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# DRUG POLICY AND AGRICULTURE

# U.S. Trade Impacts of Alternative Crops to Andean Coca

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The Honorable Charles Schumer
Chairman, Subcommittee on
Criminal Justice
Committee on Judiciary
House of Representatives

The Honorable Bob Wise
Chairman, Subcommittee on
Government Information,
Justice, and Agriculture
Committee on Government Operations
House of Representatives

As requested, this report (1) assesses how possible competition with U.S. agricultural exports has affected U.S. policy in assisting alternative crops to coca in Bolivia and Peru and (2) examines the possible impact alternative crops, particularly soybeans and citrus, would have on U.S. agricultural trade.

Unless you publicly announce its contents earlier, no further distribution of this report will be made until 7 days from its issue date. At that time, we will send copies to the Secretaries of Agriculture, State, and the Treasury; the U.S. Trade Representative; the Administrator of the Agency for International Development; the President of the Overseas Private Investment Corporation; the Administrator of the Drug Enforcement Administration; and other interested congressional committees. Copies will also be made available to others on request.

This report was prepared under the direction of Allan I. Mendelowitz, Director, International Trade, Energy, and Finance Issues, who may be reached on (202) 275-4812 if you or your staff have any questions. Other major contributors are listed in appendix I.

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# Executive Summary

## Purpose

The United States supports programs in developing countries to provide alternatives to crops used to produce narcotic and mind-altering drugs that are illegally imported into the United States. The Chairman of the Subcommittee on Criminal Justice, House Committee on Judiciary, asked GAO to assess how possible competition with U.S. agricultural exports has affected the U.S. government's policy of supporting the development of alternative crops to coca leaves in Bolivia and Peru. The Chairman of the Subcommittee on Government Information, Justice, and Agriculture, House Committee on Government Operations, asked GAO to assess the trade impact that crop substitution programs in Bolivia and Peru would have on U.S. markets, especially soybeans and citrus.

## Background

U.S. aid to help developing countries export agricultural products that might affect U.S. agricultural producers or exporters has been a contentious issue. During the 1970s and 1980s various restrictions were placed on assistance. In general, the purpose was to prevent aid that would significantly and adversely affect U.S. producers and/or exporters.

In late 1990 Congress passed three laws that provided exemptions to some of the restrictions on agricultural aid. The exemptions apply to use of AID funds and local currency generated from Public Law 480 to support the production, processing, and marketing of commodities to reduce a recipient country's dependence on producing crops from which narcotic and mind-altering drugs are derived.

Crop substitution programs are not expected to be successful unless the drug-producing countries mount effective programs to severely disrupt drug trafficking and reduce the profitability of coca. Crop alternatives do not provide comparable earnings when cocaine is in demand on world markets. In order to attract farmers to abandon coca production, other crops must be made relatively more profitable, either by raising the cost of producing coca or by lowering its price. Moreover, efforts to disrupt the supply of coca are only one element in the war on drugs. Experts believe that reducing demand for drugs is also important, and U.S. policy includes both demand and supply reduction efforts.

To date, coca eradication programs have not worked well in Bolivia and Peru, and the State Department acknowledges that drug interdiction programs face major problems. As a result, coca farming has increased rather than diminished since the crop substitution programs were established in the early 1980s.

## Results in Brief

During 1988-90 the Agency for International Development's (AID) mission in Bolivia proposed to provide assistance for growing soybeans and citrus as alternatives to growing coca. In 1990 the Overseas Private Investment Corporation proposed that it be allowed to consider providing aid to citrus projects in Andean countries. The proposals were not approved. The Department of Agriculture opposed such assistance.

Since passage of legislative exemptions in late 1990, the AID mission in Bolivia has begun to provide small amounts of aid to soybeans and citrus. In 1991 a high-level interagency team proposed that the Overseas Private Investment Corporation be allowed to assist soybean and citrus projects in Andean countries. The proposal was not approved.

Despite concerns that Bolivian and Peruvian soybeans and citrus crops might compete with U.S. crops, Bolivia's and Peru's current production and exports are insignificant. Bolivia has the potential to expand soybean production and exports considerably but major obstacles must be overcome. Even if successful, Bolivian soybean exports would represent only a small share of world trade. Peru is not expected to be competitive in world soybean markets. As for citrus crops, especially frozen concentrated orange juice, neither Bolivia nor Peru is expected to become a significant competitor.

## GAO's Analysis

### Concerns About Impacts on U.S. Markets Affect AID

Between fall 1988 and spring 1990 the Department of Agriculture led two interagency efforts prohibiting AID from using any Public Law-480 title III food aid funds to directly or indirectly support Bolivian soybean production. The AID mission in Bolivia concluded that the prohibition adversely affected the U.S.' counternarcotics strategy in Bolivia. The AID mission, however, recognized that a successful counternarcotics strategy also depends on the government of Bolivia's establishing effective coca eradication and drug interdiction programs.

Soybeans were one of the few crops that had potential for quickly expanding Bolivian exports. Although soybeans cannot be directly substituted for coca production in the coca-growing areas, increased soybean production would increase job opportunities. Added exports would increase foreign exchange earnings, helping to offset earnings reductions that would result from more vigorous coca interdiction efforts.

During interagency consideration of the issue, the Department of Agriculture took the position that Public Law 480 prohibited all assistance available under title III of the act for activities that would compete with U.S. exports. However, GAO found that the law placed restrictions only on the use of local currencies generated under title I for private sector development activities.

The AID mission and the U.S. embassy in Bolivia tried to persuade the interagency group to not prohibit soybean aid. However, AID headquarters was concerned that if any AID financing were used to help Bolivia produce soybeans for export, the American Soybean Association might persuade Congress to enact more restrictions. Such action could have repercussions for AID efforts in its agriculture and export sector development programs worldwide. The soybean case was considered to be highly politically sensitive. AID headquarters viewed the Association as having led a successful effort to reduce AID's 1986 budget by $100 million.

An example of how concerns about possible impacts on U.S. markets affected aid in the citrus area has to do with the Overseas Private Investment Corporation. In 1990 it proposed to an interagency group that it be allowed to consider giving assistance to U.S. investors for citrus projects in the Andean countries. Existing law precluded the Corporation from supporting any projects that would cause substantial injury to U.S. producers, but the Department of Agriculture opposed the proposal on the ground that it would result in increased competition with the U.S. citrus industry. The proposal was not approved.

Following enactment of legislative exemptions in late 1990, in March 1991 AID headquarters approved an AID/Bolivia mission plan to use $70,000 for technical and credit assistance to Bolivian citrus producers. With regard to soybeans, the mission is planning to spend approximately $300,000 over the next year to assist small farmers who produce soybeans and several other crops.

In early 1991, a high-level interagency team recommended that the Overseas Private Investment Corporation be allowed to extend lending and loan guarantees for citrus and soybean agroindustrial projects in the Andean countries, especially projects that would increase utilization and consumption in those countries. The Department of Agriculture opposed the recommendation. According to some agency officials, there was also concern that Congress would oppose the proposal. The recommendation was dropped.

## Possible Impacts on U.S. Markets Are Minimal

The United States is the world's biggest producer of soybeans. Bolivia is currently exporting some soybeans and has potential for considerably expanding soybean production and exports. But even if Bolivia's full potential were realized in the next decade, which is questionable, its exports would equal only about 3 percent of soybean and soybean products traded internationally (on a tonnage basis) in 1990. By way of comparison, in 1990 the United States accounted for 38 percent of world trade in soybeans and soybean products. Bolivia's potential may never be fully realized because land on which soybeans can be grown is also suitable for other crops and because of various obstacles. Independent of Bolivia's progress, world production and trade in soybeans is expected to increase during the 1990s, and the United States may considerably expand its production and trade. As for Peru, it produces some soybeans, but as a result of climate and economics, Peru is not expected to become a competitor in world markets.

In the case of citrus, the major product of concern to U.S. markets is frozen concentrated orange juice. Bolivia and Peru grow only small amounts of citrus, and neither produces frozen concentrated orange juice. There has been some interest in helping Bolivia develop a frozen concentrated orange juice industry. However, many observers are skeptical of Bolivia's ability to compete in world markets. Regarding Peru, studies GAO reviewed and most officials GAO interviewed did not rate citrus as among Peru's best products to develop for export.

## Recommendations

This report contains no recommendations.

## Agency Comments

As requested, GAO did not obtain official agency comments on this report. However, during the course of the review GAO discussed the matters addressed in this report with federal agency and soybean and citrus industry officials. Their views have been incorporated where appropriate.

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### Abbreviations

| | |
|---|---|
| AID | Agency for International Development |
| ANAPO | Bolivian Wheat and Oilseeds Producers Association |
| ASA | American Soybean Association |
| CBI | Caribbean Basin Initiative |
| DCC | Development Coordination Committee |
| FCOJ | frozen concentrated orange juice |
| GAO | General Accounting Office |
| GSP | Generalized System of Preferences |
| ITC | International Trade Commission |
| mmt | million metric tons |
| OPIC | Overseas Private Investment Corporation |
| USDA | U.S. Department of Agriculture |
| USTR | U.S. Trade Representative |

# Introduction

More than 25 million Americans spend over $50 billion a year to buy and use illicit drugs. Eighty percent of these drugs are of foreign origin. Most widely used are cocaine and its derivative, crack. Cocaine and crack continue to pose the greatest drug threat to the United States, according to the administration. Cocaine is a byproduct of the coca leaf, which grows in South America. The three principal coca-growing countries worldwide are Peru, Bolivia, and Colombia. Substantial potential for coca cultivation also exists in Venezuela, Brazil, and Ecuador but as yet has not been realized. The State Department estimates that in 1990 Peru produced 59 percent of the coca leaf available for conversion to cocaine, Bolivia 27 percent, and Colombia 14 percent.

Coca plays a major role in the Bolivian and Peruvian economies. In 1988 the Agency for International Development (AID) estimated that coca accounted for 15 percent of Bolivia's gross domestic product, 24 percent of its total employment, and approximately $200 million in foreign exchange earnings. In Peru the foreign exchange earnings generated by coca production in 1989 were estimated at $500 million-$600 million.

Key elements of the administration's national drug control strategy are to reduce the flow of illicit drugs to the United States and to combat demand through education and treatment.[1] The strategy set a 10-year goal of cutting by 50 percent the amount of cocaine, heroin, and other dangerous drugs entering the United States.

In September 1989 the administration directed that a 5-year, $2.2- billion effort begin in fiscal year 1990 to counter narcotics production in Bolivia, Peru, and Colombia. One of its main goals is to strengthen and diversify the legitimate economies of the Andean countries so they can overcome the destabilizing effects of removing cocaine as a major source of income. This goal involves supporting income-earning alternatives in coca-growing and surrounding areas; supporting trade and investment programs that generate jobs, income, and foreign exchange throughout the economy; and providing balance-of-payments assistance. The goal recognizes that before cocaine production can be reduced, new jobs must

[1] According to the President's February 1991 National Drug Control Strategy report to Congress, success in fighting drugs requires (1) meaningful efforts to prevent people from using drugs and providing effective treatment for those who need and can benefit from it; (2) punishing drug users to hold them accountable for their actions and thereby deter others from using drugs; (3) prosecuting dealers and traffickers; (4) disrupting the flow of drugs, drug money, and related chemicals; (5) engaging other nations in efforts to reduce the growth, production, and distribution of drugs; (6) supporting basic and applied research in behavior, medicine, and technology; and (7) improving intelligence capabilities in order to attack drug trafficking organizations more effectively.

be created to offset the employment provided by coca. To facilitate economic growth and the creation of new jobs, foreign exchange must be found to replace the inflow of dollars that will shrink as the governments crack down on drug production and exports.

For many years AID has supported programs in Bolivia and Peru to substitute alternative crops for coca. The current programs in Bolivia and Peru date back to 1983 and 1981, respectively. As discussed in this report, conflicts have arisen over support for particular crops. Chapter 2 provides background information on the Bolivian and Peruvian programs.

U.S. food aid laws and AID annual appropriations acts have restricted U.S. foreign aid to developing countries if such aid might significantly and adversely affect U.S. agricultural markets and exports. Chapter 3 summarizes pertinent legislation enacted during the past 2 decades and discusses how the laws and related activities have affected crop alternative projects such as those in Bolivia's Chapare Valley and Peru's Upper Huallaga Valley.

## U.S. and World Soybean Market

In 1988, 47 countries produced 95.6 million metric tons (mmt)[2] of soybeans, but just four countries accounted for almost 90 percent of world production.[3] The United States was first, at 42.2 mmt, followed by Brazil (23.2 mmt), China (11.6 mmt), and Argentina (6.5 mmt). In contrast, Bolivia produced only 0.29 mmt and Peru 0.01 mmt.

The United States has been the dominant world soybean producer and exporter for several decades, and U.S. soybean farmers depend on export markets for a significant share of their earnings. However, the U.S. share of the world market has been declining since the mid-1960s. For example, during 1964 to 1968 U.S. soybeans accounted for 70 percent of world production and 89 percent of world soybean exports (not including soybean products). By 1984 to 1988 the shares were 53 percent and 70 percent, respectively. Although the U.S. share of the world market has been considerably reduced since the mid-1960s, U.S. soybean

[2]One metric ton equals 1.1 tons.

[3]Soybeans is an oilseeds crop. Other major oilseed crops include peanuts, cottonseed, sunflower seeds, and flaxseed. These crops are used to produce protein meals and edible and inedible oils. During 1985-89 soybeans accounted for 86 percent of U.S. oilseeds production. Soybean oil accounted for 74 percent of the total fats and oils consumed in edible products during 1986. Soybean meal is used primarily as a high-protein livestock feed. In 1984-85 it accounted for 75 percent of the total high-protein livestock feed in the United States, on a 44-percent crude protein basis.

production did not peak until 1979, at 61.5 mmt. Production in 1990 was 52.3 mmt, 15 percent less than in 1979. The U.S. presence in world trade has been affected more deeply. U.S. soybean and soybean product exports combined peaked in 1981 at 32.4 mmt. In 1990 combined exports were 20.3 mmt—37 percent less.

According to the U.S. Department of Agriculture (USDA), U.S. soybean exports have fallen short of their record levels for several reasons: (1) lower U.S. production; (2) competition from Brazil, Argentina, and the European Community;[4] (3) slower economic growth abroad; and (4) strength of the U.S. dollar. U.S. soybean acreage and production declined during the 1980s because of lower soybean prices and greater incentives for farmers to participate in federal commodity programs for other crops. Between 1979 and 1987, soybean acreage dropped 13.4 million acres or nearly 19 percent. In addition, during 1983 and 1988 severe drought substantially reduced U.S. soybean output.

Much of the increased share of the world market has gone to Brazil and Argentina. In 1970 Brazil accounted for only 3.6 percent of world soybean production. By 1975 this share had increased to 17.5 percent, and during the 1980s Brazil accounted for between 15 and 24 percent. As late as 1975 Argentina's soybean production represented only 0.9 percent of world production. By 1980 it had increased to 4.3 percent and, during the latter part of the 1980s, it ranged between 7 and 10 percent.

Rising global soybean prices in the late 1960s and early 1970s induced Brazilian growers to become major producers, according to USDA. Other factors contributing to Brazil's growth were the brief U.S. soybean embargo of 1973, which increased Japanese and other soybean importers' interest in non-U.S. sources of supply, and assistance from AID. According to a study by Robert Stowe,[5] during the mid-1960s AID helped to establish a National Soybean Commission in Brazil that played an important role in introducing U.S. varieties and developing new ones adapted to Brazilian conditions. AID also provided low-interest loans to the Brazilian government from 1973 to 1979 to strengthen a system of

[4]In the beginning of the 1980s European Community support prices for oilseeds were far in excess of world market prices. As a result, output soared and U.S. oilseed and oilseed product sales to the Community were significantly reduced. In 1989-90, the Community produced more than 1.78 mmt of soybeans.

[5]Robert Clarke Stowe, "Agricultural Politics and Technical Assistance for Development," Ph.D. Thesis, Massachusetts Institute of Technology, 1990.

commodity-specific research centers. Funds were used for soybean technical assistance and research. Individual soybean experts also provided technical assistance to Brazil under AID contracts.

An American Soybean Association (ASA) official said that Japanese help and Brazilian ingenuity and organization contributed more to Brazil's success than AID assistance. At the same time, though, he said, it is the initial push from foreign assistance that gets competitor countries going. As discussed in chapter 2, U.S. aid for soybean production in other countries became a particularly contentious issue in the mid-1980s.

Brazil and Argentina have taxed soybeans at a higher rate than soybean meal and soybean oil to encourage processed soybean product exports relative to raw soybean exports and to contribute to government revenues. According to USDA, these taxes have allowed Brazil and Argentina to gain larger shares of global product markets but have inhibited production and the overall volume of exports. U.S. soybeans have been relatively free from direct government assistance programs. However, the United States maintains a 22.5-percent ad valorem duty on soybean oil imports.[6] In a June 1990 study,[7] the International Trade Commission (ITC) reported that for the most part soybean oil from Argentina and Brazil undersells U.S. soybean oil in third-country markets. The ITC concluded that under current market conditions and without the duty, soybean oil from Argentina and Brazil would undersell domestic soybean oil in the U.S. market.

## U.S. and World Citrus Market

As recently as the mid-1970s, the United States was the world's leading grower of oranges, producing 9.3 mmt, while Brazil, its closest competitor, produced 6.4 mmt. However, by 1979-81 Brazil had surpassed the United States; during the 1980s Brazil came to dominate the world market. In 1989 Brazil produced 17 mmt, representing 33 percent of world production. The United States was the next largest producer, accounting for 8 mmt, or 16 percent of world production. Fourteen countries accounted for the next 39 percent of world production and 85 countries for the remaining 12 percent. Included in the latter group were Bolivia, which produced 0.07 mmt, equivalent to 0.1 percent of world

[6]An ad valorem rate is an import duty rate expressed as a percentage of the imported commodity's value.

[7]President's List of Articles Which May Be Designated or Modified as Eligible Articles for Purposes of the U.S. Generalized System of Preferences, U.S. International Trade Commission (Washington, D.C.: June 1990).

production, and Peru, which produced 0.17 mmt, equal to 0.3 percent of world production.

There is a substantial world trade in fresh oranges, but the majority of international trade is in processed oranges, particularly frozen concentrated orange juice (FCOJ). In terms of fresh oranges, the United States is practically self-sufficient. Because of insect pest problems, many countries, including Brazil, cannot ship fresh oranges to the United States.

During the 1980s the United States became heavily dependent on Brazilian FCOJ to make up shortfalls that resulted from several freezes. Whereas in 1980 U.S. net imports of FCOJ equalled only 1 percent of U.S. consumption, imports increased to 18 percent in 1981, 39 percent in 1982, and ranged as high as 47-55 percent between 1984 and 1987. Net imports were approximately 30 percent in 1988 and 1989. In 1989 Brazil accounted for 85 percent of U.S. FCOJ imports and Mexico 12 percent. Neither Bolivia nor Peru produces FCOJ.

Brazil now dominates world trade in FCOJ. In 1989-90 it accounted for 75 percent of FCOJ exports. Most of Brazil's exports go to the United States and the European Community. The United States is also a large exporter of FCOJ (second worldwide in 1988 and 1989), but as previously noted was a major net importer throughout most of the 1980s. Ten other countries account for most of the rest of FCOJ traded in international markets.

According to several experts that we consulted, there are good prospects for additional growth in world orange juice consumption over the next decade. However, a significant growth in world orange production is also expected. Thus, the net result may be downward pressure on FCOJ prices. The Economic Research Director of the Florida Department of Citrus told us he foresees low prices during the next 5-10 years, discouraging other countries from entering the market. Department statistics show that Florida's orange production accounts for almost 90 percent of the processed orange volume in the United States. Florida's citrus industry has a significant direct and indirect economic impact on that state, which is estimated at $8 billion annually. There are approximately 14,000 citrus producers in Florida, with 70,000 people directly employed in the citrus industry.

During the 1970s and 1980s the United States maintained a duty of $0.35 per gallon of imported FCOJ. The average annual ad valorem rate during the 1980s was 37.5 percent. Without such a high tariff, the United States would be exposed to added foreign competition. The

Florida citrus industry has expressed strong reservations against reducing the U.S. tariff for citrus and citrus products. According to an industry analysis,[8] if the FCOJ tariff were reduced 50 percent, FCOJ imports, mostly from Brazil, would increase, followed by a reduction in wholesale FCOJ prices. Prices that FCOJ processors pay Florida citrus growers would also be expected to decline. The industry's adjustment process would extend more than 20 years, according to the study, during which time Florida's orange production and orange tree population would be substantially reduced. The industry estimated that Florida grower revenues would decrease $100 million in the first year, and losses would exceed $3 billion over 20 years.

We did not evaluate the industry's conclusions. However, a 1990 ITC study[9] assessed the probable economic effects on the United States of extending duty-free treatment to various products under the U.S. Generalized System of Preferences (GSP).[10] Frozen concentrated orange juice was one of the commodities examined. The study found that (1) there are few differences between the quality of FCOJ produced in the United States and major foreign producing countries such as Brazil and Mexico; (2) most foreign producers have a cost of production advantage over domestic producers, particularly in terms of labor costs; and (3) transportation costs are not an important consideration in sourcing FCOJ. The Commission's findings on probable economic effects were classified and thus cannot be discussed in this report. In July 1990 the President announced that 67 products were being added to the list of items for duty-free treatment from the 130 GSP beneficiary countries. Frozen concentrated orange juice was not among them.

## Objectives, Scope, and Methodology

The Chairman of the House Judiciary Subcommittee on Criminal Justice asked us to assess how possible competition with U.S. agricultural exports has affected the U.S. government's policy of supporting the development of alternative crops to coca leaves in Bolivia and Peru. The Chairman of the House Government Operations Subcommittee on Government Information, Justice, and Agriculture asked us to assess the

[8] A Brief to the United States International Trade Commission Regarding the Uruguay Round of the Multilateral Trade Negotiations, State of Florida Department of Citrus and others (Lakeland, Fla.: Mar. 27, 1989).

[9] President's List of Articles Which May Be Designated or Modified as Eligible Articles for Purposes of the U.S. Generalized System of Preferences.

[10] GSP is a program whereby the United States and certain other industrialized countries grant duty-free entry of imports from developing countries that are eligible for benefits.

trade impact that crop substitution programs in Bolivia and Peru would have on U.S. markets, paying particular attention to soybeans and citrus.

In conducting our review, we interviewed representatives of the U.S. Departments of Agriculture, State, and Treasury; AID; the Overseas Private Investment Corporation (OPIC); the Office of the U.S. Trade Representative (USTR); and the Drug Enforcement Administration. We also interviewed consulting firms' representatives on implementing crop substitution programs. We met with officials of ASA, the Florida Department of Citrus, Florida Citrus Mutual, and Indian River Citrus. We discussed their views on the potential impact that Bolivian and Peruvian exports of soybeans and citrus would have on their industries and export markets. We also interviewed potential investors about the difficulty of starting an orange juice industry.

We conducted field work in Bolivia and Peru, meeting with officials and staff of the AID missions and U.S. embassies, the governments of Bolivia and Peru, the United Nations, the Inter-American Development Bank, the World Bank, and private sector firms. We also visited coca-growing areas to better understand the development programs underway.

We reviewed legislation; government documents; reports; and studies on U.S. antinarcotics policy, alternative development, and the soybean, citrus, and other alternative crops. We analyzed production and world trade data pertaining to a wide range of possible crops for Bolivia and Peru. We did not verify data that were provided to us.

We performed our review between May 1990 and September 1991 in accordance with generally accepted government auditing standards.

As requested, we did not obtain agency comments on a draft of this report. However, during the course of the review we discussed the matters addressed in this report with federal agency and soybean and citrus industry officials. Their views have been incorporated where appropriate.

# Alternative Crop Programs

For many years AID has supported programs in Bolivia and Peru to substitute alternative crops for coca. The current programs in Bolivia and Peru date from 1983 and 1981, respectively. Success in these programs depends considerably on whether the countries establish effective coca eradication and drug interdiction programs, since alternative crops cannot compete with the earnings that can be made from growing coca. However, crop eradication and drug interdiction have not been very successful to date. Success with alternative crops also depends on the ability of the countries to overcome other important obstacles.

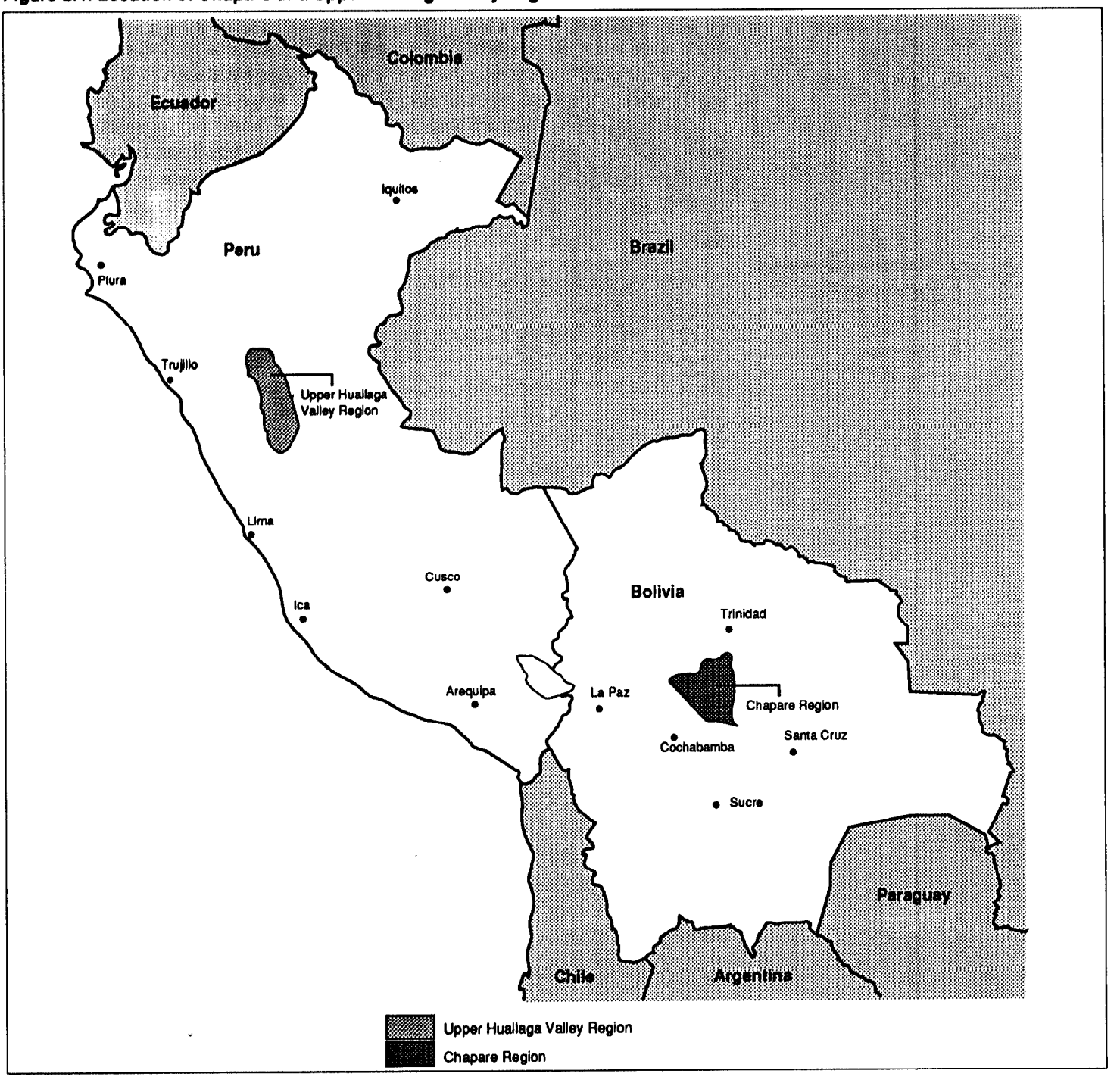
## Bolivia's Chapare Project

In August 1983 the United States and Bolivia agreed to promote alternative crops to coca in the Chapare Valley under the Chapare Regional Development Project. Most of Bolivia's illicit coca is grown in the Chapare, which is located in the eastern foothills of the Andes in the Department of Cochabamba.[1] (See fig. 2.1.) The program offered loans and technical assistance to farmers for growing a variety of crops, for developing infrastructure projects to improve the standard of living in the Chapare, and for aiding the marketing of Chapare products. It was hoped that farmers would expand their production of alternative crops to respond to increased market demand for the commodities. Expanded demand would be accomplished through four large-scale agribusiness initiatives. These enterprises would be set up by committed, well-established, private-sector Bolivian investors and would process and market Chapare products, both domestically and internationally.

AID documents show that when the Chapare project was approved, AID assumed that crop substitution would not work unless a parallel coca control program, supported by the Department of State, was established and successfully implemented. This program would include eradication of illicit coca by voluntary and involuntary means and developing methods for controlling the sale of coca leaves. The latter would include check-points and surveillance to keep coca from moving into illegal channels and being eventually processed into cocaine. It was assumed that if these methods were successfully implemented, there would be a substantial reduction in coca demand, resulting in an oversupply of coca and a significant reduction in the market price for coca.

[1]Approximately 14 percent of the Bolivian coca leaf harvest is for licit consumption — e.g., chewing, traditional medical purposes, or coca tea.

**Figure 2.1: Location of Chapare and Upper Huallaga Valley Regions in Bolivia and Peru**




Source: Based on information and materials from AID and the Department of State.

AID assumed that increasing the risk of production to the farmer and depressing the price of coca would lead farmers to reduce their illicit coca production and make them receptive to farming alternative crops. Other elements envisaged for the coca control program were locating and destroying cocaine processing facilities, arresting those involved in production and trafficking in cocaine, and interdicting chemicals required for the cocaine production.

Although scheduled to be completed in 1988, the Chapare project is now in its eighth year. According to AID, through 1990 the United States expended $30.4 million and the government of Bolivia $2 million on the project. AID is replacing the Chapare project with a modified project in fiscal year 1991 and plans to allocate $45 million to the new project over a 3-year period.

## Peru's Upper Huallaga Valley Project

In Peru, AID approved a crop alternatives project in 1981 for the Upper Huallaga Valley, which is located in the central high jungle of Peru, approximately 336 miles northward of Lima. (See fig. 2.1.) The goal of the project was to increase and diversify agricultural production in the valley by strengthening public sector agricultural support services and developing and testing agricultural production packages.

AID documents show that the project was conditioned on the commitment of the Peruvian government to initiating a coca eradication program in the Upper Huallaga Valley. The crop substitution project was to help minimize the negative social and economic effects of the coca eradication program. To do so, the project would provide farmers with means to generate income through growing new crops and with additional employment through increased productivity of these legal crops, particularly food crops.

Although scheduled for completion in 1986, the project is still ongoing in 1991. AID estimates that through 1990 it expended $21.6 million on the project, and the government of Peru spent $12.2 million. AID plans to establish a modified project in fiscal year 1992 and to allocate $36 million to the new project over a 3-year period.

## Successful Crop Substitution and Exports Depend on Eradication and Interdiction

In both Bolivia and Peru success in crop substitution programs has been based on the assumption that coca eradication and drug interdiction will be effective because other crops cannot successfully compete with coca. Table 2.1 illustrates how difficult it is for alternative crops to compete with coca.

**Table 2.1: Net Present Value of Profit of a Hectare Planted to Coca Compared to Alternative Crops**

U.S. dollars

| Coca price per carga | Expected profit per hectare of coca | Expected profit per hectare of other crops[a] |
|---|---|---|
| $100 | $17,714 | N.A.[b] |
| 75 | 11,387 | N.A. |
| 60 | 7,589 | N.A. |
| 50 | 5,059 | N.A. |
| 40 | 2,530 | N.A. |
| **Alternative crops** | | |
| Pineapples | N.A. | $10,022 |
| Macadamia nuts | N.A. | 5,436 |
| Black pepper | N.A. | 5,162 |
| Palm hearts | N.A. | 4,782 |
| Oranges | N.A. | 4,280 |
| Coffee | N.A. | 4,110 |
| Cacao | N.A. | 3,087 |
| Corn | N.A. | 2,761 |
| Bananas | N.A. | 2,622 |
| Average for the nine alternatives | N.A. | $4,696 |

Note: Profits are projected over a 10-year period and discounted to the present at 14 percent per year. Fourteen percent was the rate offered by the Bolivian central bank on certificates of deposit.

[a]Expected profits for other crops were estimated on the basis of current prevailing prices. If these prices change, expected profits would be affected. The calculations also assume each farmer receives an up-front compensation payment of $2,000 for each hectare of coca eradicated and $6,000 credit (per average 10-hectare farm with 1.5 hectares planted to coca) to cover the full initial investment cost of planting alternative crops.

[b]N.A. denotes not applicable.

Source: Data from U.S. AID/Bolivia analysis of May 29, 1990. GAO did not verify the calculations in the analysis.

The data, from an analysis by the AID mission in Bolivia, compare expected returns from coca to nine other commodities that AID believes offer promise as alternatives. The data in the upper part of the table

show expected profits per hectare[2] of coca when the price varies between $40 and $100 per carga.[3] Profits were projected over a 10-year period and are reported in net present value terms. At a price of $40 per carga of coca leaf, the expected profit to a farmer is $2,530 per hectare; at $100 per carga, the expected profit is $17,714 per hectare.

The figures in the lower part of the table show the expected profit per hectare of alternative crops when farmers are offered substantial cash incentives. In Bolivia, the government offers farmers an up-front payment of $2,000 for each hectare of coca eradicated. In addition, credits may be available to cover the initial investment cost of planting alternative crops.[4]

If the price per carga for coca is $40, all of the alternative crops show higher expected profits. However, when the coca price is $50 per carga, only three of the nine crops do better, and two of the three are only marginally better. The compensation and credits amount to major subsidies without which the alternatives would be less or not competitive. For example, if the $2,000 compensation payment were dropped, five of the nine alternative crops would not be competitive when the coca price is only $40 per carga, and a sixth would be only slightly more competitive. At a $50 price for coca, only pineapples would be competitive.

The estimated profits for the crop alternatives were based on prices that these crops were earning in the Chapare when the AID analysis was made. If land on which coca is grown were converted to alternative crops, there would be substantial increases in the quantities produced. It is questionable whether Bolivia could absorb the increased production at the same prices. Therefore, export markets would have to be found to realize the same profits.

Another problem is that as markets are found for alternative crops, traffickers can increase the price offered for coca leaf without materially affecting the price of the final product. For example, in 1990 the Drug Enforcement Administration reported that the selling price of the coca leaves needed to produce a kilogram of cocaine represented about 0.4 percent of the wholesale price of cocaine in Miami.

[2]One hectare equals 2.47 acres.

[3]The cost of production in Bolivia is estimated at $30 per carga. A carga equals 100 pounds.

[4]The Bolivian government has not always had the money to make compensation payments. In Peru the government does not offer compensation for coca eradication. Thus, all other things being equal, it will be more difficult for the Peruvian government to attract farmers out of the coca economy.

Another difficulty is that only 1-1/2 years are required from the first planting of coca to the first commercial production. Of the nine alternatives shown in table 2.1, only three can achieve similar results. The other six require 4 or more years. Thus, to the extent that farmers base crop decisions on expected returns, many alternatives will require favorable price expectations for more years into the future than does coca.

## Trends in Coca Prices

Table 2.2 lists the average monthly price for coca leaf in the Chapare from April 1986 through August 1991. The table shows that for most months the average price was well above the estimated production cost of $30 per carga of leaf. Bolivian price trends offered some cause for optimism between November 1989 and January 1991. During that period the average price for coca in the Chapare was below the production cost in every month except for July-September 1990.[5] However, since the end of January 1991, average prices have been well above $30 per carga. In fact, the average monthly price for the first 8 months of 1991 was $45.56 per carga.

The State Department reported that prices for coca leaf in Peru in 1990 averaged $40-$80 per carga. These averages are much higher than those shown in table 2.2 for Bolivia in 1990. Peru's prices may have been higher because of fewer buyers and more effective interdiction activities in Bolivia.

[5]U.S. officials we spoke to in Bolivia offered several possible reasons for the low prices. First, the Colombian government's crackdown on its narcotics traffickers had disrupted drug operations and thus reduced the traffickers' purchase of coca leaf or its derivatives from Bolivia. Second, the Bolivian government had become more effective in interdicting trafficking within Bolivia. Third, world coca leaf production had increased rapidly for several years, possibly resulting in excess supply.

**Table 2.2: Trends in Bolivian Coca Prices, 1986-1991**

Average prices in U.S. dollars per 100 pounds[a]

| Month | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|
| January | $N.A.[b] | $51.05 | $30.18 | $61.12 | $14.48[c] | $23.39[c] |
| February | N.A. | 61.24 | 20.71[c] | 70.81 | 11.73[c] | 52.43 |
| March | N.A. | 89.92 | 23.93[c] | 78.55 | 11.78[c] | 68.21 |
| April | 149.64 | 69.63 | 23.49[c] | 66.27 | 9.87[c] | 50.24 |
| May | 58.64 | 40.51 | 30.90 | 61.75 | 16.68[c] | 36.92 |
| June | 104.12 | 66.56 | 54.03 | 60.37 | 27.44[c] | 51.55 |
| July | 14.00[c] | 97.38 | 104.73 | 72.19 | 34.26 | 34.54 |
| August | 53.24 | 97.06 | 117.16 | 88.93 | 44.10 | 47.09 |
| September | 53.09 | 61.94 | 97.63 | 54.49 | 48.17 | N.A. |
| October | 63.33 | 76.14 | 68.24 | 32.52 | 28.23[c] | N.A. |
| November | 73.59 | 78.24 | 103.86 | 29.15[c] | 20.02[c] | N.A. |
| December | 101.36 | 45.06 | 98.85 | 18.96[c] | 15.20[c] | N.A. |
| Average | $74.56 | $69.56 | $64.48 | $57.93 | $23.50[c] | $45.56 |

[a]Average is based on prices in three key market towns in the Chapare. Averages were calculated by GAO.

[b]N.A. denotes not available.

[c]Below an estimated production cost of $30 per 100 pounds. The marginal cost of production, mainly harvesting, is estimated at $12-$15 per 100 pounds.

Source: Bureau of International Narcotics Matters, Department of State. August 1991 data from U.S. AID Mission, Bolivia.

## Crop Eradication and Drug Interdiction Not Very Successful to Date

Bolivia's Chapare project and Peru's Upper Huallaga Valley project were conditioned on establishing successful coca eradication programs. In general, these programs have failed. For example, the objective of the Chapare project and the associated coca control program was to reduce the production of illegal coca by 20,000 hectares within 5 years. In 1984 the State Department estimated that there were 25,000-30,000 hectares of coca under cultivation in the Chapare. In March 1991 it estimated total net Chapare hectares under coca cultivation in 1990 at 35,230 hectares. Thus, 6 years after the project had begun, cultivation had increased by 5,000-10,000 or more hectares.[6]

When the Upper Huallaga Valley project was approved in 1981, AID estimated that there were 7,300-12,000 hectares under coca cultivation in

[6]For all of Bolivia, the State Department estimated total hectarage under cultivation, after eradication, at 40,360 hectares in 1987, 48,925 hectares in 1988, 52,900 hectares in 1989, and 50,300 hectares in 1990. Thus, net hectares under cultivation in 1990 decreased 2,600 hectares or by 5 percent.

the project area. In March 1991 the State Department estimated 79,000 hectares were cultivated in the valley.[7]

In March 1991 the Department of State reported that the government of Bolivia continued to face major challenges in its counternarcotics campaign.[8] It noted that although Bolivia had increased its law enforcement efforts, trafficking organizations have kept pace by diversifying their marketing of refined cocaine and by demonstrating a greater willingness to use violence to resist enforcement. Widespread corruption, compounded by the government of Bolivia's weaknesses in policy implementation, further hampered the effectiveness of counternarcotics efforts.

The Department found that the Peruvian government's lack of a counternarcotics strategy had allowed narcotics traffickers in the Upper Huallaga Valley and other outlying areas to continue unimpeded narcotics-processing and transportation operations. Even though the valley was administered as a military emergency zone, increased guerrilla activity and serious corruption within the military limited Peruvian police counternarcotics operations.[9]

# Other Important Obstacles to Exports of Crop Alternatives

## Bolivia

After many years of political and economic instability and a 20,000-percent per year inflation rate in 1985, the Bolivian government adopted reforms that converted the economy into one of the most open and hospitable to foreign investment in Latin America. However, economic growth has been sluggish. The country still faces obstacles that hinder the export of crop alternatives, including a risk-averse private sector,

[7]For all of Peru, the State Department estimated total hectarage under cultivation, after eradication, at 108,800 hectares in 1987, 110,400 hectares in 1988, 120,400 hectares in 1989, and 121,300 hectares in 1990.

[8]International Narcotics Control Strategy Report, U.S. Department of State, Bureau of International Narcotics Matters (Washington, D.C.: Mar. 1991).

[9]For a GAO report on the management and effectiveness of U.S. and Peruvian counternarcotics efforts see The Drug War: U.S. Programs in Peru Face Serious Obstacles (GAO/NSIAD-92-36, Oct. 1991).

very limited access to credit, and high interest rates. Moreover, economic growth and exports are further constrained by substantial control of the economy by government enterprises, government corruption, lack of stability in the civil service, excessive government paperwork requirements, inexperienced exporters, and insufficient volumes and quality of agricultural products needed to attract buyers.[10]

The transportation sector presents another major obstacle to exports. Santa Cruz, the area with the greatest agricultural potential in Bolivia, is about 1,200 miles from Atlantic and Pacific ports. There are no paved roads linking the major Bolivian agricultural regions with neighboring countries, and the railroad system is old and inefficient. There are also deficiencies in irrigation, electric power, warehousing, and cold storage facilities.

## Peru

The most serious problem confronting the development of alternative crops in Peru is the guerrilla movement. The Shining Path and the Tupac Amaru Revolutionary Movement have such a strong hold on the Upper Huallaga Valley that AID no longer allows its staff to stay overnight in the valley and has virtually shut down its crop substitution program there. Many farmers have been forced off their lands and, in some cases, faced with death if they give up coca farming for growing alternative crops.

Peru's infrastructure has greatly deteriorated. Due to the government's 20 years of neglect and the deliberate destruction of roads, bridges, and rails by the terrorists, many routes are practically impassable. Transportation is time-consuming and prohibitively expensive for most products.

Peru has suffered economic hardships for many years and remains in poor economic condition today due to past government policies and practices. The government of Peru's agricultural policies, such as export taxes, subsidized imports, landownership restrictions, and late payments[11] to farmers, drove many into coca farming.

[10]In September 1991 an AID/Bolivia official told us that the Chapare project had begun to register some successes. He said that approximately 64 tons of Chapare pineapples had been exported, principally to Argentina, in 1991; an additional 130 tons is expected to be exported by year's end. Approximately 180 tons of bananas had been exported, principally to northern Chile; an additional 576 tons is expected to be exported by year's end.

[11]Government entities purchase certain crops, such as corn and rice.

# Possible Competition With U.S. Agriculture Has Affected U.S. Support for Alternative Crops to Coca Leaves

U.S. foreign aid to help developing countries export agricultural products that might have an impact on U.S. agricultural producers or exporters has caused controversy, particularly regarding crops such as soybeans and citrus. In the past 2 decades, assistance was limited by various restrictions. For the most part, the purpose was to prevent aid that would result in significant competition with U.S. producers or exporters.

During 1988-90 the AID mission in Bolivia wanted to provide or explore providing assistance for growing soybeans and citrus as alternatives to growing coca. In 1990 and 1991 proposals were made that OPIC should be allowed to consider citrus and soybean investments in the Andean countries. AID/Bolivia and OPIC were prevented or hindered from doing so because of concern that such aid might lead to exports that would compete with U.S. agricultural production or violate existing restrictions.

## Legislative Restrictions

U.S. government officials indicated to us that certain crops are "politically sensitive" because providing foreign aid for these crops may trigger congressional and agricultural trade association concern. Soybeans and citrus are among those crops considered "sensitive" because trade associations representing U.S. farmers are perceived to be politically influential. Congress has passed legislation restricting foreign agricultural aid in the past, and our review found that agency officials have been concerned that Congress could pass more restrictive laws in the future.

In the mid-1970s legislation was introduced that would have prevented international development institutions, such as the World Bank, from expanding commodity production in developing countries. These initiatives failed.[1] However, in 1977 Congress passed legislation[2] requiring U.S. representatives to the institutions to oppose any loan or other financial assistance for production for export of palm oil, citrus crops, or sugar if it will cause injury to U.S. producers of the same, a similar, or a competing agricultural commodity. Palm oil was of concern to American soybean farmers, since the oil competes with other vegetable oils for many purposes.

[1]Robert Clarke Stowe, "Agricultural Politics and Technical Assistance for Development."

[2]International Financial Institutions Act (P.L. 95-118, 91 Stat. 1071 (1977)).

In 1978 OPIC's reauthorization act prohibited OPIC support for projects involving production of palm oil, citrus, or sugar for export. The prohibition was not limited to cases causing injury.[3] Although neither of the above laws applied to AID, the AID Administrator issued a directive that AID should finance projects for palm oil, citrus, and sugar production for export only when their development rationale is high and their likely impact on U.S. producers low.[4] The directive specifically noted that assistance was a matter of concern that had resulted in restrictive legislation for OPIC and the international financial institutions. The directive required that proposed projects assess the potential injury to U.S. producers and that a determination to approve financing be made by AID/Washington.

In 1978 Congress passed the foreign assistance appropriations act[5] that restricted "direct foreign assistance" by AID, OPIC, and the U.S. Export-Import Bank for producing any surplus commodity for export when the aid would cause substantial injury to U.S. producers.[6] The act also required U.S. representatives to the international development banks to oppose any assistance for producing any commodity for export if it would cause substantial injury to U.S. producers of the same, a similar, or a competing commodity.[7]

In December 1985 Public Law 480 was amended to provide that local currencies available under sections 106 and 108 of title I of the act may not be used to finance the production for export of agricultural commodities that would compete, as determined by the President, in world markets with similar U.S. agricultural commodities.[8] The provisions applied to proceeds generated from the sale of agricultural commodities in the recipient country to be loaned by financial intermediaries to support private sector development activities. The provisions did not apply to title III of the act.

[3]Overseas Private Investment Corporation Amendments Act of 1978 (P.L. 95-268, 92 Stat. 213 (1978)). The prohibition was repealed in 1981 but other restrictions continued.

[4]Policy Determination No. 71 (PD-71), dated May 12, 1978.

[5]Foreign Assistance and Related Programs Appropriations Act, 1979 (P.L. 95-481, 92 Stat. 1591, 1601 (1978)).

[6]A surplus commodity is one that the Secretary of Agriculture determines to be in excess of quantities needed to meet domestic requirements, including adequate stocks for carryover to the next year and anticipated exports for dollars.

[7]Both restrictions have been renewed periodically.

[8]Food Security Act of 1985 (P.L. 99-198, 99 Stat. 1475).

In July 1986 an amendment to the foreign assistance appropriations act was enacted.[9] The amendment has come to be known as the "Bumpers amendment" after its sponsor, Senator Dale Bumpers. The amendment prohibited the use of certain funds for activities, such as testing and breeding feasibility studies, in connection with production in a foreign country of an agricultural commodity for export that would compete with a similar commodity produced in the United States. The Bumpers amendment exempted from the prohibition those activities designed to increase "food security" in developing countries where such activities will not have a significant impact on the export of U.S. agricultural commodities. Subsequently, the AID Administrator issued a policy directive requiring that an analysis be made of whether an activity to increase the production of a particular commodity for export can be reasonably expected to have a significant impact on U.S. exports of that or a similar commodity.[10] Supplementary guidance requires that if doubts about the level of injury likely to be caused by U.S. exports cannot be resolved, a proposed project should not receive AID financing. The directive does not apply to exports to the United States. The directive required that AID/Washington be informed of any determination to finance a project before implementing the project.

## Assessing Effects

A recurring factor in several of the restrictions that were enacted is whether foreign agricultural assistance will have a "significant" impact on or cause "substantial injury" to U.S. producers or exporters. However, these laws do not specify criteria to be used in assessing "significance" or "substantial injury." AID policy guidance requires that its missions examine the following criteria when assessing "significant impact" of an agricultural commodity: (1) the export potential of the commodity in question, (2) the magnitude of production likely to result from the project, (3) the likely export markets, (4) the volume of U.S. exports of the commodity in question and similar commodities, and (5) the U.S. share of the world or regional market that could reasonably be expected to be affected by increased exports of the commodity. However, AID guidance does not provide any quantitative criteria for evaluating significance.

In the case of OPIC, its authorizing legislation requires that OPIC not assist any investment that is likely to cause a significant reduction in the

[9]Urgent Supplemental Appropriations Act, 1986 (P.L. 99-349, 100 Stat. 710, 749 (1986)). This amendment has been renewed annually.

[10]Policy Determination No. 15 (PD-15), dated September 13, 1986.

number of employees in the United States.[11] In addition, OPIC is required to seek to support those developmental projects having positive trade benefits for the United States. OPIC analyzes data in investor applications for aid to assess the possible economic impacts of a proposed project, including whether a project is likely to cause a significant reduction in the number of U.S. employees.

## CBI Act Permits Duty-Free Imports but Aid for Citrus Projects Restricted

In 1983 Congress passed the Caribbean Basin Economic Recovery Act, commonly referred to as the Caribbean Basin Initiative (CBI). The act permitted eligible products, including agricultural commodities, to be imported duty free from designated countries in Central America and the Caribbean. According to an AID document that we reviewed, when the CBI legislation was approved, the administration agreed with Congress informally not to provide funding for citrus activities in order to obtain duty-free entry status for citrus under the CBI.[12]

A few years later, AID wanted to finance a citrus project in Dominica, a small Caribbean island, according to an AID official. A Florida citrus producers association objected, believing any exception could be used as an argument for providing aid to other countries. As a result, AID dropped the proposal.

In 1986 OPIC was considering providing political risk insurance to citrus projects in CBI countries for exporting citrus to the United States.[13] An OPIC official told us that the purpose was to support the U.S. policy of promoting economic growth in the CBI area. Because U.S. citrus growers had endured a number of major freezes, the United States was importing 40-50 percent of its orange juice concentrate from Brazil. Based on tree replanting, it appeared to OPIC that Florida production would not rebound over the longer term. Therefore, OPIC felt that it would be appropriate to support projects of limited size to produce concentrate for import into the United States.

[11]Foreign Assistance Act of 1961, section 231 as amended.

[12]Another AID document, a 1988 review of the Chapare program by AID and State Department officials, reported that the AID Administrator's office had agreed with the Florida congressional delegation that AID will not promote citrus production in Latin America and the Caribbean.

[13]Political risk insurance protects investors against (1) the inability to convert local currency gained through overseas investment into U.S. dollars; (2) the loss of the investment through a foreign government seizure; (3) the loss due to war, revolution, insurrection or civil strife; and (4) the loss due to the interruption of business caused by the previously noted risks.

The official said the Corporation consulted with various members of Congress about the proposed change in policy and thought it had Congress' support. However, when OPIC sent letters to the chairmen of its oversight committees in the House and Senate informing them of its plan, Florida citrus interests quickly voiced strong opposition. Within 1 week, all the members of the Florida congressional delegation signed a letter condemning the action. Legislation to ban OPIC from supporting citrus projects anywhere in the world was introduced in Congress. Rather than risk more restrictive legislation than that already on the books, OPIC agreed not to change its policy.

## ASA Campaign Leads AID to Drop Support for Soybeans

AID and ASA documents that we examined showed that in 1985 the American Soybean Association led a campaign urging the administration and the Congress to redirect federal research funds from assisting foreign competitors to boosting U.S. agricultural productivity.[14] ASA also wanted the administration and Congress to eliminate grants and technical assistance and to vote against international development bank loans that assist foreign production of competing commodities. ASA blamed AID for the increased competitiveness of foreign agricultural producers and a reduced share of world farm trade. ASA expressed particular concerns about AID loans for soybean assistance to Brazil and Argentina. ASA was also concerned about the International Soybean Program at the University of Illinois at Champaign-Urbana, a leading national and global center for soybean research. According to the Stowe study, the program had received major AID funding since 1973, and most of its resources had focused on increasing soybean production in developing countries.

According to AID documents, the Agency felt that information issued by ASA as part of its campaign was unfair. For example, AID said its bilateral assistance program with Brazil had ended in 1981 and that there was no AID program in Argentina. AID feared that the ASA campaign could lead to a major inquiry by Congress and reduced funding for all of AID's overseas programs in agricultural development, crippling the Agency's ability to help Third World countries develop the capacity to solve their own hunger problems.

Stowe's analysis indicated that in September 1985 a senior AID official told a meeting of senior ASA executives that AID would not fund further

[14]Two scholarly analyses have reported on the campaign. See Robert Clarke Stowe, "Agricultural Politics and Technical Assistance for Development," and David Allen Soroko, "An Analysis of Strategies Employed by the American Soybean Association in the Provision of High Exclusion Cost Goods," Masters Thesis, Michigan State University, 1987.

production-oriented research. The official suggested forming a joint working group to discuss AID oilseeds projects and to develop projects that could be jointly implemented. The projects would emphasize increased uses of soybeans and thus might lead to added demand for U.S. soybeans.

In the fall several amendments were offered to the 1985 farm bill that would have further restricted or eliminated USDA or AID support for overseas agricultural production that could adversely affect U.S. agricultural exports. None of the amendments was enacted. However, one of the amendments, introduced by Senator Bumpers, was later offered as an amendment to the foreign assistance appropriations bill and enacted in July 1986, as we discussed earlier. Senator Bumpers explained the genesis of the amendment as follows:

"Brazil, not too long ago, had about 1 percent of the world soybean export market. Today, Brazil has about 15 percent of the export market of soybeans. A lot of that can be attributed to research grants which have been given to American universities by the U.S. Agency for International Development exclusively for the purpose of helping Brazil produce better varieties of soybeans."

ASA and AID documents show that in March 1986, AID's Senior Assistant Administrator for Science and Technology told a meeting of the ASA Government Relations Committee that AID was no longer promoting soybean production overseas and that the International Soybean Program had been redesigned to focus on soybean utilization only. The official also told the attendees that AID's food and agriculture project budget was being cut by nearly $100 million. According to a later AID memorandum, ASA had led the effort that resulted in the $100-million budget reduction.[15] ASA officials told us that a substantial cut in AID's budget led AID to conclude that it needed to work with ASA to secure a political constituency for its programs.

## Bolivia and Soybeans

Under a 1978-84 Public Law-480 agreement with Bolivia, AID used $4 million to finance projects for soybean and other crops.[16] ASA officials told us that their association started doing market development work in

[15]The memorandum was sent to AID's Administrator for Latin America and the Caribbean in March 1989; it discussed whether AID should provide soybean assistance to Bolivia.

[16]For example, one project provided $455,000 for silos for storing soy, sorghum, wheat, beans, and corn.

Bolivia in 1974-75 through USDA's Cooperator Market Development Program.[17] By 1979 Bolivia had made such progress that ASA concluded Bolivia no longer was a viable export market for U.S. soybeans. However, ASA wanted to continue aid to promote increased Bolivian consumption of soybeans so that Bolivia would export less. ASA said it ended its soybean assistance to Bolivia in 1980, because USDA's policy was not to spend U.S. taxpayer dollars in a competitor country.

Table 3.1 presents figures on Bolivian soybean production and trade. As shown, Bolivian soybean production increased considerably after 1983. Bolivia exported its first soybeans in 1985, and soybean exports increased significantly during 1988-90. Bolivia exported soybean meal throughout the 1980s with increasing amounts in 1988-90. Nevertheless, in 1990 Bolivian soybean and soybean product exports equalled only 0.5 percent of world trade in soybeans and soybean products, on a tonnage basis.

## Conflicts Between USDA and AID Over Aid to Bolivia and Impact on Coca Alternatives

Our review of AID and USDA documents showed that between fall 1988 and spring 1990 two conflicts arose between the AID mission in Bolivia and USDA over the possible use of Public Law-480 local currency funds to help Bolivia increase its soybean production or exports.[18] These conflicts seriously affected the mission's objective of promoting soybeans as an alternative to coca.

The first conflict occurred between October 1988 and January 1989. USDA became suspicious that Public Law-480 funds were being used to support soybean production for export. As a result, on October 26, 1988, the interagency Development Coordination Committee (DCC) cabled the U.S. embassy in Bolivia. The Committee said it was very concerned that Public Law-480 title III sales proceeds not be used to promote exports in competition with the United States. It wanted the Bolivian AID mission to agree to monitor use of title III proceeds to ensure that no projects were funded to support production of soybeans for exports.

[17]The program provides funds to private, nonprofit agricultural organizations (known as Cooperators) to develop, maintain, or expand foreign markets for U.S. agricultural commodities.

[18]The Public Law-480 program was administered on an interagency basis by the Development Coordination Committee. Principal member agencies included AID; the Departments of Agriculture, State, and the Treasury; and the Office of Management and Budget. No one agency had lead responsibility, and decisions were reached by consensus.

**Table 3.1: Bolivia's Production and Trade in Soybeans and Soya Products, 1980-1990**

Tons in 1,000 metric units

| | Soybeans | | | Soybean oil | | | Soybean meal | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Production | Imports | Exports | Production | Imports | Exports | Production | Imports | Exports |
| 1980/81 | 40 | 1 | 0 | 7 | 27 | 8 | 30 | 0 | 15 |
| 1981/82 | 86 | 2 | 0 | 15 | 20 | 6 | 67 | 0 | 21 |
| 1982/83 | 52 | 1 | 0 | 9 | 20 | 0 | 40 | 0 | 24 |
| 1983/84 | 78 | 0 | 0 | 13 | 7 | 0 | 58 | 0 | 25 |
| 1984/85 | 99 | 0 | 0 | 16 | 7 | 0 | 69 | 0 | 30 |
| 1985/86 | 147 | 0 | 23 | 19 | 3 | 0 | 82 | 0 | 61 |
| 1986/87 | 110 | 0 | 28 | 16 | 4 | 0 | 71 | 0 | 52 |
| 1987/88 | 141 | 0 | 22 | 19 | 6 | 1 | 84 | 0 | 52 |
| 1988/89 | 294 | 0 | 78 | 34 | 1 | 4 | 146 | 0 | 111 |
| 1989/90 | 230 | 0 | 70 | 29 | 6 | 6 | 122 | 0 | 89 |
| 1990/91 | 390 | 0 | 160 | 36 | 0 | 8 | 154 | 0 | 120 |

Source: USDA/Economic Research Service.

The Committee also wanted the mission to provide a statement that Bolivia's title III program would not, either directly or indirectly, support soybean exports.

We found that the AID mission favored supporting soybean production and export activities. For example, on October 25, 1988, a draft determination for the Mission Director's signature concluded that Bolivia's current and potential soybean exports did not and would not have a "significant" impact on U.S. soybean producers and exporters.[19] Therefore, the determination concluded, soybeans should not be barred from receiving technical assistance and short-term credits via an export promotion project of the mission.

Documents showed that before signing the determination, the Mission Director sought concurrence from AID/Washington's Bureau of Latin American and Caribbean Affairs. However, the Bureau Administrator opposed using AID Development Assistance funds to support soybean production. He indicated he might consider using Public Law-480 local currencies if the State Department considered such funds sufficiently important for coca eradication purposes and if the decision were subject to consultations with officials of the ASA. Before AID made contact with ASA, the U.S. Agricultural Attache in Peru advised ASA officials that AID

[19]The mission estimated that Bolivian soybean exports would equal less than 1 percent of U.S. exports by 1992.

was intending to support Bolivian soybean production and export. An ASA official then contacted two AID bureaus in Washington to express concern.

In early November the mission replied to the DCC's October 26 cable. The mission said it would not directly support the export of soybeans from Bolivia under the title III program. However, it noted that a prohibition against providing any indirect support would be excessively restrictive and make it very difficult, if not impossible, to implement AID's export-oriented strategy in the Bolivian lowlands area. The mission said it would carefully monitor use of title III funds to ensure projects were consistent with the Bumpers amendment and it would fully comply with congressional statutes and Agency policies. The mission also agreed to have the AID Mission Director sign a determination reaffirming that total Bolivian soybean exports were insignificant in terms of U.S. exports and posed no significant threat to U.S. markets.[20]

USDA, however, was not willing to compromise, and its position was sustained by the DCC.[21] The Committee would not approve AID's fiscal year 1989 title III program until the AID/Bolivia mission agreed to the soybean prohibition and related conditions. In late January 1989 the mission agreed. As a part of the agreement, it excluded soybeans from eligibility for both credit and technical assistance for its export promotion project. The mission did so even though the government of Bolivia considered the assistance a top priority. The Committee then authorized the mission to finalize the title III agreement.

In February 1989 the AID Mission Director advised the U.S. Ambassador that ASA was so influential that AID had given a much stricter interpretation to the Bumpers amendment than was required by law. AID feared that if countries such as Bolivia used any AID financing to produce soybeans for export, ASA might persuade Congress to "tighten" the Bumpers

[20]Thus, the AID mission sought to address the issue from the perspective of whether the aid would significantly affect U.S. agricultural exports, a criterion that appears in the Bumpers amendment. However, as noted, the mission said it would not directly support the export of soybeans, even though the mission had previously concluded that assistance for soybeans would not significantly affect U.S. markets.

[21]For example, on December 28, 1988, the DCC cabled the U.S. mission in Bolivia: "DCC will be guided by language contained in Section 108(c)(5) of PL 480 in approving uses of Title III proceeds. 'No currency made available...may be used to promote the production of agricultural commodities or products thereof that will compete, as determined by the President, in world markets with similar agricultural commodities or products thereof produced in the United States.'...DCC requires statement by USAID/La Paz that it will not approve any use of funds that could be interpreted as directly or indirectly supporting the export of soybeans, soybean meal or other soybean products."

amendment. Tightening, he said, could have serious repercussions for AID development efforts in the agriculture and export sector development programs worldwide.

Also in February 1989 the AID Mission Director informed the U.S. Ambassador to Bolivia that the DCC's flat prohibition against using Public Law-480 local currency funds for any activities that could promote soybean production was rendering operation of the AID agricultural program very difficult and beginning to constitute a serious point of friction between the AID mission and the Bolivian Ministry of Agriculture. Politically, the Mission Director said, it was difficult to explain to the government of Bolivia that its soybean exports significantly affect U.S. exports when they equal less than 0.3 percent of U.S. soybean exports. He said the mission could adhere to constraints imposed by the Bumpers amendment but that the Committee's insistence that the mission go far beyond the letter and intent of the amendment was "ludicrous and counterproductive." The result, he said, was that the mission's operations for promoting exports and developing agricultural production for the internal market were "severely hamstrung."

## The Second Conflict Over Soybeans

A second conflict arose in January 1990 when USDA noted several references to soybean production in an annual AID evaluation of the Bolivian title III program. AID/Bolivia explained that no title III funds were being used for soybean production. Some of the funds were allocated for wheat production through the Bolivian Wheat and Oil Seeds Producers Association (Asociacion de Productores de Oleaginosas y Trigo—ANAPO) for improving wheat production, a major objective of the title III program. USDA objected to AID's funding of ANAPO, because ANAPO also represented soybean growers, actively promoted soybeans, and was the largest exporter of Bolivian soybean products.

In an apparent effort to pressure AID to stop funding ANAPO, USDA raised questions about continuing the long-standing Public Law-480 wheat aid program for Bolivia. USDA staff indicated opposition to further support for increasing Bolivian wheat production and sending wheat to Bolivia on the grounds that wheat aid was not in the U.S. interest. The AID mission was very concerned, since expanding production was a major priority of the mission and the Bolivia government. Also, ANAPO was seen as the only organization capable of mounting a major commercial wheat production program.

The mission informed AID/Washington that it felt it could guarantee that none of the Public Law-480 funds provided to ANAPO for wheat were being used to support soybean activities.[22] However, at a February 8, 1990, meeting, a DCC working group refused to approve the U.S.' signing of the Public Law-480 agreement. USDA said the Bolivians hoped to produce 750,000 tons of soybeans by 1993-94. A USDA official who chaired the meeting raised the prospect that ASA might ask Congress to hold hearings about whether Public Law-480 funds were being used to support Bolivia's booming soybean exports.

On February 12, 1990, the AID Administrator for Food for Peace wrote USDA's Under Secretary for International Affairs and Commodity Programs to object to USDA's blocking consideration of the fiscal year 1990 title III program for Bolivia. He noted that USDA was requesting that all title III funding for ANAPO be withdrawn on the grounds that the assistance indirectly encouraged soybean production. The Administrator said that if the latter logic were followed, much of the title III program support for road construction, antinarcotics, and other activities would have to be eliminated because of a similar indirect influence on soybean production. He asked USDA to reconsider its position.

On February 23, 1990, the U.S. Ambassador to Bolivia met with USDA's Under Secretary for International Affairs and Commodity Programs. Minutes of the meeting show that participants discussed the economic incentives of coca versus soybeans, wheat, barley, citrus, macadamia nuts, apples, and other alternative crops. The Ambassador argued that soybeans are the most profitable alternative crop and doubted that even a great expansion in Bolivian soybean exports would significantly affect U.S. soybean exports. The Under Secretary told the Ambassador that he had not seen any analysis to support soybeans as the most economical alternative crop.

USDA was not willing to bend on ANAPO, and again the DCC sustained its position. As a result, on March 2, AID agreed not to fund ANAPO in fiscal year 1990. AID also agreed that all future loans to wheat growers would specify that the funds could not be used in any way to support soybean production and to establish a system for tracking loan funds for wheat

[22]The timing of the loan disbursements and the high real rate of interest were an effective disincentive to use the loans for soybean production, the mission felt. In addition, the mission said it would implement a special monitoring program to ensure, as far as possible, that any disbursement to ANAPO was applied to wheat production. Wheat is planted in May and soybeans in November-December. A loan for planting wheat would have to be paid at the end of the production cycle for wheat.

production. The program to promote increased Santa Cruz wheat production was allowed to continue.

## ASA Views on the Conflicts and the Bolivian Program

ASA officials told us that ASA's view generally is that U.S. taxpayer dollars should not be used to help a country grow soybeans that will compete with U.S. soybeans in world markets. However, ASA does not object to using taxpayer dollars to help a country grow soybeans, even if the United States is already exporting soybeans to the country, provided that the recipient country's soybean production is consumed internally. ASA has helped in such efforts, since promoting production in foreign countries for domestic use may create new market opportunities for U.S. soybeans. Also, ASA encourages U.S. aid for research to increase the utilization of soybeans, which might expand U.S. market share.

Regarding the 1990 conflict over aid to Bolivia, ASA officials provided the following account. In fall 1989 AID informed ASA that AID had a very small program in Bolivia for loans to a soybean association. ASA did not pursue the matter. In February 1990 AID advised ASA that it was going to help Bolivia produce soybeans. Subsequently, USDA called and asked whether ASA was aware that AID was going forward with a multimillion dollar loan for soybean production in Bolivia. At the same time, USDA information indicated that Bolivian soybean production had jumped to 200,000 tons and that Bolivian soybeans were being exported with a subsidy. ASA was told when it contacted the Under Secretary of Agriculture's office that it was illegal to use Public Law-480 monies to assist Bolivian soybean production. As a result, ASA thought AID could not provide the assistance.

According to ASA, staff of a U.S. Senator's office called subsequently and asked an ASA representative to attend a meeting with the U.S. Ambassador to Bolivia to discuss soybean aid. At that meeting the Ambassador tried to convince those present that the United States should help Bolivian soybean production. The ASA official at the meeting disagreed, saying that such aid would violate U.S. law. At the next ASA board meeting in early March 1990, ASA reaffirmed its position of opposing any foreign assistance for export of crops that would compete with U.S. crops on the world market. ASA sent a delegation to AID to express its position.

An ASA official told us that Bolivia was a small case but that ASA still objected to U.S. soybean aid for Bolivia. He said that ASA does not consider the question of significant impact in terms of whether an individual country's exports would represent only a small percent of U.S. exports or have a small or negligible impact on world prices. He said that if exceptions were made, it would be difficult to stop doing so, and the law would soon become meaningless. ASA was also concerned because the area in Bolivia suitable for soybean expansion abuts a major soybean-growing area in Brazil. Infrastructure improvements in Bolivia for expanding soybean production might affect Brazilian expansion. An ASA official also said that a long-range projection of Bolivia's potential for soybean production was 3 mmt annually. He acknowledged this was an optimistic figure, but said that if it were to be achieved, 3 mmt of soybeans would be a significant factor on world markets. (See chap. 4 for our analysis of Bolivia's potential for soybean production and its possible impact on the world market.)

In June 1990 ASA testified before Congress that assisting Bolivian soybean production would not reduce drug production in Bolivia because soybean earnings cannot compete with coca earnings. However, neither AID nor the State Department expects soybeans or any other alternative crop to compete with coca. When they approved the Chapare project in 1983, AID and the State Department assumed that crop substitution would not work unless coca eradication and drug traffic interdiction were also successful (see chap. 1). AID and State Department officials told us that crop substitution still depends on effective coca eradication and drug interdiction.

ASA told Congress that U.S. soybean farmers would be willing to accept increased competition in world markets from foreign aid for soybean production if the aid, on a case-by-case basis, resulted in reduced drug production and traffic. However, ASA said it thought Bolivian soybean assistance was an ill-conceived policy, since it knew of no successful crop substitution program to reduce drug production.

Aiding Bolivian soybean production and exports did not make sense to ASA because coca is not grown where the soybeans grow and because the soybean area is located a few hundred miles away from the Chapare, where coca grows. However, as AID noted, increased soybean and other crop exports can increase foreign exchange earnings and employment opportunities. If coca interdiction is successful in the Chapare and coca prices fall, coca farmers and laborers will have an incentive to relocate to areas where jobs are available.

Another ASA criticism was that soybeans in Bolivia are grown on large expanses of land, harvested mechanically, and produced mainly by Mennonite settlers who would not welcome newcomers. However, ANAPO officials told us that many of the soybean farmers in the Santa Cruz area are small farmers who initially operate without mechanization and that a substantial number of the farmers are not Mennonites.[23] Moreover, they said, land in the Santa Cruz area is cheap and readily available. Thus, it would be possible for coca-growing farmers in the Chapare to move to the Santa Cruz area and take up farming of soybeans and other crops. Technical assistance provided to arriving farmers would facilitate this possibility. AID officials told us they are considering such assistance.

## Adverse Impact on Mission's Alternative Development and Counternarcotics Objectives

AID documents that we reviewed indicate the DCC's decisions to preclude any support for soybean production adversely affected the U.S. alternative crop development and counternarcotics strategy in Bolivia. The AID mission judged soybean production critical to (1) provide an alternative source of essential foreign exchange to compensate for anticipated exchange losses from the narcotics trade, (2) attract labor away from the coca-producing areas, and (3) permit the mission to finance development in areas of high agricultural potential.

According to an internal mission analysis, the government of Bolivia had indicated it could not take effective action to destroy coca production and leave 300,000 - 350,000 producers jobless without finding some adequate substitutes in terms of employment, income, and foreign exchange generation. Soybeans were one of the few items in which Bolivia could achieve increased exports, especially over the near term.

Soybeans cannot be grown commercially in the Chapare, Bolivia's main coca-growing area; thus, they cannot directly substitute for coca grown there. However, successful agriculture elsewhere in Bolivia could increase employment opportunities for labor used in producing coca in the Chapare. Also, soybeans could provide opportunities for farmers

[23] ANAPO officials said there are about 3,000 soybean producers in the Santa Cruz area and that 60 percent are small farmers who cultivate 5-40 hectares of land. Mechanization is not economically viable until 15 hectares. The small farmers include many Bolivian colonizers who came to the Santa Cruz area to work sugar cane. They also include a large group of Mennonites who emigrated to Bolivia from Canada, Mexico, and Paraguay.

and laborers who might otherwise be attracted to migrate to the Chapare to grow coca.[24]

The Santa Cruz region offers the greatest potential for agricultural production in Bolivia. Successful agricultural development and exports from the Santa Cruz region would increase employment opportunities and foreign exchange earnings. However, the DCC's prohibition against even indirect support for soybean production adversely affected AID's efforts to promote agricultural development and exports from the Santa Cruz region. For example, since soybeans are grown in rotation with other important crops, it was difficult for AID to separate out support for other crops from support for soybeans. Support for grain silos, farm-to-market roads, and a tropical agricultural research center could all be adversely affected because the assistance could be perceived as indirectly aiding soybeans. So too, would a river port that handled soybeans, among other products.

The DCC's prohibition also threatened the mission's efforts to help Bolivia reduce its dependence on wheat imports.[25] In addition, the mission wanted to support preparation of a land management and development plan for the Santa Cruz region. Without a study, agricultural development in the region would lead to long-term natural resources problems. However, since soybeans was a major crop in the region, the mission felt it could not support such a study.

Although the AID mission felt that assistance for soybean production was critical to its counternarcotics and alternative development strategy in Bolivia, documents we reviewed indicated this connection was not clearly articulated to USDA or the DCC during the 1988-89 conflict. However, it was clearly articulated during the 1990 conflict.

[24]During the two disputes between USDA and AID, the mission did not have a program for moving coca laborers or farmers from the Chapare to the Santa Cruz area, where soybeans are grown commercially. However, if the mission's strategy of disrupting coca markets were successful, it planned to relocate some coca producers and laborers to areas where high-value, exportable crops could be produced.

[25]Wheat is one of the most important food staples in Bolivia, yet Bolivia had been heavily dependent on wheat aid for many years. AID had a program underway to increase Bolivia's wheat production from about 10 percent of national needs to 30 percent. Because storage, seed treatment, and production and research facilities were used for both wheat and soybeans, the mission's efforts to encourage wheat production would be undermined. Support for wheat production in the Santa Cruz was seen as essential if Bolivia were to reach a viable level of food security.

## No Legal Requirement to Prohibit All Public Law-480 Assistance

We disagree with the position that USDA and the DCC took during the two conflicts, namely, that Public Law 480 prohibited all assistance available under title III of the act for activities that would compete with U.S. exports. The law placed restrictions only on title I private sector development activities financed with local currencies generated by the sale of Public Law-480 commodities in recipient countries.[26]

In January 1990 USDA program officials also told us that the Bumpers amendment forbade AID from providing assistance to production of soybeans and other commodities that would compete with U.S. agricultural exports.[27] They said that the USDA's interpretation was that Congress' intent in the Bumpers amendment was that U.S. government funds could not be used to create or promote competition with U.S. agricultural exports in world markets. However, as discussed earlier in this chapter, the Bumpers amendment applied only to the use of certain foreign assistance appropriations and not to Public Law-480 assistance. The amendment restricted only the use of the funds for certain activities, such as testing and breeding feasibility studies, and specifically exempted activities designed to increase food security in developing countries where such activities will not have a significant impact on the export of U.S. agricultural commodities. With regard to Congress' intent, the Conference Report states that the amendment was only intended to apply to projects or activities that are specifically and principally designed to increase agricultural exports in developing countries that can reasonably be expected to cause substantial injury to U.S. exporters.

## Bolivia and Citrus

The 1983 Chapare project papers identified citrus as a high-priority commodity for research and farmer outreach efforts and citrus fruit processing and marketing as one of four large-scale agribusiness initiatives. The project called for increased citrus production for use in juice and marmalade for the domestic market and for developing improved varieties like the Valencia orange that could be exported fresh mostly to neighboring countries. Credit would be provided for cultivation of citrus trees, and a $1.5-million financial commitment was planned for a citrus-processing plant. The citrus activities were to be accomplished over the projected 5-year life of the project. Although the project envisaged citrus exports, the project proposal included a determination that the

[26]With regard to these restrictions, language in the law—"compete, as determined by the President"—gave the executive branch discretion in determining what would represent competition in world markets with U.S. commodities.

[27]This information was provided during an earlier GAO review.

likely impact on U.S. producers would be low. Life-of-the-project citrus exports were estimated at only $385,000 and thus judged not injurious to U.S. producers.

According to AID, from its inception in 1983, the Chapare project experienced serious problems and delays due to a lack of civil control by the Bolivian government in the project's target areas and a lack of progress on coca eradication. When the project entered its planned final year, only a limited portion of the resources had been disbursed.

During 1988, while preparing project papers for the Chapare project and a planned export promotion project, the AID/Bolivia mission became concerned that obstacles could be raised to its promoting citrus in the Chapare. The 1983 policy determination that aiding citrus would not significantly affect U.S. producers applied only to the planned 5-year life of the project. Consequently, the mission consulted with AID/Washington about both the Chapare project and the export promotion project. The mission was told that a new waiver would be required for citrus and would be difficult to obtain.[28] As a result, all support for oranges grown in the Chapare was suspended until a waiver could be obtained, according to an AID mission document. Concerning AID's export promotion project, the mission informed the Bolivian Central Bank that a special administrative waiver would have to be obtained from AID/Washington for extending any U.S. technical assistance or credit for citrus production outside the coca-growing areas.

In March 1989 staff of the AID/Washington's Acting Assistant Administrator for Latin America and the Caribbean sent him a memorandum noting that when the CBI legislation was enacted, the administration agreed with Congress informally not to provide funding for citrus activities in order to obtain duty-free entry status for citrus under CBI. The memorandum said that since Bolivia is not a CBI beneficiary country, AID/Bolivia staff believed the agreement did not apply to Bolivia. However, the memorandum advised that given the current sensitivity of the citrus issue, AID might want to consult further with Congress about AID/Bolivia's intent to fund citrus production for export in the Chapare.

Although the mission considered support for citrus to be critical, months passed while it prepared a waiver application to submit to AID/Washington. An April 1989 AID mission draft memorandum requested a

[28]Technically, not a waiver but rather a determination that the project would not have a significant impact.

waiver for citrus produced in the Chapare region only. By August 1989 the draft request had been broadened to include citrus production and processing in other areas to which coca producers might migrate. Several reasons were given for assisting Bolivian citrus.

First, Bolivia was importing juice and pulp to meet domestic needs, and its three major processing plants were working below their installed capacity. Second, Bolivia's oranges were unsuitable for export at that time because of their low quality—even local agroindustries did not want to process them. A substantial improvement in quality was needed to attain the prevailing international markets standards. Since orange trees planted then would not produce until 1994 at the earliest, Bolivia would not be likely to export for several years. Third, Bolivian exports would be negligible compared with those of the United States and other major exporters. Fourth, the main importers of citrus were Western Europe and Japan. Owing to proximity, lack of exporting experience, and quantity and quality constraints, Bolivia's natural export markets would likely be its neighbors, such as Peru, Argentina, Ecuador, Uruguay, and Paraguay.

In November 1989 the Deputy Director of the AID mission advised AID/Washington that current prohibitions on AID involvement in citrus continued to prevent the mission from (1) supporting selection and dissemination of improved citrus varieties, (2) researching crop management practices to improve quality, and (3) identifying ways to lengthen the potential processing season. He also noted that several private sector investors had examined the potential for establishing a fruit- and vegetable-processing/concentrate plant in the Chapare but it was unclear whether the mission could participate in financing a plant.

Even though the mission had prepared a waiver, it never formally applied for the waiver. By December 1989 the issue had become partly moot because of legislation that Congress had enacted in November. The foreign assistance appropriations act for 1990[29] authorized AID to use fiscal year 1990 Foreign Assistance Act funds in Bolivia to promote all crops that could be economically grown in areas where drug crops were grown for producing cocaine, notwithstanding any other law. In addition, the 1989 International Narcotics Control Act[30] eliminated several existing legal restrictions on 1990 AID assistance if the aid were used for

[29]Foreign Operations, Export Financing and Related Programs Appropriations Act, 1990 (P.L. 101-167, 103 Stat. 1195, 1265).

[30]International Narcotics Control Act of 1989 (P.L. 101-231, 103 Stat. 1954).

crop substitution to further narcotics control activities. However, these provisions applied only to fiscal year 1990 foreign assistance monies and only to drug-producing areas of Bolivia. If the mission initiated assistance, it could not be sure that the exemptions would be renewed in succeeding fiscal years.

According to one mission analyst, after the legislation was enacted AID's restriction against all support for oranges in the Chapare was lifted. However, another mission employee told us that in practice the mission continued to withhold credit, technical assistance, and investment for citrus. For example, he said that in spring 1990 a U.S. firm wanted to send an expert to evaluate Chapare citrus production and asked the AID mission to pay the consultant's per diem and local travel expenses in Bolivia. Out of continuing concern over the Bumpers amendment, the mission said no. However, the mission did provide a professional staff person to accompany the expert during his visit.

## OPIC, the Andean Trade Initiative, and Citrus and Soybeans

In September 1989 President Bush directed the U.S. Trade Representative to lead an interagency effort to develop a package of trade initiatives to contribute to the war on drugs. In November he announced a set of initiatives to create economic alternatives to drug trafficking by expanding trade and investment opportunities between the Andean countries and the United States.

Following the Cartagena Summit in February 1990, the President asked the interagency group to prepare an expanded package of trade initiatives. The group considered a variety of proposals during the spring and early summer of 1990. One proposal was that OPIC consider providing assistance to citrus projects in the Andean countries. OPIC advised the other task force members that congressional opposition was likely. It described how in 1985 it had been forced to abandon a plan to consider providing assistance to certain citrus projects in CBI countries for exporting orange juice concentrate to the United States. (See earlier discussion in chap. 3.) As a result of this experience, OPIC advised the interagency group that it would have to secure congressional approval for any plan to consider citrus projects in the Andean countries.

An OPIC official told us that the Corporation had been prepared to approach Congress about the issue if the other task force agencies had united in support of the proposal and been willing to back it in the event of congressional opposition. However, USDA opposed the proposal, and other agencies did not challenge Agriculture's opposition. As a result,

the proposal was not approved. USDA officials confirmed that their agency had opposed the proposal. They said USDA did so because OPIC assistance would have resulted in increased competition with the U.S. citrus industry.

In July 1990 the USTR prepared a memorandum summarizing the results of the interagency's assessment of various initiatives. The major issue addressed was whether the administration should seek legislation authorizing duty-free treatment for products originating in the Andean countries similar to that provided in the 1983 CBI. According to a USDA official, one issue that divided the agencies concerned soybean oil. USDA wanted the bill to exclude soybean oil from duty-free eligibility. However, its view did not prevail. The administration felt that a bill that closely mirrored the CBI act offered the best prospects for early action by Congress and for being approved without major changes. Since the CBI act did not exclude soybean oil from eligibility, the administration did not want to exclude it in an Andean trade bill.

On October 5, 1990, the administration sent Congress a proposed Andean Trade Initiative Act. The bill was to provide authority for the President to grant duty-free treatment to imports of eligible articles from Bolivia, Colombia, Ecuador, and Peru. Under the bill, some articles were to be excluded from duty-free treatment; soybean oil and citrus products were not among those items.[31] Congress did not act on the bill in 1990. Reintroduced in early 1991, it awaits action. An official of the USTR's office told GAO the administration is hopeful that Congress will enact a law along the proposed lines by the end of 1991 or early 1992.

In fall 1990 the administration sent a high-level interagency team to the Andean countries to identify agricultural products with potential for increased production and trade. In January 1991 the team reported the results of its work to USTR. The report included numerous recommendations for actions. The recommendations were evaluated by an interagency group led by USTR. Most were approved, and an action plan was developed for implementing them. The plan was completed in July 1991.

[31]For all eligible articles, the bill established import relief and emergency provisions in order to safeguard domestic industries, including those producing perishable products. Perishable products are defined to include, among others, certain fresh fruits and concentrated citrus fruit juice. For example, duty-free treatment would be suspended upon a presidential determination if ITC determined that imports resulting from the act were causing or threatening to cause serious injury to the domestic industry. In addition, a petition filed with the Commission alleging injury and requesting emergency relief could also be filed with the Secretary of Agriculture. If the latter concluded emergency action were warranted, he or she could recommend that the President take such action.

Not included in the plan was a recommendation that the U.S. government allow OPIC to extend lending and loan guarantees for citrus and soybean agroindustrial projects, especially projects that would increase utilization and consumption. USDA officials told us they opposed the recommendation because it could increase competition with U.S. agriculture. According to some agency officials there was also concern that Congress would oppose the proposal.

In August 1991 an OPIC official told us that citrus projects are still "extremely sensitive" as a result of past attempts to amend legislation concerning OPIC's citrus activities. The official said OPIC will not provide any aid to any project that would result in citrus exports to the United States, either directly or indirectly. For other citrus projects, OPIC would consider whether the project would displace U.S. citrus exports to third countries or affect world citrus prices.

## Fall 1990 Legislation and Recent Events

In November 1990 Congress enacted three laws that eliminated some of the existing restrictions on aid for agricultural production when the aid furthers U.S. international narcotics objectives.[32] As a result, Public Law-480 funds and certain AID funds are exempt from the restrictions and can be used to promote agricultural production and exports in the Andean countries on a countrywide basis. The exemption for Public Law-480 funds and the exemption on the use of AID funds are permanent. Restrictions concerning OPIC, the Export-Import Bank, and how the United States votes in the international development institutions (see discussion earlier in this chapter) were not eliminated.

The new legislation considerably improved AID's ability to aid agricultural production for export. However, U.S. embassy and AID/Bolivia officials told us that State and AID headquarters did not encourage them to take advantage of the new authority. In fact, the officials said they had to take the initiative to find out from headquarters what the exemptions permitted.

The AID mission was advised by an AID legal adviser that the waivers permitted the use of fiscal year 1991 AID funds or host-country-owned local currency to support throughout Bolivia the production, processing, and marketing (including export) of any agricultural commodities,

[32]The International Narcotics Control Act of 1990 (P.L. 101-623, 104 Stat. 3350 (1990)); Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1991 (P.L. 101-513, 104 Stat. 1979 (1990)); and Food, Agriculture, Conservation, and Trade Act of 1990 (P.L. 101-624, 7 U.S.C. 1736 g-1).

including citrus and soybeans. These activities would be allowed so long as the production or export is part of a development strategy of supporting economic alternatives to the production and export of coca and coca derivatives from Bolivia. However, the mission was also advised that it still had to follow previously required AID procedures for assessing whether the resulting production or exports would cause "substantial injury" to or have a "significant impact" on U.S. producers or exporters. The mission was told this procedure was necessary because the existing policy did not automatically repeal or modify existing policy restrictions.

The mission was also advised that it could not use pre-fiscal-year 1991 funds or host-country-owned local currency to provide assistance for agricultural exports unless it made a determination that the aid would not have a significant impact or substantial injury.

On January 29, 1991, the AID/Bolivia mission requested that AID/Washington authorize the mission to use pre-1991 funds to provide technical and credit assistance to Bolivian citrus producers under various mission projects and including promoting citrus for export. The mission wanted to use approximately $70,000 for this purpose. The mission said its analysis indicated that U.S. exports were not likely to be affected at all. The mission wanted to use pre-1991 funds because it understood that fiscal year 1991 funds were not likely to be available to AID/Bolivia for some time. The request was approved on March 21. In August 1991, an AID/Bolivia official said the Chapare Project has not taken any action since the passage of new legislation in late 1990 to promote citrus for export. He noted that there are divergent views about whether citrus is a good crop for export. He said the mission plans to explore with local agroindustry the prospects for expanding citrus and exporting citrus to neighboring countries.

Concerning soybeans, on February 4, 1991, the AID Mission Director made a determination that the mission could use pre-fiscal-year 1991 funds and local currency to provide technical assistance and credit for soya under various mission projects. The determination concluded that aid would not have a significant impact on nor cause substantial injury to U.S. soybean producers and exporters. The determination is valid until the end of 1992, at which time a new determination must be made. On April 6, 1991, AID/Washington informed the mission that it had no objection to the determination.

In August 1991 an AID/Bolivia official told us that since the end of 1990 the mission had provided a small amount of assistance to the Bolivian soybean industry.[33] In September he advised us that the mission is planning to expend approximately $300,000 over the next year for training, technical assistance, and institutional support to assist ANAPO to expand the coverage of its extension service to include small farmers who produce soybeans, among several other crops. The real benefit of the 1990 legislative exemptions, he said, "is not that it permits us to launch a large initiative to expand Bolivia's soybean production but, rather, to permit us to work with any promising crop without having to 'look over our shoulder' to see what group will likely raise objections. It is precisely this freedom which is the most valuable in our effort to identify and promote crops which are genuine economic alternatives to farmers who are now involved in growing coca." He also said the mission would like to see Bolivia diversify its agricultural production and not be dependent on a single crop that will be subject to the vagaries of the international market.

## Citrus Industry Views

An official of Florida Citrus Mutual told us that U.S. government and World Bank dollars should not be used to help countries like Bolivia and Peru develop their citrus industry. He said the U.S. citrus industry does not want the United States to extend duty-free treatment to any country, regardless of whether or not the country has substantial production. A specific country may not account for much production, he said, but the cumulative effect of many exemptions would be significant. He acknowledged that Bolivia is a small country and that the proposed purpose of providing citrus assistance to Bolivia would be to fight drugs.

A representative of the Indian River Citrus League said that the League would probably express concerns if AID provided assistance to Bolivia for citrus exports. However, he doubted that the aid would be a big issue. He said the League's biggest concern is competition from Brazil and the possibility that the United States will reduce the tariff on orange juice imports.

## Conclusions

Possible competition with soybeans and citrus affected U.S. support for these crops as alternatives to coca. In the case of soybeans, the soybeans would not have been a direct substitute for coca leaves. However,

[33]Approximately $3,700 to finance the participation of a soybean expert at an international symposium.

increased production and export of soybeans could provide an alternative source of essential foreign exchange to compensate for anticipated exchange losses from the narcotics trade if drug interdiction is successful. It could also attract labor away from the coca-producing areas and permit the mission to finance development in areas of high agricultural potential.

Legislative restrictions and concerns over whether U.S. support would compete with U.S. agricultural markets were important factors that affected U.S. policy. Legislative changes in fall 1990 make it easier for AID to provide support when the aid will further U.S. international narcotics objectives. However, OPIC continues to be restricted from providing support for citrus, and the administration has not adopted a recent proposal that OPIC be encouraged to support soybean and citrus projects in the Andean countries.

# Minimal Trade Impact of Alternative Crop Activities on U.S. Agricultural Markets Can Be Expected

Bolivia is already an exporter of soybeans and has the potential for considerably increasing its exports. However, even if Bolivia were to fully realize its potential over the next 10 years, its exports would still represent a small percent of world production and of international trade. There are serious questions about whether Bolivia can compete in international citrus markets, apart from its immediate neighbors. As for Peru, soybeans are not a viable export commodity, and studies we reviewed and most officials we spoke to also did not rate citrus as among Peru's best products to develop for export.

## Bolivia and Soybeans

Compared to U.S. and other major world producers and exporters, Bolivia remains an insignificant player (see table 4.1). Nevertheless, Bolivia's production and exports of soya and soya products have grown dramatically in the past few years, as discussed in chapter 3. On a combined basis, Bolivia exported nearly three-quarters of its soybeans and soybean products in 1990. Bolivia's potential for soybean expansion lies in the Santa Cruz administrative department. The region accounts for 95 percent of the total area planted to soybeans in Bolivia and all of Bolivia's soybean exports.

Officials of ASA, ANAPO, and the Inter-American Development Bank cited the World Bank for an estimate of Bolivia's potential for increased soybean production. In 1990 staff of the Bank concluded that the greatest potential for increasing production in the Santa Cruz region lies in an area of about 2.2-million hectares. Staff estimated that within this area 1.5-million hectares have excellent agricultural potential. Of the latter, less than 700,000 hectares had been cleared, and less than 400,000 hectares of the cleared land were currently under cultivation. The remaining cleared area included cultivated land that had been abandoned and was in various stages of reversion to secondary forest, or lands that were forest fallow, following slash-and-burn cultivation. The other 800,000 of the 1.5-million hectares were primary or secondary forest.

An official of the ASA indicated that 1.5-million hectares were an upper-limit estimate of the land on which soybeans could be grown in Bolivia. However, this estimate assumed that all of the land identified as having excellent agricultural potential would be devoted to soybeans and crops grown in rotation with soybeans. Other crops are grown in the area, including, among others, cotton, rice, and sugarcane. An Inter-American Development Bank official and ANAPO officials estimated an upper limit of 1 million-1.1-million hectares for soybeans.

**Table 4.1: Bolivia's Soybean Activity Compared to Worldwide Activity, 1980-1990**

Percent share of world market

| Activity and country | 1980/ 1981 | 1981/ 1982 | 1982/ 1983 | 1983/ 1984 | 1984/ 1985 | 1985/ 1986 | 1986/ 1987 | 1987/ 1988 | 1988/ 1989 | 1989/ 1990 | 1990/ 1991 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Soybean production | | | | | | | | | | | |
| United States | 60.4 | 62.8 | 63.7 | 53.5 | 54.4 | 58.9 | 53.9 | 50.8 | 44.1 | 48.8 | 50.8 |
| Brazil | 18.8 | 14.9 | 15.8 | 18.7 | 19.6 | 14.5 | 17.6 | 17.4 | 24.3 | 19.0 | 15.1 |
| China | 9.8 | 10.8 | 9.7 | 11.7 | 10.4 | 10.8 | 11.8 | 12.0 | 12.2 | 9.5 | 10.7 |
| Argentina | 4.3 | 4.8 | 4.5 | 8.4 | 7.2 | 7.5 | 7.1 | 9.3 | 6.8 | 10.0 | 10.5 |
| Paraguay | 0.7 | 0.7 | 0.6 | 0.7 | 1.0 | 0.6 | 1.0 | 1.1 | 1.7 | 1.5 | 1.3 |
| Bolivia | 0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.3 | 0.2 | 0.4 |
| Other | 6.0 | 5.9 | 5.8 | 6.9 | 7.2 | 7.5 | 8.4 | 9.3 | 10.7 | 11.0 | 11.4 |
| Soybean exports | | | | | | | | | | | |
| United States | 80.3 | 85.6 | 86.3 | 76.7 | 65.3 | 77.2 | 72.2 | 71.9 | 60.2 | 60.1 | 62.6 |
| Brazil | 6.1 | 2.7 | 4.6 | 6.0 | 13.9 | 4.6 | 11.5 | 9.9 | 21.3 | 15.0 | 8.2 |
| Argentina | 8.9 | 7.3 | 4.7 | 11.9 | 11.9 | 9.8 | 4.5 | 6.9 | 2.2 | 12.8 | 16.4 |
| China | 0.6 | 0.4 | 1.1 | 3.0 | 4.3 | 4.8 | 6.1 | 4.9 | 5.1 | 3.9 | 4.3 |
| Bolivia | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | 0.7 |
| Other | 4.0 | 4.0 | 3.3 | 2.4 | 4.6 | 3.5 | 5.5 | 6.3 | 11.0 | 8.0 | 7.6 |
| Soybean meal exports | | | | | | | | | | | |
| Brazil | 43.1 | 37.7 | 34.3 | 35.0 | 39.0 | 30.5 | 31.2 | 31.4 | 37.9 | 35.5 | 29.1 |
| United States | 31.0 | 30.2 | 27.6 | 22.1 | 20.1 | 24.0 | 25.7 | 22.9 | 18.9 | 18.0 | 18.6 |
| Argentina | 3.0 | 5.8 | 7.6 | 12.1 | 11.4 | 14.2 | 14.0 | 19.8 | 17.2 | 18.9 | 21.6 |
| EC-12[a] | 19.6 | 21.9 | 25.1 | 24.6 | 23.3 | 22.3 | 19.7 | 14.2 | 14.0 | 15.1 | 14.7 |
| Bolivia | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 | 0.4 | 0.4 | 0.5 |
| Other | 3.3 | 4.4 | 5.3 | 6.0 | 6.1 | 8.7 | 9.1 | 11.5 | 11.5 | 12.1 | 15.4 |
| Soybean oil exports | | | | | | | | | | | |
| EC-12 | 37.8 | 41.0 | 39.1 | 39.9 | 36.1 | 44.5 | 36.1 | 29.4 | 28.9 | 29.9 | 36.5 |
| Argentina | 2.4 | 6.1 | 7.9 | 12.8 | 15.0 | 20.8 | 20.1 | 25.5 | 22.6 | 25.4 | 32.4 |
| Brazil | 35.3 | 24.0 | 25.1 | 23.3 | 25.9 | 13.2 | 24.4 | 16.4 | 22.5 | 22.1 | 11.6 |
| United States | 21.5 | 25.9 | 24.4 | 21.0 | 20.8 | 18.3 | 13.5 | 21.0 | 19.6 | 15.3 | 9.8 |
| Bolivia | 0.2 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.1 | 0.2 |
| Other | 2.6 | 2.9 | 3.6 | 3.0 | 2.2 | 3.2 | 6.0 | 7.7 | 6.3 | 7.2 | 9.5 |

[a]EC-12 denotes the European Community of 12 member countries. Includes intra-EC trade.

Source: Based on data provided by USDA/Economic Research Service. Percentages calculated by GAO. Split years shown refer to differing local marketing years as aggregated and reported by USDA.

Assuming a yield of 2 metric tons of soybeans per hectare, 1-million hectares would result in 2 mmt of soybeans annually. For that scenario, ANAPO officials estimated that 1.7-million tons would be exported and

the rest consumed domestically. However, it is not clear whether the 2-mmt production potential will be realized; in any case, reaching 2-mmt production is likely to take many years.

## Problems to Be Faced

According to officials we spoke to and documents we reviewed, Bolivia's ability to expand its soya production faces several problems. For example, most of the land Bolivia used to double its soybean output in the past few years had been previously cleared for cotton and corn. Over half of the remaining land with potential for soybean expansion is primary or secondary forest. Land-clearing is by far the most expensive cost (about $500 per hectare) in the production function, thus the high interest rates will limit farmers' ability to clear land for soy production, experts we spoke with acknowledged.[1]

Other factors cited that could affect expansion opportunities are the unreliable transportation and infrastructure system, and possible fluctuations in export prices and the continued market for soya exports. Yet another concern cited was the environmental fragility of the Eastern Lowlands. There is a growing belief that agricultural development should be limited by controlling where farming will occur and monitoring land-clearing and cultivation methods.

For all of the above reasons, we believe it will be difficult for Bolivia to cultivate 1-million hectares over the next decade. In fall 1990 the Bolivian Minister of Agriculture estimated that in 5 years soybean production might reach 600,000 metric tons, which would represent only about 300,000 hectares of soybean cultivation.[2] An AID/Bolivia agricultural officer said it could cost up to $1 billion to clear approximately 1-million hectares, purchase harvesters, and build silos, roads, bridges, and port facilities needed to move the bulk of the production to international markets. And, he said, these improvements might take 20 years.

[1]Some experts said a factor that could significantly change the situation is Brazilian investors. They might be attracted to Bolivia because of its relatively inexpensive land and high soybean yields. They could provide their own financing.

[2]In 1990 the World Bank approved a $40.6-million project for the Eastern Lowlands designed to provide financing for expanding, over a 5-year period, annual soybean exports by about 200,000 tons. The project would also reduce imports of wheat by about 30,000 tons and provide the technological support for expanding the production of other crops. It would expand the area for soya production by about 70,000 hectares and for wheat by about 30,000 hectares.

## Impact of Possible Increased Bolivian Soybean Production and Exports

If Bolivia eventually succeeds in planting 1-million hectares to soybeans and averages a yield of 2 metric tons of soybeans per hectare, its production would equal 2 mmt. In 1990 world soybean production was 102.9 mmt. Thus, future Bolivian production of 2 mmt would equal 1.9 percent of recent world production. By way of comparison, in 1990 the United States produced 52.3 mmt of soybeans, which equalled 51 percent of world production.

If Bolivia eventually produced 2 mmt of soybeans, we assume it would export 1.7 mmt in the form of soybeans and soybean products. In 1990 world trade in soybeans and soybean products combined was 53 mmt. Thus, future Bolivian exports of 1.7 mmt would represent about 3 percent of world trade. In 1990 the United States exported 20.3 mmt of soybeans and soybean products, which equalled 38 percent of world trade.

The above figures exaggerate Bolivia's possible future share of world production and trade because, as discussed above, it will take Bolivia many years to realize its full potential if that occurs, and world soybean production and trade are expected to grow in the interim. A USDA/Economic Research Service study concluded that world demand for soybeans will increase over the next decade as peoples of the world demand more meat and meat products.[3] The study did not cite a particular growth rate. However, an ASA official and a Bolivian agricultural official provided information to us indicating that world demand might increase at an annual rate of about 3.5 percent during the 1990s.[4] We calculated that a 3.5-percent annual increase in world soybean demand would require an increase in world soybean production of 43 mmt by the year 2000.

If world soybean demand increases, the United States could further increase its soybean production and trade. As discussed in chapter 1, a decade ago the United States had more acreage in soybeans and produced and exported considerably more soybeans and soybean products. The U.S. role will depend in part on the outcome of the current Uruguay

[3]World Oilseed Markets—Government Intervention and Multilateral Policy Reform, USDA, Economic Research Service (Mar. 1990). The study assumed increased world income.

[4]During the 1970s world soybean production grew at an average annual rate of 6.4 percent and during the 1980s at 1 percent.

Round of multilateral trade negotiations. The negotiators are considering substantial liberalization of world agricultural trade.[5] If substantial liberalization occurs, the U.S. output of soybeans likely would increase, according to the Economic Research Service.[6] Relatively larger declines in the prices of nonoilseed crops, as well as increased acreage for these crops, will cause such an effect. Adjustments in world soybean trade would be relatively small, but the U.S. share of world soybean complex trade volume could increase, the Service said, because higher world grain prices probably would induce South American competitors to plant more wheat and corn at the expense of soybeans. U.S. relative prices for producers would move in the opposite direction with the end of U.S. deficiency payments.[7]

## Peru and Soybeans

Although Peru grows some soybeans, conditions are not appropriate for Peru to become an exporter. For example, an ASA official knowledgeable about South America said that there is no potential in Peru for growing soybeans for commercial export. He said the only area in Peru suitable for growing soybeans is too close to the equator. Soybeans do not grow well in the area. Rather, he said, the area is one of the best in the world for growing cotton, and cotton is much more profitable.

Similarly, a USDA official with expertise on Peru said soybeans cannot be produced economically in Peru and that the country would never be a soya exporter or competitive threat in the world market. He said soybeans would not be viable unless subsidized by the government.

## Bolivia and Citrus

From the inception of the Chapare project in 1983, the AID mission has sought to promote the development of a citrus industry. The initial focus was on expanding production for the national market and on promoting exports of fresh fruit and juices, primarily to neighbors. The project did not include any plan for developing an FCOJ industry. However, in recent years the AID mission explored whether Bolivia could develop an FCOJ

[5]After 4 years of negotiations, the United States and the European Community, the two major participants in the agricultural negotiations, still disagreed strongly on the nature and extent of trade liberalization. As a result, the overall negotiations were not completed in December 1990, and their outcome is in doubt. Nonetheless, the agricultural negotiations are expected to continue, and there is considerable pressure to reach an agreement.

[6]World Oilseed Markets—Government Intervention and Multilateral Policy Reform.

[7]Government programs for feedgrains have placed soybeans at a competitive disadvantage because feedgrain programs provided high income support through deficiency payments.

industry to export product to the United States. The United Nations Development Program is trying to promote citrus in Bolivia, both in the Chapare and the Yungas region, including FCOJ for export.

## Progress to Date of the Chapare Project

The original Chapare project objectives included increasing citrus production and financing a citrus-processing plant. These objectives were to be accomplished by the end of 1988. Accomplishments have fallen far short of the original goals. To date, no Chapare oranges have been exported, and a citrus-processing plant has not been built in the Chapare. Bolivia continues to import orange juice to help meet domestic demand. In 1989 the AID mission estimated that Bolivia was importing about 1,500 metric tons of orange juice (juice and pulp) to meet a demand of 3,500 metric tons.

The Chapare project developed a demonstration production plot for citrus and has sought to grow improved varieties of citrus. It has provided technical assistance to farmers concerning lime and fertilizers, the planting and care of perennials, and the establishment of nursery orchards. Improved varieties have been introduced in recent years. Chapare project data indicate that these varieties account for 10-20 percent of the total area in citrus production. However, in fall 1990 the Executive Director of the Bolivian governmental agency in charge of the Chapare project told us that the project is still studying how to improve varieties and that it will take at least 5 years to produce new varieties.

Although the citrus sector of the Chapare has been extensively studied, reliable data still do not exist on the area under cultivation, crop yields, and total production. The absence of reliable data makes it more difficult to attract companies to invest in the Chapare. In fall 1990 project officials told us they were launching a new effort to establish reliable figures.

## Citrus' Potential as an Export Crop in Question

In spite of the AID mission's interest in being able to support development of citrus for export, a number of experts have advised the mission that citrus' potential, especially FCOJ, is questionable. Bolivia's oranges are of poor quality, and it will take years to improve the varieties. Since the world may experience a surplus of oranges in the next decade, it would be risky for investors to make substantial investments in a Bolivian FCOJ export business. Bolivia must compete against Brazil, which enjoys significant economies-of-scale advantages. Brazil ships its FCOJ in large tankers, whereas Bolivia would have to ship in drums,

which are more costly. In addition, Brazil is closer to the U.S. market and has ocean ports.

In August 1989 a team from Project SUSTAIN evaluated the export potential of several Bolivian products.[8] It rated Bolivia's potential for exporting orange products as "poor" or "very poor" in terms of commercial quality and quantity, competitive cost, price, and delivery. In September 1989 a former Tropicana orange juice company executive advised the U.S. Ambassador that Bolivia would be at a great disadvantage if it attempted to become a world supplier of citrus because of the lack of infrastructure, lack of ports for export, and transportation difficulties. Furthermore, in August 1990 a former Del Monte company representative recommended against development of a citrus juice export business because of Brazil's dominant position as a low-cost producer. And in fall 1990 a U.S. government interagency team analyzed which Bolivian agricultural products are good candidates for marketing, including export. Citrus was not selected, even in terms of good potential for local markets and accessibility to neighboring countries.

If Congress enacted a CBI-type program for the Andean countries, as contemplated in draft legislation, Bolivia would find it easier to compete against Brazil. However, it would still have to compete against Caribbean Basin countries that have already established industries, are closer to the U.S. market, and also enjoy a duty-free import privilege.

## Some FCOJ Investments Have Been Considered and May Be Made

In spite of the negative views about citrus exports cited above, the United Nations is planning on building two FCOJ plants in Bolivia. Several private companies have also assessed investing in FCOJ, but it appears they would not find the investments economically viable without subsidies.

A United Nations Development Program official said the FCOJ plant it plans to sponsor in the Chapare has better potential than the proposed plant in the Yungas region.[9] He said the 5,000 hectares of citrus in the Chapare could supply a plant. There is a longer-term potential for

[8]Project SUSTAIN is an AID-funded program that offers technical assistance on the part of U.S. food industries to food processors in developing countries.

[9]The plant would cost $6 million to build and operate for 1 year. Initially the plant would operate at only 30-percent capacity because of the bitterness of oranges currently grown in the Chapare. The official said the program is seeking a private sector investor to take a 51-percent or more share in the plant's cost and to operate the plant. The United Nations would gradually transfer its equity share to an association of orange growers.

growing citrus on at least 10,000 hectares, which could annually produce a maximum of 250,000 metric tons. That would equal 3 percent of U.S. production in 1989.

In May 1990 three Bolivian companies and a U.S. firm, International Agro and Food Products, announced plans for a joint venture to build an agroindustrial plant in the Chapare region.[10] However, the venture is not likely to go forward without large subsidies. Most of the product would be exported to the United States. It was estimated that in 5 years plant production would reach 30,600 metric tons of oranges, which would be the equivalent of 3,061 metric tons of FCOJ. The latter would represent 0.4 percent of U.S. FCOJ production in 1989.

The President of the U.S. firm said the joint venture partners would contribute $2.4 million in equity of the estimated $8-million project cost. The remainder would have to be financed by a low-interest loan from the U.S. government or international agencies. In addition, because of the huge transportation costs involved in exporting from Bolivia, the United States would need to provide relief from the duty on imported orange juice in order to make the Bolivian products competitive. Alternatively, someone would have to help subsidize the product. The joint venture requested a $5.6-million loan at 10-percent interest over 10 years from AID. However, the AID/Bolivia mission replied that it does not provide low-cost, long-term loans.

## Peru and Citrus

We found somewhat mixed views about Peru's potential to produce citrus for export. In general, though, studies we reviewed and most officials we spoke to did not rate citrus as among Peru's best products to develop for export. Also, U.S. officials said they had no interest in helping Peru to promote citrus for export.

A 1985 study prepared for the AID mission in Peru evaluated opportunities for expanding agribusiness activity in the Huallaga Valley. Fruit-marketing and -processing (especially bananas and citrus) was one of 24 projects assessed. The study recommended against investments in

[10]The venture was described as a three-phase project involving investments over a 10-year period. The first phase called for developing 3,000 Chapare hectares to produce citrus and other tropical fruits in 1-2 years. The second phase called for constructing a processing plant in the Chapare to make frozen concentrates from 30,000 metric tons of oranges, 500 metric tons of grapefruit and 11,000 metric tons of tropical fruits each year. The third phase involved marketing the products.

fruit processing at that time because fruit produced in the area was generally poor, production volumes were not sufficient to warrant establishing processing facilities, and internal regional demand for fresh fruit might grow as fast as fruit production. Overall, the valley lacked the quantity and quality of fruit needed to compete in world export markets.

A 1990 study, also prepared for the AID mission, sought to identify the most promising products for expanding Peru's agricultural exports. This study focused on other geographical areas, particularly along the coast. Mission officials said it currently makes more sense to focus on agriculture in areas that do not have the security and transportation problems that exist in the Upper Huallaga Valley. The study concluded that the most promising products were asparagus, mango, tomato paste, garlic, grapes, and beans. It also identified 12 other products of importance. One of these was oranges produced in the Lima and Ica regions of Peru. The study said there was some demand for peeled, seedless oranges. Nine of the 12 other products were rated as superior to oranges in terms of a benefit-to-cost ratio, while the remaining 2 were rated as comparable to oranges.

In November 1990 AID mission officials told us that they do not have any plans to promote citrus in either the Upper Huallaga Valley or other parts of Peru. They said that the 1985 study still provides a basis for judging which crops and agribusiness opportunities offer the most potential in the Huallaga Valley. They acknowledged that the Upper Huallaga Valley project has conducted research on citrus varieties to help farmers grow a better product, but said that citrus is not among the most promising crops for that region. Concerning other areas of Peru, they said Peru's potential was limited.

The U.S. Agricultural Attache in Lima told us that citrus is not a good export crop for Peru because of the substantial investments needed to build processing plants and acquire the large tracts of land needed to make citrus economically feasible. (Peru's fruit currently cannot be exported fresh to the United States because it is infested with the Mediterranean fruit fly.) He indicated it would be difficult to attract investors for projects to produce FCOJ for export because the world is likely to have surplus supplies.

In late 1990 a high-level interagency team, composed of officials of AID and the Departments of Agriculture and State, visited Peru to assess how Peru could best expand its agricultural production and trade to

increase employment and foreign exchange earnings. It concluded that citrus might have medium-term export potential.

According to an official of Peru's National Agrarian University, citrus is not among the crops that offer the best prospects for intensive cultivation in the Central and Upper Huallaga Valley. An official of an agribusiness concern said that citrus is a potential crop for Peru, while an official of another concern said it had potential but only for internal consumption.

A high-level official in Peru's Ministry of Agriculture told us that citrus has a lot of potential along the coast and in high jungle areas such as the Upper Huallaga Valley. He said much of the fruit grown in the high jungle is lost because of storage and transportation problems. Losses could be substantially reduced if processing plants were built closer to where the product is grown. However, he noted that because there is not much internal demand most of the processed juice would have to be exported.

## Conclusions

Bolivia has potential to expand its soybean production and exports but is currently an insignificant player in the international market. Even if its potential were fully realized in the next decade, which is questionable, its exports would equal only 3 percent of soybean and soybean products recently traded in the world market. In 1990 the United States accounted for 38 percent of soybean and soybean products traded internationally, on a tonnage basis. U.S. soybean production and trade may grow in the 1990s as a result of increased world demand for soybeans and possible changes in the rules of international trade. Peru is not expected to be competitive in world soybean markets.

AID has been interested in helping Bolivia develop a frozen concentrated orange juice industry. However, many observers are skeptical of Bolivia's ability to compete in international markets. As for Peru, studies we examined and most officials we interviewed did not rate citrus as among Peru's best products for export.

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