One result of that policy is price volatility at the farm level. Close surveillance in the Chapare, and raids on processing facilities there (and elsewhere), are indeed disruptive and do contribute to local price volatility and spatial price variation (variation that is tantamount to volatility for any *given* space, or place).

There is no doubt that the decline in the coca price beginning in August 1989 has created an opening for development in the Chapare. Price is everything--a matter too often overlooked. As long as the coca price remained high and conditions in the uplands of Bolivia remained wretched, phrases like "coca substitution," or "alternative development," or "development of the Chapare" rang hollow to Chapare farmers. But with the low coca prices of recent months, farmers have become interested, some desperately and others cautiously, in alternatives to coca production. They have begun to eradicate their coca plantings in part; many of them seem to have adopted a wait-and-see attitude before eradicating totally. As the Chapare interviews show, farmers are waiting both to see what will happen to coca prices and to see what viable alternatives to coca are forthcoming. Many are waiting to see what will happen to their neighbors who have eradicated part or all of their coca.

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[6]An established plantation of *Erythroxylum coca* will yield its first harvest in one to two years and reach maximum productivity in about five years (Plowman 1986:13). The time required for the plant to come into production definitely deters farmers from planting new coca under conditions of extreme price volatility. Such volatility also deters them from maintaining already-established plantations so long as the price drops occur often enough to deny them a viable market. However, coca in the Chapare yields from three to five harvests per year, depending on its location and care. So a high price for only one harvest per year will induce many farmers to maintain at least a portion (but less than they otherwise might) of their planted area in coca.

[7]Short of some sort of legalization or decriminalization of cocaine in the United States, either of which is politically unlikely in the near term, disruption of coca processing operations and cocaine-related supply lines is probably the most viable approach to dealing with a serious problem, both for the United States and other involved countries. And it may be the most effective way to combat the problem on the production side.

3. The Migrant Population: A Sample from the Associated High Valleys

Most of this chapter is a synthesis of information, reported in nine categories below, from farmer interviews (group interviews, mostly) that I conducted in late August 1990 in six communities of Campero and Mizque Provinces, in the high-valley country of Bolivia's Cochabamba Department. In the tenth category, I discuss CRDP activities being implemented by nongovernmental organizations (NGOs) working in the area. Notes on farmer interview methods and procedures as well as on the physical settings of the two provinces appear in the opening section of the interviews themselves, which are included in the appendix. The interviewed population is a small sample of the large population that migrated sporadically (the so-called "floating population") to the Chapare from the Bolivian uplands in the 1980s to work in coca.

This migratory population cleared the forests, prepared the seedbeds, planted and transplanted the coca, and weeded the crop until its harvest. And it also furnished the cocaine trade with its stampers, its carriers, and sometimes its lookouts. But most of all, it furnished the trade the heavy amounts of labor required to harvest coca--from three to five times per year, depending on local growing conditions and cultivation practices. Without this migratory labor, there could have been no coca boom.

3.1. Community Needs

In the communities without irrigation water, and sometimes without water for livestock and human consumption as well, water was the first expressed need. This need was expressed in the strongest of terms in three of the six interview communities, none with irrigation. Women in a fourth (Community 5), also without irrigation, said they had lost all their crops to drought this year (1990). They expressed a need for local employment, especially for young people, so they would not have to migrate. One might conclude, therefore, that irrigation was a critical need in that community as well. Two of the other communities without irrigation had also lost their crops this year to drought. Residents were having to buy food--often by selling firewood, which was scarce and hard to find.

Three communities, two of them with no irrigation (and that had lost all their crops this year) expressed a need for seed--corn, potatoes, and wheat--for the forthcoming planting season. Four of the communities also inquired of me about credit--for seeds and fertilizer, as farmers of one community said. The opinion was voiced in another community that credit was only for those with irrigation; in yet another that it was for persons in town to buy houses and trucks. Farmers in one community said they would never be allowed credit because they had no collateral.

Other urgent needs included assistance with agricultural pest management and with health problems--a need for a *posta sanitaria*, usually. The women I interviewed (Community 5) spoke of a high incidence of Chagas disease in their area.

3.2. Local Production, Consumption, and Income

Three of the six communities had irrigation systems that served at least part of the community, while the remaining three communities had no systems. And differences between residents of the irrigation and non-irrigation communities with regard to general welfare were pronounced.

In the three communities without irrigation (#1, #2, #5), residents had lost their crops to drought and were without food. In one community, they were cutting and gathering scarce firewood for sale in Aiquile. It was either this or migrate, they said. In another community, they were selling off their animals (sheep and goats; it is my sense that communities in the dryer areas, without irrigation, tend to have more animals, which are normally not for sale on a regular basis), and herd numbers were reaching ominously low levels. When the animals are gone, people will have to migrate to Santa Cruz or the Chapare, they said. And in a third community (#5), young people were working in Cochabamba, Santa Cruz, or the Chapare and sending money home.

The communities with irrigation were producing and marketing crops such as onions, corn, tomatoes, garlic, and sometimes potatoes. The crops were in almost all cases sold to truckers (*transportistas-rescatistas*) passing through the area. According to informed persons with local NGOs, these farmers (especially in the Aiquile area) know little about markets and prices, and so are easily exploited by the truckers.

Residents of two communities (both without irrigation) complained of the high price of coca in Aiquile--4.00 bolivianos/lb. It only cost 1.00 boliviano/lb. in the Chapare, I was told. One has to work hard just to buy coca, one person said. In Community 2, respondents told me they were chewing leaves from the Chapare, and that the leaves were good. A man in another community told me that people migrated to the Chapare to work in order to buy coca. I was also told this by settlers (*colonos*) several days later when I conducted interviews in the Chapare (see Section 4.5). Given the attachment of these highland farmers to the leaf, I am not surprised. It clearly qualifies as a basic necessity.

3.3. Frequency and Timing of Migration

The evidence suggests that seasonal migration to the Chapare is a recent phenomenon in these communities. Residents in Community 2 said that their fathers and grandfathers did not go to the Chapare, that such migration was a thing of their generation. It began about ten years ago, one man said (the years of chronic drought were 1983 and 1984, from which many communities have never recovered; such estimates must be taken as approximations). Before, they added, people went to Santa Cruz, but there was less migration then, there was more rain.

Women in Community 5 said that people there began to migrate seasonally in about 1970, but that the pace had since quickened. According to one woman of about 48, nobody had heard of the Chapare when she was a young girl. Nor did people go to Santa Cruz then. They

did not leave the community in those years. In Community 6, I was told that before about 1978 nobody went to the Chapare.

Respondents in four of the communities said that people migrated to the Chapare during periods of slack agricultural activity at home. They left after the harvest, by one account; in two communities, I was told that residents left around June and returned in October or November--by *Todos Santos* (All Saints' Day), in time for the planting season.
In Community 2 (with 84 families), respondents estimated that twenty-five men were in Santa Cruz or the Chapare (fifteen of them in the Chapare) at the time of my interview; those I talked with would not migrate at this late date (29 August), they said, because of the nearness of the planting rains.

Residents often made several trips to the Chapare per year. "We leave by turns," said one farmer. By reports from one community, it was common for farmers to go two or three times in a year. One respondent from that community had gone ten times over a six-year period, staying for a year on one occasion. A man from another community had gone three times last year to stamp (*pisar*) coca. One farmer told me that people went to the Chapare when they needed money.

An extensionist with an NGO working in the area described the Chapare as a turgid cow that upland farmers milked as they needed to. The opportunities to "milk" were ample during the 1980s for coca yields up to five harvests per year, and its harvest is a labor-intensive activity. (The Chapare interviews reveal the current dilemma of Chapare settlers, who do not have the money to hire *peones* because of low coca prices.) If one considers other activities associated with the production of coca and the processing of cocaine--slashing and felling of the forest, weeding, stamping, transporting, and so on--one sees that the opportunities for short-term employment were endless. No other activity, either in Bolivia or elsewhere in this part of South America, offered such opportunity. If one needed cash, one could work for three weeks or a month in the Chapare at almost any time, return home, and then go back three months later.

3.4. Rationale for Migration

Respondents from five of the six communities unequivocally associated migration to the Chapare (and sometimes elsewhere, though the Chapare had clearly received the bulk of seasonal migration in recent years) with a lack of irrigation. In the one community (#5) where a direct association was not made, respondents said that residents were migrating because of failed harvests. But this community had no irrigation and the harvests had failed from drought. Therefore, a lack of water has been a major force leading to migration to the Chapare from all six communities. This is perhaps the most solid finding of my interviews in the Aiquile and Mizque areas. The relationship between migration and a lack of water is *very* strong, which a reading of the interviews quickly reveals.

Respondents in Communities 1 and 2 said they would not go to the Chapare if they had irrigation. In one of these communities I asked farmers if they would go if they had irrigation

and if the price of coca in the Chapare rose to 800 bolivianos/*carga* (=100 lbs. dry weight)--a very high price. They said they would not. Women respondents in Community 5 said that people there would not migrate if they had work. But irrigation, which this community lacks, could provide work by increasing production. In Community 4, where the irrigation system is recent, respondents said they would be migrating to the Chapare if they did not have water.

In three communities, I asked farmers to tell me which communities in their areas had the largest number of migrants to the Chapare. When they gave me the names of a couple or three communities, I asked why those communities had more migrants. In each case the response was the same: because of a lack of water and consequent crop failures, they said. In a community in Mizque (most valley communities in Mizque have irrigation), I asked respondents whether communities there or in Aiquile sent more migrants to the Chapare, and why. Those in Mizque had fewer migrants, they said, because they had irrigation. Again, a relationship between a lack of water and migration appears.

The ultimate cause of migration is a lack of employment and income for family maintenance. According to respondents in Community 3 (which has irrigation), there was an increase in seasonal migration from there to the Chapare in 1988, when the market price of onions (a major cash crop) dropped sharply. And a similar mishap twice befell Community 6, once in 1978 (the date a respondent gave, but he may have meant 1988), when the price of cash crops plummeted, thus driving many young people to the Chapare as seasonal migrants; and again three or four years ago (a reference probably to the period of high inflation, about five years ago), when by one estimate half the community left for the Chapare after their cash crops lost all value. A low market price, therefore, can have the same effect as no irrigation (over the short term) with regard to migration.

It is important to understand that residents of these and other upland communities have migrated seasonally to the Chapare to survive, not to accumulate capital for luxury consumption. As one man put it, "There are years when the crops don't produce, it's too dry. Nobody wants to die, you have to eat, so you go to the Chapare." And as a woman said, "People return (from the Chapare) with a little bit of money so they can live a little bit better." A farmer in Community 4 said that migrants spent what they made on food and basic necessities for the family.

3.5. Destination and Duration of Migration

The Chapare has received most of the migrants from these communities, no surprise given the perpetual opportunities for earning income there; but Santa Cruz received some, where migrants harvest rice and are often paid in kind; and Cochabamba a trickle.

According to limited information from four communities on the topic, there has been little migration to urban areas. Respondents in Community 1 said that urban migrants went either to Cochabamba or to Santa Cruz, where they worked in construction. Respondents in Community 2 said that nobody went to Cochabamba to work, only to sell corn or livestock. In

Community 3, one man had worked for sixteen years in Cochabamba as a brick layer (*albañil*). He had returned to his community in 1972, when an irrigation system was completed. And the women in Community 5 said that more than ten single women from there were then working as domestics in Cochabamba. (I would guess that during much of the 1980s there were labor shortages in some of the cities and rural areas of Bolivia because of heavy labor demands in the Chapare.)

I occasionally asked residents where they went in the Chapare, or how they knew where to go. This broad query fetched widely varying responses that included: where they could make the most money (Community 1); where persons from their community had settled, for there they had friends (Community 2); and where they had friends (Community 6). Respondents from Communities 2,4, and 6 said that migrants from there went to all parts of the Chapare. A man from Community 4 said that once he went to the Chapare *a la ventura* (i.e., without knowing where he would work) and was hired as *partidario* by a *patrón* once he arrived.

The time migrants spend in the Chapare (or elsewhere) seems to vary considerably, from several weeks to a year. This probably depends on individual circumstances. As I have already noted, in the Chapare one has great flexibility (because of the frequent harvests of coca) with regard to when one can migrate and how long one can stay. This flexibility has further added to the attraction of the Chapare.

3.6. Occupation of Migrants

The range of migrant occupations in the Chapare is also quite varied and includes coca harvesters, weeders, fellers of the forest, and stampers. The task of harvesting is that most often mentioned by respondents. This is understandable, for *peones* working as harvesters are paid by how much they harvest (by the *tirada*, or twelve pounds of wet leaf). A good harvester can earn more than those engaged in other occupations such as felling forest and weeding, for those activities pay only a daily wage. Both the price of a *tirada* and the daily wage, of course, vary with the price of a *carga*, or 100 lbs. of dry leaf.

The job of stamping (*la pisada*) is the most lucrative of all for the time spent--but also the riskiest, as a young man in community 2 with experience related. (Stamping occurs in plastic-lined pits and is a step in the making of *pichicata*, or coca paste, an early intermediate product in cocaine manufacture.) Respondents in Communities 2 and 3 associated stamping with younger migrants. There are probably good reasons for this. The *pisada* favors a younger person, first, because it is a grueling activity, lasting about 8 hours and usually taking place at night. Second, it is a high-risk activity since it occurs in conjunction with coca paste manufacture and is subject to UMOPAR/DEA interdiction. Young people, with a sense of adventure and on the fringe of the modern world--yet sadly excluded--are less responsive to community norms that might discourage participation in an illegal, or at least high-risk, activity. Third, it can pay extraordinarily well; young men in these peasant communities, without work at home and driven by frustrated aspirations, are easily tempted.

Respondents in Communities 3, 5, and 6 spoke of young people in the context of migration. In Community 5, young people sent money back to their families if they were away for extended periods. Not only young people migrate, of course, but these comments suggest that migration may favor a younger group. Quite apart from the physical rigors of migration, the division of rights to land and water through inheritance often leaves too little of either for younger persons. The pressures on them to migrate, therefore, would be greater. I would guess that much of the Chapare's "floating population" (on which there are no statistics, nor can statistics be easily generated) has been young, though the utter destitution in the highlands during the 1980s probably brought more older persons into the migrant group than otherwise would have been the case.

Migrants usually work as either *peones* or *partidarios* in the Chapare. *Peones* are laborers who work for a daily wage. They reside on the premises of the employer, who is obliged to house and feed them. *Peones* usually work for brief periods of time. *Partidarios*, by contrast, work for a longer period; they work as caretakers of a property, reside on the property, and receive half of the harvest. The owner-employer, however, has no obligation to feed them. Most of the migrants from the interview communities had worked in the Chapare as *peones*, only a few of them as *partidarios*.

A few residents of the interview communities owned land in the Chapare. I was told by respondents in Community 2 (with 84 families) that ten residents from there owned land in the Chapare. But they resided primarily in the community, leaving their Chapare land in the care of a *partidario*. Respondents in Community 4 (with 60 families) and Community 6 (with 67 families) estimated that two residents from each of those communities owned land in the Chapare. One of the Chapare land owners in Community 6 resided primarily in the highlands, with occasional trips to his Chapare land. The other Chapare land owner had not been heard from for some time, and there was speculation that he was dead.

3.7. Effects of Male Migration on the Farm and Family

The usual pattern is for men to migrate alone (not in groups), leaving their farms in the care of their women and children. When the migration is to be for an extended period, the men may take their wives, though children are sometimes left with grandparents. But this seems not to occur often.

The men I interviewed indicated no particular problems with leaving the farm in the care of their women. Respondents in a couple of communities said that some of the women did not care well for the fields and animals in their absence, or that they did not tend to things as well as their husbands did. In regard to the farm, at least, migration seems to create no significant problems from the point of view of the men.

Out of curiosity, I asked respondents in one community what they did for women while in the Chapare. They consorted with prostitutes, came the slow reply. (San Simon University in Cochabamba conducted a study of venereal disease in the Chapare and found the rates to be

alarmingly high. This is not surprising given the large population and the money circulating there during much of the 1980s.)

The one interview that I had with women (Community 5) strongly suggests that migration often creates family tensions and other problems. Their complaints were several. (This may have been the best interview I had in the high valleys--a surprise to me, for I had expected the women to be reticent and very closed. This was anything but the case. I did, however, have to depend entirely on interpreters. The interested reader should read this entire interview in order to place my comments here in a fuller context). Sometimes migrants did not return, they said, and one did not know what had happened to them. And migrants sometimes found other women in the Chapare, I was told. But they left them when they returned home (just as they left us, said one woman facetiously). And when a husband did not return for the planting season (I have no feel for how often this happens, but it must happen often enough for the women to complain to me about it), women had to hire *peones* to put in the crop. And the work was never as good as the husband would have done.

According to one woman, there were often disputes between a man and his wife when he returned. "Women scold their husbands when they return, ask them where they've been, what they've done, and where the money is..." Men often returned without any money, the women said.

The women spoke of vices their men acquired in the Chapare. "They learn to drink and become drunkards; they continue to drink when they return, they do not care for their families, for their children." I asked if the same happened when their men went to Santa Cruz. It did, they said. (Perhaps, but I have my doubts. The Chapare was a wild place during the 1980s. Farmers from another community commented on the quantity of beer consumed there. And a colleague told me that the level of economic activity in the Chapare at the time could be measured by the volume of beer sold, which reached a very high level.)

3.8. Likes and Dislikes about the Chapare

I asked residents to talk about what they liked and disliked about the Chapare. They seemed to like little beyond the chance to earn money, which residents in two communities (5 and 6) cited. Residents from one community (without irrigation) cited an abundance of water in the Chapare; one could grow things there, they said. The women in Community 5 said that one could bathe in the Chapare's rivers.

What residents liked about the Chapare pales beside what they disliked. Residents in two communities (#2 and #4) commented on the presence of drugs, or the dangers of drug addiction for young people working in the Chapare. Other negative attributes included the presence of poisonous snakes, heat, and high humidity.

But the strongest and most consistent negative attribute of all was sickness and disease. Respondents from all six interview communities spoke to this issue, sometimes with passion.

Residents in Community 1 complained of lung infections and yellow fever acquired in the Chapare, while those in Community 5 cited tuberculosis caused by the tropical humidity (according to their etiology).

One disease (or perhaps class of diseases) emerged as the most serious of all from the point of view of respondents, who in all six communities described it as a stomach ailment. Residents in five of the six communities termed the ailment *anemia*. They described its symptoms as including a swollen stomach (in two communities) and the evacuation of large worms. In four communities, respondents said that migrants often died of *anemia* (and in one community, of tuberculosis as well) after returning from the Chapare.

From the point of view of respondents in these communities, the health costs of migrating to the Chapare are very high. It is only extreme deprivation at home that has driven people to the Chapare and led them to incur such high costs. As one of the women in Community 5 (without irrigation) aptly put it, "You're better off at home, even if it's dry."

3.9. The Chapare Coca Economy: The Migrant's Perspective

(At the time of these interviews, $1.00 U.S. = 3.18 *bolivianos*.)

Residents in the interview communities were fully aware of the decline in coca prices and its effect on the Chapare economy. Respondents in four of the six communities (3,4,5,and 6) commented on this. From Community 3: "There's no longer life in the Chapare, people are returning; the young people no longer want to go." From Community 4: "There's no life in the Chapare because the coca plants are being destroyed." From Community 5: "You don't earn well in the Chapare now, so people don't go; people are coming back. There is less coca there now, it's being cut down." And from Community 6: "There's no life in the Chapare now."

These highland farmers clearly gauged the status of the Chapare coca economy by the price of a *carga* (=100 lbs.) of dry leaf. And their knowledge of prices was fairly current. Respondents in Community 1 told me that the price had been 150 bolivianos/*carga* a week before (this was good information, and very current); they knew the price, they said, because somebody was always going back and forth. In Community 2, farmers said they had heard the price was about 100 bolivianos/*carga*; the price went up and down, they added (the price was gradually rising and had been at 100 bolivianos not long before). A woman in Community 5 said the price was between 100 and 150 bolivianos/*carga*.

I asked respondents in Communities 1 and 2 (neither with irrigation and both having lost their harvest this year to drought) what they considered a good price for a *carga* --a price, that is, that might make it worth their while to migrate to the Chapare. They considered neither 100 bolivianos/*carga* nor 150 bolivianos/*carga* (the price had only recently risen from less than 100 to 150 bolivianos, as they knew) a good price (*no vale la pena*, they said). In both communities, they cited the same figure--300 bolivianos/*carga*--as a good price. At this price,

they would migrate to the Chapare, they said.[8] simple calculations may reveal the economic logic behind this decision. Farmers in Community 1 said that *peones* harvesting coca in the Chapare were paid by the *tirada* (= 12 lbs. of fresh leaf). If the price of a *carga* was 100 bolivianos, *peones* received 1 boliviano/*tirada*. If the price of a *carga* rose to 300 bolivianos, they received 3 bolivianos/*tirada*. (The value of a *tirada* is 1/100 the price of a *carga*.) These farmers said they harvested about 5 *tiradas* of coca in a day. Depending on the price of a *carga*, then, they could earn from 5 bolivianos (at 100 bolivianos/*carga*) to 15 bolivianos (at 300 bolivianos/*carga*) in a day.

The local daily wage was from 4 to 5 bolivianos, plus food; adding the cost of food would bring the effective wage to between 8 and 9 bolivianos.[9] For a coca harvester to receive an equivalent daily amount in the Chapare, the price of a *carga* would have to be between 160 and 180 bolivianos. If one has alternatives at home, therefore, one might not consider a *carga* price of 100 to 150 bolivianos to be worth a trip to the Chapare, whereas one might consider a price of 300 bolivianos to be attractive (see Note 8).

The daily wage (what a *peon* receives for activities other than harvesting coca) in the Chapare rose and fell with the price of a *carga*. A farmer in Community 6 had heard that the

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[8]According to monthly regional price averages maintained by IBTA/Chapare from April 1986 through June 1990 (see the appendix), the average price of a *carga* of coca has only once--in April of 1986--reached 300 bolivianos. It is clear that these farmers have migrated to the Chapare to work when the price was lower--a lot lower. But two points must be made. First, the IBTA prices have not been adjusted for inflation. Three hundred bolivianos today would have been worth considerably less in 1986. And second, it only makes sense to speak of coca *prices* triggering migration to the Chapare so long as alternatives to that migration exist at home (or at other potential migratory destinations). Assuming those alternatives to exist and 300 bolivianos per *carga* to be the current lower price threshold for stimulating peasant migration to the Chapare, then it follows that the triggering per-*carga* price is probably in the range of from half again to twice as much (1.67 to 1.88) as the effective (i.e., including food) local daily wage. But to emphasize again, if there are few opportunities to work locally or elsewhere at *any* wage, or otherwise to earn income locally or elsewhere, then migration to the Chapare becomes necessary as a means of survival. Under a migration-for-survival scenario, it makes little sense to speak of triggering prices. And that was the scenario for many highlanders during much of the 1980s.

[9]Some of these peasants earn about 3.30 bolivianos per day from the sale of laboriously collected firewood--and they often have to rent the burros to gather the wood and convey it to market.

daily wage in the Chapare at the time of our interview was 3 bolivianos; before the coca-price fall, the wage was 10 bolivianos, he said. (When I was in the Chapare a few days after this interview, the daily wage was 4-5 bolivianos, plus food. Also, Chapare farmer J5 said that he could not recall the daily wage ever rising above 8 bolivianos--see Section 4.5.)

The *pisada*, or stamping, is the activity that paid the most for the time required. One young respondent in Community 2 had engaged in this activity and received 20 bolivianos per stamping--good money for eight hours work. Another reported stamping emoluments of 25 bolivianos. As a farmer in Community 6 said, before the coca price fell, one could earn 20-30 bolivianos/day working in the Chapare. Like the daily wage, the stamping emolument fluctuated with the price of a *carga*, which in turn rose and fell with demand.

3.10. Project Implementation in the Associated High Valleys: Some Notes on NGOs

By far most CRDP activities in the high-valleys region are implemented by NGOs. I treat below four project NGOs operating in small areas of Campero (near Aiquile) and Mizque Provinces. I deal mostly with NGOs, but also comment freely on the activities of other agencies as they bear on the work of NGOs. I do much of this in Section 3.10.5 below, where I also define some issues and problems that need the attention of project management. It is necessary to cast a broad net in order to present a coherent picture of the project as I saw it during the four days that I spent in the valleys talking with farmers and NGO personnel (August 29-31, 1990--the present tense as used below refers to this period).

For further information on project NGOs, and project-related institutions in general, the reader should consult an excellent report prepared by Michael Painter (1990). I say this, for because of my heavy agenda on the CRDP evaluation team--to interview farmers in both the valleys and the Chapare, as well as to assess the NGOs and the work of IBTA/Chapare--I did not have time to pursue the full panoply of NGOs--their strengths and potentials--present in the valleys. Furthermore, I do not bother to provide historical background and affiliations of the NGOs that I do discuss; Painter does a good job of this.

The four NGOs that I selected to visit are: ASAR, PROCIPLA (a part of ARADO), *Radio Esperanza*, and CEDEAGRO (see list of acronyms). According to PDAR, they are the strongest of the NGOs in terms of institutional solidarity and ability to respond to project needs. My visits confirmed that these four had been well selected.

A basic question, which I would answer in the affirmative, is whether CRDP is pitched to the rural needs of the High Valleys--as local farmers define those needs. According to the synthesis of farmer interview findings presented in this chapter, what farmers need most is water--water for crops, for livestock, and for human consumption. Other needs include seeds (people are hungry, yet have nothing to plant because of the drought)--corn, potatoes, and wheat--for the forthcoming planting season; assistance with agricultural pest management (which relates to the need for seeds--seeds of disease-resistant varieties adapted to the zone; I expand

on this below); and assistance with health problems. And farmers expressed a strong need for credit--to buy seeds and other inputs for the forthcoming cropping season.

3.10.1. ***Asociacion de Servicios Artesanales Rurales*** **(ASAR).** ASAR is the NGO with which PDAR is most involved in 1990. And according to ASAR top management, 99 percent of its efforts go into PDAR activities. Although new in Aiquile, ASAR has worked for many years in Mizque. There are six components to ASAR's work in Aiquile and Mizque: livestock management, soil conservation, cropping systems and technology transfer, irrigation management, forage development, and production units (*unidades productivas*).

The production units work with women and young persons of both sexes. This work promotes activities that complement agricultural production and provide family income as well as enhance the quality of life in other ways. Such activities include establishing family gardens (*huertas familiares*--in communities with water) to improve diet, sewing (for women), health education, and candle and soap making.

I was impressed with the degree of organization that I found in both ASAR's Cochabamba office and their Aiquile field office. And I liked the integrated way in which they think about rural development. They clearly have years of experience with it. Twenty-four technicians and seven *promotores* (three of them women; the fourth woman on the staff is a soils extensionist) work on the six components, supported by a staff of four in Aiquile and six in Cochabamba. The *promotores* work only on the production units component. ASAR seems to be handling the six project components well--probably because ASAR is well organized. ASAR also has very good rapport in the communities; indeed, I tapped this rapport in order to conduct interviews (assisted by ASAR personnel) with local farmers.

ASAR favors integrated rural development. This requires that the six components be managed as one, which is what ASAR tries to do. But the division of PDAR activities into six components makes this difficult. (The accounting alone is enormously cumbersome, I was told.) ASAR has requested that the division of project activities into components be eliminated. Furthermore, there are needs that the components do not provide for. There has been no attention to marketing problems, for example. (Shortly before I left Bolivia, CRDP hired a marketing advisor to work in both the valleys and the Chapare.)

ASAR also has a plan to improve the delivery of its services to local farmers. Whereas now ASAR extensionists are assigned to the six components, backed by component specialists, ASAR would like in the future to assign extensionists to geographic areas, where they would be generalists in charge of several communities. These extensionists would then call in specialists as they needed them. Now, nobody is in charge of geographic areas.
Placing extensionists in charge of areas rather than of components would facilitate integrated rural development. To make this scheme operate well, however, may require the hiring of additional staff, they said.

ASAR would like to expand its geographic coverage and thinks it can do so with existing staff. But the staff need further training, I was told. This speaks to an important point, I think: ASAR and other NGOs are basically not research entities but rather are technology validation and transfer agents. To perform this role well, they must be in communication with research organizations in order to know what the technology options are as well as to have access to them. Sending ASAR personnel to seminars and short courses in Bolivia and beyond is one way of achieving this. And bringing experts to them from time to time would also help. In technical areas such as irrigation, PDAR experts could assist with this training.

ASAR is also requesting resources to establish themselves in Aiquile in a more permanent way. They need office space, classrooms, and dormitories for farmers attending short courses. ASAR facilities are now rented, its classrooms from the local parish. They are also asking for more vehicles; they have a total of five, all rented, but these are not enough to maintain an effective rural presence with six components in two watersheds, they said. I deem these requests reasonable, for I think ASAR is able to make good use of the resources.

ASAR works a lot with short courses of two kinds: those of two-day duration held in the communities, and those of longer duration held in Aiquile for farmers from a wide area. ASAR personnel initiate work in a community by explaining there what they do. Next, their component technicians enter to give a two-day short course (using slides and other visual aids) on a topic of interest to local residents. The technical part is given in late afternoon or evening, with supervised on-farm practice on the following day.

Participating communities select course participants, whom ASAR then uses as community promoters. These promoters will play a brokerage role by instructing others in their communities. When they cannot handle a problem, they will call in an ASAR technician. In Aiquile, ASAR has already formed a livestock association composed mostly of promoters.

ASAR is now working with "modules" for different types of farms in different ecological areas of the two watersheds, trying to introduce several components to each farm type in an integrated fashion. Cooperating farmers are selected, with each farmer agreeing to do all the work under the supervision of an ASAR technical person. In selecting cooperating farmers, they seek the approval of both the sindicato and the prospective cooperator's wife, they said.

3.10.2. ***Centro de Desarrollo Agropecuario*** **(CEDEAGRO).** CEDEAGRO is implementing only one project component--in soil conservation. They have proposed several projects to PDAR over a four-year period, but all have been rejected--ostensibly either on technical grounds, or on the grounds that CEDEAGRO cannot manage what they propose. PDAR has now begun to work with IBTA in fruit culture; CEDEAGRO has been working for three years in fruit culture and asked PDAR for help three years ago but received no response. Furthermore, according to CEDEAGRO management, PDAR has some very competent technical personnel in irrigation and other fields, and CEDEAGRO would like to receive training from them.

The strengths of CEDEAGRO as they acknowledge them are in the organization of peasant communities--helping the communities think about their future and that of the region and to develop a vision of what they want from development. CEDEAGRO starts at the base and works up, they said. Because of their organizational concerns, they work closely with the sindicatos and the local *central*. Other acknowledged strengths include agricultural and livestock technical assistance and rural construction--small irrigation systems, potable water systems, schools, and so on.

In the agricultural area, CEDEAGRO is now working largely with potatoes and peanuts in Mizque. CEDEAGRO's way of promoting agricultural production in these communities is worthy of comment. (Remember, there is no bank credit here.) They provide a peasant family with technical assistance and the necessary inputs to produce a crop. Upon harvest, the family keeps half of the crop and turns the other half over to CEDEAGRO. CEDEAGRO applies 65 percent of the proceeds from the sale of its half to cover production costs and gives the remaining 35 percent to the local sindicato, either in money or in materials. The arrangement is called working *en compañia* ("in company") and is a play on a locally familiar pattern whereby middlemen (*rescatistas*) formerly assumed the part of CEDEAGRO, the difference being that CEDEAGRO shares the profits with the community (with the sindicato).

Farmers in the Mizque area are today divided politically, between those supporting the government and those opposed. The forthcoming (in 1991) municipal elections are intensifying this division, if not responsible for it. There is still only a single *central*, but it is badly divided. When I was there, some persons spoke of two *centrales* in describing this division. Although my visit was too brief to delve much into this rift, it clearly has implications for the project. The government faction favors working with PDAR (which is the government) and the project, whereas the opposing faction does not.

When PDAR began working in Mizque, it entered CEDEAGRO's domain and there were some tensions. These have been largely (but not entirely) resolved, I was told. Collaboration seemed good in the soil conservation component --indeed, I witnessed excellent collaboration between the two institutions in the recent presentation of a short course on soil management in Callejas. However, CEDEAGRO is not aligned with the current government. And in the Bolivian political setting, the government often excludes such an institution. I cannot say whether this is happening in some degree to CEDEAGRO--or whether PDAR is exploiting political divisions in Mizque to its advantage. But the matter is worthy of further inquiry. It would seem that there is still more room for CEDEAGRO in the project, for the problems in the region are enormous. I think CEDEAGRO has more to offer than PDAR has acknowledged.

3.10.3. ***Programa de Control Integrado de Plagas*** **(PROCIPLA).** PROCIPLA operates under the umbrella of *Accion Rural Agricola de Desarrollo Organizado* (ARADO), which signed the project agreement with PDAR. But PROCIPLA has a direct relationship with PDAR in regard to finances and programming. PROCIPLA began in 1985 as a USAID-sponsored project to develop Integrated Pest Management (IPM) technologies for the country (Painter 1990). According to my information, it is today the leading IPM entity in Bolivia (and one of the few).

PROCIPLA is itself a PDAR subproject activity and has in the past worked with both ASAR and CEDEAGRO.

PROCIPLA began working with the project in September 1988 and since then has worked in 35 communities of the Aiquile-Mizque and Tarata areas. Their technical staff functions as a team, with specialists in plant pathology, entomology, and cropping systems. And as Painter also points out, PROCIPLA has promoted an awareness of the dangers of pesticide use among area farmers and others.

PROCIPLA does most of its research on farmers' fields and mounts demonstration plots in the communities. There, they conduct short courses lasting a morning or a day, and timed if possible to coincide with the presence of pests. And they also seek to use local plants to develop effective pesticides. They, too, stress strongly the need for coordination among the several PDAR activities in the area. They say there is little seed research in the zone, where there is a need for pest-resistant varieties of onion and peanut. ARADO has much experience working with improved seeds, especially potato seed, and so could assume this task, I was told. This problem was brought to the attention of PDAR a year ago, but nothing was done, they said.

PROCIPLA has asked PDAR to find a mechanism to place agrochemical supply stores in both Aiquile and Mizque--stores, unlike the present ones, that would sell safe and unadulterated agrochemical products. PROCIPLA would set the norms for the chemicals to be sold and for how they are to be used. PROCIPLA suggests that ARADO (a non-profit farmer organization) could do this also, and laments that PDAR has done nothing about this serious and urgent problem, which, like the seed problem, was brought before them a year ago. (I heard that PDAR wanted to reserve this sale function for the private sector, but had found no viable mechanism to do so.)

It is PROCIPLA's position that effective development requires not merely that institutions coordinate the activities of different projects, but that they collaborate on the same projects. (PROCIPLA technicians commented on the many organizations now working in Aiquile and the need to coordinate their work in order to make it more effective and avoid duplication. They even suggested cofinancing of a single project by several agencies.) PROCIPLA, for instance, might work with persons from soil conservation or environmental pollution or irrigation on a single project. As things are now, they said, farmers hear one day about pest management, the next about soil conservation, and yet the next about irrigation. They get tired of so many visits; they get confused and do not know whom to believe. PROCIPLA, like ASAR, stresses the need for integrated rural development.

3.10.4. ***Radio Esperanza.*** PDAR approached *Radio Esperanza* about three years ago to seek their cooperation, knowing that their station reached into the Chapare and could be picked up by migrants from the High Valleys. PDAR offered to improve *Radio Esperanza*'s transmission equipment and made several promises that were never fulfilled. And so relations between the two soured for a season. PDAR later provided *Radio Esperanza* with a generator, but did nothing in regard to transmission equipment (the supplying of a repeater, for example).

It offered them a short-wave transmitter to reach the Chapare, but they rejected it because short-wave transmissions would bypass their numerous listener constituency in Aiquile and Mizque. Not until mid-1989 did PDAR and *Radio Esperanza* form a relationship: *Radio Esperanza* would daily announce PDAR activities in the Aiquile and Mizque areas.

Today, PDAR has two subprojects with *Radio Esperanza*: one in radio broadcasting and community organization, and another to promote community participation in reforestation. *Radio Esperanza* uses *promotores* in its forestry projects to reinforce its programming work in the communities. Some of these promoters have attended courses offered by PDAR. One must recall that *Radio Esperanza* belongs to the Catholic Church, and so will not use its radio to laud (or malign) PDAR activities. The radio has insisted on maintaining a neutral stance, and PDAR has not always accepted this.

3.11 Reflections

Perhaps the central challenge facing PDAR and the project today in the valleys is that of coordination of activities. It is very clear that lack of coordination is a major problem. Within PDAR, there is poor coordination of the several component activities--irrigation, forestry, soil conservation, and livestock and forage management. And there is poor coordination by PDAR of the activities of its several implementing NGOs. As one NGO worker above pointed out, at the community level this lack of coordination creates confusion among farmers--who weary as well of a parade of technicians passing through, each promoting a component.

Integrated rural development should be the goal. I was encouraged to learn that the NGOs I interviewed were very sensitive to this need. ASAR is making efforts to operate in this fashion despite project obstacles, but probably can only go so far without a relaxing of constraints and better coordination by both PDAR and USAID.

At least two urgent problems demonstrate the need for an integrated approach and good coordination. In its use of IPM, PROCIPLA has probably reached its limits in some ways and with some crops. The need now is for disease-resistant varieties. This means varietal testing in the valley zone as well as the instituting of means to reproduce seeds locally. PDAR is doing nothing to make this happen. PROCIPLA says its parent organization, ARADO, has experience in seed research and reproduction and could undertake the task. PDAR should move forward immediately on this front.

The availability and sale of appropriate agrochemicals also seems to be a serious problem in the valleys. Vendors often practice deception (adulterating mixtures, for example) and charge high prices, and local farmers are ignorant of correct agrochemical use. There should be norms and controls governing the sale and use of these chemicals. And it is most unlikely that the "private sector" (the business sector) can or will devise and institute the measures called for. But PROCIPLA can devise the needed norms and controls, and they have volunteered to take the lead.

In the agrarian societies of Latin America, it is not easy to regulate the agrochemical industry, which is enormously profitable and often politically powerful. In the Bolivian case, with the government's support of the private sector (and in Bolivian government parlance today, "private sector" does not include non-profit NGOs. In the so-called "patriotic accord," economic policy is in the hands of ADN, which supports the business sector with ideological fervor in order to placate powerful interests), any proposed controls are likely to be resisted by that sector. And to take the sale of agrochemicals out of its hands and place it with an NGO may meet more resistance. This may be why PDAR (a government agency) is dilatory in responding to this need.

USAID should bring pressure to bear, either on PDAR or elsewhere, to place the sale of these chemicals in the hands of an NGO (s) in the valleys. PROCIPLA, which would establish the necessary norms, has suggested ARADO as a viable candidate. Again, there should be forward movement immediately here.

An insufficient number of vehicles, as well as a lack of their timely procurance, also seems to be a problem. Neither the NGOs nor PDAR can maintain an effective level of presence in these often remote rural areas without vehicles. One suggestion I heard was that vehicles be included among the resources provided to the NGOs.

PDAR has never taken its social science unit seriously. The SARSA anthropologist and his counterpart seem to hover on the fringes. This is unfortunate, because the unit is very competent and better use should be made of it. The social sciences (and not just economics, but anthropology and sociology as well) should play a key role not only in monitoring CRDP activities, but in designing and planning them as well. This should happen in both the High Valleys and in the Chapare, where there has been almost no social science involvement.

It is said that PDAR is the only institution that can implement water infrastructural projects. This may be true, I cannot judge the matter; but several NGOs in the area have also implemented such projects--both CEDEAGRO and *Radio Esperanza*, to mention two. This matter should be looked into, for there is a great need in the area for water projects. If other institutions could assist, that need could be better met. Perhaps PDAR (which seems to have an excellent irrigation staff; much evidence points to this) could further train those NGOs with some water experience, thereby enabling them to better implement water projects.

There seems in general to be a lack of strategic planning in the project. USAID often confuses such planning with project management. In this regard, the creation of urban development poles in the Aiquile and Mizque areas, arguably a good thing (to provide employment, to absorb migrants heading to the Chapare or elsewhere, or to reverse those already there), seems devoid of such planning. How is this development to happen? Around what are these areas to be developed? What sorts of occupations can rural dwellers engage in there? As one observer wryly put it, "You can't develop these areas on the basis of *chicha* (a native beer), *charangos* (a musical instrument made locally), and schools alone."

A farming systems research specialist is soon to join the DAI advisory team, and a market specialist has just arrived. These are moves in the right direction. A farming systems specialist can provide valuable assistance in locating susceptible points of leverage for technological intervention on the valleys' very small farms, and in integrating cropping technologies with irrigation.

CRDP and PDAR are still in their infancy (see Section 2.3). PDAR has yet to achieve coordination of its array of activities, and internal procedures for selecting NGOs, monitoring their implementation, and evaluating project progress are only now being worked out. For this reason, it is premature to speak of extending PDAR over a broader geographical area. For now, PDAR should consolidate its activities and gain institutional experience.

4. The Chapare Settler Population

This chapter is a synthesis of information, reported in nine categories below, that a Bolivian colleague and I collected through 21 interviews (many of them group interviews) of Chapare settlers, or *colonos*, conducted between September 4 and September 8, 1990. We did not interview either *peones* or *partidarios* (with the exception of C4, where a *partidario* enters) because several days earlier, in Cochabamba's high-valleys region, I had interviewed a sample of farmers from the Chapare's "floating population" of the 1980s, several of whom had worked in this capacity. But we did talk to settlers about the *peones* and *partidarios* working for them and I report on what they said below. Notes on interview methods and procedures appear in the opening section of the interviews themselves, which are included in the appendix.

Thirty-eight or thirty-nine of those we interviewed in the Chapare were exclusively farmers, whereas at least one was a farmer who also owned a small general store (J6). Two of the farmers (J3, J10) were sindicato, or peasant-union, leaders (*dirigentes*) at the time of the interviews, and another (J6) had been a leader until not long before. Four of the respondents (J9, C1, C7, C9) were women, and another two (J7, C8) were former IBTA/Chapare promoters.

4.1. A Settler Profile: Origin, Arrival Period, and Reasons for Migration

Reliable demographic data are next to impossible to obtain from the Chapare because of the remoteness of much of the area and the fluidity of the population there at any given time. This was especially true during the 1980s, the time of the coca boom. The recent CERES study, for example (a good study, perhaps the best that can be done) was conducted soon after the coca price fall, when the "floating population" was leaving the Chapare in great numbers. It was a dynamic time, and the task of CERES was especially challenging.

Because of the nature of our interviews, it was not possible in each interview to obtain information on all categories of interest to us. In group interviews, we could not always obtain detailed information from each individual on where they were from (or their parents, for those born in the Chapare), when they arrived in the Chapare, and why. The following percentages, therefore, are based on the number of persons from whom we *could* obtain such information.

The percentages, which are only relative magnitudes, provide a crude--a very crude--demographic profile of the Chapare. Our sample was small, and it was not randomly selected. But neither was it consciously stratified: it definitely has a randomness to it, and any stratification bias would have derived largely from our working in areas (for the most part) where IBTA/Chapare had been active, and in some cases, with farmers who had participated directly in the project. But this kind of stratification should have little bearing on the profiles constructed below.

Settler Origin
(N=23)

Cochabamba (excluding the Chapare)	9	(39%)
Chapare (born in the Chapare)	7	(30%)
Potosi (usually northern Potosi)	4	(17%)
Chuquisaca	1	(4%)
Tarija	1	(4%)
Santa Cruz	1	(4%)

The fathers of at least five of those born in the Chapare were also from Cochabamba. The bulk of the settlers from Cochabamba were from either the Valle Alto (not the Valles Altos Asociados, where Aiquile and Mizque are and where CRDP is active) or Quillacollo. And by the frequent mention of Quillacollo in my interviews, I would conclude that some strong forces have operated there to drive people out well before the beginning of the coca boom. The profile above also suggests that a substantial number of settlers in the Chapare were born in the Chapare.

It is useful to compare this profile with the one constructed by *Direccion Nacional de Reconversion Agricola* (DIRECO) based on its population of farmers who have eradicated at least some part of their coca plants. This population numbers in the thousands; the eradication program, and hence the collection of statistics, began in about September 1987 and is still active. Although the DIRECO universe defines only eradicators, there is little reason to believe that eradication behavior varies significantly with settler origin. The origins of the eradication population should correspond quite closely to those of the general settler population. The DIRECO profile below, then, should give a reliable picture of the origins of the settler population.

	Percent
Settler Origin[10] (excluding the Chapare)[11] . . .	51
Chapare	24
Potosi	14
Chuquisaca	3
Santa Cruz & Tarija	1
Oruro	5
La Paz	2

Source: DIRECO, courtesy of IBTA/Chapare

The following profile, also constructed with DIRECO data, is a distribution by internal origin (in descending order) of settlers from Cochabamba Department. Of these, more than 16 percent are from Quillacollo. Just above 2 percent are from Mizque, and fewer than 1 percent are from Campero.

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[10]I am assuming that DIRECO statistics on origin for the Chapare represent place of birth (i.e., the Chapare) rather than location of last residence. One has to pursue the issue of origins carefully because settlers often give the location of their previous residence, which in many cases is some place in the Chapare (and in many cases also some place outside the Chapare, yet still not their ultimate point of origin). The interviews suggest a lot of settler movement within the Chapare.

[11]I would argue that the population of coca eradicators in the DIRECO files not only defines the general settler population with regard to origin, but also defines the floating population with regard to origin. For the most part, the same forces--a lack of land and water--that sent today's settler population to the Chapare before the coca boom also sent the "floating population" there during the nineteen-eighties. Extreme drought and a total collapse of the national economy merely intensified those forces during the 1980s. Such population distributions by origin can be quite useful for siting development activities to thwart the migratory tide to the Chapare (or elsewhere--again, the Chapare is only incidental as a migration destination). And if the development schemes are viable, they may provide incentives for some settlers already in the Chapare to leave.

Internal Origin of Cochabamba Settlers by Province
(DIRECO)

	Percent
Chapare	32.1
Quillacollo	16.5
Ayopaya	7.9
Capinota	6.6
Punata	5.7
Arani	5.2
Arque	4.7
Tapacari	4.6
Cercado	4.0
Carrasco	3.3
Esteban Arce	2.9
Tiraque	2.6
Mizque	2.2
Jordan	0.8
Campero	0.7

Source: DIRECO, courtesy of IBTA/Chapare

For 14 persons (excluding those born in the Chapare), we obtained through the interviews approximate information on when they arrived *in the Chapare* (not necessarily when they arrived at their present location).

Settler Arrival Period in the Chapare
(N = 14)

1940 - 1950	2 (14%)
1950 - 1960	1 (7%)
1960 - 1970	6 (43%)
1970 - 1980	3 (21%)
1980 - 1990	2 (14%)

Generalizations from such a small sample are hazardous, but the above distribution may be fairly reliable. In regard to the high figure for the 1960s, one should recall that during this decade the government improved and expanded roads to and within the Chapare and promoted colonization there. The period saw the first heavy influx of highlanders into the region. The figure for the 1980s may not be far off either. According to another informed estimate, only 20 percent of the Chapare's settlers in early 1990 had arrived since 1981 (Rivera 1990:11).

We obtained information from 19 persons on why they left their communities of origin to settle in the Chapare. Respondents would sometimes include insufficient land and water together as a reason for leaving; and in group interviews, with several persons responding, it was not possible to sort out whether both (together) were reasons for leaving, or whether one and not the other was responsible. Therefore, the first category below should be interpreted as one or the other, or perhaps both. Sorting through this in the interviews would have been cumbrous and would have consumed valuable time. But it is my sense that the category should be weighted more toward insufficient land.

Reasons for Migrating
(N = 18)

Insufficient Land or Water, or Both	11
Insufficient Land	4
Insufficient Water	1
Flooding	1
No Work	1

The major force driving the settler population from the highlands before the coca boom, I would say, was insufficient land. But water also seems to have played a significant role. The chronic drought of the 1980s only intensified the water problem.

4.2. A Note on Chapare Population Dynamics

A few observations on population dynamics should be made. (For a classification of human groups in the Chapare in recent years, see Section 2.2.) First, it is clear from the interviews that many settlers have moved within the Chapare, some of them several times, subsequent to their arrival there (see interviews C2, C3, and C4, for example). Soil fertility has declined, families have outgrown land size, and an expanding road system has opened up new areas. (And during the 1980s, remote lands where there was little police surveillance and forest growth tended to be high, thus ensuring good coca yields for the first couple or three years without the use of agrochemicals, often acquired value, sometimes in excess of good lands near major roads.)

Second, there appears to be a "floating population" within the Chapare of *peones* and *partidarios* who do not own land there (see interviews J7, C2, and C4). They reside in the Chapare and do not return regularly to the uplands. They move in the demographic shadows, so to speak; they belong to no sindicato, and so have no formal representation or protection. Some members of this population have "floated" for years. Indeed, many of the current settlers were formerly part of this group until they could accumulate enough capital to buy land, or else

form a sindicato and petition for it. The interviews suggest that this group is numerically significant. With the possible exception of C4, its members were not part of our interview sample.

There is at present much speculation on whether and to what extent the recent drop in the price of coca has driven settlers from the Chapare. Comments about their neighbors from some of the persons I interviewed suggest a population of settlers who have returned to the highlands, at least temporarily. According to the farmer in interview J8, for example, five families from that sindicato (with 45 families) had left the Chapare for Cochabamba when the coca price fell (no more information).

The *dirigente* of interview J10 estimated that 10 percent of the families from local *colonias* (90 families in his sindicato) had left the Chapare in search of work when the coca price fell. Some had returned to their highland communities of origin, others had gone elsewhere, he said. But he added that they had only departed temporarily. They would be back, he insisted, for they had farms here; the Chapare was their home. (They are probably seeking temporary work, something to get them through the current economic squeeze.) The farmer of interview J12 said that five families of his sindicato (estimated at 60 families) had left for their *estancias* (highland ranches with sheep or camelids) when the price fell (they may belong to Group 3; see Section 2.2). But they would return, he said.

It is hard to know what is happening to those farmers who settled in the Chapare to grow coca during the boom (the farmers of Group 4; see Section 2.2), or what their numbers are (figures in the table above on Settler Arrival Period would suggest this group to be small--about 14 percent); it is next to impossible to gather reliable numerical data on its members. Some of those settlers cited in the foregoing paragraph may belong to this group.

I would guess that persons in this population are largely undecided about their future, and that many are agonizing over what to do. Because the coca price could rise, they are reluctant to eradicate their coca plants, at least on any scale (only enough to obtain money from DIRECO--at the rate of $2,000 U.S. per hectare eradicated--for food for the near term). Persons in this group are in a serious bind, for they have no place to go. I would further guess (because they came late and had little capital) that they tend to have smaller holdings, on poorer soils and in the remoter areas. So they have few alternatives to coca. There are hungry people in the Chapare today, most of whom may come from this group.

4.3. The Settler Household Economy and the Role of Coca

(At the time of these interviews, $1.00 U.S. = 3.19 *bolivianos*.)

In at least six (and probably seven--C5 is somewhat problematic)--J10, C3, C4, C6, C7, C8--of the 19 interview cases (again, a "case" is often a group interview) for which we had relevant information, coca was still the main cash crop. Either bananas or plantains were the main cash crop in seven (J1, J2, J3, J4, J12, C1, C2) of the 19 cases, and perhaps also in an

eighth (J7).[12] Citrus (oranges and mandarins) was the cash crop second in importance in five (J1, J2, J3, J4, J5) of the cases (after bananas or plantains in cases J1, J2, J3, and J4, all in the *sendas* area of IBTA's Subregion III--see Note 12), and may have been the most important cash crop in one case (J7).

The lone farmer of case J6, who had recently eradicated all of his coca and invested the proceeds from DIRECO in IBTA plants and forage grass, complained that there was no market for any of his products now. The story of the Potosino of case J10 is similar; he had eradicated (so he said) all of the coca on his remote farm in Subregion II (colonized largely during the coca boom) and was working in a tile factory in a community near the highway. The respondent of J8 had eradicated all but a small patch of coca (and would soon eradicate that, he said) and had used a part of his DIRECO remuneration to purchase dairy cattle and plant forage grass. At the time of the interview, his main source of income was from the sale of milk.

From the point of view of the small Chapare farmer, coca has several positive attributes. It yields from three to five harvests per year, depending on the farm's conditions of soil and moisture (see J3, J5, C3), and can therefore provide income frequently. Coca will perform better than almost any other crop under poor agroecological conditions (which obtain over much of the Chapare); if the price is up, even low yields can provide an attractive return (see J8, C7). Coca is light, and so can be readily conveyed from the numerous farms far from access roads (J3,J10, J12, C1, C2). And coca in small amounts (0.5 to 1.0 hectares) can provide a satisfactory income if the price is good (J5). A family with little land can thus live from coca, whereas it could not from any other crop. Moreover, respondents (see C3 and C8, for example) often pointed out that there was no alternative in the Chapare to coca--no market for anything else.

Any one of three factors--poor agroecological conditions, a lack of roads, small landholdings--favors the production of coca to the de-emphasis or exclusion of other activities. To the extent that a farm is characterized by more than one of these factors, the production of coca is further favored. Although numbers are not available, it is clear that the Chapare settler population facing at least one of these factors today is substantial.[13] This is especially so, I

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[12]Six of these seven cases come from IBTA's Subregion III, where we interviewed mostly among protestant settlers in the *sendas* area. The settlements there for the most part represent planned colonization schemes dating from the late 1960s and early 1970s. For religious reasons, these farmers have always been less involved in coca production (but some did produce coca during the boom years). The *sendas* area was one of the first to receive assistance from IBTA/Chapare.

[13]A matrix, or model, could be constructed in which settlements (*colonias*, or *sindicatos*) are referenced to these factors. Such a model could be useful in establishing research and extension

believe, of those settlers who entered the Chapare from the late 1970s on, though we have no figures to support this.

We often asked farmers what the local price of a *carga* (=100 lbs. of dry leaf) of coca was (J3, J4, J5, J7, J8, J10, J12). Responses ranged from 100 bolivianos to 200 bolivianos. The variation in response has at least three explanations: real price variation from one area of the Chapare to another; short-term price volatility in a given area (within just over a week after I left the Chapare, the price in one community near the Isiboro-Sécure Park climbed to 280 bolivianos), so that not all farmers are aware of day-to-day price swings in the area and can thus quote the current price; and a relative lack of attention to price by those farmers not now producing (or selling) coca.

As I did with farmers in the High Valleys, we asked Chapare settlers what they considered a good price (which was sometimes interpreted to mean a price at which only costs were covered, at other times a price at which some profit could be made--a "reasonable price"). Respondents quoted prices ranging from 100 bolivianos (only one case) to 300 bolivianos (four cases) per *carga* (J4, J5, J6, J7, J8, J10, J12, C3, C4, C5, C6, C7, C8). The per-*carga* price quoted in nine of the thirteen cases was at least 200 bolivianos, and in twelve of the thirteen cases was at least 150 bolivianos.

Such variation is to be expected, for what one family needs to support itself is not what another one needs, and land size and agroecological conditions differ from farm to farm. Costs of production are higher on some lands than on others, for instance. My reading of these responses suggests that a price range of between 180 and 200 bolivianos per *carga* is a lower threshold of attractiveness for Chapare farmers. As the price rises above this range and remains (assuming no viable, competitive alternatives), coca becomes an increasingly attractive crop (see Note 8).

But the price must remain at an attractive level, for price volatility (of a kind that seems to be occurring with greater frequency now) deters farmers from producing coca (which cannot be stored, as one farmer reminded me). Farmers from six interviews (J4, J5, J6, J8, C2, C3) cited the importance of price stability. But price stability is a complex issue. Farmers at the time of the interviews were having difficulty factoring out seasonal fluctuation from fluctuation that might signal longer term trends. Although the recent price trend had been downward, the price at the time of the interviews was rising. But the price always rises (other things being equal) in this season because coca is scarce: less moisture and lower temperatures cause lower

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priorities by geographical area. It could be useful also in locating populations whose commitment to the Chapare is probably less--populations that might be the first to respond to incentives to relocate. I would predict that those settlers that entered the region during the nineteen-eighties (Group 4, that is; see Section 2.2) might be the first to leave.

yields. With the good summer harvests from January to March, the price typically drops (other things being equal).

Because of these price swings, many farmers in the Chapare today agonize over whether to eradicate their coca. According to one man (J10), Hugo Banzer (military president of Bolivia during most of the 1970s) told Bolivians that coca would disappear by 1972 (the date may be in error). Many in the Chapare then eradicated their coca and began to raise cattle. And then the coca price rose in the late 1970s and 1980s, so that those who had gone into cattle grew poor. People remembered this, he said.

A common strategy seems to be to eradicate a part of one's coca plants. This partial eradication is often forced by economic necessity: a farmer cannot afford to hire the labor to harvest a large area (J8), or else he needs the space for another crop that has some market potential. The farmer of J10 (a union leader) eradicated 1.5 ha of the 2.0 ha he had. Farmers who eradicated in his sindicato had each retained 0.5 ha of coca as security, he estimated, and were waiting to see how the price would behave. He further estimated that 50 percent of the farmers in the sindicato had eradicated 70 percent of their coca, 15 percent had eradicated all of it, and 35 percent had eradicated none of it. Only two (J6, J10) of the seven farmers (J1, J6, J7, J8, J9, J10, J12) with whom I discussed the matter had eradicated their coca plants entirely.[14] variously said that they would not eradicate (at least all of their coca) until they were assured of a viable alternative, or until they saw what happened to a neighbor who did eradicate, or until they saw how the non-traditional crops promoted by IBTA/Chapare fared both agronomically and commercially.

Three farmers volunteered information on what they did with the DIRECO money ($2,000 U.S. per hectare) they had received from eradication (this is a delicate topic). One (J6) had invested his in pastures and dairy cattle. Another had invested one part of his in pastures and dairy cattle, another part in buying coca leaves for resale (as a *rescatista*), and had saved a third part.[15] A third farmer (J7) had used half of his money to buy tree crops from IBTA and the other half to buy a house in Cochabamba so his children could go to school there.

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[14]Because it can yield from three to five harvests per year, depending on cultivation practices and its location in the Chapare, coca can be a viable crop even with volatile prices: if the price is low during three harvests, it may be high during the fourth, thereby contributing to family income.

[15]A group of Swedish Protestants was building a dairy in the region, so several farmers were attracted by the prospect of selling milk, but there is some question as to whether the milk-producing capacity of the Chapare will make the dairy economic.

4.4. Settler Views of Chapare Life

We asked settlers to discuss the good and bad things about the Chapare, or the things they liked and disliked.

In ten of the interviews (J1, J4, C1, C2, C3, C4, C5, C6, C7, C8), respondents cited the productivity of the land (as compared to other places that had not been productive for them because of drought or small plot size). This broad assessment was often coupled by amplifying remarks such as, "You don't have to scrounge for food here," "There's more money here than in Cochabamba," "There's ample water here" (two cases), "At least you can eat in the Chapare," or "The Chapare is work, production, and land." In interview J5, respondents noted that in the Chapare there were fruits, fish, and wild game--something to be had year round. The Chapare was a paradise, one said. The farmer of J7 said that everything was good about the Chapare (after he had cited several negative attributes). In some cases, such appraisals seem to reflect a deep commitment to the Chapare.

But the Chapare also had a down side. Respondents from five interviews (J1, J2, J4, J5, C2) cited the presence of disease--anemia, malaria, yellow fever, parasitosis. According to three respondents (J2, J4, C2), children were especially susceptible (mostly to anemia). One respondent (J4) said that families often left their children with relatives in the highlands. Respondent in another interview (C2) said that they did not see the Chapare as a future place for their children. It is of interest that respondents in four of these five interviews had spent twenty or more years in the Chapare.

Respondents in five interviews (J1, J5, J7, J8, J12) mentioned mosquitos as a negative attribute of the Chapare, and those in four interviews (J1, J7, J8, J12) cited the heat. Two older farmers (J1 and J2), both with twenty or more years in the Chapare, were looking for lands to buy near Cochabamba. As one of them told me, the heat and mosquitos weakened one in the Chapare.

Two respondents (J3, C8) cited a lack of markets for agricultural products. Other complaints included a lack of development in the Chapare (J7), a lack of roads (J3, J10), a lack of electricity (J3), and a lack of good educational facilities (J7). The farmer of J7 had bought a house (with part of the money he received for coca eradication) in Cochabamba so his children could live there (with their mother) and go to school. Respondents in three interviews (C1, C4, C8) cited the abusive treatment that farmers received from UMOPAR as a negative feature of the Chapare. UMOPAR did not treat them like humans, UMOPAR bullied them about, UMOPAR confiscated their property and sold it.

Several persons in interview J5, all born in the Chapare, said they would leave the Chapare if they had lands and opportunity elsewhere. And the respondent of C4 (a 25 year resident of the Chapare) said he would return home (to Arque) if he had land and water there.

On balance, the Chapare is far from a paradise for many settlers. Although there are settlers committed to the Chapare at all cost (see C8), many others are not so committed. If they had attractive alternatives outside the Chapare, many settlers would leave.

4.5. Migrants and "Floaters": The Settler Perspective

The interviews suggest that most Chapare settlers employ workers on their farms. This labor may take the form of *peones*, or (usually) casual workers who assist with some periodic and labor-demanding task such as harvesting rice or coca. But some settlers also employ *peones* on a permanent basis. Labor may also take the form of a *partidario*, or long-term resident caretaker-sharecropper who receives in compensation half of all harvests. *Partidarios* differ from *peones* in that *peones* are generally hired for the shorter term (two weeks to three months, say) and either receive a daily wage and food (three meals; *peones* live on the premises and dine with the owner family) or are paid by the job. *Peones* are much more common than *partidarios*.

Most of the *peones* seem to be sporadic migrants trying to mitigate the effects of poverty and drought in the highlands, and some of the *partidarios* are highlanders come to the Chapare for the longer term, sometimes seeking to accumulate enough capital to purchase land and settle there. As I have already noted, there is also a Chapare-based "floating population," one whose ties to the highlands are tenuous. And this population is also part of the Chapare's labor reservoir. At least some of the permanent *peones* reported by respondents below should probably be classed with this group. Many of those sporadic migrants who elect to remain in the Chapare also become part of the group.

According to one respondent (C1), *peones* from the highlands tend to come alone, leaving their wives and children behind, whereas *partidarios* tend to bring their families and enroll their children in school. The same respondent observed that those *peones* who come and go most often are from nearby, from Cochabamba. Another respondent (C5) observed that the migrants who stay the longest in the Chapare come from the farthest away since it costs a lot to journey to and fro. Four settlers (J6, C1, C5, C8) described the sporadic migrants as youthful; according to C8, they were young and poor and were trying to earn money in order to buy land.

Farmers J6 and J8 each had five *peones* working for them at the time of the interviews, and farmer C5 had one permanent *peon*. Farmer C6 had two permanent *peones* and usually hired more for harvest periods. Farmer J7 had a single *peon* family under contract for a year (whom he went to Potosí to select, using references his wife had obtained; he liked neither the impermanence of the drifters nor the quality of their work, he said).

Several respondents remarked the contrast in numbers of *peones* in the Chapare before and after the last coca price fall (see J5 and J7, for example). By one report (C1), both men and women entered the Chapare to harvest coca when the price was high. By the same report, some *peones* stayed in the Chapare when the price fell, for they had no place to go. By another report (C3), those who stayed settled in remote areas, where they had to walk a lot and cross rivers to reach their lands. Remote lands were all that was left for them, I was told. One

observer (J5) thought that *peones* had begun to return to the Chapare now that the price of coca was rising.

A union leader (J3) from Ibuelo, after saying that there was no longer a "floating population" there, observed that *peones* entering the Chapare today went to the "new zones." By this he meant the most recently colonized zones, which tend to be the remoter areas, like those in and around the Isiboro-Sécure National Park. This observation was supported by comments from C3, who said there was no longer a "floating population" in that area, that today *peones* all went "inland" (*tierra adentro*)--another reference to the remoter areas.

Migrants entering the Chapare as temporary workers seem to be engaged mostly in the harvest of rice and especially coca, and so enter the region at harvest periods (J5, C1, C5, C6, C7). But workers, either temporary or permanent, also clear the forests as well as sow and weed the crops. If the coca price is high, *peones* overwhelmingly favor working as coca harvesters, for this activity pays the most (excluding, of course, the high-risk work of stamping in the coca pits, which pays three times or more that of any other activity for the time involved). Coca harvesters are paid at the rate of 1 percent of the per-*carga* (= 100 pounds of dry leaf) price for each *tirada* (= twelve pounds of fresh leaf) they harvest.

Daily wage rates in the area are sensitive to the price of coca, though less so than wages paid to coca harvesters, which are directly tied to that price. According to one farmer (J5), the daily wage at the time of the interviews was five bolivianos, plus food. The wage dropped to three bolivianos if the coca price was low, and rose to seven or eight bolivianos (plus food) when the *carga* price reached 300 bolivianos. The wage had never exceeded eight bolivianos, he said. According to another farmer (J7), the daily wage was six bolivianos, plus food (like coca prices, wages seem to vary somewhat by Chapare region, in accordance with labor supply and demand). One farmer (J8), with five *peones*, was paying each of them five bolivianos and three meals per day, for an effective daily wage, he estimated, of ten bolivianos.

One respondent (J5) said that some temporary migrants came to the Chapare to work for two weeks, perhaps a month--only long enough to buy coca, which is why they had come. I had heard the same from highland farmers only a few days earlier in the Provinces of Campero and Mizque, where the high price of coca elicited frequent and vocal complaints from farmers, for whom the importance of coca leaves (to chew) can hardly be overestimated. In both the Cochabamba valleys and the Chapare, farmers carried their plastic bags filled with leaves and chewed as we talked. Recognizing the importance of coca, colonist J7 cultivated a small patch of it for his *peones*. "They won't work without it," he said.

We often asked the settlers if the workers they knew had any special problems or complaints. In addition to the usual litany of problems and complaints regarding mosquitos, the heat, the damp, the food, and the inability to educate their children, respondents (J3, C4, C8) cited the health problems of migrants--yellow fever, malaria, bronchitis, parasitosis. According to C4, migrants who came to the Chapare for the first time always got sick and sometimes had

to return home. The settler of C6 said that migrants got sick easily and could be a financial burden to employers.

4.6. Peasant Unions (sindicatos) and Farmer Associations

Peasant (and miner) unions, or sindicatos, created in conjunction with the Bolivian Revolution of 1952, have since that time been the major organizational expression of peasant and worker interests at the community level. These highly politicized grass-roots entities are further organized into *subcentrales*, *centrales*, and finally, at the highest level, into federations. Peasant unions in the Chapare, where each belongs to one of five federations, have been among the best organized and strongest in Bolivia. It has been suggested that union organization in the Chapare is a major reason for the relatively low level of violence there in recent years. (Compared to Peru's Alto Huallaga, the Chapare is a halcyon place.)

State retrenchment from the economy in favor of the private sector is a cornerstone of the New Economic Policy (NEP) instituted by the Paz Estenssoro government in 1985 and still adhered to closely (see Section 2.2). Of a piece with the NEP has been official antipathy toward the unions. *Acción Democrática Nacional* (ADN, the party of Hugo Banzer), which controls economic and financial matters under the present government of the "patriotic accord," is the party of the Bolivian business sector *par excellence* and is notorious for union bashing. In a recent public statement, President Jaime Paz declared that the era of *sindicalismo*, or unionism, was over in Bolivia and that the country now needed production-centered organizations.

During the 1980s, Chapare unions and their federations frequently clashed with Bolivian and American efforts at the farm level to eliminate the production of coca. Some of the unions still clash with those efforts, arguing that there is as yet no viable economic alternative to coca in the Chapare. The battle between the government and the unions has perhaps been more intense in the Chapare, where PDAR (and CRDP's implementing agency, IBTA/Chapare) has been accused of "union busting." In recent months, however, PDAR may have softened its stand with regard to the Chapare's peasant unions in an effort to elicit cooperation with its programs at the grass roots (see Section 2.3).

The work of IBTA vis-à-vis the sindicatos has been especially delicate because IBTA has promoted the formation of producer associations to stimulate entrepreneurial behavior and increase production. During our interviews, therefore, my colleague and I elicited commentary on these matters.

Sindicatos in the Chapare have historically provided order to newly formed communities in a frontier zone--a kind of order that tradition itself has supplied to long-established communities elsewhere. For many years, sindicatos were virtually the only form of government in the lives of settlers in the remote Chapare. This importance of the *sindicato*, both in general and in the specific context of a coca-based economy, was well expressed by settler C3:

> The sindicato is our maximum authority. If we had no sindicato, there would be no road, for the sindicato sees that its members maintain it. And together we members built the local sindicato headquarters. It is the sindicato that organizes us. The biggest problem that we've had is that of defending our coca; they (the government) have tried to eradicate it by force, and we have struggled against them and have even lost our lives in the struggle. But through struggle we brought respect to the coca leaf.[16]

The following is from a sharecropper (interview C4) soon to enter a sindicato whose leadership had fought ardently to defend coca production and had instructed members not to eradicate their coca plants.

> I will soon begin to participate in the sindicato; I'm still a sharecropper (*partidario*). But I support the sindicato all the same, for it's all we have to defend and support us. Because of this, they (the Leopards, or UMOPAR) don't like the sindicato and are forever fighting with it. They almost killed the sindicato leader. And all this because we defend coca production.

I asked the farmer of case J12 (living in a "red zone," near the Isiboro-Sécure National Park) whether he planned to eradicate any of his coca (he had 1.5 hectares). "No," he said adamantly. "They say DIRECO can't pay." And if DIRECO could pay? I asked. "No--The head of the sindicato and people here say that if you take money from DIRECO, then the DEA and the gringos will own the land."

But not all Chapare farmers are as committed to *sindicalismo*, or unionism, as those above, and not all sindicato leaders and members are adamantly opposed to eradication. Respondent J8, for example, was not much interested in the local sindicato. "It's mostly a waste of money, and they don't do anything," he said. He added that his sindicato favored coca reduction and that he had heard that other sindicatos in the area did also.

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[16]There have been violent encounters between peasants and government police forces in the Chapare. This settler's mention of loss of life may be a reference to events of 1988, when police fired upon a group of peasants protesting the use of chemical defoliants to eradicate coca. Several peasants were killed. (There was evidence that authorities had experimented with "Spike" in the Chapare.) Also in 1988, peasants from several Chapare *sindicatos* temporarily took over the offices of DIRECO and PDAC in Cochabamba.

Perhaps the best articulated view of associations as the antithesis of sindicatos was provided by a dynamic young entrepreneur (J7) and head of an association of Chapare nursery owners.[17]

> *Sindicalismo* has prevailed in the Chapare, but it has brought few benefits to farmers, only to its leaders. The leaders say that coca is the only solution for Chapare farmers, that there are no alternatives, that coca monoculture is the only way to survive. But now farmers are realizing that to survive they must take care of themselves, the leaders don't have all the answers. *Sindicalismo* doesn't have the sway it once had. Farmers are looking to associations to assure their futures. Things have changed a lot this year (1990). Today, you can't make it on coca alone. Before, farmers didn't sow yucca (cassava, or manioc) and rice, only coca. But now they're planting rice, yucca, plantain, corn--they're trying to balance their production. They have to survive, they can't depend on coca any longer.

This man, until recently an IBTA *promotor*, volunteered for the position, and his doing so was not well received by sindicato leaders, who said he had been bought by the gringos. But now those same leaders came to him for technical assistance, he said. "Now, nobody in the community harasses *promotores*; the sindicato leaders see IBTA as an entity that provides technical assistance--farmers didn't need technical assistance to grow coca, but the new crops require it."

IBTA clearly had good relations with some sindicatos, and less than ideal relations with others. Because IBTA does promote associations, the potential for tensions with local sindicatos is always present. Suspecting early on that this might be the case, I asked one long-time Chapare settler (J1) to comment generally on how sindicato leaders viewed these associations.

> There is no problem in my sindicato, but in other communities sindicato leaders are jealous of the associations. The leaders feel that the associations detract from the sindicatos. Associations are usually formed around projects (IBTA-sponsored nurseries,

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[17]This man, about 32 years old, is a former IBTA *promotor* (and almost all members of the association that he headed were likewise former IBTA *promotores*) and major supporter of IBTA efforts in the Chapare. He had eradicated four hectares (a very large amount) of cocaine-destined coca in early 1988, and his farm of fifteen hectares was located on an access road and in one of the Chapare's more productive areas (in Subregion III). The reader interested in these associations, which IBTA promotes as a way of creating entrepreneurial talent--and in the case of nurseries, as a local source for tree crops, which figure fundamentally in IBTA's strategy to provide alternative crops in the Chapare's fragile ecosystem--should read this lengthy case study. It describes an interesting man, who also talks much about his experiences as a *promotor*.

for example), and some sindicato leaders think the projects should be run through the sindicatos. They're jealous.

The decline in coca prices had indeed challenged the authority of many *sindicatos* in the Chapare, for there was little their leaders could do about low coca prices. Farmers were interested in alternative crops (or livestock)--in how to produce them and where and how to sell them. And those interests favored the formation and functioning of producer associations.

Although I did detect attitudes less than charitable toward sindicatos and their leaders among the staff of both PDAR and IBTA/Chapare, I found no instances of blatant "union busting" by either. Indeed, I found many instances of cooperation between IBTA and sindicatos. sindicatos were requesting IBTA's short courses on the cultivation of non-traditional crops, and sindicatos were sometimes selecting IBTA's community-level *promotores*.

The relationship between IBTA and the sindicatos, or between producer associations and the sindicatos, should not be adversarial. IBTA and the sindicatos very much need each other today: farmers need IBTA's technical assistance to produce non-traditional crops (or livestock) that may be alternatives to coca--and to produce traditional ones more efficiently. And IBTA cannot do its best work with farmers except through the sindicatos, which in the Chapare are a major expression of community and social order. The sindicatos can also provide valuable support to producer associations, which perform a specialized function that justifies their existence and that *sindicatos* probably could not perform as well (although there was at least one case of a sindicato functioning as a producer association).

But whether the sindicatos support IBTA (and PDAR) or not will largely depend on two things: the price of coca and the availability of marketable alternatives to coca. If the price of coca rises and remains high, marketable alternatives are unlikely to exist; this puts great pressure on Chapare farmers to continue to produce coca--or to begin producing it again--and on sindicato leaders to advocate this. If the coca price remains low and marketable alternatives are soon found, then many Chapare farmers (but not all; it is unlikely that the alternatives will be suitable for farmers in all parts of the Chapare) will be spared the agony of economic disaster, and the credibility of IBTA and the government will be enhanced among benefiting farmers. If the coca price remains low and no marketable alternatives are found, then a sense of desperation and despair will spread among Chapare farmers, coupled with widespread animosity against IBTA and the government (and the Americans). Many settlers and workers will then begin a long and bitter quest for survival. This scenario may have already begun. If coca prices should subsequently rise and remain high, then the pressures to produce coca again will be immense, as will the hostility toward those who seek to thwart it.

4.7. IBTA/Chapare: What the Settlers Say

Some preliminary background information on IBTA's strategy and methods for conducting research and extension in the Chapare will help to understand the settler views subsequently presented.

IBTA's broad research and extension strategy is to move Chapare agriculture toward sustainable systems involving combinations of annual crops and perennials (and in some areas, livestock). The perennials, largely non-traditional tree crops, are the key to sustainability in the Chapare's fragile ecosystem. A few of the household food crops IBTA works with include plantains, bananas, beans, yucca (cassava), rice, sweet potato, taro, corn, and peanuts. The perennials, some of them new to the Chapare, include macadamia, coffee, cacao, passion fruit (*maracuyá*), pineapple, black pepper, turmeric (*cúrcuma*), ginger (*jengibre*), citrus, oil palm (*coco*), palm cabbage (*tembé*), and pasture grasses. Ornamentals also figure.

The goal of research is to achieve viable crop combinations (including livestock and pastures) for each of the Chapare's subregions, or parts thereof. The research also involves looking at the performance of crop combinations under different input levels. If grown in areas with poor soils, some of the crops might require lime and fertilizers, whereas they could be grown in the better areas (Subregions I and III) with fewer agrochemicals.

As already noted, research during much of the life of CRDP has been restricted to the two research stations (La Jota and Chipiriri) for security reasons. There has been some on-farm research since 1987, but very little before that time. More recently, IBTA has increased the number of on-farm trials, especially those comparing new vegetative material with local varieties.

Just under half of IBTA's forty-some professional staff formally worked in extension in September 1990. (The line between research and extension is a bleary one at IBTA, for personnel engaged primarily in either also do a good bit of the other.) Extension agents were based on the two stations as well as at an extension office in Villa Tunari. Agents had not been based in the countryside for security reasons, although IBTA had plans to open extension offices in the rural areas soon because of improved security.

IBTA begins the extension process by establishing contact with a community (a sindicato, or a *central*) and providing it with an orientation to the project. The community then decides whether to participate or not. If it decides to participate, then it selects a *promotor*, or person to be trained by IBTA. These promoters, local farmers and usually young, are important persons in the extension function. They are liaisons between IBTA and their communities, and so are brokers for technology transfer. IBTA's farmer-training programs, held exclusively on the experiment stations until recent times, have focused on these promoters, who transmit their newly acquired knowledge to the communities.

There were eighty-four promoters in September 1990, almost half of them from communities in Subregions I and III and a fifth from communities in Subregion IV. (Subregions I and III are held by IBTA to have the highest potential for development, largely because of superior agroecological conditions; Subregion IV is held to have a relatively high potential.) Several of these promoters had gone to Costa Rica to receive training in the cultivation of tree crops, especially macadamia.[18]

IBTA seeks to initiate Production Demonstration Units (UPDs) in communities with promoters. The UPD serves a technology transfer function and is always mounted on the promoter's land. He (all the promoters have been men) must purchase the trees for the UPD, but IBTA provides him with free training and technical assistance in the management of crops in the unit. A UPD is built gradually, with hectares added as the promoter can. In its final stage, a UPD should exemplify the IBTA-recommended mix of annuals and perennials (but perennials clearly dominate) for the promoter's area.

IBTA also devotes considerable effort and resources to the preparation and delivery of short courses for area farmers. Whereas all such courses (formally requested by the communities through their sindicatos) until recently were conducted on one of IBTA's two research stations, IBTA staff in September 1990 were entering the communities to give them. The request for these courses rose enormously during 1990, reflecting an interest in alternative crops because of the fall in coca prices.[19]

One of IBTA's important activities, as the following settler interviews show, has been the sale of vegetative material for tree crops to local farmers. To buy this material, farmers often use money they have received from DIRECO for coca eradication, or from loans taken out through CRDP's Public Law 480 (PL-480) loan program. Some of the material, such as macadamia seedlings (from Costa Rica), must be imported. IBTA has promoted the establishment of local privately owned nurseries (and associations of nursery owners) as a more efficient, less costly way of providing farmers with this material. IBTA officials argue that the quality of these local nursery plants is as high as that of any plants in the Chapare.

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[18]The chief-of-party of the Experience, Inc. advisory team owned several farms in Costa Rica, where promoters had gone for training. There was not a single macadamia tree in production in all the Chapare in September of 1990, though I was told that trees on the La Jota station would fruit for the first time in December.

[19]And perhaps reflecting to a degree also the PL-480 loan program's requirement that farmers show evidence of attendance at a relevant IBTA course before they could receive agricultural production credit. It is my sense that this requirement was never rigidly enforced, and there were discussions of relaxing it when I was in the Chapare in September of 1990.

In the synthesis of settler views below (17 of the 21 cases expressed views on IBTA), the negative things about IBTA and CRDP--or what might be construed as negative--clearly outweigh the positive things. This disproportion has much to do, I think, with a human tendency to favor the negative in mentally recording and recalling (and perhaps to a degree in probing).[20] The material to follow, therefore, should be seen not so much as deficiencies of IBTA or CRDP as indicators of areas for potential improvement.

Farmers in three cases spoke very favorably of IBTA's work with citrus improvement, which involved the grafting of new varieties onto traditional stock. According to J4, the improved trees lasted longer, fruited sooner, and resisted desiccation. Both J4 and C2 identified citrus improvement as the most useful of IBTA's technologies. And J7 observed that local farmers were at last coming to appreciate the virtues of grafted citrus. The day after my interview with J7, IBTA was to offer a short course on this technology to his community, and 70 percent of the sindicato had registered for it. IBTA's work with citrus is important, for citrus, plantains, and bananas are, after coca, the major cash crops in the Chapare.

There were three positive but very general comments about IBTA's work: IBTA was practical, not theoretical (J1); IBTA gave good advice on how to deal with pests (J4); and IBTA was the institution that had given the community the most support (J3). IBTA had introduced new rice and bean varieties that were well received in one community (J4); respondents in another community (C2) also spoke well of a new IBTA-introduced rice variety, saying it was "heavier" and matured earlier. Farmers in a livestock zone (C6) said that IBTA's forage grasses had adapted well there (but other IBTA introductions had not). And farmers elsewhere (J4) had planted passion fruit at IBTA's suggestion and were optimistic about future chances to sell it to soft-drink companies in Cochabamba.

The farmers of J1, where soils were among the best in the Chapare but were tiring after long years of cultivation, were learning from IBTA how to fertilize plantains and citrus, and so increase their yields. In another community (J8), the local sindicato had asked IBTA to present short courses there on citrus and forage-grass cultivation--and on how to handle poor soils. In general, farmers showed much interest in how to manage poor soils (see J11), and thus to cultivate other crops than coca. Soil management is a major challenge for IBTA and alternative development in the Chapare today. As the farmers of C3 well observed, agrochemicals were expensive; before, they could produce coca without fertilizers.

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[20]Perhaps the human experience of pain registers more efficiently than that of pleasure. Or, if you will, perhaps there is a bias toward the positive in all but seasoned cynics. Put yet another way, perhaps for the positive to be recorded and recalled with definition, it must be more positive than the negative must be negative in order for *it* to be recorded and recalled with the same definition.

On the negative side, the most frequent complaint (J4, J5, J6, J10, C2, C3, C4, C5, C6, C7, C8) from farmers was the high cost of IBTA's trees, which put them out of the economic range of many farmers. As one farmer of J5 put it,

> Farmers here are willing to plant the tree crops recommended by IBTA. But they have no money to buy them. For this reason, they continue to plant coca. Macadamia, for example, takes four years (other estimates range from five to seven) to come into production. What do we do in the meantime?

IBTA's pay-back period for purchased tree crops is 18 months, interest-free. Farmers of cases J4 and J5 related the prices and terms. Macadamia plants cost $13.00 U.S. each ($15.00 according to J10), and oil palm and citrus plants cost $5.00 each. (According to J4, one needed 100 plants for a hectare of macadamia.) These plants had to be paid for in cash within 18 months, either by installments or by lump sum at the end. For black pepper, farmers returned to IBTA within 18 months twice the number of plants received. As J10 noted, farmers who had taken out project (PL-480) loans to purchase these crops had to pay 13 percent interest meanwhile (the grace period on PL-480 loans does not apply to interest, and farmers must begin repaying capital well before macadamia trees first fruit). A farmer in J5 said that IBTA should not demand payment on tree crops until they came into production.

These economic obstacles to production were compounded by marketing ones. Farmers in six cases (J3, J4, J5, J7, C2, C7) cited a lack of markets for IBTA-recommended crops as a serious problem. The farmers of J4 complained that there was no market for turmeric, macadamia, and oil palm, nor was there much community interest in pepper and ginger for the same reason. Farmers would be much interested in all these crops if there were markets, they said. They needed help in finding markets; they could not pay off their loans without markets. One farmer in the group said they could just maintain their families by selling plantains, but they could not buy other things.

Respondents in five of the interviews (J4, J8, C1, C3, C6) challenged either the quality of IBTA's vegetative material or the appropriateness of it to their ecological conditions. A farmer of J4 had bought 520 citrus plants, thirty of which had died and IBTA had refused to replace them. Farmer J8 had bought 408 citrus plants and had received instructions from IBTA on how to plant and care for them. One hundred of the plants subsequently died, and IBTA had refused to replace them. Farmer C8 had lost 80 percent of the citrus and oil palms he had bought, and faulted IBTA for releasing material unsuited for the poor soils of his zone (a ranching zone, where IBTA had only recently entered).

According to farmer C1, the coffee trees he purchased from IBTA with PL-480 loan money had dried up. A technician had come to his farm once to investigate but had never returned. The farmer had wasted his credit. And the farmers of C3 (members of a coffee producers association) complained that coffee seeds they had bought from IBTA were old and had lost their germinative power.

There is no way to know for sure, of course, whether these problems lay with IBTA's vegetative material (or its suitability to farm ecology) or whether they were the result of poor communications (instructions either poorly given or poorly understood, or both) between IBTA and its client farmers. The matter of communication is an important one and is closely related to IBTA's projection in the countryside.

With regard to this projection, farmers in eight interviews (J7, J10, C2, C3, C5, C6, C7, C8) complained that IBTA was not sufficiently available to them. Extension agents did not visit communities often enough if at all, we frequently heard. As farmer C5 said, "What we learn in the courses is sometimes useful, but the agents never come to our farms to see our crops, to see firsthand our pests and problems and discuss them with us. If they would come, we would learn more and would have more confidence in them." Farmer C6 complained that IBTA's livestock technician rarely visited his community, where cattle were urinating blood and dying. Farmers there had already lost several cattle and were concerned that they would not be able to pay off their PL-480 loans if more died.

According to a farmer in interview C3, IBTA worked mostly with farmers living near the roads. And C8 said that IBTA had little presence in the remoter areas. Farmer C7 suggested that IBTA should modify its extension system. "They should locate extension agencies in the countryside; now, they operate out of two research stations, so there's no way they can attend to farmers in a timely way. And farmers can't always go looking for IBTA at the stations when there's a crop pest." Farmer C8 suggested that IBTA establish "information posts" (*puestos de información*--no elaboration on how these might work) at each union *central.*

It is easy to understand why there might be criticism regarding IBTA's availability. Only recently has it been safe (relatively) for IBTA personnel to work in the Chapare countryside, and even today they must exercise some caution when working in "red zones." Furthermore, with the low coca prices of the past several months, Chapare farmers had approached IBTA in large numbers to request short courses and other forms of technical assistance. When I was in the Chapare in September 1990, IBTA simply did not have the staff to respond to this rising demand for services.

I asked farmer J7 (until recently an IBTA promoter) with what crops local farmers needed the most help.

> With the alternative (non-traditional) crops, for farmers here have little experience with these. They need to learn how to graft, how to control diseases. You have to be a real expert to grow oil palm, for example, because of insect pests, which are difficult to control in oil palms. Within two or three months, or even less, you can lose all your plants if you're not on top of the problem.

Farmer officials (J11) of a large cooperative (exercising several functions) whose nursery IBTA had helped establish said they needed more help with growing macadamia than they were

getting. And they said that cooperative farmers needed help with soil management (many soils are poor in this area) for all their crops.

Since many of the IBTA-promoted crops are new to farmers, good extension is all the more necessary. If the price of coca remains low and "alternatives" can be found, even for a few ecological zones of the Chapare, it will be most important that IBTA establish an extension system that can provide quality service in a timely way to farmers producing those alternatives. If it does not, then the expectations of farmers will be dashed and their relations (and those of their sindicatos) with IBTA will deteriorate, to the detriment of both.

As I have already noted, farmer demand for IBTA's short courses was considerably up. Farmers occasionally (J4, J5, J6, C1, C3) commented specifically on these courses and how they might be improved, or in some cases made comments suggesting that the courses alone are not enough (J5, C3--as material above has also indicated) or that the technologies they address may not be economically viable (C3). I asked the farmers of J5 what IBTA might do to improve its courses. One of them said:

> They should be conducted at night so they won't interfere with our work. And many persons here can't read and write, they need to see how to plant, how to do the cultural practices in actual fields. The talks (in the courses, an IBTA technician often lectures, using a blackboard and printed matter in Spanish) aren't enough for them.[21]

Another farmer (C7) said that courses should be given in Quechua rather than in Spanish since many farmers could not operate effectively in Spanish. The same farmer, a woman, also complained that IBTA worked only with men, that only men attended the courses.

Alone these same lines, a farmer of J7 said:

> The promoter has been to IBTA's research stations for courses and to see how things are done, but others have not. They say they need to see for themselves. People here have never seen a macadamia tree in production, they need to see one (see Note 18).

And farmer C1 remarked skeptically that farmers had not seen the results of IBTA recommendations on their own farms.

Just as IBTA will need to increase its presence in the countryside with the new demand for alternative crops, it will also need to assess its farmer training program and seek ways to make it more effective. Combining courses with more practical experience, giving more courses

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[21]The illiteracy rate is said to be high among the older settlers. By one estimate, thirty-one percent of the Chapare population is illiterate (Rivera 1990:11).

at night (IBTA already does some of this), in Quechua, and using didactic materials and techniques carefully prepared for a population of low literacy could be among those ways (see Note 21). And IBTA should not overlook the role of women both as farmers and in other household capacities.

The issue of technology appropriateness, or viability, did not often come up in the interviews, but no technology is extendable if it is not economically as well as agroecologically viable. In this regard, a comment by a farmer of C3 merits attention:

> We think IBTA has good intentions, but this isn't always enough. They conduct the courses that we ask for, but they don't go beyond that. They tell us what we must do--what chemicals we must use, but we're small farmers and don't have the resources to buy them. For example, to spray orange trees we must have a motorized sprayer (according to the courses) because the trees are tall. We can't use the knowledge we gain from the courses because we don't have such implements and don't have the money to buy them.

Another farmer from the same group (C3) expressed doubts about the appropriateness of the new orange variety:

> Everything that IBTA gives us (vegetative material, that is) costs us more to produce than our creole (traditional) varieties. To make the new orange variety produce, for example, costs more because you have to give it more attention; you have to spray the creole orange only twice, whereas you have to apply fungicides to the new variety every three months for it to provide good yields and quality fruit. And you have to prune it each year and clear and weed around it every three months. And the fruit of both varieties fetches the same market price.

The inclusion of these comments is not intended to deprecate IBTA's citrus varieties, for, as I have indicated elsewhere, some farmers gave them high marks. I include the comments, rather, to show the importance of economic viability of a technology and to show the reasoning process by which farmers evaluate varieties and technologies.

With all the project emphasis on alternative development and non-traditional crops, it is easy to lose sight of the importance of traditional crops, especially food crops. A farmer of J5, where IBTA began working only in January 1990, spoke of local pest problems in food crops. Pests often attacked farmers' peanuts, and pests had destroyed their yuca plants in 1987 and 1988. And the grains on their rice plants sometimes dried out before they could harvest them. According to farmer C5:

> They (IBTA) do more for the plants they introduce and do little for our native plants. I remember once that my watermelons weren't doing well and I asked a visiting IBTA technician to take a look at them. He told me that he didn't have time but would come back. When I later insisted that he come back he told me to spray them with *Tamarón*;

he told me this without seeing the watermelons. And so I sprayed them and they all died . . . What we learn in the courses can be useful, but they never come to our farms, to see our plants . . .

These cases, and others less explicit, and so not mentioned here, point to a potential if not an already-existing problem. Even if viable (agroecologically and economically) cash-crop alternatives to coca are found for certain areas of the Chapare, it is unlikely that those alternatives will provide the income that coca has provided. Chapare farmers, therefore, will likely be looking more to subsistence crops--to household food crops--now than they have at any other time in more than a decade.

As I have already noted, IBTA has worked with subsistence crops. However, some of this work, perhaps most of it, has been with high-yielding varieties. But the high yields require the application of agrochemicals. And this means that the new alternative cash crops, whatever they are to be, must provide the earnings to buy those agrochemicals. If they can not (and for those areas of the Chapare where no cash alternatives can be found), then the introduced varieties will be little availing. To address farmer food-crop needs under that scenario, IBTA researchers will have little room to maneuver; the "technological space" they enjoy will be small because of the Chapare's hostile agroecology *and* farmers' low income.

I was surprised to learn, while talking with officials of the large farmer cooperative (J11) mentioned above, that lime, which IBTA often recommends in its technologies, was among those chemicals forbidden by UMOPAR in the Chapare because of their use in processing coca into *pichicata*, or coca paste.[22] Lime was available on the black market, however, where farmers (those who could afford it) were buying it at a high price. (Lime is mixed with rice chaff and other matter to prepare seed beds for macadamia and other tree crops.) The scarcity of lime in the Chapare, with its highly acid soils, is only one of several instances where interdiction conflicts with development, sometimes rendering the very notion of it ludicrous.

4.8. Notes on *Dirección Nacional de Reconversión Agrícola* (DIRECO) and the PL-480 Loan Program

DIRECO and CRDP's PL-480 credit program constitute the only external sources of financing available to Chapare settlers to shift out of coca production and into either a

[22]Kerosene, acetone, ether, and sulfuric are other *precursores*, or forbidden chemicals. Lime neutralizes the sulfuric acid, which is used to extract the alkaloids from coca leaves. Toilet paper, trucked into the Chapare in vast quantities until UMOPAR got wise to its use, was also used (to soak up moisture) in the process. That, too, is now a closely scrutinized if not wholly forbidden item.

non-agricultural pursuit or alternative forms of agricultural production. DIRECO, which began operating in September 1987, gives Chapare farmers the equivalent of $2,000 U.S. in local currency for each hectare of coca they eradicate. This money takes the form of a grant and requires no repayment. CRDP's loan program, which is managed by PL-480, offers Chapare farmers dollar-denominated loans at 13 percent annual interest and with a grace period of three years on the principal (but not on the interest). In September 1990, only those farmers with eradication certificates from DIRECO qualified for loans (a policy under review at the time).

Farmer comments on DIRECO were few but telling. Farmer comments on the loan program were more numerous. I deal only briefly below with comments on both. I am not a credit specialist, and so refrain from detailed analysis of the loan program. That program is reviewed in detail in a report on the final evaluation of CRDP conducted by PRAGMA Corporation (Washington, D.C.) in August and September 1990.

Farmers in four interviews (J5, J9, J12, C7) commented on DIRECO. In all cases, they said that DIRECO either had no money to pay farmers, or was late in making promised payments. As one farmer in J5 put it,

> The people at DIRECO don't have time to attend to us because everybody is eradicating coca. And if a farmer does go to the DIRECO office with proof of eradication, he's told that there's no money, that he must return on such-and-such date. But this wastes our time, and we have to pay transportation to and from the DIRECO office. The trip is about fourteen kilometers, and it costs us six *bolivianos* round trip. The daily wage is only five *bolivianos*.

Farmer C7 complained that several persons in his community had eradicated coca plants three months ago and had not received payment from DIRECO, and thus the certificates required by PL-480 for loan consideration. These farmers had eradicated their coca plants in order to qualify for loans.

As I have noted elsewhere, farmer J12 said he would not eradicate his coca (he had 1.5 hectares) because he had heard DIRECO could not pay--and because the local sindicato leader had told him that if he took money from DIRECO the DEA and the gringos would own his land.

Especially poignant is the case of farmer J9, a Quechua woman who had lost her husband and was running the farm alone. She was attending an IBTA course in Ivirgarzama when we met, and she immediately complained to me in broken Spanish that DIRECO had not paid her for coca she had eradicated. A DIRECO agent had not even made the third visit to her farm to verify the eradication, she said.[23] She had no money to pay *peones* with, she complained,

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[23]DIRECO personnel make three visits to a farm whose owner decides to eradicate coca plants. The first visit is to measure the area planted in coca, the second to measure the area eradicated. The third visit is to further verify the eradication (and probably also to check on

and no money to buy food. For this reason, she said, many people in the area were eating poorly now. And without money, she could not buy the passion fruit and pepper plants that she wanted from IBTA. She could move neither forward nor backward, she said.

Unable to move either forward or backward was an apt description of this woman's dilemma--and probably that of many other farmers in the area (an old man stood nearby as we talked and later told me that his problem was identical to hers). She had no money to move forward and alter her production mix, and she could not move backward into coca, for she had eradicated that (and by law, Chapare farmers are now prohibited from planting coca). Situations of this kind demoralize farmers, discredit the notion of alternative development, argue powerfully against coca eradication (except as a last resort to survive), and give credence to drug traffickers and others who tell farmers that they should not cooperate with eradication and alternative development efforts.

Farmers in eleven interviews (J4, J7, J8, J10, C1, C3, C4, C5, C6, C7, C8) commented on the PL-480 loan program. Respondents in seven of those interviews (J4, J7, J8, J10, C1, C3, C6) complained that they had to begin payment on the loans before the crops or livestock they had financed were in production. Most of the concern seemed to center on the 13 percent yearly interest, which borrowers must begin paying immediately; the three-year grace period applies only to the principal. This complaint was well expressed by farmer J7:

> You have to pay interest from the time the loan is taken out, yet plants like macadamia don't come into production for seven years (some farmers say five years). And citrus takes five years. So, how can you pay on the loan meanwhile? Many farmers don't want to fool with credit for this reason. Yet credit is needed for quality production, you have to buy inputs. With fertilizer, citrus will yield in two and a half years; without it, you have to wait five years.

Farmers in two interviews (J4, C3) expressed the view that PL-480 officials had deceived them by saying that they would not have to pay anything for three years when they took out the loan, and then requiring interest of them immediately. The farmer of J4 observed that this was a disincentive to coca eradication. According to a farmer of C3, PL-480 officials were forever changing the story on the terms of their loans. At first, they said that the interest rate was 2

DIRECO personnel making the second visit; there is a potential for graft in this process) and to issue a certificate, which the farmer takes to a DIRECO office to request payment. The procedure is bureaucratically cumbrous, and with the rise in coca eradication of recent months, it is probable that DIRECO is behind. On the morning of the day of this interview (September 6, 1990), I drove past the DIRECO office in Ivirgarzama and observed a long line of persons spilling out into and down the street. They were there to request payment for coca they had eradicated.

percent and the grace period two years. Then they said the interest rate was 13 percent. The criticisms of J4 and C3 may largely represent poor communications between PL-480 officials and settler farmers, but they should nonetheless be looked into.

I will mention two final complaints. A farmer of C4 complained that only those who eradicated coca could receive credit. (There was talk of changing this policy in September 1990.) And a respondent of C3 complained that PL-480 loans required farmers to show land titles or personal guarantees, which they could not always do.

The above farmer comments suggest that certain procedures and policies of both DIRECO and the CRDP loan program may be harming alternative development and creating among Chapare farmers a lack of confidence in project institutions and personnel. If so, the consequences could be ominous for the longer term; the costs could be high indeed.

4.9. *Unidad Mobilaria de Patrullaje Rural* (UMOPAR): A Settler View

UMOPAR is an elite anti-narcotics police unit (part of the National Police, under the Ministry of the Interior), largely trained, supplied, and advised by the United States. UMOPAR works closely with the United States Drug Enforcement Agency (DEA), and DEA personnel often accompany UMOPAR helicopter and ground patrols in an advisory capacity (and so are subject to different rules of engagement). In Bolivia, UMOPAR is often referred to as "the Leopards," or, as Chapare peasants call them, "the Leos." UMOPAR's Chapare base is located at Chimoré, not far from IBTA's La Jota research station.

Respondents talked about UMOPAR in nine of our interviews (J4, J7, J11, C1, C2, C4, C5, C7, C8). UMOPAR was not a theme we much dwelt on, however, so we did not (and did not have time to) pursue some of the comments as we otherwise might have had UMOPAR been more central to our concerns. We talked with no representative from UMOPAR (or the DEA). Yet in the Chapare one cannot ignore UMOPAR, which plays a significant part in the lives of area workers and settlers and is never far removed in their minds from agencies working in alternative development. The comments to follow reveal this.

Farmers in five interviews (C1, C4, C5, C7, C8) spoke of UMOPAR police scaring, intimidating, abusing, or otherwise bringing harm to peasant families. Said a farmer of C1

> . . . they abuse us in all kinds of ways. We're poor, for this reason we came to the Chapare. But when they enter our homes and don't find anything (narcotics or chemicals for processing), they take from us what little we have. They scare the children--the children sometimes get sick from fright. It's barbaric the way they behave, nobody likes them; I doubt that even God likes them.

And according to C8:

> They (UMOPAR) scare people and abuse them. We're afraid of the Leos on the one hand and of the *narcos* (drug traffickers) on the other. The *narcos* are a danger to our children; these *cambas* (persons from the eastern lowlands) are out shooting and our children have to walk long distances to school.

Drug traffickers fare little better than UMOPAR in the estimation of this farmer--and probably of others as well.[24]

Farmer C7 expressed a somewhat different complaint:
"They (UMOPAR) go about intimidating (*amedentrando*) people. They've destroyed the roads that farmers here have built, they're not constructive in any way. They abuse people and we suffer at their hands." This response is of particular interest, for it points up another policy contradiction between development and interdiction.[25] There is currently a government

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[24]There may be a touch of regionalism in this response. Many, probably most, of the drug operatives are *cambas*, or lowlanders. Because of government "Andeocentrism," lowland isolation, and a keen sense of "racial" purity (of being white rather than dark, or Indian) among lowlanders, they often hold *kollas*, or highlanders, in low regard. Highlanders are frequently the butt of their jokes, for instance. But in Bolivia these attitudes go beyond the usual ones associated with regionalism in Latin America. In Bolivia they border on contempt. Tensions, therefore, often characterize relations between lowlanders and highlanders. I would speculate that lowland drug operatives in the Chapare evince this contempt strongly when dealing with highlanders. I would also speculate that this contempt enhances the potential for violence between drug operatives and UMOPAR (and by extension, the DEA), whose soldiers are overwhelmingly highlanders from the lower classes (where the dark, Indian features are the strongest). Violence (encouraged by a strong *machismo*) remains a time-honored way of settling disputes in the remote eastern lowlands, where State institutions are still incipient and weak. And there is a keen resentment of outside meddling, especially by highlanders, in local or family affairs (the two largely coincide).

[25]At the time I entered the Chapare, there was quite a stir in Bolivia over the reported recent destruction of Chapare roads by UMOPAR and the DEA. *Sindicato* leaders filed a formal report with the Bolivian Human Rights Commission alleging that UMOPAR soldiers and DEA agents "bombed" a section of Chapare road on August 25, 1990. According to their complaint, the explosion caused structural damage to a nearby bridge as well as to a local Baptist church and a health clinic (*Presencia* 1990d). I quote from a newspaper article of the account:

> In the complaint, it is charged that such 'bombings' as well as 'abuse' of peasants is constant in the zone, matters that are of concern not only because they destroy roads, but also because they affect peasant houses and, as in this case, churches and health clinics (*Presencia* 1990d).

moratorium (supported by the DEA) on road-building in the Chapare. It is said that roads open new areas to coca production and drug trafficking. Furthermore, small airplanes often land on Chapare roads to pick up coca paste and deliver chemicals for coca processing. But roads are also important for getting agricultural produce from farm to market. In some areas of the Chapare, a lack of roads is only one more obstacle to alternative development. [26]

In four interviews (C1, C4, C5, C7), farmers complained that UMOPAR police took things from them, sometimes for later sale (C1, C7). As farmer C5 said,

> They only abuse us, they take from us everything they can, they scare our women and children. Every time they come through here they commit abuses--and they don't catch the real drug traffickers, they only take innocent farmers away.

According to C3, ". . . the Leos harm us the most, they treat us in inhuman ways, they're abusive; they take our money and whatever else they can and sell it." And a farmer of C1 said that UMOPAR confiscated items such as toilet paper (see Note 22) and *lavandina* ("Clorox," another forbidden chemical, probably used in coca processing to neutralize sulphuric acid because of its potency as an oxidizer) that farmers brought into the Chapare from Cochabamba, and then sold them.[27]

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[26]One could argue also that roads make areas more accessible to UMOPAR. But already there seems to be a substantial amount of coca produced in areas of poor access; coca leaves are light and can be moved by human carrier. In brief, I doubt that more roads will bring more drug trafficking. In the final analysis, the issue of whether and where to build roads (or improve them) in the Chapare should turn on matters other than narcotics. Some areas of the Chapare, because of their ecological fragility, should have neither roads nor agriculture. And anyway, it is unlikely that sustainable markets will be found for production in such areas. So why build roads there? Why try to develop these areas?

[27]This farmer is probably referring to the *tranca*, a checkpoint near the bottom of the winding road that descends into the Chapare from Cochabamba. Here, UMOPAR soldiers check the cargo and passengers of all entering and departing vehicles. They look mainly for banned chemicals coming in and for narcotics going out. Stationed at the *tranca* also is a fiscal agent who taxes Chapare farmers taking out limited quantities of coca for sale on the legal market in Cochabamba. These farmers have special permits. Peasants leaving the Chapare are also entitled to take with them, untaxed, a specified amount of coca leaf for personal consumption.

In three interviews(J4, J7, C2), farmers said that UMOPAR police took bribes. A farmer of J4 said that UMOPAR let them pass with their coca (taken from one point to another for sale within the Chapare), but only if they were paid. Another farmer from the same community (C2) said that when they took their coca to Isinuta to sell, they had to pay UMOPAR to let them pass--and pay settlers in Isinuta for the right to sell it there (see Note 5). I told farmer J7 I had heard that UMOPAR police were easy to bribe. "Yes, they are," he replied, "but this is life in Bolivia; there's no justice here." And as already noted, a farmer of J11 said that UMOPAR would not permit lime into the Chapare (see Note 22). But he added that it was available there on the black market. So, one has to ask, how does it enter?

It is axiomatic in the Chapare that UMOPAR police are "on the take." This is heard in much of the local ridicule of UMOPAR. As one non-peasant Bolivian told me, UMOPAR is in the best position of all. They are paid by the American Embassy, they steal and take small bribes from local peasants, and they take big bribes from the drug traffickers.[28]

These comments suggest a marked degree of gratuitous mistreatment of Chapare farmers by UMOPAR police. And they further indicate a strong farmer dislike, even hatred, of UMOPAR--sentiments that can extend to the Bolivian government and to the United States. Such sentiments support those who argue against alternative development, whether sindicato leader or drug trafficker. And since there are no demonstrated alternatives to coca at present, the sentiments are deepened.

There is also a humanitarian side. Most Chapare settlers and workers are not there by choice but by force of economic circumstance. A civilized society does not treat destitute people this way. And it is not good for the United States to be associated with this treatment, even at some remove. The association is a stain on its foreign policy and may even bode ominously for its future relations with sectors of Bolivian society. The Cold War is over, but anti-American feelings still exist; the recent October bombing of the Marine residence in La Paz is evidence of that.[29]

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[28]To what extent UMOPAR salaries are paid by the Embassy, or by DEA, I do not know. However, there is a perception throughout Bolivia that UMOPAR has a special relationship with the DEA and with the Americans. And that relationship is perceived to center on the American Embassy.

[29]The bombing occurred on the evening of October 10, 1990. An hour later, at midnight, a public statue of John Kennedy was also blown up. The group claiming responsibility called itself the Nestor Paz Zamora Commission (CNPZ), an unknown group until its logo and letters appeared on building facades about three weeks earlier. Someone purporting to be from CNPZ called FIDES, a Catholic radio station in La Paz, to say that they were opposed to American imperialism (personal communication).

To the extent that Chapare farmers associate alternative development with UMOPAR, alternative development will suffer. In this regard, the comment about IBTA by a respondent from interview C4 may be instructive:

> They (IBTA) don't come to us and we don't go to them. People say they're Leopards in mufti. Is this true? We have our doubts about IBTA because we know that those (the Americans) that give money to the Leopards also give it to IBTA and DIRECO. And so, you see, the three work for the same objective.

It is also worth pondering at what point an adversarial relationship between Chapare farmers and UMOPAR may cease to deter illicit behavior, and even begin to undermine interdiction itself.

5. Past and Future: Conclusions and Recommendations

In this final chapter, I will draw several conclusions about CRDP and make a few recommendations based on them. Although most of the conclusions and recommendations deal with matters under the direct control of PDAR, or at least of USAID, and so can be altered by one of those agencies, or at least by the two in concert, I have not restricted them to such matters so long as what they deal with bears importantly on CRDP. Also, the conclusions and recommendations below are not intended to be exhaustive; there are others that are implicit, sometimes explicit, in the text above. I formulate below only those that would seem to be more central to the present workings of CRDP, or of relevance for future efforts of its kind.

5.1. Administration and Management Issues

Conclusion: PDAR is not well coordinating project activities in the High Valleys. Neither is it coordinating components (irrigation, soil conservation, forestry, and so on) well internally, nor the work of the implementing NGOs. But the problem may be even deeper. For not only is there a failure to coordinate components well in time and space, there seems to be an exclusive attachment to components themselves. And this attachment has a down side: it does not foster an integrated approach to rural development. (For a treatment of CRDP implementation in the high-valley country, see Section 3.10, and especially Section 3.10.5, where I analyze project activities there.)

> **Recommendation (1):** That PDAR operate with the concept of integrated rural development of a geographic area and explore ways to improve coordination. The NGOs working in the High Valleys, with their experience in the rural milieu, strongly sense the need for an integrated approach and have several good ideas on how to achieve it. PDAR and USAID should sit down with them (perhaps through an intensive seminar-workshop) and discuss options.

> **Recommendation (2):** Because of this coordination problem, and because internal procedures for selecting NGOs, monitoring their implementation, and evaluating project progress are only now being worked out, PDAR should focus on consolidating its activities and gaining institutional experience rather than on expanding its geographical coverage.

Conclusion: USAID management of CRDP over much of its life has been deficient (see Section 2.3). The reasons range from staff ineptitude to staff shortage to injudicious and feckless staff response in the face of unreasoned political and bureaucratic pressure. The opening of an AID office in Cochabamba in August 1990 was a belated move in the right direction. But there is still no single person in the Mission with a deep and broad understanding of CRDP--its history and its present complexities. The current project manager is an able and willing man whose contribution has been positive since he arrived in mid-1989. But he has been

very overburdened with work that has had little relevance to project management (giving Chapare tours, often of dubious purpose--Chapare safaris, as they're wryly called--to Washington officials, for example).

Recommendation: That USAID give more attention to managing CRDP. As an anti-narcotics development project, CRDP should have higher priority in the Mission portfolio than it seems to have had.

Conclusion: The social science component (agricultural economics and anthropology/sociology) of CRDP has not been taken seriously by PDAR, but has instead remained marginal. This is especially true of SARSA, which could provide valuable assistance to the project if permitted to do so.

Recommendation: PDAR must more effectively incorporate SARSA and the social sciences into the project. Social scientists should be engaged in the design, implementation, monitoring, and evaluation of subproject activities as well as in problem diagnosis and solution.

5.2. Implementation Issues

Conclusion: There is considerable abuse in the sale of agrochemicals in Aiquile and Mizque. Prices are high, mixtures are sometimes altered to enhance profits, and farmers are not given good instructions in the use of chemicals. The current risks to both individuals and the environment are substantial, not to mention adverse consequences for agricultural production.

Recommendation: That PDAR use ARADO to distribute agrochemicals in the area. ARADO is an experienced non-profit small-farmer organization that could exercise this function. And PROCIPLA (which belongs to ARADO) should be charged with establishing norms for the distribution of agrochemicals in the zone and should work with ARADO to set up a distribution scheme. This is an urgent matter, and PDAR should act on it soon.

Conclusion: There is a need for seed research (to find pest-resistant varieties adapted to the area) and seed multiplication in the High Valleys, and currently no capacity for either.

Recommendation: That PDAR seek to fill this vacuum soon. Again, ARADO and PROCIPLA might usefully participate in this task.

Conclusion: CEDEAGRO is capable of playing a greater role in the project than it now does. For example, they have worked with fruit trees at the farm level for three years, yet PDAR has not invited them to collaborate with IBTA (IBTA in the high-valleys region, not IBTA/Chapare) in this endeavor. And IBTA has little experience working at the farm level.

Recommendation: That PDAR expand CEDEAGRO's role in the project. CEDEAGRO should certainly be working with IBTA in the area of fruit research and extension. Furthermore, PDAR should provide CEDEAGRO staff with training in irrigation and other areas where PDAR has strengths.

Conclusion: CRDP is in need of training expertise in both the high-valleys region and the Chapare. Since project implementation in the valleys is mostly in the hands of NGOs, which are basically extension agencies that conduct some adaptive research (although PROCIPLA does a substantial amount of research), there is a need to link them with a research function so they will be informed of technological alternatives. In the Chapare, IBTA personnel need training in the preparation and delivery of short courses for farmers. This is all the more important because of the recent and dramatic rise in demand for these short courses.

Recommendation 1: That PDAR hire a training coordinator to link NGO implementing agencies with sources of technology. The coordinator would arrange for NGO implementation staff to visit research centers and to attend seminars and short courses in Bolivia and abroad. In some technical areas (irrigation, for example), PDAR personnel can provide NGO staff with training.

Recommendation 2: That the training coordinator (see Recommendation 1 above) arrange for IBTA extension agents to receive training in the preparation and delivery of short courses for farmers. There are NGO personnel in the valleys who can serve as internal "consultants" as well as assist with this training. (Chapare settlers are Quechua-speaking highlanders.)

Conclusion: IBTA cannot respond to the current demand for services with its present staff if it is to continue working in the several subregions of the Chapare.

Recommendation: That IBTA hire more staff (extensionists, mostly) if it is to continue to operate in the seven subregions of the Chapare.

Conclusion: Project emphasis on alternative development and non-traditional crops in the Chapare may lead to an underestimation of the importance of subsistence food crops. To the extent that there are no alternatives to coca, or that the alternatives are less lucrative, then farmers will depend more on what they grow for food. And they will have limited resources to grow that food.

Recommendation: IBTA/Chapare should be especially sensitive today to farmer need for appropriate technologies to produce household foodstuffs. And "appropriate" will probably mean that those technologies must be implementable at low cost.

5.3. Strategic and Policy Issues

Conclusion: The solution to the narcotics problem in the Chapare (in Bolivia) lies not only (or even mostly) in the Chapare, but also (even mostly) in the highland and valley areas of the country. With regard to sporadic migration to the Chapare, the forces "pushing" highlanders from their local communities are overwhelming; the "pull" forces pale by comparison. Project activities, especially the provision of water, do reduce the "push" forces, and thereby reduce migration. This fundamental conclusion has important implications for future alternative development efforts.

If the coca price rises to pre-August 1989 levels and remains there, then development efforts *in the Chapare* will be futile. The recommendations below regarding development *in the Chapare*, therefore, are valid only so long as coca prices remain low. But those regarding development *outside the Chapare*, especially in the highlands and valleys, remain valid under all coca-price scenarios. High coca prices in the Chapare will not *ipso facto* attract an army of sporadic migrants if those would-be migrants have alternatives at home, for the costs of migrating to the Chapare in terms of health alone are very high (see Section 3.8).

Recommendation 1: Future development efforts should focus strongly on well-selected problem areas of the highlands and valleys. To define such problem areas, one might look first at those areas that have contributed most of the sporadic migrants (the "floating population") and most of the settlers to the Chapare. (For instructions on selection of these areas, see Note 11 and Section 4.1.) These areas should then be assessed for development potential: hydrological conditions (for water works, which must clearly be a major thrust) and proximity to important roads and urban centers would be important considerations. But the lack of a road should not alone disqualify a potential area, for roads can be built if an area otherwise shows promise.

It is likely that some of the sites suggested by migrant and settler origin will have little potential for development, and some of them will inevitably be poor candidates under any feasible technology because of too many people on too little land (perhaps already ravaged beyond repair). So alternative sites (in other than the eastern lowlands, for their fragile ecosystems, much like that of the Chapare, impose serious limits) for either settlement or sporadic migration must also be considered. And those sites must likewise be assessed for development potential.

Recommendation 2: Current project activities should continue in the valley areas of Aiquile and Mizque. The project entered these areas not because they contributed substantially to the population of sporadic migrants to the Chapare, but because they offered the prospect of developing a model that would vindicate Amendment 2 and that could be generalized to other areas. The indications are strong that this model is viable, so it should be further developed. By the time future action areas have been selected, at least parts of the model should be ready for generalization. Beyond all this, the rural needs are great in the Aiquile and Mizque areas, and so project activities there are justified in their own right.

Recommendation 3: The ecologically fragile Chapare cannot be ignored, for it is today one more region of the country and does have a substantial population committed to remaining there. But development efforts in the Chapare should be focused on those subregions (I, III, and perhaps IV; the actual areas will need further study) with the greatest potential for development. Trying to attend to the present population dispersed over seven subregions--providing them with appropriate technology for producing crops (or livestock) suited to each subregion, and then finding sustainable markets (the order should be reversed) for the full range of production--is a herculean task whose prospects of achievement are highly unrealistic. Moreover, there is some evidence that a substantial Chapare population--on poor soils, with small holdings, and in remote locations--is not fully committed to the region and would leave if presented with viable alternatives elsewhere.

An issue then becomes what to do with this marginal population (which must be defined in geographic terms--see Note 13 and Section 4.3) over the short term and over the long term. Over the long term, areas developed outside the Chapare can absorb some, perhaps most, of this population. But over the short term, and for humanitarian reasons alone (are these not the innocent victims of the drug war?), consideration must be given to alleviating their plight. One option could be for the project to buy (with international funds) the coca they produce, but at a price little above what would permit them to maintain their households.

Conclusion: At least over the past five years in Bolivia, there has been too little coordination at both the policy and operations levels between those agencies charged with interdiction (UMOPAR/DEA) and those charged with development (PDAR/USAID). Furthermore, the abusive behavior of UMOPAR police in the Chapare compromises development work as well as the role of the United States in both interdiction and development (see Section 4.9 and Notes 16, 25, and 28).

Until recently, tensions between Embassy officials (probably under pressure from Washington) and those USAID staff who favored a de-emphasis of development work in the Chapare and an emphasis on such work in Cochabamba's high-valley region (see Section 2.3) were one manifestation of differences at the policy level. Those tensions further suggest that the Embassy, as the maximum expression of United States policies and interests in Bolivia, did not take development seriously--certainly not in the high-valley country. The warriors (who operate out of the Embassy) clearly held sway at the time. (CRDP may have been seen largely as a token concession to the critics of interdiction as a primary strategy.)

There have been, and continue to be, other differences and contradictions between interdiction and development at the policy and operations levels. Lime, for example, is classified as a forbidden chemical (a *precursor*) in the Chapare, where soils are highly acid (see Note 22). There is a moratorium on road construction in the Chapare, and sections of existing

roads have been destroyed by UMOPAR (see Note 25). And instances have been alleged of UMOPAR's following IBTA/Chapare extension agents into the field in search of leads.

Recommendation: That a mechanism be established to better coordinate interdiction and development activities in the Chapare. And that the behavior of UMOPAR police in the presence of peasant farmers be more carefully monitored and controlled. And furthermore, that United States policy in Bolivia take development efforts, especially those outside the Chapare, seriously (there seems to be a move in this direction at present).

Conclusion: The size of PDAR relative to the geographic area it now serves may be near an upper limit with regard to operational effectiveness. There is certainly no way it can coordinate alternative development activities over all the geographic problem areas that I am suggesting be defined in the design of a project to succeed CRDP (see the opening recommendation in this section). Alternative arrangements must be devised for a new project.

Recommendation: A project (or projects) to succeed CRDP and to address geographic problem areas should rely on several PDARs; there should probably be one to coordinate project activities in each problem area. One can envision a pod arrangement of these PDARs, coordinated by a central unit. SUBDESAL, which appears to be well managed today, should be a candidate to coordinate the arrangement. SUBDESAL is now arguing for a scheme that will address the development needs of Bolivia's poorest areas--precisely those that have contributed many of the migrants to the Chapare (and elsewhere). SUBDESAL is also asking for more control over CRDP program and budget.

Conclusion: Until September 1990, CRDP gave almost no attention to marketing issues, either in the high-valley country or in the Chapare. The situation is especially delicate in the Chapare, where IBTA/Chapare has promoted perennials (many of them non-traditional tree crops) that have not yet demonstrated a marketing potential. Since alternative development efforts there turn fundamentally on these crops, a failure to find markets for them could create hardship and despair among many Chapare farmers, and could undermine future credibility of IBTA/Chapare and the government for years to come.

Recommendation: CRDP must give undivided attention to marketing issues in both the high-valley country and the Chapare, but especially in the Chapare.

Conclusion: There are serious problems with the financing of alternative development at the farm level in the Chapare. First, the tree crops sold by IBTA/Chapare are beyond the financial reach of many farmers. Second, the terms of PL-480 loans are entirely unrealistic--certainly with the high price of IBTA's tree crops. Farmers must immediately begin paying 13 percent interest on loans to produce trees that will show no economic return for five years or longer. And third, DIRECO is either low on funds or suffers from bureaucratic

lethargy (or a backlog caused by increased coca eradication rates), for farmers report demoralizing delays in receiving money for the coca they have eradicated.

Recommendation: That there be better project coordination between the PL-480 loan program and IBTA/Chapare regarding the cost of nontraditional tree crops. And that the cause of delays in DIRECO payments to farmers be corrected immediately. In the eyes of local farmers, these financial obstacles discredit the notion of alternative development and those institutions that promote it.

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1990b Desmantelan red internacional de narcotraficantes. September 28.
1990c Un muerto, un herido y varios detenidos en Ishinuta. September 26.

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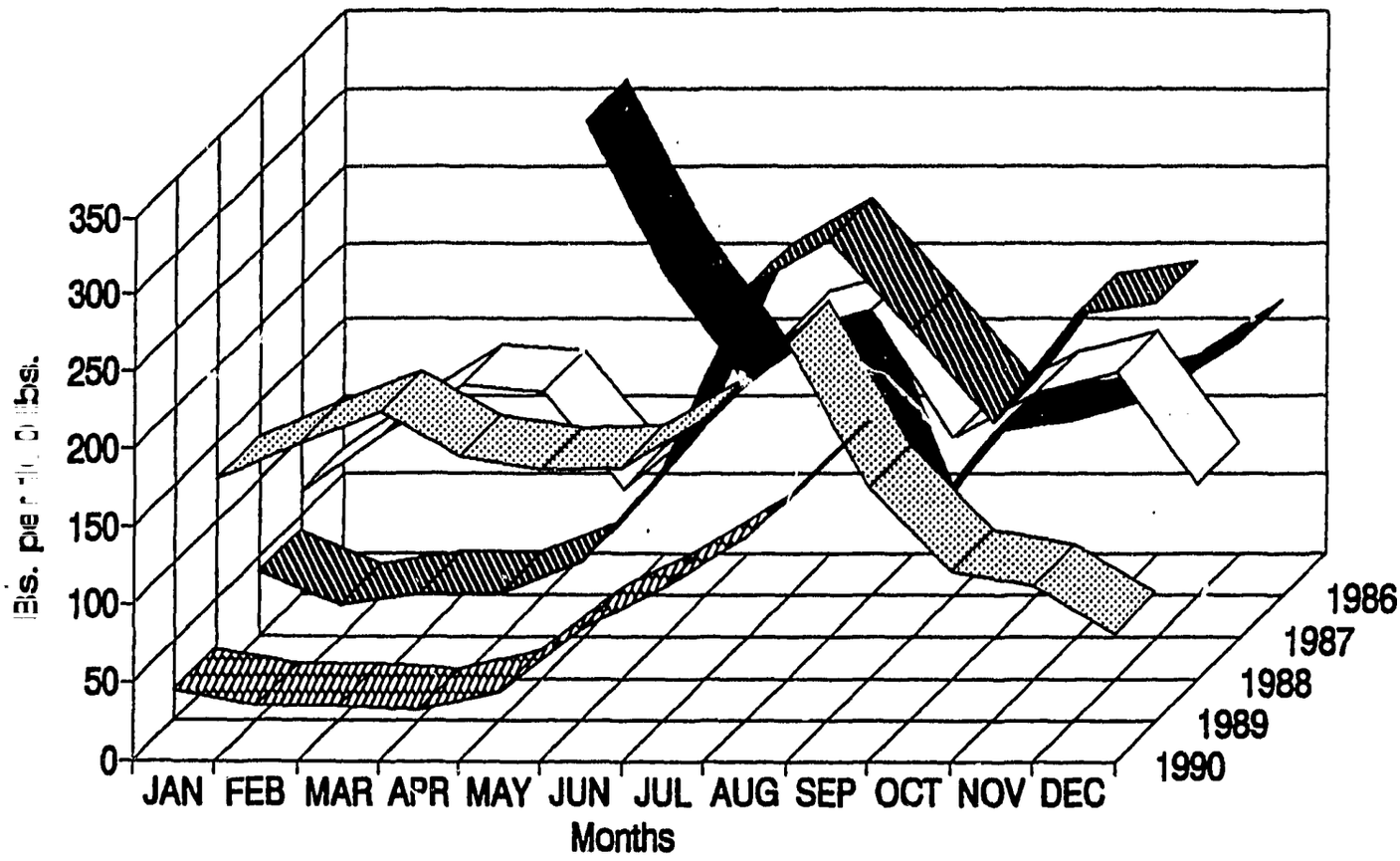
List of Appendixes

Appendix A: Coca Prices, 1986-1990

Appendix B: Farmer Interviews, Associated High Valleys

Appendix C: Farmer Interviews, Chapare

Coca Leaf Prices
1986 - 90



Source: Dirección de Reconversión Agrícola, Government of Bolivia

SUPERFICIE ERRADICADA DE

CULTIVIOS DE COCA 1986 - 1990

	AÑOS	Sup. Erradicada (Voluntaria Has)	Sup. Erradicada (Forzosa Has.)
	Sept./87 - Dic./87	1.042.7529	--------
	1988	1.475.0154	--------
	1989	2.334.1009	105.2486
(*)	1990	6.075.7837	24.1362
		10.927.6529	129.3848

(*) Reducción de Enero al 12 de Septiembre 1990

AÑO 1990	ENERO	45.08
	FEBRERO	35.61
	MARZO	35.48
	ABRIL	32.87
	MAYO	44.87
	JUNIO	85.25
	JULIO	110.80
	AGOSTO	143.06
AL 12	SEPTIEMBRE	191.46

PRECIO PROMEDIO Bs. 80.50 (Enero - Septiembre 1990)

AÑO 1988	ENERO	67.31
	FEBRERO	46.44
	MARZO	54.09
	ABRIL	54.33
	MAYO	74.57
	JUNIO	134.11
	JULIO	251.34
	AGOSTO	282.24
	SEPTIEMBRE	223.78
	OCTUBRE	163.11
	NOVIEMBRE	233.51
	DICIEMBRE	241.25

PRECIO PROMEDIO Bs. 152.17 (Enero - Diciembre 1988)

AÑO 1989	ENERO	154.26
	FEBRERO	177.36
	MARZO	196.65
	ABRIL	168.40
	MAYO	161.06
	JUNIO	161.53
	JULIO	192.74
	AGOSTO	241.68
	SEPTIEMBRE	149.27
	OCTUBRE	95.16
	NOVIEMBRE	85.47
	DICIEMBRE	55.22

PRECIO PROMEDIO Bs. 152.23 (Enero - Diciembre 1989)

PROMEDIOS MENSUALES DEL PRECIO DE LA COCA

1986 - 1990

AÑO 1986	MESES	PRECIO
	ENERO	-----
	FEBRERO	-----
	MARZO	-----
	ABRIL	305.17
	MAYO	206.67
	JUNIO	134.83
	JULIO	176.17
	AGOSTO	39.67
	SEPTIEMBRE	103.58
	OCTUBRE	111.67
	NOVIEMBRE	127.00
	DICIEMBRE	162.42
	PRECIO PROMEDIO BS.	151.91 (Abril - Diciembre 1986)
AÑO 1987	ENERO	92.68
	FEBRERO	127.86
	MARZO	160.77
	ABRIL	156.67
	MAYO	94.05
	JUNIO	134.29
	JULIO	195.36
	AGOSTO	209.64
	SEPTIEMBRE	127.14
	OCTUBRE	155.71
	NOVIEMBRE	169.05
	DICIEMBRE	96.90
	PRECIO PROMEDIO Bs.	143.34 (Enero - Diciembre 1987)

Farmer Interviews--High Valleys

James C. Jones

Interview Procedure

The following interviews were conducted between August 29 and August 31, 1990. With one exception, I conducted group interviews; though different farmers occasionally responded individually to my questions, it was usually the case that one or two farmers took the lead and did most of the talking. I had originally wanted to conduct detailed interviews with individual farmers, but this proved infeasible. What rapport I had with community members was established (at least initially) by personnel from institutions (either an NGO or PDAR) that had worked there. This rapport was indispensable and largely adequate for group interviews, but was not sufficient for productive individual interviews.

Migration to the Chapare, and the work that upland peasants perform there, is a delicate subject (even personnel from the NGOs and PDAR who work regularly in the communities must handle it with care), and so must be approached slowly and obliquely. These farmers are well aware that coca production in the Chapare is a controversial issue, and many of them have personally experienced the repression that has obtained there in recent years.

The small-group interview put respondents at relative ease as they dealt with a delicate topic in the presence of a stranger (and a *gringo* at that), for they were surrounded by their own kind. It also encouraged response veracity.

I began the interviews with innocuous subjects (yet those yielding useful information), such as the current needs of the community, or the production and disposition of agricultural and animal products. I then nudged the dialogue toward sources of off-farm income, whence migration inevitably entered with almost no prompting since it is only through migration that such income is to be had. I began the theme by discussing community migration to Santa Cruz, or to Cochabamba, or even to places closer to home (to any place but the Chapare), and only later veered carefully into the Chapare, trying to feign indifference (at least at first) to information about respondent activities there. Some farmers talked readily and volubly about the Chapare and what they do there, whereas others were more guarded.

I put all questions in Spanish, and respondents usually tried to respond in Spanish. But there was always a

bilingual interpreter (Quechua/Spanish) on hand (a person from PDAR or an NGO) to intervene when necessary (which was often, especially in Aiquile Province). Having the option of responding in Quechua further put farmers at ease.

With one exception, I conducted the interviews outdoors, in the communities of the respondents, often on the edge of a field or near an infrastructural work. The interviews were conducted in late August and typically lasted from forty-five minutes to an hour.

The exercise of interviewing farmers may be thought of by some as a survey. But I prefer to think of the material from each interview as a case study. Good case studies provide pictures of life "in the round," whereas the best survey data can only portray life as "flat."

I must extend a word of thanks to Ing. Lucio Colque, head of PDAR's irrigation component and a technically capable and kind man who knows the high valleys. He accompanied me there and often served as interpreter during my farmer interviews. I am also indebted to the able staff of ASAR, especially to Ing. Juan Antisana, who set up my visits to communities in the Aiquile area. ASAR personnel also accompanied me to the communities and served as interpreters during my interviews. In Mizque, I must thank Ing. Ricard Mercado of CEDEAGRO for arranging a farmer interview there. I could never have done what I did in the short time I had without their assistance.

Farmer Interviews--Aiquile Province

General Notes on Aiquile Province

A very dry area, with relatively little land under irrigation. A land of rocky hillsides denuded of all but patches of short, parched grass and thorn scrub (Xerophytic). Peasants very poor, livestock (mostly sheep, goats, some bovine cattle) numerous and important in peasant economy. Region remote, isolated; *sindicatos* present, but seem not to have the organizaing force that they have in other areas--in Mizque, for example. Valley was site of haciendas in pre-1952 times, but probably not as prosperous as in other valleys--as in Mizque, for example. Although most men are bilingual in varying degrees, they clearly are more comfortable in Quechua. The women cannot communicate well in Spanish. In general, people here seem little aware of events beyond the valley and little conversant with national institutions.

The CRDP project area

The project works in two watersheds, Uchuchajra and Tipajara. Uchuchajra (sometimes known locally as Cercado) is the poorer of the two, both with regard to its residents and its productive base. Uchuchajra is drier, there is less irrigation there and a corresponding greater dependence on livestock.

Interview Community No. 1: Tacko-Tacko Grande

Basic data: Located in Uchuchajra watershed/42 families belong to local sindicato, but about 25 families (heads of family) participate in project/6 farmers (male) in interview group; a man of about 50 takes lead in answering questions/They estimate community to be 100-150 years old; all respondents were born there/Date of interview: August 29, 1990

Project Activities

PDAR has installed three laundry sinks (*lavanderias*), a potable water system (with *pileta*), a small shower house (with separate stalls for men and women), a drinking trough for animals (*bebedero*), and a retention pond (*atajado*). There is also a communal nursery (*vivero*) with seedlings of eucalyptus, peach, pine, cedar, and grape. There is no irrigation system.

Excess water from the drinking trough is placed on a communal garden (*huerta comunal*) with cabbage, tomatos, potatoes, cauliflower, carrots, and beets (*veteraba*). ASAR, active in the community, is promoting communal gardens as a way of improving the local diet. Both animal and vegetable fertlizer is used on the garden.

Community residents are quite proud of the small water infrastructure work. Before the laundry sinks were installed, women washed clothes in a river three kilometers distant.

Community Needs

I first asked what the community most needed. The immediate response: irrigation water. The second need: machinery to make more retention ponds. Other urgent needs: seeds, pest control, and a medical post (*posta sanitaria*).

Retention ponds collect water during the rains and store it for dry periods. Water is carried from the pond and put on the fields. Last season, the community lost everything planted to drought. A retention pond could probably have saved last season's corn crop. PDAR makes these ponds using heavy equipment (hence, the reference to machinery above). Respondents said they plan to plant trees on the cerro above the water intake (*toma*) so they would have more water.

At the time of the interview, the community had no seed for planting this year's crop--and no money to buy the seed. They were having to buy food at the time.

Local Production, Consumption, and Income

I asked where money for food was coming from: from the sale of firewood. They gather it and load onto burros, must journey a day with burros to find the wood. And not everybody has burros, so animals must be rented--another cost. A *carga* (quantity carried by a burro) of firewood fetches 2 bolivianos in Aiquile. It takes about three days to gather five *cargas* of firewood, and thus earn 10 bolivianos. To earn money you sell firewood or go away (migrate). The local daily wage: 4-5 bolivianos, plus food.

Wheat and a few potatoes are grown for local consumption. Produce onions mostly for consumption. Corn is what they most sell. Sometimes sell chickpeas, but these are subject to pests, and so not always reliable. And sometimes sell *arbejas*. All sold in Aiquile at market (*feria*) to truckers (*transportista-rescatista* intermediaries).

Animals normally not for sale, though they do sell an occasional cow. Sheep mostly for fertilizer and wool, but occasionally slaughtered for meat. Burros are never sold. Oxen rented from the few farmers that have them.

There is no credit here, Banco Agricola doesn't give money to peasant farmers, only to persons in town to buy houses and trucks, so respondents say.

If they don't migrate, they exchange labor with each other rather than hire *peones*. Or sometimes, when they have a bumper corn crop, dwellers from the *puna* (the high areas of the valleys, not the *puna* lands of the *altiplano*) with their llamas bringing chuno and salt. They help with the corn harvest, and are paid by locals in corn. And locals sometimes go to the nearby pampas (in Mizque area) to harvest potatoes and receive payment in kind. And they carry salt which also exchange for potatoes (Note: Trading patterns of this kind are ancient in the Andes).

Frequency and Timing of Migration

People go to the Chapare whenever they need money. They go during slack work periods at home. They return to

their farms when it's time for work to be done. If they can't return, they send money to their wives to hire *peones*.

Rationale for Migration

If there were irrigation water here, people would not go to Santa Cruz or the Chapare. Now, they all go to work.

With work available here now, people don't want to go to the Chapare. No head of the 25 project families is in the Chapare now (one of them is in Cochabamba visiting a daughter), and no head of the 42 families of the sindicato is in the Chapare. All are here. Nobody leaving because everybody is working locally on a *tajamar* (cut-water, an irrigation work, communally constructed; they receive no money for their labor, but if they have irrigation they will have crops to sell. Meanwhile, they share foodstuffs among themselves and sell firewood to survive).

I ask for the names of local communities that experience the heaviest migration to the Chapare and then ask why they think this is: Negro Pujio and Wara Wara are the communities with the heaviest migration. Why? Because there are years when the crops don't produce; it's too dry. Nobody wants to die, you have to eat, so you go to the Chapare

Of all the places they have been or have heard about, they would prefer to live in their home community, they say. But there's no money here (*no corre la plata aqui*), there's money in Santa Cruz, Cochabamba, and the Chapare.

Destination/Duration of Migration and Occupation while There

People go to Santa Cruz to earn rice (i.e., they are paid in rice). They stay for three weeks to a month and are paid in rice at a rate of one to three--one arroba (about 25 lbs.) for each three they harvest. Or sometimes they go nearby (to the pampas, or higher elevations, about a day away by foot, where potatoes are the main crop and where they are paid in potatoes for their work) for brief periods to harvest potatoes.

But most people go to the Chapare each year to harvest coca. This migration began about fifteen years ago; there was coca in the Chapare then, but less than now. Some people work as *partidarios* (i.e., as caretakers of a coca field, receiving a part of the harvest for their efforts). Most of them leave in May or June, and often stay three months. But some come back before the three months (e.g.,

the *partidarios*), returning to the Chapare at key periods to care for the coca crop.

I ask how they know where to go in the Chapare: You look where they're paying more and you go there. And some of them have friends and relatives in the Chapare, and so go to those areas.

Migration Cohorts

They sometimes go to the Chapare in groups, sometimes alone.

Who Runs the Farm in Absence of Migrant

The women and children usually stay while the men migrate--unless the man is to be gone for an extended period, in which case his wife often goes with him. Men complain that the women sometimes don't care for the animals and fields while they're away. The animals wander in the scrub. But some women do a good job managing the farm in their absence, they agree.

What you Like/Dislike about the Chapare

Not many people now want to go to the Chapare because they get sick, often of lung infections (I'm told by a colleague that many of these peasants carry tuberculosis, which becomes active in the warm, damp Chapare climate. And stomach ailments are common from water-borne microbes (*bichos en el agua*). And some migrants have contracted yellow fever.

A good thing about the Chapare is that there's an abundance of water, one can grow things (A natural observation if one recalls that it's water they so dramatically lack at home).

Coca Prices (below cost between November 1989 and June 1990)

A week ago, coca (the dry leaves) fetched 150 bolivianos the *carga* (i.e., 100 lbs.). (The price is rising.) As for how they know the current price, someone is always going back and forth who conveys this information.

I ask what they consider a good price for coca: 300 bol./carga (*vale la pena*). They don't consider the current price, 150 bol./carga, a good one (*no vale la pena*).

Respondents say that *peones* harvesting coca are paid by the *tirada* (= 12 lbs.) of green (or wet) leaf harvested. If the price of a *carga* (=100 lbs. of dry leaf; coca prices in the Chapare are always quoted by the *carga*) is 100 bolivianos, *peones* are paid 1 boliviano/*tirada*. If the price of a *carga* rises to 300 bolivianos, *peones* receive 3 bolivianos/*tirada*. (Note: the price of a *tirada* seems to be tied to the price of a *carga* by the ratio 1/100.) These peasants say they harvest about five *tiradas* (1 tirada = 12 lbs.) of coca in a day. Depending on the price of a *carga* of dry leaf, then, they can earn from 5 bolivianos (at 100 bol./*carga*) to 15 bolivianos (at 300 bol./*carga*) per day. (Compare this with the local daily wage of 4-5 bolivianos, or with the 3.30 bol./day from the sale of firewood. One can see why a coca price of 100 bol./*carga* might not be worth a trip to the Chapare, whereas a price of 300 bol./*carga* might be attractive--especially if there is no alternative at home.)

The clearing of a hectare of high forest in the Chapare pays about the same as a *carga* of coca, I'm told. (This suggests that the value of labor in the Chapare is effectively indexed, at least within a certain range, to the price of a *carga* of coca. These highland farmers seem to associate the price of a *carga* with the economic state of the Chapare and evaluate that state accordingly.)

(Although I had no time to pursue the matter, I wondered how these highlanders viewed working as a *partidario* versus working as a *peon*. Whereas *peones* are given a daily wage, food, and shelter for the duration of their employment, *partidarios* share half of the harvest, and so can sell their own *cargas*. Partidarios also live on the patron's property, but they do not receive food or wage. And whereas peones can arrive and spend short periods of time--for the weeding, or the harvest, or some other agricultural activity, according to their available time and economic needs--*partidarios* are with the *patron* for a longer period of time (for at least an agricultural season) and function as caretakers of the property. Not all highland migrants want to spend such an extended period in the Chapare.)

Urban Experience

When they migrate to the city, they go to either Santa Cruz or Cochabamba, where they work as *peones* in construction (seem to work often as *albaniles*).

Miscellaneous Comments by ASAR/ISE Personnel on the Area

Farmers need credit to purchase inputs. After the economic crisis of the 1980s and years of severe drought, the peasantry is totally decapitalized. Credit is to be available, it's now under discussion, and only the mechanics and institutional responsibilities have to be worked out. Small farmers will definitely pay the credit back.

Now, local lenders (*usuarios*) charge up to 20% per month (if the loan is quoted in bolivianos, 5-8% if quoted in dollars). Often buyers of produce extend credit, and then receive the harvest at very low prices.

It is better to give credit to small farmers in kind. Experience suggests that the way to handle credit is to extend it to a group of, say, fifteen farmers. If one of them fails to pay his part back, none of the group gets credit the following year. Group pressure is the key. This system is functioning well in other areas, under DESEC.

Land titles cannot by Bolivian law be used as credit guarantees.

Potatoes are an important crop in the area, but onions are the major source of earnings from the farm.

Farmers here don't know anything about prices or markets. And chemical inputs are often adulterated; farmers don't know what to buy or how to use it.

Interview Community No. 2: Wara Wara

Basic data: Located in Uchuchajra watershed/84 families in the community, 77 of them (of family heads) belong to the *sindicato*/8 farmers (male) in interview group/Date of interview: August 29, 1990.

Project Activities

All agriculture here is rainfed; there are no irrigation systems. ASAR has just begun work in the community and is still making initial contacts. Several farmers have participated in one short course in livestock, ASAR's first activity in the community. Livestock are numerous in this dry area. ASAR will soon move into the crops area with on-farm trials.

Community Needs

As usual, I opened the interview by asking about community needs. The first and most urgent need: water--for irrigation, for human consumption, and for livestock. I conduct this interview near two wells that residents have dug, each appearing to be about six or seven meters in depth. Dirt is still being dug out of one of them, while the other provides some water, which is drawn out by a bucket suspended from a rope.

They asked for a *tractor* to come and make *atajados* (retention ponds); this is the last solution for us, they said. They have submitted a request to PDAR through the local *sindicato* for retention ponds. (A PDAR technician told me that PDAR would respond to this request; and that the subprefecture--with funds from the Fondo Nacional de Emergencia--would help them with materials--to purchase tubing for the wells they're digging, for example.)

Animals are taken to a river, 5 kilometers away, where women also wash clothes. It takes about an hour to walk this distance (one way), two hours if animals are taken.

The second need: seeds--corn, potatoes, wheat. There is no food in the community now; one farmer remarks that they're in the fourth year of drought. They lost their entire maize crop this year to drought; they're forced to buy corn and potatoes.

They ask me about credit for seeds and fertilizer. But one fellow remarks that the bank would probably not give them credit because they don't have irrigation. Credit is for those with irrigation.

Local Production, Consumption, and Income

I ask where they get the money to buy food: They're having to sell their animals. And one farmer says that heard numbers are declining ominously. When there are no more animals, they say they will migrate to Santa Cruz or the Chapare.

All of those present for the interview had their plastic bags of coca and were chewing. I ask where the leaves came from and was told they were from the Chapare. They said that the Chapare leaves were good for chewing. They complain about the current high price of the coca leaf in Aiquile, 4 bol./pound--very expensive, they say.

Frequency and Timing of Migration

About 25 men have already migrated to either Santa Cruz or the Chapare, 15 of them to the Chapare. Those present at interview say they will not leave because it's too close to the planting rains locally and they must get ready for these. We leave by turns, said one of the farmers.

One young fellow acknowledged that he went to Chapare three times last year to stamp (*pisar*) coca.

People go to the Chapare after the harvest.

Rationale for Migration

I ask where they get the money to buy food: They're having to sell their animals. And one farmer says that herd numbers are declining ominously. When there are no more animals, they say they will migrate to Santa Cruz or the Chapare.

Their grandfathers and fathers didn't go to the Chapare, they said. Migraation to the Chapare is a recent thing, a thing of their generation. Recent years have been unusually dry. Migration to the Chapare, said one man, began about ten years ago (note: numbers like this are to be taken as approximations--1983 was the begining of severe drought). Before, people went to Santa Cruz, where they

harvested rice. But there wasn't so much migration then; it rained more here in those years, I was told.

They say that if they had water for their crops, they would not have to migrate. I ask them if they would migrate if they had irrigation *and* the price of a *carga* of coca jumped to 800 bolivianos. They said they would not, but added that those community residents with land in the Chapare would probably continue to go (none of the respondents owned land in the Chapare, but others in the community did).

I ask what communities in the area have the greatest number of migrants to the Chapare: Negro Pujio and Cercado was the immediate response. From Negro Pujio, everybody goes to the Chapare; they're real traders from that community (this suggests that people from this community may work more as traders than as agricultural laborers). These people go to the Chapare so they can support their families.

One respondent says that cheap coca (for chewing) is one motivation for going to the Chapare. There, it costs one boliviano for a pound, whereas in Aiquile now it costs four bolivianos per pound (about a day's wage). (They say that one is permitted to take 8 pounds of coca tax free out of the Chapare for consumption. There is a check-point on the highway, manned by UMOPAR--Unidad Movil de Patrullaje Rural.)

Destination/Duration of Migration and Occupation while There

Most migrants from the community go to the Chapare, to work coca. They work in several capacities: they clear forest for coca plants, they weed the plants, they harvest the crop (always working as *peones*).

Migrants stay in Chapare for one to two months, sometimes three. And they go to all parts of the Chapare. When I press on this point, I'm told that several migrants from here go to Agrigento (located *frente a Villa Tunari*). And why there? Because some of the first migrants from the community went there, and so people have friends there. And what's in Agrigento? Only coca, there is nothing else, no fruit trees, no nothing (*pura coca, no hay fruta ni nada*).

One farmer says that 10 community residents own land in the Chapare, but they spend most of their time here in the community, going to their lands sporadically and remaining for short periods. They leave their coca plantings in the hands of *partidarios* (note: some of the residents of Community #1 have worked in the Chapare as partidarios).

Some of these Chapare land owners obtained lands from the Instituto de Colonizacion, others bought them.

The respondents don't know of anybody from the local community who has stayed in the Chapare. Everybody always comes back.

People from Negro Pujio and Cercado (respondents identify these communities as having high migratation rates) go to all parts of the Chapare, the young people go to stamp (*pisar*) coca.

(Note: That young people engage in this activity comes out in other interviews. There are probably good reasons for this. First, the *pisada* is a gruelling activity, lasting about 8 hours, usually at night. So, it favors a younger person. Second, it is an activity of high risk, since it occurs in conjunction with coca paste manufacture and is subject to UMOPAR intervention. Third, it can pay extraordinarily well; young people in these peasant communities, without work at home and driven by frustrated consumer aspirations, are easily tempted. And fourth, young people, with a sense of adventure and on the fringe of the modern world--yet sadly excluded--are less responsive to community norms that might discourage participation in an illegal, or at least high-risk, activity.)

Migration Cohorts

They don't usually go in groups to the Chapare, but rather go alone.

Who Runs the Farm in Absence of Migrant

When the men go to the Chapare, the women stay at home and tend to the animals. One fellow quips that some of them even work the *yunta* (the ox-drawn plow). Picking up on the humor, another says that not all of them work the *yunta*. And there's general laughter.

What you Like/Dislike about the Chapare

I ask what's bad about the Chapare (or what they dislike): diseases, too much beer (laughter, here), drugs, and poisonous snakes. I pursue the disease category: anemia seems to be the most serious. Although I could not pursue the drug category, I infer from the response (in which drugs are juxtaposed to beer, which one does consume) that some of

them have consumed coca derivatives (other than the leaf, that is, which everybody chews) while in the Chapare.

Coca Prices (below cost between November 1989 and June 1990)

One young, robust, fellow acknowledged that he went to Chapare three times last year to stamp (*pisar*) coca. He was paid 20 bolivianos the *pisada*. A stamping (*pisada*) lasts eight hours and usually (but not always) occurs at night. It's hard work, he said; you have to stamp hard. Of all the coca-related work, the *pisada* pays the most. It's dangerous work, he adds, chuckling with others present. And why is it dangerous? I ask. Because of the *Leos*, he says. (The reference is to the Leopards, or UMOPAR (Unidad Movil de Patrullaje Rural), the mobile, U.S. trained narcotics-fighting unit of the Bolivian army. Peasants in the Chapare are aware of UMOPAR patrols in the zone and try to avoid them). When I ask him if he wanted to return and stamp again, he said no.

They say that price of a *carga* of coca in the Chapare now is 100 bolivianos (again, these farmers follow coca prices there). The price goes up and down, one of them says. I was told that 300 bolivianos/*carga* was a good price, but that the price had been as high as 800 bol. for a *carga*. If the price reaches 300 bol./*carga*, they say they would return to the Chapare.

(In this context, they begin to complain about the high price of the coca leaf in Aiquile--4 bol./pound, very expensive.)

Urban Experience

People in the community don't generally go to Cochabamba to work, but rather to sell corn or livestock.

Miscellaneous Comments by ASAR/ISE Personnel on the Area

An ISE person supplied an appropriate analogy for the role of coca production in the life of these rural communities. "Coca is a cow that farmers milk as they need to. They don't go to the Chapare because they like it; they go because they have to." With this I heartily concur.

Interview Community No. 3: Tipa Tipa

Basic data: Located in Tipajara watershed/52 families belong to the project (*galeria filtrante*), but 115 families represented in local *sindicato*/A single farmer (male) interviewed/Date of interview: August 29, 1990

Project Activities

This community one of partial irrigation--that is, not all families have access to it. Irrigation water comes from a *galeria filtrante* (filtration gallery), built in 1972. PDAR is now supplying material (concrete; the community must supply the labor) to line the ditches, thus enhancing the efficiency of the system. About half of the irrigation water is lost when it flows through earthen ditches. Lining the ditches, therefore, makes much more water available.

A two-man extension team from ASAR arrived while I was interviewing this man, to look at an eroded drainage ditch and make recommendations. One of the men was an irrigation technician, the other a crops technician (the two work together).

The community has a water judge (*juez de agua*), a traditional role.

Community Needs

Local Production, Consumption, and Income

Community produces onions, tomatoes, and a few potatoes, but mostly onions. He also produces peaches, with technical assistance provided by IBTA. He sells produce to truckers (*transportistas-rescatistas*). Families here have only a few animals--cattle, sheep, goats. Animals not often sold (only when need money), slaughtered sometimes for meat, or on special occasions.

By dint of hard work, some individuals here in the community have been able to purchase trucks from the sale of onions and tomatoes.

Frequency and Timing of Migration

Rationale for Migration

He says he knows a man with four sons. The man has only six hours of water (his water share in the irrigation system). Each son is allowed only 30 minutes of water, which is insufficient. So the sons go to the Chapare to work, stamping coca. But they have now returned; they say there is no longer life in the Chapare (*que ya no hay vida en el Chapare*).

All youth from the community have been going to the Chapare. The young people are really the ones who go to the Chapare. Last year, 30% of the youth of the community went, and many adults as well. And in 1988, there was very low market price for onions, so many went to Chapare to work as *peones* or stampers.

He had a younger brother who went to the Chapare, where he made a lot of money and planned to buy a truck. But then he reinvested the money in the Chapare (it is not clear in what activity, but the suggestion is that it was in some sort of narcotics activity), thinking he would make even more. Instead, he lost it all, became disillusioned, and came home.

Destination/Duration of Migration and Occupation while There

People work as *peones* and stampers. Young people especially stamp coca in the Chapare. They say that the leaves are covered with kerosene for the stamping.

Migration Cohorts

Who Runs the Farm in Absence of Migrant

What you Like/Dislike about the Chapare

Many return from the Chapare sick, with their bellies distended; they evacuate large worms. Many have died when they return (*hartos se han muerto*) from illnesses contracted there.

Coca Prices (below cost between November 1989 and June 1990)

The sons of a friend of his who recently returned from the Chapare, where they stamped coca, say they earned 10-15

bolivianos per night stamping coca. But now the price of coca has dropped, and so has the price of a stamping (*pisada*).

Young people have been returning from the Chapare, beginning in about December of last year (1989). Many of them came back in June of this year, for the Fiesta of San Juan. They say that there is no longer life in the Chapare (*ya no hay vida en el Chapare*). And they say they don't want to go back. They are now working in the fruit groves and helping line the irrigation ditches with concrete (Note: the lined ditches will make for more water, more production, and greater income, other things being equal).

Urban Experience

He worked (in construction) for sixteen years in Cochabamba, before 1972, when the irrigation system completed.

Interview Community No.4: Pucara Esquina (Puca Pila Sector)

Basic data: Located in Tipajara watershed/68 families belong to project, 54 represented in local *sindicato*/Five farmers (males) interviewed as group/Date of interview: August 29, 1990.

Project Activities

The project is in community of Pucara Esquina. Three sectors of the community--Puca Pila, Rumicancha, and Puente Pampa are participating. But not all parts of all sections are included in the irrigation scheme. Construction of the irrigation system began about three years ago. An expansion of the system was completed last year when the original filtration gallery was extended. Radio Esperanza had begun this extension but did not have the resources to provide the materials. So PDAR stepped in and financed the completion. Some areas of these sectors had irrigation water for the first time only last year (1989). This seems to be the case with some of the interview respondents. Before, all agriculture was rainfed.

A note is in order here. It is usually the case that PDAR irrigation projects do not include all of a single community, and often extend across parts of more than one community. For technical reasons, there is no way to make irrigation systems perfectly coincident with community boundaries (residents live at different elevations, for example). And this sometimes creates friction within communities.

Community Needs

Potable water and water for their animals. They also say they need a health post (*posta sanitaria*), especially for their children, and agricultural credit.

They have requested of PDAR that a bulldozer come to make retention ponds (*atajados*) for livestock.

Local Production, Consumption, and Income

Before the irrigation system, local farmers planted only in the rainy season. Now, they take two harvests per year. In the first cycle, August to September, they plant

onions; and in the second cycle, November to January, they plant tomatoes, potatoes and garlic.

These crops are their source of on-farm income. Harvests are sold locally to *transportistas-rescatistas*.

Frequency and Timing of Migration

People usually leave around June for the Chapare, but this year almost nobody went, only four or five. People return to the community in October and November.

One individual in the interview group had been to the Chapare ten times over a six-year period. Once, he stayed for a year. It has been common for persons to go two or three times in a year.

Rationale for Migration

Before the irrigation system, everybody went to the Chapare to work seasonally. About 80% of the men went there, said one respondent, with a few others going to Santa Cruz. People returned in October and November of last year; this year, almost nobody went to the Chapare, only four or five persons.

Nobody wants to go to the Chapare now, we can work here; we have water. If they didn't have water here now, they said, they would probably be in the Chapare.

I ask from what communities in the area most people go to the Chapare. One man responds that about the same number go from all communities, another said that those communities without water supply the most migrants.

Destination/Duration of Migration and Occupation while There

Perhaps two persons in the community own land in the Chapare.

One of those in the group went to the Chapare four years ago and worked as a *partidario* (living on the property of a *patron*, helping with farm activities and sharing equally in the harvest--but not receiving food from the *patron*, as *peones* do). He weeded and harvested, for example. Many people from this community went to the Chapare four years ago, respondents said. Now, almost nobody is going.

One individual in the interview group had been to the Chapare ten times over a six-year period. Once, he stayed for a year. It has been common for persons to go two or three times in a year.

The man who stayed in the Chapare for a year went to a place near Villa Tunari--Cuarenta Arroyos, as the place is called. Others have gone elsewhere--to all parts of the Chapare, I'm told.

I ask how one knows where to go in the Chapare. One man answered that he went there, alone, without knowing (*a la ventura*) where he would work. Once there (but he didn't say where), he offered his services as a *partidario* and was selected by a *patron*--a man from Sacaba, near Cochabamba.

(When I was in the Chapare interviewing a week later, I was approached by a young highlander of perhaps twenty, with his belongings wrapped in a cloth. He asked me if I had work for him. He was looking for work as a *peon*. This is probably the way much work is found. And when coca prices are high, much work is to be had; one doesn't have to search long.)

I asked them what they do with the money they earn in the Chapare. They spend it on food and family expenses, they said. Nobody makes enough money to buy a vehicle or land, they assure me.

I ask where most of the settlers (*colonos*) in the Chapare are from. From Cochabamba, I'm told. But the *peones* are from everywhere, they add.

Migration Cohorts

They say the go alone to the Chapare for the most part, not in groups. But if they meet up there, they may form small social groups.

Who Runs the Farm in Absence of Migrant

Wives of the migrants care for the farm in their absence. I asked respondents what they did for women while in the Chapare. Prostitutes, they said. (A recent study was conducted on the incidence of venereal disease in the Chapare. Rates are alarmingly high.)

What you Like/Dislike about the Chapare

Those who have worked in the Chapare say there is drug addiction there. This is a danger for young people.

Persons have returned to the community from the Chapare and died. It's said they die from anemia; their stomachs swell (swelling of the stomach seems widely associated with "anemia" in these highland communities).

Coca Prices (below cost between November 1989 and June 1990)

They say that there's no life in the Chapare now (*no hay vida en el Chapare*) because coca plantings are being reduced. Nobody now wants to go to the Chapare, now they can work here; we have water.

In the Chapare, the quickest way to earn money is through the *pisada* (stamping); they say you can earn 25 bolivianos for a half night's work.

I ask whether people from the community will once again go to the Chapare if the coca price goes back up. I'm told no, that the young people will not go; the risk is too great, and there is disease and drug addiction.

Interview Community No. 5: Rumicancha (a sector of Pucara Esquina--see Community No. 4)

Basic data: Located in Tipajara watershed/About 60 families, all affiliated with local *sindicato*/Group interview with four farm women, with a woman of about 50 years taking the lead/Date of interview: Aug. 30, 1990

Project Activities

PDAR has brought potable water to this community. But agriculture is rainfed; there is no irrigation.

Community Needs

Most important needs: (1) Local occupations for young people, men and women (teaching them to sew and make textiles, for example), who now must go elsewhere to make a living. (2) Health improvements: relief from the *vinchuca* (a man-biting beetle that is the vector in Chagas Disease). Say that this disease (*mal de chagas*) a serious problem in the community; and no money from agriculture to protect themselves, to seek help, so people are dying... These women tell me that the Vinchuca also bites animals, infecting them; chickens are dying, I'm told (Chagas Disease requires about twenty years to manifest itself fully in the human body, so it's unlikely the chickens are dying of this.) I pursue this further and the women reveal their logic: The animals are thin (little food, little water, because of the drought), with little blood, and so the *vinchucas* are hungry and look for people to feed on. Also, since the animals are thin, there's not much food for people, the women add.

Later in the interview, the women express a need to know how to make noodles (*fideos*), soap, and candles locally so they won't have to buy them. And they need sewing machines as well, they say.

Their needs keep coming at me during the interview. At one point, they request training for community residents in the manual arts--carpentry, mechanics--so that people will have an income. A woman gestures with her hand to the unglazed windows of the house where we sit, and then to the open frame without a door...There's no money for windows and doors, she adds.

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Local Production, Consumption, and Income

I ask what the local crops are: potatoes, peanuts, wheat, *sara* (?). But they only yield when there's rain. Because of the drought, there was no harvest this year.

I ask about the source of family income. From the sale of grains when the crops yield, I'm told, but this year the crops failed. So, the children must migrate and work in other parts--Santa Cruz, the Chapare, Cochabamba. Children working in these places send money to their parents, the women say.

Coca (for chewing) here now costs 4 bol./pound, very expensive, the women say. This isn't right, it costs only 1 boliviano/pound in the Chapare. So one has to work hard just to buy coca, the older woman complains. (Note: Coca is a basic necessity for these people.)

Frequency and Timing of Migration

People usually migrate about June and return in November, for Todos Santos and the beginning of the agricultural cycle.

People began to migrate from this area since about 1970, I'm told, but the pace has quickened over the years. I ask the older woman (who said she thought she was about 48, but wasn't sure) whether people migrated from the community when she was a young girl. The Chapare hadn't been heard of when she was young she said. Nor did people go to Santa Cruz. People didn't leave in those years.

More migrated last year from the community than this year. There were fewer migrants this year because of local work: lining irrigation canals (a very few families in this community belong to the irrigation system of Community No. 4 above), and on a nursery (*vivero*). (Note: PDAR pays salaries of those who work in *viveros* but only supplies materials for irrigation activities such as lining canals; the labor is donated by the community.) But many people are still migrating.

More people went to the Chapare in previous years than are going there now. You don't earn well in the Chapare now, so people don't go there. There's less coca there, and people earn less. They're cutting coca (i.e., destroying it) in the Chapare now.

The men who go to the Chapare are gone seven to eight months, some of them a year. They leave about May and

return in November for the planting season. They're always going and coming.

Rationale for Migration

I ask what is their source of income. From the sale of grains when the crops yield, but this year there was no yield. So, the children must migrate and work in other parts--Santa Cruz, the Chapare, Cochabamba. Children working in these places send money to their parents, the women say.

Many men are away now, they would return if there were work here.

People return with a little bit of money, so they can eat a little better (Note: These people are migrating so they can stay alive).

If people had work here, they wouldn't leave for the Chapare and other places. We need local employment.

Destination/Duration of Migration and Occupation while There

Most of the men go to the Chapare to work, the women say. And some go to Santa Cruz, or even to Cochabamba. Several go to Omereque Negros (a mesothermic valley in Santa Cruz Department).

Many men are away now, they would return if there were work here. About 15 are away, either in the Chapare or Santa Cruz. They will return for Todos Santos (All Saints' Day), to plant the fields with the first rains (in November).

More than 10 women are away, young and single, working as domestics in Cochabamba. And five couples are away, in the Chapare or Santa Cruz. When they earn money, they will all return, for they miss their community, I'm told.

The older woman (the one taking the lead in answering my queries) was last in the Chapare in 1984. A younger woman present went there with her father, who worked as a *partidario* in Chinaota. (This small roadside settlement, now with adobe houses and a busy little market, consisted of a few thatched houses from 1980-1985, when it was the principal Bolivian center for commercialization of coca paste. Planes came in from far and wide to pick up the paste, and there was a thriving commerce in a wide variety of consumer goods--a way of laundering narcodollars. Many

people came from Cochabamba and elsewhere to purchase consumer goods, at low prices, during this time. Chinaota is almost legendary in the region.)

The men who go to the Chapare participate in the coca harvest and the *pisada*, and sometimes also clear the forest (*desmonte*) and weed the crops. Some of the complained that they weren't paid for their work in the *pisada*.

The men who go to the Chapare are gone seven to eight months, some of them a year. They leave about May and return in November for the planting season. They're always going and coming.

I ask whether men spend more time in Santa Cruz or the Chapare when they're away. About the same time in both places, perhaps a bit more in Santa Cruz.

Migration Cohorts

Who Runs the Farm in Absence of Migrant

Migrants must leave their houses and lands...and sometimes they don't return.... We don't know whether they have died or what.

When the men leave for the Chapare, their women and children tend the farm. Some of the men take their women, leaving their children with grandparents. But the men usually go alone.

The men sometimes find other women in the Chapare, the older woman says, but women can do the same here (general laughter in the room). I ask whether the men bring these Chapare women home with them. No, the older woman responds, they leave them, just like they left us (general laughter).

The older woman says that the men often return without any money. Her husband returned from the Chapare without any money, and at a time when she was sick. Also, when a husband is not present for the planting, the woman has to pay *peones*--and the work they do is never as if it had been done by the husband.

Men pick up vices (*vicios*) in the Chapare, says the older woman. They learn to drink in the Chapare and become alchoholics and continue to drink when they return; they don't want to work when they come back. And they don't care for their families, for their children. I ask whether the same happens when the men go to Santa Cruz. I'm told that it's the same.

Sometimes there are family disputes (*rinas*) when the men return. Women scold their husbands when they return, ask them where they've been, what they've done, and where the money is...

I ask the older woman (we were developing good rapport) how many children she had had (she's 48-50 years old). Fifteen, she replied. Only three are alive today. Eleven of them died during the first two years of life, and one of her daughters died in the Chapare as a young girl. I asked how the daughter died. Her husband mistreated her, the woman said, and added that she thought the husband killed her daughter by poisioning her with an insecticide. I asked where the son-in-law was now. He's in the Chapare, where he owns land, she said. But he's from Tiraque. This daughter also lost a baby in the Chapare, the older woman told me. She thinks the baby died because of poor feeding; the mother didn't have much milk and didn't have money to buy food for the baby.

What you Like/Dislike about the Chapare

Local people don't like the Chapare, the women say. The humidity makes them sick, and they don't earn much money. You're better off here in the community, even when it's dry.

The Chapare climate causes tuberculosis. Some people get sick and die when they return home, others pull through. I ask how many have died and am told only a few. The older woman said that she returned sick, and still has problems. She coughs, she looses feeling in her lower back (lungs?), and she was coughing up blood when she returned, but is not now. She went to Aiquile for medical attention, she said, and was told by a doctor there that she probably had tubercolosis which she had picked up in the Chapare.

Those who return and die do so of anemia and tubercolosis, I'm told. (One of my interpreters intervenes to explain "anemia": a condition resulting from a poor diet and the contraction of parasites from contaminated drinking water.)

I ask if there's anything good about the Chapare. After a long silence, the response: you can earn money there and you can bathe in the rivers (i.e., there's lots of water for bathing).

Coca Prices (below cost between November 1989 and June 1990)

The price of a *carga* of coca now is between 100 and 150 bolivianos, they say.

Work in the Chapare today doesn't pay, so people come back.

Urban Experience

Farmer Interviews--Mizque Province

General Notes on Mizque Province

Mizque Province has both more land and more irrigated land than Aiquile Province, and livestock are less important here. Existing livestock include cows and oxen (for plowing); there are almost no sheep and goats. The valley was the site of haciendas in pre-1952 times, probably prosperous ones, and the *sindicatos* are well organized and politically active today. There are now two *centrales* in the valley, one that supports the government and the other (affiliated with the MBL party, it seems) in opposition to it. The farmers I talked to spoke Spanish better than those I had talked with in Aiquile, and it is my sense that they are more attuned to the national society and culture as well. It was only after some pleading that farmers in the community below consented to an interview.

Interview Community No. 6: Mayra

Basic data: 67 families affiliated with local *sindicato*/7 farmers (male) in the group interview/Date of interview: Aug. 31, 1990.

Project Activities

PDAR is not directly executing projects in this community as it is in communities in Aiquile Province. Here, CEDEAGRO is executing CRDP activities. These activities include technical assistance in the production of potaotes and peanuts. The lands of all 67 families are under irrigation.

Community Needs

The primary needs of the community, respondents say, are fertilizers and seeds; and they have no capital to buy these, especially fertilizers. They say they were told six months ago that loans would be made available to them, but nothing more has been said or done. They clearly are interested in this and press me for an answer. They are also worried about the kind of guarantees that might be asked of them and fear they will be denied credit because they lack the guarantees.

Local Production, Consumption, and Income

The main crops in the community are corn, potatoes, and onions. Onions are the main cash crop. Family income is entirely from the farm.

Frequency and Timing of Migration

Before about 1978, nobody went to the Chapare.

Rationale for Migration

Last year, about 10% of the men in the community went to the Chapare, but three or four years ago, half of the community went because agricultural produce here lost its value (this is probably a reference to the time of high inflation rates in Bolivia). If it's dry (making for less irrigation water), or market prices are low, people go to the Chapare. In 1978, all the young people went to the Chapare when the price of local produce experienced a sharp drop.

Nobody has gone to the Chapare from the community this year. There's good production here now, and crops fetch a good price; and besides, they say there's no life in the Chapare now.

The communities in the area which have furnished the most migrants to the Chapare: Tajvas (?), Pucapila, Monte Aguada, Curumayo. These communities have had no irrigation. But now Curumayo and several other communities have irrigation, and so fewer persons must leave for the Chapare.

I ask why (as it seems to me) more people from Aiquile than from Mizque go to the Chapare. Because most of the farmers in Mizque have irrigation, I'm told, whereas in Aiquile they don't have it.

Destination/Duration of Migration and Occupation while There

In the Chapare, migrants from here weed and harvest coca. Some stay for a month, others for longer; and some stay until they die. Several have died after returning from the Chapare.

I ask where they go in the Chapare. To different parts, wherever friends are. Some of these friends are from other communities and own land in the Chpare. Only two residents of this community own land in the Chapare. They say one of them has died, respondents tell me, but they don't know for sure. The other one lives here in the community, but always goes to the Chapare to attend to his land.

People from here never much went to Santa Cruz, even in former years.

Migration Cohorts

Men go to the Chapare alone, not in groups; sometimes they go with their wives.

Who Runs the Farm in Absence of Migrant

Women and children remain on the farm when the men go to the Chapare. But the farms are not as well tended in the man's absence.

What you Like/Dislike about the Chapare

People don't go to the Chapare for the sport of it (*por gusto*); they go to earn money. The Chapare is a hell, a hot place (i.e., referring to the high temperatures).

Several have died of anemia after returning from the Chapare.

Coca Prices (below cost between November 1989 and June 1990)

Nobody has gone to the Chapare from the community this year. There's good production here now and crops fetch a good price; and besides, they say that there's no life in the Chapare now.

The daily wage in the Chapare now is 3 bolivianos; before, it was 10 bolivianos (i.e., when coca prices were very high). Before, one could earn 20-30 bolivianos per day working in the Chapare (this is probably a reference to the *pisada*).

Urban Experience

INTERVIEWS-CHAPARE

James C. Jones

Interview Procedure

The following interviews were conducted between the fourth and eighth of September, 1990, by myself and a Bolivian colleague, Lic. Rhinda Calla Gutierrez. I have organized material from my interviews and presented it in English in the indicated categories (which can only be approximate in the case of informal, open-ended interviews). Lic. Calla has done the same, but in Spanish. We conducted the interviews in Spanish (which posed few problems among the settler population of the Chapare, though by far most of them seem to be Quechua speakers), working separately, either in the same or different communities, in order to cover a greater social and geographic space.

Some of the interviews to follow were group interviews, others were individual interviews. In the Chapare, I would have preferred to have individual responses to many of the questions, which were intended to probe into individual circumstances. But a lack of time did not permit us to arrange, or search for, ideal interview conditions. There was often no way to control the number of persons in an interview, since upon arriving at a farm household, or a field, two or three adults or more were sometimes present, and it was usually not feasible to request only one or two of them for an interview and ask the others to leave. To do this, I felt, would likely have created suspicion among the respondents (not to mention those asked to leave), thereby compromising rapport and adversely conditioning responses.

Establishing confidence among farmers in the Chapare has posed enormous problems for IBTA/Chapare. That confidence today is only incipient, is sometimes tenuous, and is more manifest in certain subregions (or parts thereof, or sindicatos therein) than in others. In some cases, "confidence" may not be the most appropriate term to describe an opening in communications between farmers and IBTA. The quick drop in the price of coca, and the resulting desperation on the part of many Chapare farmers, would seem alone to account for the opening. This is not to disparage the efforts of IBTA to establish confidence among farmers. Indeed, through hard work and often great personal risk and sacrifice, IBTA personnel had established working relationships with many farmers before the great coca price fall.

In conducting our interviews, Lic. Calla and I availed ourselves of IBTA's confidence base with farmers (and also of a farmer receptivity clearly attributable to the fall in coca

prices). Several of the farmers we interviewed (but not all) were recipients of IBTA technical assistance, or at least had had dealings of one sort or another with IBTA. Since an IBTA extension agent accompanied us to the field, helped us select farmers to be interviewed, and introduced us to those farmers (but kindly absented himself from the interviews), this was inevitable. We also interviewed a few sindicato leaders (often farmers as well) and others of sundry occupation who appeared to have information relevant to our interests. Those interviews are included as well.

The bulk of our interviewees is from the Chapare's settler population (the colonos). The colonos who settled in the Chapare before about 1980 went there intending to make it their home. It is my sense that many of the colonos who entered after 1980 (pushed out of the highlands by a coincidence of chronic inflation and chronic drought) are more equivocal with regard to long-term committments to the Chapare.

But it must be recalled that the settlers are not the only persons in the Chapare. At any given time, there is a so-called "floating population" (perhaps better termed a human flotsam because of their desperate plight to survive as castaways during the 1980s) of mostly highlanders in search of short-term employment as peones or partidarios or pisadores or carriers. During the 1980s, this population reached enormous numbers in the Chapare. With the fall in coca prices, their numbers declined substantially. Since the persons I interviewed in the high valleys of Aiquile and Mizque belong to this population, we made no effort to interview them further in the Chapare. And then there are the merchants and itinerant traders and truckers that flow and ebb with the economic tides. Numerous in the area during the 1980s, they, too, have since largely abandoned the Chapare.

We originally wanted to stratify the settler sample by highland origin and time in the Chapare as well as by ICTA's subregions. But this proved infeasible given our constraints of time and resources. But we feel the interviews nevertheless represent a good mix with respect to these characteristics.

We visited and interviewed in IBTA's seven project subregions (sometimes called microregions). IBTA's work in the Chapare has turned fundamentally on these subregions, which are defined by agoecological criteria (largely soils). There is a very substantial difference in agroecological potential from one subregion to another. Or perhaps better put, most of the subregions are suitable for some crops and not for others (but, alas, coca, with its high plasticity, performs admirably in them all). A wide variety of crops can be grown over much of Subregions I and III, the zones with the greatest potential for development. These agroecological differences among subregions emerge clearly in the interviews to follow. The subregions (or sections of them) also differ markedly with regard to

accessability by road, to when they were first settled, to whether the colonizations were spontaneous or directed, and to when the bulk of the migrants arrived.

Lic. Calla and I are much indebted to IBTA/Chapare and their technical advisors from Experience, Inc. for making transportation and extensionists available to us during our stay in the Chapare. We could not have done the work without their generous help and splendid cooperation.

The interviews to follow are presented in the order in which we visited IBTA's seven subregions. As a preface to interview material from each subregion, I include comments about that subregion based largely on information I obtained verbally from its IBTA extensionist just prior to visiting it. However, more detail is available in a brief IBTA publication on farm types in each subregion ("Tipos de Finca en el Chapare: Primera Aproximacion," by Dr. Alfredo Alvarado and Ms. Daniel Sanchez, March, 1990, Cochabamba) and in a PIDYS document (SUBDESAL, 1989), which providetechnical description of each subregion.

The exercise of interviewing farmers may be thought of by some as a survey. But I prefer to think of the material from each interview as a case study. Good case studies provide vigorous pictures of life "in the round," whereas the best survey data can only portray life as "flat."

Subregion III

Subregion III, along with Subregion I, are considered to have on average the most agroecological potential (suitable soils and moisture, permitting a wide range of crops) of the seven Subregions, and thus the most potential for development.

Subregion III is divided by the Cochabamba-Santa Cruz highway, with the towns of Villa Tunari and Chimore lying at the extremes of the subregion. One of IBTA's two Chapare research stations, La Jota, is in the zone. Both spontaneous and directed colonization are found in Subregion III, with the better soils tending to lie in the areas of directed colonization (the sendas area). Coca has been the predominant crop in the area of spontaneous colonization (Alvarado and Sanchez 1990), whereas citrus and plantains have dominated in the area of directed colonization.

By one report, many of the coca farmers of the spontaneous colonization area have moved into forests near (or even in) the Parque Isiboro-Secure, on the Beni-Cochabamba border, where sindicatos have obtained lands. This began when UNOPAR made its base in Chimore, which was once an important center of commercialization for coca paste.

The zone also has a small agroindustrial infrastructure --sawmills, rice-hulling operations, processing plants for tea and lemon grass (paja cedron) (Alvarado and Sanchez 1990).

Subregion III, Senda B--Interview J1

Basic Data: Interview two farmers (males) simultaneously, which I identify in my field notes as "1" and "2." But I will handle them here as separate interviews, denoting them by No. 1 and No. 2. But they should probably be read as a unit/Date of interview: Sept. 4, 1990, at an small outdoor restaurant near Chimore.

The Community, Project Activities

These farmers are evangelistas; the directed colonization of which they are a part was organized by an evangelical church (which they call the OSE) for its members from several highland areas. These farmers do not grow coca, and little was ever grown in their community, they say. And as I learned during the interview, they neither chew coca nor drink chicha, the consumption of both being against their religion. Neither they nor their community are typical of the Chapare.

Migration: History and Circumstances

He arrived in the Chapare in November of 1970, from northern Potosi (Province of Charcas). He resides in Chimore and has 20 hectares of land in Senda B. About 19 has. are cultivable, he says, the rest being taken up by branches (arroyos).

He came directly to the Chapare from Potosi and has never lived elsewhere, he says. He's never lived in a city. Three families (including his) left his community in Potosi to come to the Chapare, but the others left before he did.

He considers himself a Chapare resident, plans to stay in Cochabamba Department; there's no land anymore in northern Potosi, he said. He left because there was no land for him. And there's no water there: people must carry water from two kilometers away, and there's no grass for the animals because of the drought. There's not even water to drink. (I was in northern Potosi two years ago and witnessed the grimness of things there. Nobody would return to such conditions.)

He goes back to northern Potosi about once per year and owns a half-hectare of land there.

I ask him why he chose to come to the Chapare rather than go elsewhere. Because the OSE (the Protestant church to which he belongs) got land for all its members (hermanos) in Bolivia.

He has an older brother (blood brother, not church brother) who came to the Chapare about 10 years ago with his family.

He's searching for land near the city of Cochabamba, something with irrigation. I ask him why he wants this. For two

reasons, he replied: first, he's been in the Chapare a long time, and there are lots of diseases here, he says. And second, the heat and mosquitos weaken one. I ask what diseases he refers to: anemia and malaria. I ask him to describe anemia: you become skinny, you don't feel like working, your skin turns yellow.

I asked him how he made the transition from farming in northern Potosi to farming in the Chapare, a vastly different world from the heights of Potosi. You don't plow here and use oxen, he said, and it took him a few days to learn to use a machete. But there were highlanders already here who knew how to do things, and we practiced ayni (a pre-Hispanic system of labor exchange where neighbors gather to build a house or to engage in another activity), where 30 or 40 neighbors would gather to help each other work. When the colony began, there were colonization leaders (jefes de colonizacion) to give instruction. And there were also social promoters (promotores sociales), but these had left the scene when he arrived. But then colonization leaders retreated to their offices, for people learned how to do things.

Local Production, Consumption, and Income

He dedicates himself exclusively to agricultural activities.

Plantains are what he most sells and what's most sold in the community; truckers come in to buy them (I see three large trucks parked nearby). Trucks come from Potosi, Tarija, Cochabamba, and La Paz. Sometimes six or seven trucks per day load up and leave. Farmers here typically have 5-10 hectares of plantain. Second in importance is citrus--oranges and mandarines. Rice is for household consumption, and likewise yuca, corn, and gualusa (taro). A few farmers have cows and pigs, but these don't count for much.

Farmers in the area have not had to use fertilizers until now. He has harvested plantain from the same plot for twenty years, he said, and has never added fertilizer. But now the land is getting tired. He hopes to improve his yields with fertilizer. His citrus trees have also been yielding for twenty years--some of them for thirty, he adds, after reflecting. And without fertilizer.

He does not use fertilizer for domestic crops such as rice, yuca, corn, and gualusa.

In order, he plants rice, then corn, then soybeans or frijol or yuca. I ask him how long he can continue this cycle on a single plot. If you continue, he says, the weeds get so bad you can't deal with them. He cultivates a plot for about three years before returning it to fallow for about three years (during which time low growth, or chume--a Quechua term universally used in the area--returns).

Coca in the Household Economy

He estimates that maybe 30% of those belong to the sindicato planted coca when the price was high. He further estimates that they have reduced about half of that. And now, a government decree prohibits the sowing of coca; you can't make the seedbeds now, he says. And he adds that we're brothers (hermanos) here and don't chew (Note: farmers suck the coca quid more than they chew it) coca. The sindicato belongs to the church.

Seasonal Migrants

The peones who come here, he says, are usually from northern Potosi; they come here to work, where they have family. We know them, he says; they spend two or three months here to earn money, then return.

I ask him what kind of work these peones do. They weed the plantains and clear the forest; these jobs take time, so we give work by the "contract" (as opposed to paying a daily wage). It requires a person more than a month to clear in high forest (to clear one hectare, I infer).

Those who come to work are between thirty and forty years old, they don't have any money and there's no way to earn money in northern Potosi. On their return, they often stop off in Cochabamba to purchase necessities: clothes, tools, sandals, sugar, and rice...

I ask if he's heard the workers express views or sentiments regarding the Chapare. They like to work here, he says, but sometimes they return to find that others have taken possession of their animals in their absence.

Farmer Perspectives on Life in the Chapare

Although he considers the Chapare home, he's searching for land near the city of Cochabamba, something with irrigation. I ask him why he wants this. For two reasons, he replied: first, he's been in the Chapare a long time, and there are lots of diseases here, he says. And second, the heat and mosquitos weaken one. I ask what diseases he refers to: anemia and malaria. I ask him to describe anemia: you become skinny, you don't feel like working, your skin turns yellow.

I ask him what he likes most about the Chapare. There's production here, you don't have to scrounge for food every year as you have to in northern Potosi. Corn matures in three months, rice in four; but before planting these you plant plantains.

Sindicatos and Associations

There are three associations in the area: for tea, for bananas (he says bananos--banana and plantain are sometimes used interchangeably here, but they are different plants--but I think he means platanos since this is what they sell), and for telapia (a fish raised for food; the university in Cochabamba has a telapia project here, I think). There are also Clubs de Madres (Mothers Clubs), he adds. He estimates that 70% of the sindicato members belong to one of the above associations.

I ask how such associations are viewed by sindicato leaders. There is no problem in his sindicato, he says, but in other communities sindicato leaders are jealous of the associations. The leaders feel that the associations detract from the sindicatos. Associations, he says, are usually formed around projects, and some sindicato leaders think the projects should be run through the sindicatos. They're jealous.

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

IBTA

I ask him how he thinks IBTA might improve on the work it does in the area for farmers. He says that IBTA is very practical, not theoretical. IBTA is now showing them how to fertilize plantain and citrus.

Subregion III, Senda B--Interview J2

Basic Data: Interview two farmers (males) simultaneously, which I identify in my field notes as "1" and "2." But I will handle them here as separate interviews, denoting them by No. 1 and No. 2. But they should probably be read as a unit/Date of interview: Sept. 4, 1990, at an small outdoor restaurant near Chimore.

The Community, Project Activities

These farmers are evangelistas; the directed colonization of which they're a part was organized by an evangelical church (which they call the OSE) for its members from several highland areas. These farmers do not grow coca, and little was ever grown in their community, they say. And as I learned during the interview, they neither chew coca nor drink chicha, the consumption of both being against their religion. Neither they nor their community are typical of the Chapare.

(Note: IBTA is promoting the planting of macadamia, pepper, coco, citrus, guanabana, and maracuya--pasion fruit --in old platanales.)

Migration: History and Circumstances

He came directly to the Chapare in 1967, also from northern Potosi (Chaiyanta Province). He's never lived in a city or any place else. He considers the Chapare home, but does return every two or three years to northern Potosi, where he has a small land inheritance. Like farmer No. 1, he also wants land near the city of Cochabamba. It's hot in the Chapare, and the children get sick, he says.

This man left northern Potosi because there was little land apt for cultivation, only mountains and ravines (mucha quebrada, serranias solamente).

First, his father came to the Chapare when he heard that there was lots of water here, and that one could harvest three times per year. His parents and brothers have all come to the Chapare.

Local Production, Consumption, and Income

This man devotes himself exclusively to farming. He says that residents of the community are extending their plantain plantings this year in areas where they have reduced their coca plants.

I inquire about his swidden cycle. He first slashes the low growth with a machete, then plants plantains. The trees are then felled with an ax. The slash and fallen boles are left to dry for about a month, then fired (the fire does not damage the

plantains, he says, but rather makes them vigorous). Within three days (before the weeds can enter), he sows rice with corn planted in rows (this is basically a rice field, with an occasional row of corn). The corn matures in two to three months (tender ears--choclos--are harvested at two and a half months), the rice in four months. After the rice is harvested, the corn and rice stubble is cut back; the plantains meanwhile are gaining height. Most farmers, he says, then plant another corn crop (before the plantains begin to leaf and shade the ground), and some of them also cowpeas and beans (the carioca, or black bean).

He plants a small patch of yuca elsewhere; yuca is only for household consumption. At the end of a year, the plantains mature and the area becomes a platanal. Such a platanal will yield for more than twenty years on his soils, he says. (Note: I used plantain as an indicator crop when talking to farmers; the duration of a platanal is a crude indication of agroecological potential.) Old platanales are cut back and the land left fallow for three or four years, until the low growth returns. Then they can be used again. Sometimes, farmers plant macadamia trees in old platanales.

One also has the option of cutting back the platanal, burning the debris and again planting rice and corn (corn is for domestic consumption). The plantains are renewed by the fire and return.

The swidden clearing begins in June, and the crops (rice, corn) are sown in October and November. The usual practice is to take one rice harvest per year and two or three corn harvests.

He has a total of 18-19 cultivable hectares, 9 of them in plantains. I asked about the market for citrus. The price is low, he said; only recently have we begun planting citrus.

Coca in the Household Economy

Seasonal Migrants

Farmer Perspectives on Life in the Chapare

Like farmer No. 1, he considers the Chapare home, but he also wants land near the city of Cochabamba. It's hot in the Chapare, and the children get sick, he says.

Sindicatos and Associations

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

Subregion III, Area of Central de Ibuelo--Interview J3

Basic Data: This man is head of Central de Ibuelo/Date of Interview: Sept. 4, 1990

Observation: The speech and general demeanor of this dirigente were clearly not those of a peasant farmer, and I had difficulty at first getting my bearings in his presence. He didn't fit the setting. A big man with a stubbly beard, pock-marked face, and a large paunch, his posture and voice tone were menacing, and he wasn't anxious for me to visit farms in his area. He was very patronizing with me (he may have taken me for a U.S. drug-enforcement agent). After a brief interview, which I elected to do out of deference to his authority, we left and went elsewhere. I learned later that this man is a former vice-minister of agriculture under Barrientos. A peculiar man in a peculiar situation.

The Community, Project Activities

The Central de Ibuelo is composed of 12 sindicatos and includes well over 1,000 families, he says.

Migration: History and Circumstances

This dirigente first came to this area to settle in 1949. He's from Vallegrande (Santa Cruz Department). He came with his wife, and others came also; there were lands here. And there were years when it didn't rain much in Vallegrande; here it rains a lot, he says.

In trying to make conversation, I asked him if there were Yuracares here when he came. (Yuracares once occupied the area that is today the Chapare, but over the years, with increasing colonization, have been pushed into remoter areas in the Parque Isiboro-Secure and forests of the Beni.) He says that they were here, "but it seems we ran them off...They like to live alone."

The people settled in his area include cambas (i.e., a person from the eastern lowlands) and many others; they've come from everywhere, he said. But Cochabambinos predominate, most of the people are vallunos (i.e., from the valleys of Cochabamba Department).

Local Production, Consumption, and Income

His area needs roads and electricity...There are communities fifty kilometres from the highway, so how are farmers going to get products to market? He's very critical of the government's lack of attention to roads in parts of his area. There's also a need for markets, he says.

He insists that there's little coca in his area, that farmers mostly produce citrus. But plantain is what is sold mostly at present, he said. And citrus is second. These are the main two products of the zone.

There's no coherence among institutions working in the Chapare (i.e., they don't coordinate activities, he means). IBTA is here and teaches people how to grow crops. The SNC (State Highway Department) should also be working here, but they're not. And we need other institutions to look at the problem of flooding of some of the rivers. And we need help in marketing our products--where can we take them? And we need schools...

Coca in the Household Economy

He insists that there's little coca in his area, that farmers mostly produce citrus.

In the new zones (those recently settled) is where the illicit drug activity is (not in Ibuelo, he implies).

He says that the coca price is up now, to 200 bolivianos/carga (because of the season, the leaf is scarce in the area). I ask him what the advantages of producing coca are: you can harvest it more often, three times a year. In the Oct.-Nov. harvest, yields are 15 cargas/ha. In the season of San Juan (winter--June-July), yields decline, sometimes to as low as one carga/ha. In February and March, the time of the most abundant coca harvest, yields are 18 cargas/ha. Another advantage: plantains are heavy, you can't get a crop to market if you live far from the roads.

Seasonal Migrants

In the new zones (i.e., those recently settled) is where you find peones, not here in Ibuelo. People who came from outside to work here came during the coca boom. There is almost no "floating population" in Ibuelo, he assured me. The floaters work at weeding and other tasks, and as partidarios (caretakers/sharecroppers) in the coca fields.

Before the coca boom, the floating population was small.

I asked him if he had observed any problems among the floating population. They get yellow fever and they complain of the mosquitos (the mosco, as it's called hereabouts). And they can't educate their children.

Farmer Perspectives on Life in the Chapare

His area needs roads and electricity...There are communities fifty kilometres from the highway, so how are farmers going to get products to market? He's very critical of the government's

lack of attention to roads in parts of his area. There's also a need for markets, he says.

Sindicatos and Associations

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

IBTA/UMOPAR/DEA/Gringos

He says that the institution that has given the community the most support is IBTA (here, a couple of IBTA extensionists were with us, in his presence). He then began a long tirade on how other institutions had neglected the area, especially Servicio Nacional de Caminos (SNC--The National Highway Department). (Note: UNOPAR/DEA recently bombed a road in the Chapare, supposedly so it couldn't be used as a landing strip for drug pickups, and the Bolivian government, at the instance of the DEA, has suspended road-building activity in the Chapare. It is felt by many that roads abet the drug traffic.)

Countries that buy coca (cocaine) must help us. Helicopters fly over to fight the drug traffic, and airplanes arrive to pick up the drugs (i.e., his point is that the gringos are responsible for both the helicopters and the light planes that pick up the coca paste). What's going on here? The U.S. isn't serious.

There's no coherence among institutions working in the Chapare (i.e., they don't coordinate activities, he means). IBTA is here and teaches people how to grow crops. The SNC (State Highway Department) should also be working here, but they're not. And we need other institutions to look at the problem of flooding of some of the rivers. And we need help in marketing our products--where can we take them? And we need schools...

Subregion III, Sindicato San Luis (Central Ibuelo)--Interview J4

Basic Data: Five farmers (males) in interview group/Date of Interview: Sept. 4, 1990.

Observations: This interview was cumbrous because of the number of persons. There was no way to conduct five separate interviews simultaneously (two is my limit). Among the group was an IBTA promotor. The respondents were all young--under 40, I estimate. (An old man sat in the corner, but he had a poor command of Spanish. Occasionally I tried to bring him into the conversation, asking one of the young men to interpret for me.)

The Community, Project Activities

The sindicato includes 118 families--80 farmers. Twelve sindicatos belong to the Central, which belongs in turn to the Federacion Tiraque Tropical. San Luis produces mainly plantain.

Migration: History and Circumstances

First settlers came to San Luis in about 1965-1968, I'm told. They came from Sucre. Then settlers came from Cochabamba. The promotor's family arrived in Chapare in 1963 (went to Ibuelo), then came here in 1974. They're from Cochabamba. His wife (38 yrs. old) was born in Ibuelo.

The promotor's family left Cochabamba because there was no water, he said, and also because there was too little land.

Others in the interview group arrived in 1970 and 1978. One of them came from Tarata (in the Valle Grande, Cochabamba Department).

There are persons in the community who arrived from Potosi, I'm told, and also from Sucre. But most of the settlers are from Cochabamba.

Said one of the respondents: Had there been irrigation and land in his community (I forgot where he was from--a problem in trying to manage five respondents), he (or his family: these respondents are mostly young, under 40) would not have come to the Chapare. "It's a healthy life there, there's no disease."

They all say they plan to stay in the Chapare. The promotor hasn't been to his highland community in eighteen years, he said. There's more money in the Chapare than in Cochabamba, you can produce everything here.

One of the interviewees spent two years in Santa Cruz. The others have lived only in the Chapare (and in their communities of origin).

Not one of them, they say, (or their families) obtained their lands through through colonization; they all had to buy the lands they have. They came as peones, they worked, some for three years, others for five, others for eight years. You can't find land here now except through purchase, they say.

None of them now works as a peon, one of them says with pride. They have peones and partidarios working for them.

Some of them came to the Chapare because they already had families here.

They say they don't give preference to those of their communities of origin when they socialize. In the sindicato, everybody lives communally (i.e., they socialize among their fellow sindicato members). (Note: This question not productive).

Local Production, Consumption, and Income

They mostly produce and sell plantains. And citrus comes next. Plantain fetches the most money now, followed by citrus and then yuca. Trucks queue up here for plantain, taking it mostly to Potosi and Sucre. Farmers also produce gualusa, rice, and corn. They sell coca too, but there's less coca now (this seems more a reference to the seasonal decline in the coca harvest; these are winter months, when coca yields are lower and the price is higher.)

I ask for information on land size. The smallest farmers have 2 hectares, the largest 15 hectares. They estimate that the average (promedio--but they really mean the mode) holding is eight hectares. And half of this typically would be in plantain, I'm told. The rest of the land is in other crops, and some of it is low and swampy and uncultivable. San Luis is a platano-producing community, they remind me.

Coca in the Household Economy

A half-hectare of coca was the most anybody here had in 1962 and 1963.

One of them comments ironically: We first eliminated our plantain to plant coca; now we're eliminating our coca to plant plantain.

Coca now pays 150-160 bolivianos the carga. At one time it paid 800 bol./carga. I ask what they consider a "good price" (un buen precio). One response: 300 bol./carga. They agree that the current price is not a good one. I ask if they will again eliminate their plantain to plant coca if the price climbs to 300 bol./carga. One fellow responds that they will not, for the coca price is not stable. Another one said that he once eliminated his plantain to plant coca, then the coca price fell. "And one must respect the law," added another.

(A major part of the U.S. anti-narcotics strategy involves disrupting the illegal traffic, not stopping it entirely, which is almost impossible. Such disruption does affect prices, making them volatile. And it's this volatility that discourages many farmers from planting coca. So, the comment above tends to vindicate the strategy. What is less clear is the degree that UMOPAR/DEA activities are responsible for disruption of a kind that makes for the price volatility reported above. This volatility may be the result of events outside Bolivia. As for the current rise in the price of a carga in the Chapare, it may be more related to low yields associated with the winter dry season; how the price behaves in February, when harvest yields are high, will be telling. If they drop quickly, the low price of recent months may signal a secular trend.)

Coca is not reliable, I'm told. The plataneros (i.e., farmers who live on the sale of plantain) live better than the cocaleros when the price of coca drops, one says. And the controls (i.e., activities of UMOPAR) keep coca prices low. Also, UMOPAR takes coca away from farmers. Nobody takes plantain away.

I ask them where most of the coca fields in the Chapare are now. In Ishinuta and Eterazama, they say.

Seasonal Migrants

They have peones and partidarios working for them. Partidarios receive half the harvest, whereas peones work on a contract basis. Peones live with the farm owner. Partidarios life apart, though on lands of the owner. I ask whether these workers have any relationship to local sindicatos. Peones and partidarios don't belong to sindicatos here, but they can complain to them if they're not paid or are mistreated.

Farmer Perspectives on Life in the Chapare

Said one of the respondents: Had there been irrigation and land in his community (I forgot where he was from--a problem in trying to manage five respondents), he (or his family; these respondents are mostly young, under 40) would not have come to the Chapare. "It's a healthy life there (i.e., in the highlands), there's no disease."

The worm (el gusano) affects children here, so some families leave their children with relatives in the highlands. These worms destroy children. Anemia is what most affects the children, the worms give them anemia.

They all say they plan to stay in the Chapare. The promotor hasn't been to his highland community in eighteen years, he said. There's more money in the Chapare than in Cochabamba, you can produce everything here. They've invested too much work in the Chapare to leave, one of them said.

What they don't like about the Chapare: the heat, the mosquitos, the humidity, the dirty water, which makes them sick. They drink water from the River Chapare.

Sindicatos and Associations

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

UMOPAR/DEA

(A major part of the U.S. anti-narcotics strategy involves disrupting the illegal traffic, not stopping it entirely, which is almost impossible. Such disruption does affect prices, making them volatile. And it's this volatility that discourages many farmers from planting coca. So, the comment above tends to vindicate the strategy. What is less clear is the degree that UMOPAR/DEA activities are responsible for disruption of a kind that makes for the price volatility reported above. This volatility may be the result of events outside Bolivia. As for the current rise in the price of a carga in the Chapare, it may be more related to low yields associated with the winter dry season; how the price behaves in February, when harvest yields are high, will be telling. If they drop quickly, the low price of recent months may signal a secular trend.)

The Leos (i.e., the Leopards, or UMOPAR) sometimes let them pass (within the Chapare) with coca to sell, but only if they're paid. (It is axiomatic in the Chapare that UMOPAR is always "on the take." I was constantly hearing comments to this effect.)

Credit

I asked them about credit, which some of them had received. PL-480 told them that they would have a grace period of three years, but this was not true; PL-480 lied to them, they say. They were told they would not have to pay interest for three years; but then PL-480 told them that it was the capital that they would not have to begin paying back for three years. (Note: this sounds to me like poor communication between PL-480 and farmers.)

IBTA (and Marketing)

I inquire about their views of IBTA. IBTA is forever asking them to plant new things and offering short-courses (cursillos). Some people are excited about this, others are not. IBTA charges $13.00 U.S. per plant for macadamia--very expensive! You need about 100 plants for a hectare of macadamia. You have to pay for the plants in cash; you have 18 months to pay off the debt and you can pay in installments. Coco and citrus trees cost $5.00 U.S. each.

There's a lot of discussion among themselves about how expensive the plants are. One fellow said he bought plants, but

several died on him. One bought 520 citrus plants and 30 of them died; IBTA did not replace the lost plants, or compensate him, he complained.

Curcuma (turmeric) has no market, one man says. And there's no market security for macadamia and coco. Everybody would work with IBTA's suggestions if there were secure markets, one said.

There's not much interest in the community now in macadamia, pepper, and giner. But if there were a market, there would be interest.

IBTA gives good advice on how to deal with pests (como sanar plantas). They began this about a year ago. The most useful advice is in the area of citrus, where the technology of grafting an improved variety on the native one has been well received. The trees don't dry out, they last longer, and they fruit sooner.

IBTA has also introduced new rice and bean varieties that they like and are using (for consumption).

Some farmers are planting maracuya (passion fruit), to sell to soft-drink companies in Cochabamba. The plants aren't old enough to bear fruit yet, they need another year. Farmers just began planting maracuya.

I ask them what they now want most from IBTA: more technical assistance, they said. More courses on how to care for crops. They have seen telapias and would like to make fish ponds to have fish to eat (IBTA is not involved here, but they don't know that; San Simon University in Cochabamba has a telapia project in the Chapare).

And they would like IBTA to help locate markets for products. There's no way to pay off the loans without a market. By selling plantain, they say, they can maintain their families, but they can't buy other things.

Subregion V

This was the first area to be colonized in the Chapare (Alvarado and Sanchez 1990). With subregions II and VI, Subregion V is considered to have less agroecological potential. The terrain is generally hilly, and soils tend to be more acidic, of lower fertility, and eroded. Farm size tends to be small, from five to ten hectares, because of the gradient.

The zone has twenty sindicatos according to IBTA'extension agent (Alvarado and Sanchez report 72 sindicatos), almost all of them spontaneous colonizations. The zone extends along a fifty-two kilometer road from Villa Tunari to Alto Chocolatal, with settlements on either side.

Crops include coca, citrus, rice, yuca, corn, peants, and now turmeric. There are coffee producers using varieties introduced by IBTA five years ago. There is an association (ASPROCCA) of coffee and turmeric in the zone, with 86 members. IBTA is introduced non-traditional crops such as macadamia, coco, and pepper. The extensionist estimates that twenty farmers now have these plants, mostly macademia and coco.

Subregion V, San Mateo Bajo--Interview J5

Basic Data: Group interview with five farmers (males), one of them an old man, the others young (but heads of family). One of them is the IBTA promotor/Date of Interview: Sept. 5, 1990.

The Community, Project Activities

The community one of spontaneous colonization. About 68 famlies belong to the sindicato. The size of land holdings ranges from a half-hectare to eleven hectares, they say.

Migration: History and Circumstances

All but one of the respondents were born in the Chapare. The old man arrived from northern Potosi 48 years ago. He came because northern Potosi was dry and there was no work. The families of the other fellows were all from the Valle Alto of Cochabamba except one. The father of one left Punata because of drought: there was no rain, no wheat, no food. He settled in the Chapare in the 1940s.

All of them considered themselves Chaparenos (i.e., they considered the Chapare their home). Indeed, they say that most of those in the sindicato so consider themselves, for they've lived long in the Chapare.

Some of the families in the community, I was told, came to the area to escape the Chaco War (1932-1935: this was a savage conflict between Bolivia and Paraguay, a war fought by peasants with great carnage on both sides. Many peasants fled into the remote recesses of the eastern regions to avoid military conscription.)

All of the respondents own land in the Chapare. One of them also owns lands in Sacaba (Chapare Province, but in the upper zone, near Cochabamba), an inheritance from his parents. He has wheat and corn there; an uncle tends the lands.

One of the respondents spent two years studying painting and sculpture (of wood) under Austrian clerics in San Ignacio de Velasco (a province of Santa Cruz, once part of the Jesuit mission Province of Chiquitos in colonial times). He did paintings in the local church in San Ignacio.

Local Production, Consumption, and Income

Crops include coca, citrus, plantain, yuca, rice, gualusa, peanuts, corn, pineapple, and sugar cane. Coca fetches the best market price now, more than plantain. Local farmers have more hectares planted in coca for this reason.

Coca fetches the most income for them, followed by citrus.

But citrus yields only once per year, they say (as opposed to coca, which yields up to four harvests per year). Almost every body in the sindicato has citrus, at least four or five plants; but when the crop matures, everybody sells and the price falls.

The land area here is small, not enough to plant many things to sell (other than coca, they mean). They plant yuca, rice, gualusa, peanuts, and corn--for consumption, not for sale; the lands are too small for commercial production, they tell me.

I ask what their main needs are at present. To control pests in their crops, they say--especially in yuca, peanuts, and rice (i.e., in subsistence crops, one notes).

I ask them what the major problems are with the subsistence crops listed above. A pest attacks the peanuts, and a pest destroyed the yuca plantings in 1987-1988. And sometimes the rice grains dry up before they can harvest them. IBTA has not worked in the community with any of the subsistence crops (Note: IBTA began working in the community only in January of 1990).

Plantains here don't produce continuously for long. At most a platanal will last four years, and usually no more than two before you have to replant. Plantains give one harvest after you plant them, and then one more (los hijos), and then they produce no more. (Note: This is an indication of the area's poor soils).

I inquire about livestock. Chickens are the most important, they say, for their meat and eggs. Chicken and fish (the sabalo is what they most consume; this is a fish found in most rivers and streams of the tropical lowlands of South America) are the meats (here, considering fish a "meat") that people here eat most, I'm told. A few individuals hunt wild meat. I ask what meat they most like: fish, they say; it has the best flavor. As for other foods: they are never without yuca, which they consume daily, as they also do rice; and peanuts they eat about once per week...

Coca in the Household Economy

Coca fetches the best market price now, more than plantain. Local farmers have more hectares planted in coca for this reason. Coca is the only crop that yields year round.

Coca fetches 160 bol./carga now (September 5), it never has a stable price. It went down to 10 bol./carga in March and April. It climbed to 50 bol./carga in August. We're harvesting little coca now because it's the dry season, it's cold and dry.

(Note: this price fluctuation seems to correspond with the seasons: the March and April harvests are the highest yielding, so the market is gluted. August and September are dry, and yields tend to be low; coca is scarce and the price rises. It may be significant that nobody has said that the price is low

But citrus yields only once per year, they say (as opposed to coca, which yields up to four harvests per year). Almost every body in the sindicato has citrus, at least four or five plants; but when the crop matures, everybody sells and the price falls.

The land area here is small, not enough to plant many things to sell (other than coca, they mean). They plant yuca, rice, gualusa, peanuts, and corn--for consumption, not for sale; the lands are too small for commercial production, they tell me.

I ask what their main needs are at present. To control pests in their crops, they say--especially in yuca, peanuts, and rice (i.e., in subsistence crops, one notes).

I ask them what the major problems are with the subsistence crops listed above. A pest attacks the peanuts, and a pest destroyed the yuca plantings in 1987-1988. And sometimes the rice grains dry up before they can harvest them. IBTA has not worked in the community with any of the subsistence crops (Note: IBTA began working in the community only in January of 1990).

Plantains here don't produce continuously for long. At most a platanal will last four years, and usually no more than two before you have to replant. Plantains give one harvest after you plant them, and then one more (los hijos), and then they produce no more. (Note: This is an indication of the area's poor soils).

I inquire about livestock. Chickens are the most important, they say, for their meat and eggs. Chicken and fish (the sabalo is what they most consume; this is a fish found in most rivers and streams of the tropical lowlands of South America) are the meats (here, considering fish a "meat") that people here eat most, I'm told. A few individuals hunt wild meat. I ask what meat they most like: fish, they say; it has the best flavor. As for other foods: they are never without yuca, which they consume daily, as they also do rice; and peanuts they eat about once per week...

Coca in the Household Economy

Coca fetches the best market price now, more than plantain. Local farmers have more hectares planted in coca for this reason. Coca is the only crop that yields year round.

Coca fetches 160 bol./carga now (September 5), it never has a stable price. It went down to 10 bol./carga in March and April. It climbed to 50 bol./carga in August. We're harvesting little coca now because it's the dry season, it's cold and dry.

(Note: this price fluctuation seems to correspond with the seasons: the March and April harvests are the highest yielding, so the market is gluted. August and September are dry, and yields tend to be low; coca is scarce and the price rises. It may be significant that nobody has said that the price is low

because of military controls in the Chapare.)

Again, I ask what they consider a "good price" for coca. They respond that the price has to be 150 bol./carga for them to maintain their families. But at this price, there would be no money to buy tools, a radio, and so on. And you wouldn't eat much meat at this coca price. You would survive on only yuca and plantain. The price must be at 300 bol/carga for a family to buy clothes, tools, meat, and other necessities.

The land area here is small, not enough to plant many things to sell (other than coca, they mean). People here are disposed to plant the non-traditional crops recommended by IBTA. But they have no money to buy the plants with (i.e., the trees). For this reason, they have to continue with their coca plantings. Macadamia, for example, takes four years before it begins to produce. What do we do in the meantime? So, we have to maintain the cocales.

The IBTA promotor has 1.5 hectares of coca.

I'm told that about half of the community are abandoning their coca plantings because of the low price, whereas the other half are maintaining (limpiando) their coca plantings.

Seasonal Migrants

Many people have gone, the peones have gone; when the price of coca fell to 10 bol./carga, they all left. There were no vehicles on the roads anymore. But some of the peones seem to be returning, now that the price is going up.

The peones here are from Potosi, Sucre, Aiquile...Many of them came to work for two weeks, or a month, long enough to buy coca here; they came because the price of coca was high there, so they bought it here cheap. They work only to buy their coca, then they return.

The daily wage (jornal) here is 5 bol. now (and food on top of this). If the coca price falls, the daily wage falls to 3 bol. When the coca price falls a lot, one can't hire peones any longer. The daily wage goes to 7-8 bolivianos (for good workers) when the coca price rises to 300 bol./carga.

Peones prefer to work in the harvest of coca, since they make more money that way (note: they're paid by how much they harvest rather than by the day). They make about 20% of the harvest price, says one (note: they are not paid on a percentage basis, so I don't know how he arrives at this figure). If the price of coca is high, they make more this way than they do at a daily wage of 8 bolivianos. (And nobody has ever paid more than 8 bolivianos, I'm told.)

Farmer Perspectives on Life in the Chapare

I ask them what they like about the Chapare. The fruits, the fish, the hunting--it's a paradise, says one. There's something to be had year round.

What they don't like: mosquitos and diseases such as malaria, yellow fever, and parasitic infections from the water.

I ask whether they would leave the Chapare if they had lands and the means for a livelihood elsewhere. Some said they would leave; a woman walked into the interview and expressed strongly that they would leave. But others present said they would stay: they're accustomed to the climate and to the foods of the Chapare (recall that these respondents were nearly all born in the Chapare).

Sindicatos and Associations

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

IBTA

This is a new area for IBTA, they began work here only in January, 1990. People here are disposed to plant the non-traditional crops recommended by IBTA. But they have no money to buy the plants with (i.e., the trees). For this reason, they have to continue with their coca plantings. Macadamia, for example, takes four years before it begins to produce. What do we do in the meantime? So, we have to maintain the cocales.

IBTA is promoting here coco, macadamia, pepper, citrus (manadarines, oranges). Six persons have coco plants (only 3-4 plants, someone says). The plants are small, and the issue of marketing will have to be dealt with later. There are a few macadamia plants, but no pepper yet; the promotor tells me that he wants to bring a few pepper plants to the community. Nobody has ginger yet, but it is under consideration, they say.

IBTA charges $13.00 U.S. (their estimate) for each macadamia plant, they say. Coco plants cost $5.00 U.S. You have to pay for the macadamia plants with cash within 18 months, but you can make the payments in installments. IBTA charges no interest. And likewise for coco. As for pepper plants, you return to IBTA, within 18 months, twice the number of plants you received.

Since IBTA uses the promotores as initial adopters of its technologies, I ask this promotor what non-traditional plants he had on his land. His response: 60 coco plants, 48 macadamia plants, and he plans to introduce 100 pepper plants (note: the promotores buy these plants). He also has 1.5 hectares of coca, he says.

The promotor has been to IBTA research stations for

cursillos and to see how things are done, but others have not. They say they need to see for themselves. People here have never seen a macadamia tree in production, they need to see one (Note: So far as I know, there is not yet a single macadamia tree in production in all the Chapare; I'm told that some will mature, for the first time, in about three months on an IBTA station.) We've seen pepper at the recent agricultural fair (in Chipiriri, in August of this year) as well as on IBTA's station, so we know more or less how it is.

I ask if they have any recommendations for IBTA. Yes, IBTA should supply them with plants (i.e., trees), but with the provision that have to pay for them only when they come into production, not before. Also, people are asking where they are going to market the produce from the plants. Coffee...tea...where are going to sell this?

I ask them what the major problems are with the their subsistence crops listed above. A pest attacks the peanuts, and a pest destroyed the yuca plantings in 1987-1988. And sometimes the rice grains dry up before they can harvest them. IBTA has not worked in the community with any of the subsistence crops (Note: IBTA began working in the community only in January of 1990).

I ask them to talk a bit about IBTA's short courses, since IBTA expends a major effort on these. These courses are on non-traditional crops, they tell me--macadamia, coco, pepper, citrus (citrus should be considered "traditional" in much of the Chapare). In these courses, IBTA teaches about sistemas--that is, about how to incorporate perennials into annual cropping schemes in a single system. The courses show how to plant, to fertilize, to treat plant diseases. The courses are given in the community by an IBTA ingeniero (an extension agronomist).

I ask them to suggest ways IBTA might improve on the cursillos, or short courses. They should be conducted at night so they won't interfere with our work, they said. But many persons here can't read and write, they need to see how to plant, how to do the cultural practices in actual fields. The talks (i.e., the format of the short courses) are not enough for them.

(IBTA has a slide projector that works off of a gasoline generator. Another reason for doing the courses at night is that slides can't be handily used of the day because of the light. And slides should be used when possible, I would say, especially for showing certain kinds of disease; trying to draw an infected fruit on a blackboard, which IBTA extensionists sometimes do, is not convincing, I would argue. As far as literacy is concerned, this has implications for the pamphlets that IBTA puts out. Many of these are quite simple, with pictures, and so on. But for some things, cultural practices demonstrated in the field--on farmers' fields--are the most convincing of all, especially for those not print/picture oriented. I'm told that the literacy

rate in the Chapare, especially among the older generations, is low.)

DIRECO

The people at DIRECO don't have time to attend to us, one fellow tells me. Before, DIRECO paid $2,000 U.S. (this is a dollar-quoted price; the farmers don't receive actual dollars) for each hectare reduced, but now they pay only 1,500 bolivianos for each half-hectare reduced--i.e., they're paying less. DIRECO has no time because everybody is reducing their coca plantings. And if a farmer does receive a certificate from DIRECO for reducing his coca plantings, he takes it to the DIRECO office and is told that there's no money, that he must return at such-and-such time. But this wastes our time, and we have to pay transportation to and from the DIRECO office. WE have to go about 14 km., and it costs us six bolivianos round trip. The jornal is only five bolivianos now.

Subregion V, Sindicato Paratito--Interview J6

Basic Data: Interviewed a single farmer (male)/Date of Interview: September 5, 1990

The Community, Project Activities

He says the sindicato has 104 members, about 80 of them living locally (asentados). (Note: This suggests that the others have lands within the sindicato, but may have primary residence elsewhere. Or perhaps they have recently left the Chapare. I had no time to pursue this.)

This community received a potable water system (from a UN project, I think) in return for reducing its coca plantings. Thus, the respondent has benefited from this project as well as from DIRECO, who paid him to reduce his coca (see below).

Migration: History and Circumstances

He's been in the Chapare 35 years, is from Kilakolla Province, Cochabamba Department. He considers himself a Chapare resident, has bought lands here. He's been in Paratito for about 23 years, he estimated.

Before he settled in Paratito, he was in Antiguas Yungas, where he worked as a platanero (i.e., he planted plantain commercially).

He left Kilakolla when a flood came and carried his house away and washed away his lands. He then went to Antiguas Yungas. But then the price of plantain dropped and he came to Paratito, where he has remained. He chose Paratito because there was a school here for his children. There were already a lot of people here when he arrived, the road to Cochabamba (his house is on

this road, now the old road to Cochabamba) was inaugurated a year after he arrived, he said.

When he first arrived in Paratito, he worked as a carpenter and janitor/caretaker at the local school. He came with his wife and children, and with them alone.

All the land he owns is here, he owns no land elsewhere, he said.

He said there was a lot of coca grown in the area in the early 1960s, when he arrived. Traders (rescatistas) gathered it and took it to Cochabamba to sell. Then, came to work in the cocales in order to get coca to chew; now, they come from Aiquile to work in the stamping (pisada) and participate in the illegal traffic. (Note: I had mentioned to him earlier that I had worked the previous week in Aiquile and Mizque, so I think he's using Aiquile as an example. There's no reason to think that more persons from Aiquile participate in coca stamping than from other areas.)

Local Production, Consumption, and Income

He has a few head of cattle, forage pasture for the cattle, tea (CORDECO buys tea, though they are late in getting it and he asks IBTA's extension agent to look into the matter), a fair amount of coffee (hartas plantas), macadamia (50 plants), coco (40 plants), pineapple (hartas plantas), and the usual rice, yuca, corn, and plantain. He also has a nursery (vivero) with macadamia and carrizo (?). He no longer has coca, having eradicated 2.5 has. of that last year. (Although I didn't ask, it's pretty clear that he took the money he received from DIRECO--$5,000 U.S.--and invested it the diversified spread of activities above.)

I ask him what gives him the most income of the above activities. Nothing, he promptly said; there's no market for anything. Before, his income came from coca. He complains that he has spent money on peones to work his tea and plant pasture grass...but there's no prospect of selling anything. CORDECO (not IBTA) has been promoting tea for several years.

CORDECO picks it up and processes it in Senda B (the Chimore area). But CORDECO has not picked his tea up and he's concerned; he asks the IBTA extensionist to look into the matter. CORDECO pays an established price for this tea, but he's far from Senda B, he says, and for this reason CORDECO ignores him.

I ask about the distribution of activities over his land. He has a total of seven hectares, he said. He has 0.5 has. in tea, 4 has. in pasture (for six cows), 0.5 ha. in pineapple, and 0.5 ha. in macadamia and coco (i.e., both in the same 0.5 ha.). And he has 1 ha. in corn, rice, yuca,and plantain. And a little

bit of urucu, he says, but it has no market value. Absolutely nothing gives him an income, he says again.

Some people in the area now planting curcuma (turmeric) and pineapple. But curcuma doesn't yield everywhere here; the soils vary much, some parts need fertilizer, but you can't buy fertilizer without money.

I ask about the cows and the pasture. The cows are for milk, for the house, he said. I ask about the durability of plantain (which is for consumption only), knowing that it's an indicator crop for soil character. The land is tired, he said; plantain lasts from one and a half to two years (compare this with a duration of 20-25 years in Subregions I and III).

Coca in the Household Economy

He said there was a lot of coca grown in the area in the early 1960s, when he arrived. Traders (rescatistas) gathered it and took it to Cochabamba to sell. Then, came came to work in the cocales in order to get coca to chew; now, they come from Aiquile to work in the stamping (pisada) and participate in the illegal traffic. (Note: I had mentioned to him earlier that I had worked the previous week in Aiquile and Mizque, so I think he's using Aiquile as an example. There's no reason to think that more persons from Aiquile participate in coca stamping than from other areas.)

He had 2.5 has. of coca, which he eradicated last year (And was paid for it--He has abided by the law, he says with pride). He estimates that from 50 to 70% of the sindicato members have eradicated (but we don't discuss how much). He's getting into ranching, he said. (And he has other crops, listed above.)

I ask him what gives him the most income of the activities in the above section. Nothing, he promptly said; there's no market for anything. Before, his income came from coca. He complains that he has spent money on peones to work his tea and plant pasture grass...but there's no prospect of selling anything.

I come at the amount of coca in the area again. There's little coca in Paratito, he says; only 3 persons have coca here now. People here comply with the law, he insists (He may think I'm a drug enforcement agent of some sort). I ask about the local price of coca. He hesitates, thinks, and says that he thinks it's about 50 bol./carga (he seems very uncertain, and the figure doesn't square with my figures from elsewhere).

I ask him where he buys his chewing coca. In Cochabamba, he said. The flavor of coca varies depending on where it's produced in the Chapare, he says.

The price of coca climbed to 500 bol./carga during the

Garcia Meza era, he said. In recent months, it fell to 5 bol./carga and nobody even bothered to harvest it; they had no money to pay the peones.

I ask him what is the minimum coca price farmers need here to make it worth their while (I put the question in terms of what "farmers" need rather than what he needs, hoping he'll speak to the topic more readily. He's not comfortable with the topic, not with me). They say they need 100 bol./carga, but the price must be stable, mind you ("...pero que este fijo el precio, sabe). To maintain a family and buy food for the peones (whether for the coca harvest or other non-coca related activities is not clear, but he probably means for the coca harvest, which is labor intensive), you need 150 bol./carga and one hectare of coca. But you must work it with your family (i.e., you can't hire peones to weed, and so on). You can harvest about 5 cargas every 3.5 months from the one hectare. I ask him how much a weeding costs (in term of daily wage for peones): 240 bolivianos, he says (only one weeding is usually required).

You pay harvesters one boliviano/12 pounds of wet leaf harvested. (He doesn't say under what carga price, but from other interviews I would guess 100 bol./carga.) (Note: 250 lbs. of wet leaf reduces to 100 lbs. of dry leaf, according to this man. I don't think this is correct, however; the ratio of wet weight to dry weight is more like 6/5. I infer this from interview data from both Aiquile and the Chapare--see Chapare interviews J7 and J8, as well as Aiquile interviews) You would have to pay each peon about 20 bolivianos/wet carga harvested, he says.

Seasonal Migrants

He has five (from Cochabamba Department) working for him now; they are young and work for a year, leaving their families back home. I ask him why they came to the Chapare. Because of the drought: there's no wheat, no nothing there.

I ask whether peones complain much about life in the Chapare. Some don't like it, he says; they complain of the heat, the mosquitos, the food; he buys meat (beef) only once per week for his family, he says (Note: The peones eat with his family; this is the custom).

Farmer Perspectives on Life in the Chapare

I ask whether peones complain much about life in the Chapare. Some don't like it, he says; they complain of the heat, the mosquitos, the food; he buys meat (beef) only once per week for his family, he says (Note: The peones eat with his family; this is the custom).

Sindicatos and Associations

He had been dirigente of the local sindicato for 20 years, and resigned only three months before our talk. I asked him why. Because of the personal expense involved, going on comisiones (i.e., traveling to represent the sindicato). It's an economic damage (i.e., to his family), he said, and now all he wants to do is to work, to farm.

IBTA is working well with the sindicatos in his zone, he says. In other zones, relations are not so good.

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

IBTA

IBTA is working well with the sindicatos in his zone, he says. In other zones, relations are not so good.

People here want more cursillos (short-courses). And people complain that the plants IBTA sells are too expensive. (He says he bought his macadamia plants two years ago, and doesn't remember how much he paid.)

Subregion I

Subregion I, along with Subregion III, are considered to have on average the most agroecological potential (suitable soils and moisture, permitting a wide range of crops) of the seven Subregions, and thus the most potential for development. Some consider this subregion to have the best all-round soils in the Chapare. The zone was the site of spontaneous colonization beginning in the early 1940s, and of directed colonization in the 1960s (Alvarado and Sanchez 1990). There is relatively less coca here than in other subregions since a variety of other plants do well; according to IBTA's extension agent, anything can be produced here. Bananas and citrus are the main products of the zone, and the typical farm size is 15 hectares, with the earlier settlers having as many as twenty hectares, the more recent ones ten or less.

Subregion I, Sindicato Gualberto Villaroel--Interview J7

Basic Data: Interview with one farmer (male); another farmer showed up for part of the time, but did not participate/Date of Interview: Sept. 5, 1990

The Community, Project Activities

This man is one of nine members of "Viveros del Chapare," a legally constituted association of persons (mostly former IBTA promotores) trained by IBTA in the cultivation of tree crops. He manages the association, which includes nine nurseries, two in each of Subregions I, III, IV, and V, and one in Subregion II. Like the respondent below, each member is a local farmer and has a plant nursery on his land, which he owns and operates. The nurseries are usually also parts of UPDs, or demonstration farms. The association sells improved plants, seeds and agrochemicals to local farmers, as well as provides them with technical assistance and orientation.

Although clearly of the Chapare small-farmer class, this man is exceptional for his breadth of vision and willingness to accept risk. About 32 years old, he's hard-working and bright and very congenial, and we spent the better part of an afternoon talking and walking the land, surrounded by an impressive variety of tree crops and ornamentals (and, alas, a little patch of coca--for the peones to chew on, he said).

The local sindicato numbers 50 members, but he includes in the local stable population about 70 families. The difference is made up of peones and partidarios, categories of workers without land but with some degree of permanence in the community.

I asked him what the needs of the community were. He pondered long before responding (There are many cases of hunger and abject misery in the Chapare today. The case presented here is far from that. Here, the needs are clearly less). Economic improvement, he finally said: better education, better nutrition, and better health. "We Bolivians are behind."

This man recently left his job as promotor. There is a new promotor, a very young man who showed up during the interview but did not participate.

Migration: History and Circumstances

He was born in the Chapare, but his father is from Kilakolla Province, Cochabamba Department. His mother was born in the Chapare. He thinks his father came to the Chapare because of family problems (I didn't pursue this) in around 1945, after the Chaco War. His father didn't serve in the war, he said. His father went first to Todos Santos (in the Chapare), where he stayed for about five years before moving to Puerto Aurora (near

Todos Santos). There, he married the respondent's mother (she's from Puerto Aurora, he says) and stayed for 10 years. He settled where the respondent is now in 1959 or 1960.

He thinks the first settlers came to where he lives now between 1957 and 1959. The settlement was a spontaneous one, he says, noting that the lots here are uneven in size.

He owns his land here, and also owns a small lot with a house near Cochabamba. He bought this with half of the money he received from DIRECO for eradicating his coca. (With the other half, he bought macadamia, citrus, and coco plants from IBTA.) I asked him why he bought this house and lot. So the children could go to school, he said. They live there with their mother. It's important to educate the children, he said, and educational facilities in the Chapare are poor. I asked him how often he and his wife see each other. About every 10 days, he said.

Local Production, Consumption, and Income

Citrus and bananas are the main crops here, citrus fetching a better market price than banana. The annuals include corn, yuca, gualusa, peanuts, and beans--but these are not much sold, they're for the house. He estimates that about 20% of the planted area of the sindicato is today in coca. But now both citrus and banana earn more than coca, he said. Before, it was the reverse.

He also has a considerable number of papaya plants, and says that almost all farmers in the area have some papaya.

He estimates on average that each family has about eight hectares; he has fifteen. He has 5 has. in banana, and has just planted 5 more in banana (to mature in about a year). He has one hectare of citrus under production, but recently planted 2 more hectares. In coca, he has 1,000 square meters (0.1 has.); he had 4 hectares in coca until he eradicated them in early 1988. He plants about 0.5 ha. per year in rice and 0.5 ha. in yuca--for family consumption.

He owns his land here, and also owns a small lot with a house near Cochabamba. He bought this with half of the money he received from DIRECO for eradicating his coca. With the other half, he bought macadamia, citrus, and coco plants from IBTA. The macadamia is now flowering, the citrus is just beginning to fruit, and nothing is happening with the coco yet. The coco he can sell, he says, and he thinks he can sell the macadamia also (but he seems to have some doubt here). (Note: I have to wonder how this man, or any other small Chapare farmer, can sail into producing macadamia without knowing anything about markets. Since the money to buy these trees usually comes from eradicating coca--from eliminating something, that is, not from producing something through hard work--is it possible that farmers are more disposed to handle the money as venture capital?)

He says that plantain will easily last 25 years on soils here (i.e., of a kind where he is). He takes only one rice harvest from an area, then shifts; a second rice crop in the same spot would have low yields, he said. But he could put either corn or yuca where the rice was; you have to rotate crops, he said.

Coca in the Household Economy

He estimates that about 20% of the planted area of the sindicato is today in coca. But now both citrus and banana earn more than coca, he said. Before, it was the reverse.

He estimates that 70% of the families in the sindicato have reduced their coca plantings. The small patch he has left he will use to give the peones to chew while they work; they won't work without it, he said.

I asked him why he didn't have more coca (or retain more when he eradicated). "You have to live," he said. (Note: There's irony here: He eradicated his coca in order "to live." But there are many farmers in the Chapare who retain their coca, or some part of it, also in order "to live." The respondent has many options because of his excellent soils, relatively large land area, and proximity to a good road. Many others, perhaps most of the Chapare, are not so fortunate.)

In coca, he has 1,000 square meters (0.1 has.); he had 4 hectares in coca until he eradicated it in early 1988 (Note: the market price fell below the cost of production at this time). I asked him why he eradicated: for economic reasons, he said; the coca needed too much labor, which hecouldn't afford to pay because of the low market price.

In producing coca, it is the harvest that demands labor, and you have only about two weeks to get the harvest in once the crop matures. To harvest 4 hectares of coca, you need 8-10 days (if it doesn't rain), with 20 peones working per day. You can harvest bananas alone, without the help of peones. Transplanting coca from the seed beds doesn't require much labor (if I recall well, he told me that he could transplant 2 hectares alone). (Note: He told me that to plant coca, he throws the seeds by hand onto a prepared seed bed--almacigo--where they are allowed to germinate, after which he transplants the young plants.)

I ask him what the price of coca is now. He's heard that it sells for 180 bol./carga, he said. I ask him at what price one can begin to make money on coca. When it's 180-200 bol./carga, he said; you can make a little profit. With prices at 100-110 bol./carga, you loose money.

He says that peones working in the coca harvest earn on a percentage basis. (This must not be the only system, for the harvest is paid also by the tirada, or 12 lbs. of wet leaf; I

explain this system in the interviews from Aiquile, in the High Valleys.) They receive 10% of the value of a carga (that is, if they harvest what comes to a carga, or 100 lbs. of dry weight, they are paid 10% of its market value). If the coca price is 500 bol./carga, a peon receives 50 bolivianos. (Note: the two systems for paying peones may not be two at all if the ratio of wet weight to dry weight is 120/100=6/5. The two systems come to the same thing if this is so.)

When the price of coca is low, the daily wage (jornal) is fixed at about six bolivianos (plus food). But this wage can climb to 10-15 bolivianos when the price of a carga is 500 bolivianos or more. The wage varies, it's a matter of supply and demand, he says.

The pisada (stamping) pays 20 bolivianos at present--or the equivalent of three days wage for a night's work. If the price of coca rises, a pisada rises also; it can climb to as much as 50 bolivianos--not bad for a night's work. But there's a danger: the Leos (i.e., UMOPAR).

He also comments on the susceptibility of UMOPAR to bribes. "But this is life in Bolivia, there's no justice in life here."

He owns his land here, and also owns a small lot with a house near Cochabamba. He bought this with half of the money he received from DIRECO for eradicating his coca. With the other half, he bought macadamia, citrus, and coco plants from IBTA.

Seasonal Migrants

He says there are perhaps 20 families living in the area who work as peones or partidarios. He has a peon family living on his property that helps him. They're from Potosi and they help him with weeding and other chores. He went to Potosi to pick this family up about a year ago, he said. His wife's relatives knew about the family and gave good references on them. I asked him why he didn't pick up a family locally. It's better to get one fresh from Potosi, he said; those locally here have bad habits. Also, many who come to the Chapare stay for only a short time and then leave; this doesn't suit him, he wants a family that will contract for a year with him.

The small patch of coca he has left he will use to give the peones to chew while they work; they won't work without it, he said.

He estimates that 70% of the highlanders who come to the Chapare do so as peones, without no intention of staying. Only about 30% come to stay. Many peones came when coca prices were high, but now it's not worth it to them to come.

The daily wage now is about 6 bolivianos (plus food).

Farmer Perspectives on Life in the Chapare

I ask him what he dislikes about the Chapare. Everything's good here (Aqui es todo bueno).... After a pause, I prompt him, noting that there's surely something he doesn't like. The mosquitos, the heat, the lack of help...Of all the money coming from the Bolivian government, there's no development in the Chapare.

He owns his land here, and also owns a small lot with a house near Cochabamba. He bought this with half of the money he received from DIRECO for eradicating his coca. (With the other half, he bought macadamia, citrus, and coco plants from IBTA.) I asked him why he bought this house and lot. So the children could go to school, he said. They live there with their mother. It's important to educate the children, he said, and educational facilities in the Chapare are poor. I asked him how often he and his wife see each other. About every 10 days, he said.

Sindicatos and Associations

He manages "Viveros del Chapare" (see notes at the beginning of this interview for information on this). The association has 80,000 citrus plants, 60,000 of them already grafted. They plan to sell these plants to local farmers. They hope to sell 100,000 plants in 1992, and they're already getting requests, he says. They're also working with ornamental plants; they brought the material from Costa Rica.

He says they received credit from a "private bank," and then laughs. He was evasive when I inquired about the source. The citrus material for the nurseries was all imported from Costa Rica, at a cost of $9,000 U.S. This is what the "private bank" financed, he later told me with a smile. The terms: a grace period of 1.5 years during which nothing is paid; in the second year, you begin to pay interest and capital. He says they might ask PL-480 for a loan, but there is a problem: you have to pay interest from the time the loan is taken out, yet plants like macadamia don't come into production for seven years. And citrus takes five years. So, how can you pay on the loan meanwhile? Many people don't want to fool with credit for this reason. Yet credit is needed for quality production, you have to buy inputs. With fertilizer, citrus will yield in 2.5 years; without it, you have to wait five years.

I ask him what the value is of being "associated": you have advantages when your importing and when your marketing, he says. These socios are almost all former IBTA promotores, he says.

The grafted citrus (i.e., improved varieties grafted onto the creole varieties) is superior, people are beginning to see this. IBTA is to present a short-course here tomorrow, he says, and about 70% of the sindicato will attend. The dirigentes are interested now; they, too, will be there.

Sindacalismo (peasant unionism) has prevailed in the Chapare, but it's brought few benefits to farmers, only to its leaders (dirigentes). The leaders say that coca is the only solution for Chapare farmers, that there are no alternatives, that coca monoculture is the only way to survive. But now farmers are realizing that to survive they must take care of themselves, the leaders don't have all the answers. Sindicalismo doesn't have the sway it once had. Farmers are looking to associations to assure their own futures. Things have changed much this year. Today, you can't make it on coca alone. Before, people here didn't sow yuca, rice, only coca, he said. He has observed in communities in the area that now people are planting rice, yuca, plantain, corn--they're trying to balance their income source. They have to survive, they can't depend on coca any longer. (Note: This is a good observation: the settler population is in transition, retreating into a semi-subsistence economy, with marginal market participation, after a decade of avid, coca-fueled market participation).

He volunteered to be an IBTA promotor, he said; and his doing so was not well received by the local sindicato. The sindicato leaders were against him, they said he had been bought by the gringos. But now the same leaders come to him for technical assistance. Now, nobody in the community harasses promotores; the sindicato leaders see IBTA as an entity that provides technical assistance--they didn't need technical assistance to grow coca, but the new crops require it.

Most of the sindicatos now agree, he says, that farmers need to grow other than coca. The drop in coca prices taught them a lesson. I ask him what the lesson is: that farmers couldn't eat when the coca price was low.

<u>IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA</u>

IBTA

He owns his land here, and also owns a small lot with a house near Cochabamba. He bought this with half of the money he received from DIRECO for eradicating his coca. With the other half, he bought macadamia, citrus, and coco plants from IBTA. The macadamia is now flowering, the citrus is just beginning to fruit, and nothing is happening with the coco yet. The coco he can sell, he says, and he thinks he can sell the macadamia also (but he seems to have some doubt here). (Note: I have to wonder how this man, or any other small Chapare farmer, can sail into producing macadamia without knowing anything about markets. Since the money to buy these trees usually comes from eradicating coca--from eliminating something, that is, not from producing something through hard work--is it possible that farmers are more disposed to handle the money as venture capital?)

I ask him for suggestions on how IBTA might improve its work (he's a former IBTA promotor). By changing its extension system,

he says. They should have extension agencies in the communities; now, they operate out of two research stations in the Chapare (Chipiriri and La Jota--and there's an extension office in Villa Tunari, which he fails to mention), so there's no way they can attend to farmers in a timely way. Because they're far away, the attention farmers get is sometimes poor. And farmers can't go looking for IBTA when there's a crop pest.

Before, IBTA stayed on the stations and farmers didn't know what they had. Now, they're getting out more. They should have done this ten years ago.

I ask with what crops farmers need the most help: With the alternative crops (i.e., the non-traditional crops), for farmers here have little experience with these. They need to learn how to graft, how to control diseases. You have to be a real expert to grow coco, for example, because of the need to control insects, which is difficult with coco. Within 2-3 months or less, you can loose all your plants if you're not on top of the problem.

The grafted citrus (i.e., improved varieties grafted onto the creole varieties) is superior, people are beginning to see this. IBTA is to present a short-course here tomorrow, he says, and about 70% of the sindicato will attend. The dirigentes are interested now; they, too, will be there.

See material under "Associations" above.

Since he's a former IBTA promotor, I ask him what the advantages of being a promotor are. You learn new things, modern technology. And the disadvantages? You're resented by those not involved in the program. Some people say the promotores are bought by the gringos. The old people say this. But the young ones want to learn new things.

He volunteered to be an IBTA promotor, he said; and his doing so was not well received by the local sindicato. The sindicato leaders were against him, they said he had been bought by the gringos. But now the same leaders come to him for technical assistance. Now, nobody in the community harasses promotores; the sindicato leaders see IBTA as an entity that provides technical assistance--they didn't need technical assistance to grow coca, but the new crops require it.

He was for three years a promotor (the usual term of office) and only recently left office. He suggested to the community a young fellow for the job and the community (the sindicato, that is) agreed.

I ask him what the qualities are that make for a good promotor. He (they're all women, I observe in passing) must be active, a good communicator, and able to give technical assistance to farmers.

I inquire about UPDs (Unidad de Produccion Demostrativa) since these play an important role in IBTA's extension strategy. These are created by IBTA for demonstration value in the communities, he says. IBTA sets them up on a farmer's land, but the farmer must pay for the plants; only IBTA's technical assistance is free. He has had a UPD, and has one now. IBTA's promotores are the first to have UPDs, he says, and they have to take two or three short-courses to know how to manage the plants.

I ask him for a tour of his UPD (which merges with the nursery). It includes coffee, macadamia, ginger (for export to Chile, he said), coco, tembe (palm cabbage), grafted citrus, and ornamentals. In the UPD are mostly perennials (this is what IBTA mostly promotes, it seems), but there are also annuals, he reminds me. He has corn where the coco trees are, and he will next plant rice alone to the side. (Note: The UPD is clearly not built around annuals, or subsistence crops, but around perennials. This is the situation that IBTA wishes to move farmers toward.)

Gringos

Since he's a former IBTA promotor, I ask him what the advantages of being a promotor are. You learn new things, modern technology. And the disadvantages? You're resented by those not involved in the program. Some people say the promotores are bought by the gringos. The old people say this, not the young ones. The young people want to learn new things.

Credit

He says they received credit from a "private bank," and then laughs. He was politely evasive when I inquired about the source. The citrus material for the nurseries was all imported from Costa Rica at a cost of $9,000 U.S. This is what the "private bank" financed, he later told me with a smile (see "Associations above). The terms: a grace period of 1.5 years during which nothing is paid; in the second year, you begin to pay interest and capital. He says they might ask PL-480 for a loan, but there is a problem: you have to pay interest from the time the loan is taken out, yet plants like macadamia don't come into production for seven years. And citrus takes five years. So, how can you pay on the loan meanwhile? Many people don't want to fool with credit for this reason. Yet credit is needed for quality production, you have to buy inputs. With fertilizer, citrus will yield in 2.5 years; without it, you have to wait five years.

UMOPAR/DEA

I told him I had heard that UMOPAR was easy to bribe. Yes, they are, he acknowledged. "But this is life in Bolivia, there's no justice in life here.

"Subregion VI

According to IBTA's extensionist, all of the colonization in this zone is planned, with the first settlers having arrived between twenty and twenty-five years ago. There has been no spontaneous colonization. Most of the settlers are from the Altiplano rather than from the valleys. Soils over much of the area are sandy and of low fertility, and a section of the subregion is subject to flooding during the rainy season. The modal farm size is 20 hectares.

A lot of coca is found in the subregion, with citrus, banana, and plantain also playing roles in the local household economy.

Subregion VI, Colonia Recta e Ivirgarzama--Interview J8

Basic Data: Interviewed one farmer (male)/Date of Interview: Sept. 6, 1990.

The Community, Project Activities

The sindicato, or colonia, has 45 families.

Migration: History and Circumstances

He thinks the colonia began about twenty years ago; he's been here for only ten years. He came from Kilakolla Province, Cochabamba Department, in 1979. He came because there was not enough land there. But he first settled in a nearby colonia--Colonia Remedos Kolpa--where he lived for two years. He obtained land there (una dotacion--not purchased). But he gave the land to his brother-in-law and moved here, where he bought land.

He says that most of the farmers in the community are from Cochabamba, though some are from Oruro. He plans to stay here; he's now beginning to raise cattle and wants to produce milk commercially.

He always goes to Cochabamba (to the city) to visit family twice or three times per year, sometimes more often, to buy things--potatoes, onions, carrots, and other consumption items. He has one hectare of inherited land there (in Kilakolla, probably), without irrigation, but it's been five or six years since he last visited it. His older brother lives on and works the land.

I asked him why he came to the Chapare (rather than elsewhere). There was movement here, lots of coca and a way to earn money.

I asked him whether he'd ever lived in other places. Yes, he went to Santa Cruz in 1965 to work (harvesting rice) and stayed for a month; and he also did his military service in Santa Cruz. He also lived and worked in Buenos Aires, Argentina, for three years in the early 1970s. There, he worked as a mason/bricklayer (albanil). He made lots of money in Buenos Aires, he said. Working his land in Cochabamba, he could only make enough to feed his family, not to buy things for them. There wasn't enough land to make a decent living.

There are two other families from Kilakolla living in the community, he said, and others from there living in other colonias.

Local Production, Consumption, and Income

He has 20 hectares of land. His crops: coca (1 ha.), plantain (1 ha. in production, will plant 2 has. more), orange (0.5 has. in production, 2.5 more planted but not yet in production), papaya (1.5 has.), pasture grass (4 has. now, but will plant 2 more; he has six cows and plans to produce milk commercially), corn (3 has.), yuca (a little bit, perhaps 0.5 ha.), rice (he will sow 0.5 has.; last year he planted 3 has., but rice requires a lot of labor for weeding and harvesting, it's too costly).

A group of Sweedish Protestants is building a dairy nearby and he hopes to eventually sell milk to them. Now, he sells milk in town (Ivirgarzama). Coca is the crop that fetches the most now--but it does not pay him as much as milk, he says. Papaya and plantain are also important sources of income for him.

His six cows feed on the pasture grass, and he also gives them plantain, yuca, and alfrecho (which he buys locally; it's like flour, a by-product of rice hulling). One of his neighbors also has milk cows.

Plantains will last about 10 years here without replanting, he says (but he has none of that age). He says the soils are good where he is. But other soils in the community are not good, he says; some of them are very poor, so the owners grow mostly coca.

Oranges sell for 2-3 bolivianos/100 fruit in season, but are selling now for 10 bol./100 fruit because they're not in season.

He bought a truck (a Ford 3.50 pickup) semi-new in 1982 and sold it in 1985. I asked him why he sold it: a lot of mechanical problems, he said. I asked him where he got the money for the truck: from planting coca and from buying and reselling it (as rescatista).

Coca in the Household Economy

Coca is the crop that fetches the most now--but it does not pay him as much as milk, he says. He has one hectare of coca.

Plantains will last about 10 years here without replanting, he says (but he has none of that age). He says the soils are good where he is. But other soils in the community are not good, he says; some of them are very poor, so the owners grow mostly coca.

He had one hectare more of coca before than he has now, but he eradicated it a year ago and received $2,000 U.S. I asked him what he did with the money. He saved some of it, he said, and took the rest to buy coca and resell it (as a rescatista). But he's not now working as a rescatista, he has to stay home and

supervise the peones; they won't work if you leave them alone, he says.

I asked him why he eradicated the one hectare: when the price fell, he had no money to hire peones to weed and harvest the crop, he said. You have about a month to harvest the coca leaf once it matures; after this, the leaf falls. (Note: Another farmer told me you had to harvest it within two weeks of maturity.)

When he had two hectares of coca, he harvested them with 20 peones in a week. You pay them by the tirada (=12 lbs. of wet leaf), he said. When the coca price is at 150 bol./carga (=100 lbs. dry weight), a tirada pays 1.50 bolivianos (Note: this squares with information I received from peones in Aiquile who had worked in the Chapare. See those interviews). A tirada varies with the price of a carga, he says. (And again, the ratio seems to be 1/100.) A good peon (one who knows how to harvest coca, he says) can harvest 10 tiradas in a day, thus earning 15.00 bolivianos (at a carga price of 150 bol., that is). (I ask him about a system of paying peones on a percentage basis--10% of the value of a carga that is made up--after drying--of what a peon harvests. He has never heard of this system, he says; farmers always pay by the tirada, he insists. IBTA extensionists confirm this. See Chapare interview J7).

Drying coca leaves requires a half-day only, then the leaves are ready to be sold.

Most of the farmers in his colonia have reduced (but not eliminated, one must note) their coca, he says; only two or three have not.

He's keeping the one remaining hectare until the last; he wants one more harvest from it, in about three months. Meanwhile, he has planted pasture grass in the cocal, so after the next harvest he will have no coca. He says he thinks he can make a living with his milk cows.

I ask him what he plans to do with the money he'll receive from eradicating the final hectare of coca. He will use it to maintain his family and to engage in commerce (dedicarme a los negocios--this man is clearly the quintessential Cochabamba trader).

About two months ago, coca was selling for 20 bol./carga, he said. Now, it's up to 150 bol./carga. The price varies a lot, but you can maintain a family on 150 bol./carga. I ask him if he will still eradicate his final hectare of coca if the price continues to climb, jumping to, say, 200-300 bol./carga. Yes, he'll eradicate it, he's already decided. But he adds that he's happy he hasn't eradicated it yet, because the price is climbing now. Some of his neighbors have eradicated all of theirs, and

now they regret it, he said. Once you eradicate coca, it's against the law to plant it again. (Here, one notes something of the agony that a decision to reduce coca plantings involves for many farmers. It's quite a gamble.)

Five families of the community have left for Cochabamba, he says (whether permanently or just temporarily I never learned, but their departure is clearly related to the declining Chapare economy).

From May to September, coca is scarce because of the cold and lack of moisture. It's this way every year, and the price goes up during this period. In October, the price comes down. He plans to eradicate his final hectare in December; he's getting ready to harvest it now. He will sell the harvest locally; the price varies, he says, but he hopes it will favor him because you can't store the leaf. The harvest at this time of the year is generally not good.

The price of coca rose to 800 bol./carga two years ago, then fell to 10 bol./carga. Oranges, by contrast, sell at 2-3 bolivianos/100 fruit in season, but are selling now for 10 bol./100 fruit because they're not in season.

He bought a truck (a Ford 3.50 pickup) semi-new in 1982 and sold it in 1985. I asked him why he sold it: a lot of mechanical problems, he said. I asked him where he got the money for the truck: from planting coca and from buying and reselling it (as a rescatista, that is).

Seasonal Migrants

He has five peones working for him now, weeding, sowing...He pays them five bolivianos per day plus food--and they eat three times per day, he says. He figures each one costs him 10 bolivianos/day. One of them is from Potosi, the other three are from Aiquile Province, Cochabamba Department. They say there's no work for them at home, he says.

He's no longer working as a rescatista, he has to stay home and supervise the peones; they won't work if you leave them alone, he says.

Farmer Perspectives on Life in the Chapare

I ask him what he dislikes about the Chapare: the heat, the mosquitos, the dust (he lives near a heavily traveled dirt road, which is dusty at this dry time).

Sindicatos and Associations

He says the local sindicato has asked IBTA to present short-courses to members on citrus, forage grasses, and soils--on how to handle poor soils, he says. (This seems to be an issue in

this area, where many soils are poor.) The sindicato doesn't interest him much, he said; it's mostly a waste of money (I assume they must pay some sort of dues) and they don't do anything. The local sindicato favors coca reduction, he said, and he's heard that others in the area do as well.

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

IBTA

I ask him if he's receiving assistance from IBTA. No, he's not. He purchased 408 citrus plants at IBTA's La Jota station, for $1.50 U.S. per plant. IBTA gave him instructions at the station on how to plant the citrus, and then IBTA delivered the plants. But 100 of them have dried out and he's been complaining to IBTA and asking that the plants be replaced. IBTA has told him they will send an agronomist to look into the problem. And he presses the IBTA extensionist who took me to talk to him to send an agronomist specialized in citrus. He complains that IBTA doesn't want to give him credit for the 100 trees he lost.

He has attended IBTA short-courses on forage grasses and citrus. (Note: As I indicate below, he has received PL-480 credit for both citrus and livestock. To get this credit, applicants must show certificates from IBTA that they have taken courses relevant to the production lines for which credit is sought.)

He says the local sindicato has asked IBTA to present short-courses to members on citrus, forage grasses, and soils--on how to handle poor soils, he says. (This seems to be an issue in this area, where many soils are poor.)

Credit

He received PL-480 credit, which he used to buy citrus trees and enter dairy ranching (see IBTA above). Somebody from PL-480 occasionally drops by to see what he's doing in these areas (i.e., with the loan money). The interest is 13% annually, and he must make the first payment this month, he says. But he has a complaint: the citrus trees are not yet in production, and neither is the pasture grass; yet he has to pay on his loan. This is not right, he says.

Subregion VI, Ivirgarzama Area, Colonias Villa Flores and Tres Pozos--Interview J9

Basic Data: Interview with a farmer (female)/Date of interview: September 6, 1990.

Observations: I attended briefly a short-course given by IBTA in Ivirgarzama for members of a cooperative (s) there. The course was on diseases in maracuya and cacao--a two-day course, the first day on maracuya, the second on cacao. In the course were two women (de pollera--in highland native attire), one of them replacing her husband who was unable to attend, the other a farmer and household head. This second woman, of, say, between 40 and 50 years of age, was much interested in this course, asking questions, sometimes in very broken Spanish (she was a Quechua speaker). The IBTA extensionists had commented to me on her participation, which, they found unusual. So when the class recessed for lunch, I approached her--and an older man who was also in the course--and we talked briefly.

The Community, Project Activities

Migration: History and Circumstances

This woman is widowed and operates her farm only with the help of hired labor (peones).

Local Production, Consumption, and Income

She tells me she wants to plant maracuya, (either pepper or papaya, I can't understand which), plantains, and rice; IBTA has said they will show her how to plant maracuya. But she has no money to buy plants, she says in a pleading voice; she has no money to go either forward or backward (No hay dinero para ir atras o para adelante). She can't hire peones now, she has no money.

(Note: The comment above that she has no money to go either forward or backward is telling. She has no money either to go forward and alter her production mix, or to go backward and maintain herself at a bare subsistence level with coca--she reduced that and can't plant more. A most difficult bind.)

Coca in the Household Economy

She reduced 0.5 hectares of coca in July (1990).

Seasonal Migrants

Farmer Perspectives on Life in the Chapare

Sindicatos and Associations

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

DIRECO

She immediately complains to me that DIRECO has not paid her for the coca she eradicated (in July, 1990). She has no money to pay peones, not even to buy food with. She says many people in the area are eating poorly (mal alimentados) now, they have no money.

When I inquire, she explains that DIRECO personnel make three visits to a property. On the first visit they measure the area of the coca plantation. On the second visit, after a portion or all of the coca plantation has been eradicated, a DIRECO agent returns to take measurements and verify the reduction. And then DIRECO makes a third visit to verify the results of the third and to deliver a certificate of reduction. One takes the certificate to a DIRECO office and receives payment for the reduction.

DIRECO has not made the third visit to her property to give her a certificate. And she has no money. The old man who was present when I talked with her told me that his situation was idential to hers. And he, too, had no money--no money to buy food.

(On the morning of this day, I drove by the DIRECO office in Ivirgarzama and I saw a long line of persons reaching down the street. I had heard complaints from others that DIRECO had no money, that farmers were arriving with their certificates only to be told to return another day, that there was no money for payment. This seems to be a serious situation in some areas.)

She tells me she wants to plant maracuya, (either pepper or papaya, I can't understand which), plantains, and rice; IBTA has said they will show her how to plant maracuya. But she has no money to buy plants, she says in a pleading voice; she has no money to go either forward or backward (No hay dinero para ir atras o para adelante). She can't hire peones now, she has no money.

(Note: The comment above that she has no money to go either forward or backward is telling. She has no money either to go forward and alter her production mix, or to go backward and maintain herself at a bare subsistence level with coca--she reduced that and can't plant more. A most difficult bind)

(Note: Circumstances such as this argue powerfully against eradication--if there is the faintest glimmer of other options, that is. And some sindicato leaders--and probably drug traffickers--are pointing to these cases to argue that farmers should not cooperate with the eradication program. And their argument has a compelling logic.)

Subregion II

This is probably the most recent area of colonization, with the exception of Valle Ivirsa, which was settled about fourteen years ago by planned colonization. Most of the other settlers arrived during the coca boom of the 1980s, forming spontaneous colonizations and producing mostly coca. Soils over the subregion range from from good to average to bad, with the worst soils mostly in areas of spontaneous colonization.

Subregion II, Sindicato Dr. Ernesto Daza Ondarza/Sindicato Villa Imperial--Interview J10

Basic Data: Conducted interview with two farmers (males) of separate sindicatos/Date of Interview: September 6, 1990.

Observations: One of the farmers in the interview situation is the dirigente of the sindicato Dr. Ernesto Daza Ondarza, while the other is a farmer from Potosi who belongs to a neighboring sindicato, Villa Imperial. I met the dirigente first, at a small store he recently bought (or opened), and asked if there was a farmer nearby I could talk with. He called one to the store, so both persons were necessarily involved in the interview. The Potosino farmer was reticent and a trifle shy, so the dirigente sometimes intervened, but always in a helpful, diplomatic way. He often spoke to issues that applied to the larger area, not just to the Potosino's sindicato. In the interview material below, I indicate whether the response is that of the Potosino or of the dirigente.

The Community, Project Activities

Migration: History and Circumstances

The dirigente said that most of the farmers in his sindicato came in 1976, mostly from Cochabamba and Potosi. The sindicato includes 90 families.

Dirigente: Before 1980, people migrated mostly to Santa Cruz, where they harvested rice and sugar; but after 1980, they came to the Chapare. In the 1950s and early 1960s, people went to Argentina, and then after that they went to Santa Cruz to harvest cotton, cane, and rice.

The Potosino came to the Chapare in January of 1982, from Linares Province in Potosi. He left because of drought and insufficient land to support his family. I asked him why he chose the Chapare. He had worked in the tropics before, he said, and on his way to Santa Cruz he came through the Chapare and learned that there was land for colonization. So he stayed.

The Potosino had worked for a couple of years in Santa Cruz (1969, 1970, 1971 he estimates), where he had his own land. But the land was far from everything, to get out he had to cross two rivers; there was no way to get produce to market. This land was also a colonization. From there he went to Bermejo, on the Argentine frontier, where he lived for seven years, planting corn and rice and some sugar cane. There were many mosquitos in Bermejo, he said, so he sold the land and returned to Potosi for eight months or so to visit his parents. He had heard that there was land available in the Chapare, he said. And so when he came through on his way to Santa Cruz he decided to stay.

The Potosino has first-cousins (primos hermanos) here, they left Potosi together; it was very dry in Potosi in that year. (Note: This was the time of the worst drought of the century in many parts of the highlands; the water levels have still not recovered.)

Local Production, Consumption, and Income

Potosino: We live far away, there are no roads, there's no way to get produce out (Note: He lives in the small settlement where we talk, but his land lies several kilometers away, in a remote area. To get there, he travels on more of a trail than a road and must cross a couple of streams. In the rainy season, which is the harvest seasons, vehicles can't negotiate the turgid streams.)

I ask the Potosino what he plants: rice, corn, yuca, plantain, citrus, coca, and peanuts--all annual crops, all for consumption except coca. Coca is what pays him the most, he says; he can't get anything else out because of the roads. Dirigente: Without coca, these people are dead (Sin coca, esta gente esta muerta), the dirigente proffers helpfully. The road needs to be fixed. Two things are needed, the dirigente adds: for the government to fix the roads and for IBTA to lower the price of its trees.

The Potosino has a total of 20 hectares: rice (0.5-1.0 ha. he plants), corn (0.5-1.0 ha.), yuca (0.5-0.75 ha.), plantain (1.0 ha.). He had 1.25 has. of coca, but reduced it all. Some farmers in his area had as many as 3.0 hectares of coca, he said. I asked him how he is surviving now: By making tiles (at a tejeria), he said, and he also received money from DIRECO in June for eliminating the 1.25 has. of coca.

The daily wage here is now 10 bolivianos, the dirigente says. But this is without food. If food is included, the wage drops to 5-6 bolivianos.

The dirigente also has 20 has. of land: rice (1.0 ha.), corn (less than 0.5 ha.), plantain (0.5 ha. but he plans to put another hectare in this year), citrus (100 plants), coca (0.5 ha.--he had 2.0 has. before reduction), yuca (1,600 sq. m.). He has no peanuts. Animals: chickens and pigs. Coca is still the best earner among his crops, with plantain second.

I ask about the soils in their area. Average to good, the dirigente responds, but there's much variation. He says that plantains, if well cared for, will last for 10 years on his land. The Potosino says that they will last for six on his (but he's only been here about this time, he says).

Coca in the Household Economy

I ask the Potosino what he plants: rice, corn, yuca,

plantain, citrus, coca, and peanuts--all annual crops, all for consumption except coca. Coca is what pays him the most he says; he can't get anything else out because of the roads. Dirigente: Without coca, these people are dead (Sin coca, esta gente esta muerta), the dirigente proffers helpfully. The road needs to be fixed.

The Potosino had 1.25 has. of coca, but reduced it all. Some farmers in his area had as many as 3.0 hectares of coca, he said. I asked him how he is surviving now: By making tiles (at a tejeria), he said, and he also received money from DIRECO in June for eliminating the 1.25 has. of coca. I ask him how he plans to use the money, but get no reply.

Dirigente: The price of coca now is about 150-200 bol./carga, the price varies; the price is slightly high now, but the next harvest will be in three weeks (i.e., this is the winter dry season, when the coca supply is less and the price tends to be high).

I ask what the minimum coca price has to be to cover the needs of a family: the dirigente responds that about 100 bol./carga covers basic needs, with 0.5-1 ha. planted in coca. Farmers here are keeping about 0.5 has. or so in coca (as opposed to eradicating everything, he means) until they see what's going to happen (i.e., to the price). He (the dirigente) says that he has eradicated one hectare but has kept back 0.5 has. for this reason. He will not eradicate this 0.5 has. until the very last. He's now looking at plantain, milk cattle, and swine; he mentions that the Swedes (a Swedish Protestant group in the region) are installing a dairy.

Dirigente: He estimates that 50% of the farmers in his sindicato have reduced their coca plantings by about 70%; and about 15% of these have eradicated their coca completely. Those who have not reduced are looking at those who have, to see what happens to them. In the 1970s, Banzer (President of Bolivia at the time) said that coca would disappear by 1972 (the year is probably an estimate), so many farmers in the Chapare stopped planting it and began to raise cattle. And then the coca price rose in the late 1970s and 1980s, and those with cattle became poor, whereas those with coca fared well. People remember this.

I ask them in which sindicato (or colonia) more coca had been reduced: in Villa Imperial, they agreed.

Dirigente: When the price of coca dropped, he estimates that 10% of the farmers in the local colonias left in search of work. He says they have only gone temporarily, some to the communities from which they came, others to other parts. But he insists that they will return; all those with farms (chacos) here live here.

Seasonal Migrants

Farmer Perspectives on Life in the Chapare

Potosino: I ask him what are the bad things about the Chapare. We live far away, there are no roads, there's no way to get produce out (Note: He lives in the small settlement where we talk, but his land lies several kilometers away, in a remote area. To get there, he travels on more of a trail than a road and must cross a couple of streams. In the rainy season, which is the harvest seasons, vehicles can't negotiate the turgid streams.)

Sindicatos and Associations

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

IBTA

Dirigente: Before, IBTA recommended Limon ruboso for this area, but it didn't give good results. This was their first mistake. IBTA's plants are too expensive, farmers don't have the money to buy them. He has told them they must lower their prices. Now, a macadamia plant costs $15 U.S.--a lot of money, and they don't come into production for five years. And you have to pay 13% interest on the loans...

Dirigente: In the early years, IBTA had few personnel, their efforts weren't felt in the countryside. They never came around this area then. They said they couldn't get out because of the danger.

Two things are needed, the dirigente says, in reference to the Potosino's community: for the government to fix the roads and for IBTA to lower the price of its trees.

CREDIT

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Subregion IV

Soil fertility in this subregion, where IBTA's Chipiriri research station is located, ranges from very low to high. Coca is the principal crop on soils with poor to medium fertility, and there is a substantial amount of coca in the zone. Many of the roads in the remote areas are poor and have made by settlers. Drug trafficking is still strong in this subregion, which borders on the Parque Nacional Isiboro-Secure, where there are no roads and where traffickers can process coca in relative isolation. For this reason, much of the subregion has been declared a "red zone," and Isinuta, San Julian, and San Gabriel are commercial centers for the sale of both coca and pichicata, or coca paste.

According to IBTA's extensionist, some of the sindicatos in the subregion are twenty or more years old, but he estimates that seventy percent of them are new--only three or four years old. And there are sindicato, he says, where half of the people have eradicated their coca, received payment from DIRECO, and left the area.

Subregion IV, Eterazama Cooperative--Interview J11

Basic Data: Very casual interview with four persons, cooperative employees, some of them farmers as well/Date of Interview: September 7, 1990.

Observations: We pass by the headquarters of this large cooperati 3, where IBTA has given technical assistance in the cultivation of tree crops to members. There is a nursery at the headquarters, so I asked to stop and see it. I talk briefly with local personnel about their operation and their dealings with IBTA. The project has not been involved in the creation of this cooperative.

The Community, Project Activities

Migration: History and Circumstances

Local Production, Consumption, and Income

Four months ago, they bought 10,000 macadamia plants (or seeds) imported from Costa Rica. The local nursery belongs to the cooperative (to its members, I'm reminded), and the objective is to make seedlings available to members for about $5.00 U.S. per plant. They plan for each member to have one hectare of macadamia.

I ask what cooperative products have the best market: tomatoes, I'm told; you can sell these immediately. They're also selling citrus (oranges, mandarines), maracuya, rice, white corn, soybeans, trefol (?--trebol = clover), and vainita (some kind of bean). Soils in the area are no good for plantain, they tell me.

In the nursery they have mandarines (cleopatra variety), maracuya, ornamentals, papaya, and vast numbers of macadamia.

I ask them if they're concerned about a market for all the macadamia. They're not thinking beyond the sale of the plants to their members for now, they say. I press them on this. They admit that they don't know where they can sell it; we need an international market, they said. They plan to graft in six months. And where will the material come from? I ask. They don't know.

They want to import seeds (or plants) for palm cabage (tembe).

He says they want to export abroad, and they are looking for some sort of processing plant.

Most members of the cooperative have about 10 hectares, I'm told; some have 20, others 5.

Coca in the Household Economy

Seasonal Migrants

Farmer Perspectives on Life in the Chapare

Sindicatos and Associations

There are 900 members of this cooperative, which includes twelve sindicatos. As one of the leaders told me, they decided to do their own "alternative development"; he stressed that they receive no outside financial assistance.

The cooperative has seven functional divisions (rubros) which include education (they built a colegio with four ciclos), health, housing, agriculture and livestock, marketing, savings and credit, and transportation.

Four months ago, they bought 10,000 macadamia plants (or seeds) imported from Costa Rica. The local nursery belongs to the cooperative (to its members, I'm reminded), and the objective is to make seedlings available to members for about $5.00 U.S. per plant.

IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

IBTA

I ask them about IBTA's technical assistance. They need a lot more help with macadamia: how to cure diseases, how to graft. And they need help with soil management for all their crops, they say (because of the poor soils in the area).

They have been told by IBTA that they need to use lime (cal), but UMOPAR won't permit traffic in lime. (Note: Lime is considered a precursor, or a reagent for use in processing coca--it's used to neutralize the sulphuric acid that is used, I think, to leach out the alkaloids from the leaf.) When I pursue the issue of calcium, I learn that they're buying it on the local black market, at a premium price (so, it is getting into the Chapare). They mix lime with rice chaff and other matter to prepare the soil for the macadamia seed beds (and other seed beds as well, probably).

They characterize IBTA's assistance as regular.

UMOPAR/DEA

They have been told by IBTA that they need to use lime (cal), but UMOPAR won't let lime into the Chapare. (Note: Lime is considered a precursor, or a reagent for use in processing coca--It's used to neutralize the sulphuric acid that is used, I think, to leach out the alkaloids from the leaf.) When I pursue the issue of lime further, I learn that they're buying it on the

local black market, at a premium price (so, it is getting into the Chapare). They mix lime with rice chaff and other matter to prepare the soil for the macadamia seed beds and those of other seedlings. With regard to local soils, they tell me that the sand is "hot" (El arena es caliente)--a reference to the area's acid soils.

Subregion IV, Sindicato Mariscal--Interview J12

Basic Data: Interviewed a single farmer (male)/Date of Interview: Sept. 7, 1990

Observations: While in a remote area of this subregion (well beyond Erazama, in the general area of the Isiboro-Secure National Park), we passed a farmer slashing underbrush with a machete. Since I had to return to Villa Tunari in the afternoon in order to catch a ride to Cochabamba, I didn't have time to continue along this isolated road to an even remoter area where IBTA was beginning to work. So I asked my driver and the extension agent to stop and introduce me to this man. The introduction was quite brief, for IBTA had not worked here and the farmer didn't know much about them--and even less about me. The extension agent left me with my driver and the farmer, and continued in another vehicle with my colleague, Lic. Calla, to the area where IBTA was beginning to work. I began to explain my mission in terms I thought might make sense to him.

This was "oportunistic sampling" at its finest, and a bit "importunistic" as well, for the farmer was busy and anxious to return to his task. He was sparse of word and spoke very indistinctly, whether because of a large quid of coca in his jaw or some other reason I don't know. The interview, therefore, was rushed, a bit painful for us both, and the information less complete than I would have preferred.

The Community, Project Activities

He estimates that 60 families belong to the sindicato.

Migration: History and Circumstances

Most of the families here, he said, had been twenty years or so in the Chapare (but not necessarily in this sindicato, I learn later). He was born in the Chapare 32 years ago, in Chipiriri, and came to the present location with his parents about 15 years ago, when the land there grew tired. His parents are from Colomi, in Cochabamba Department. They left Colomi because they had no lands, after the Revolution of 1952.

His parents have a house in a rural area of Sacaba (Cochabamba Department), where they now live. He says he bought his father's lands here, those he now works. His brothers left the Chapare, he said; one suffers a lot here: the heat, the mosquitos...They have lighter work (trabajo mas liviano) where

they are. I ask what they do and learn that they're in school (colegio) and at least one of them is at the university. He has three brothers and two sisters and is the only one left in the Chapare.

Local Production, Consumption, and Income

When his family settled in the present location 15 years ago, they grew citrus, rice, yuca, corn, and coca. Coca and rice fetched about the same market price then. They took their rice to the "corner" (esquina--a point nearby, obviously, on a major road; I don't know the area and didn't have time to delve into trivia under the circumstances), where they sold it to truckers. They took coca also to the "corner," but sometimes sold it to local drug dealers. There were drug dealers buying coca here during the Banzer years (i.e, the 1970's, when Gen. Hugo Banzer was president).

There was coca in the Chapare when he was born, he said, but there was no drug traffic then.

I ask him what crops he has now: oranges, plantain, corn, gualusa, yuca, coca, palta (avocado), mango, and rice. Now, plantain fetches a better market price than coca.

He has 12 hectares of land: plantain (2 has.), citrus (1.5 has.), rice (1.5 has.), corn (0.5 has.--he intercrops corn with rice, he says), coca (1.5 has.).

I ask him what he most sells: plantain, papaya, oranges. He earns more from plantain because he can harvest it more often, he said. A platanal will last 7-10 years here; the soils are clayey, not sandy.

Coca in the Household Economy

There was coca in the Chapare when he was born, he said, but there was no drug traffic then.

Without roads, you can't get your produce out (i.e., he's making the point that coca is the only crop one can sell if there's no access road).

Now, plantain fetches a better market price than coca. The price of coca (in Eterazama, the nearest town) is 100 bol./carga. And he has 1.5 has. of coca (a rather large amount). This price is low, it doesn't cover costs (muy bajo, no cubre). I ask what a "good" price might be. He says that 200 bol./carga is a good price, because you have to pay the peones, buy their food, give them with a place to live.

He takes his coca to Cochabamba to sell, he says; he gets a better price there. He often takes it himself, sells it, then returns, or sometimes he entrusts it to a friend. I ask him how

he passes the UMOPAR tranca (check point) on the highway. He has a license (carnet de productor) to sell coca, he said; he merely pays 5 bol./carga (I assume this is a tax).

About half the farmers in his sindicato have coca, he estimates. Those that have it have 0.5-1 ha. Only two farmers in the sindicato have reduced their plantings.

He estimates that five or so members of his sindicato left the Chapare when the coca price fell; they left for their "ranches" (estancias), where they have lands. (Note: This suggests to me that they have returned to highland areas, where there are animal herds.) But they'll come back, he said.

I ask whether he plans to reduce his coca (he has 1.5 has.). No, he says adamantly; they say DIRECO can't pay. And if DIRECO could pay? I ask him. Again, an unequivocal no. "The dirigente and people here say that if you receive money from DIRECO, the DEA and the gringos will own the land." (Note: In this dialogue, he uses DIRECO and the DEA almost synonymously.)

Seasonal Migrants

He has one peon working for him now, a man from Oruro who's been with him for three months. I ask how long he will stay: as long as he wants, I'm told. The daily wage here is 5.00 bol. plus food and lodging. The peon is alone. I ask why he came: He's an orphan, he had no land to farm.

Farmer Perspectives on Life in the Chapare

His parents have a house in a rural area of Sacaba (Cochabamba Department), where they now live. He says he bought his father's lands here, those he now works. His brothers left the Chapare, he said; one suffers a lot here: the heat, the mosquitos...They have lighter work (trabajo mas liviano) where they are. I ask what they do and learn that they're in school (colegio) and at least one of them is at the university. He has three brothers and two sisters and is the only one left in the Chapare.

Sindicatos and Associations

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IBTA, PDAR, DIRECO, Credit, Gringos, UMOPAR/DEA

DIRECO/DEA/Gringos

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Subregion VII

This subregion extends into the Yapacani area, near the border with Santa Cruz. Only about two years ago did IBTA begin working here, with the completion of the highway to Santa Cruz. The soils are extremely poor, and much of the area is flood-prone. Most of the settlements are spontaneous and formed with the completion of the highway between Cochabamba and Santa Cruz.