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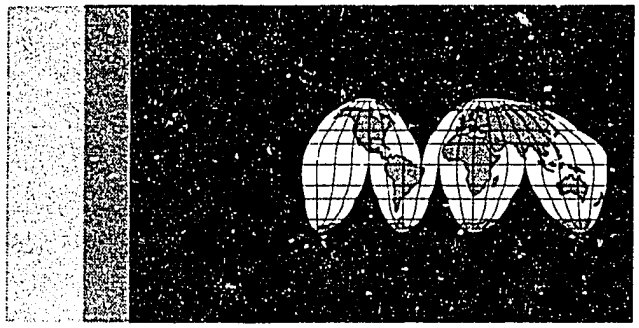

USAID Program and Operations Assessment Report No. 9

Generating Broad-Based Growth Through Agribusiness Promotion

Assessment of USAID Experience

by

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March 1995

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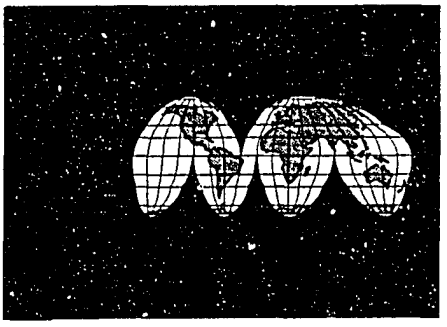


Summary

This assessment presents U.S. Agency for International Development (USAID) senior managers policy and operational recommendations based on a critical review of the Agency's agribusiness programs. In the early 1980s, to promote sustainable agricultural development, USAID began shifting its focus toward the development of private sector agribusiness. It designed and implemented hundreds of development interventions focused exclusively or significantly on agribusiness development in Africa, Asia, Latin America, and the Caribbean.

To follow the Administrator's Evaluation Agenda (1992–94), the Center for Development Information and Evaluation (CDIE) in 1993–94 undertook an assessment of the performance and impact of USAID agribusiness programs. CDIE reviewed program documents and reports; interviewed USAID managers, contractors, and outside experts; and conducted fieldwork in Bangladesh, Cameroon, Ecuador, Guatemala, Sri Lanka, Thailand, and Uganda. Its assessment findings and recommendations are summarized here.

Findings

What were the underlying strategies for promoting agribusiness? The agribusiness programs followed four main intervention strategies, as appropriate. The first strategy was to develop and strengthen public and private institutions that support the growth and functioning of agribusiness. Three types of organizations were targeted: government ministries and agencies that regulate, provide a legal framework for, and service private agribusinesses; semigovernmental organizations such as export and investment boards; and trade and business associations, guilds, cooperatives, foundations, and financial intermediaries.

The second strategy was to provide assistance to current and potential entrepreneurs in agroprocessing and marketing. Most assistance—in the form of technical assistance, training, credit, and, in selected cases, grants—was channeled through such intermediary organizations as banks, nongovernmental organizations (NGOs), trade or business organizations, even government agencies.

The third strategy was to facilitate market development for agriculture-based products. Although some attention was paid to the export of traditional products (such as coffee, bananas, livestock, cocoa, and rubber), USAID agribusiness programs focused largely on nontraditional agricultural exports, such as fruits, vegetables, flowers, herbs and spices, and other products that are exported fresh, frozen, dried, or canned.

The fourth strategy—adopted only in Bangladesh and Cameroon—was to privatize parastatals and public sector organizations involved in marketing and distributing fertilizers. With the exception of Bangladesh and Cameroon, agribusiness programs focused on the other three strategies.

How did the agribusiness programs perform? What did they accomplish?

Program performance was judged by the following criteria:

- Growth of private sector firms, of agribusiness cooperatives, and of collaborative arrangements with foreign firms
- Strengthening of both public and private sector institutions that support agribusiness
- Increase of agricultural exports

Agribusiness programs succeeded in boosting the growth of agribusinesses in many countries studied. Small and medium-size private firms were the main beneficiaries. Assistance was critical in two areas: production technology and market networks with foreign importers.

The programs were less successful in promoting marketing cooperatives. Few of the cooperatives were prepared for the discipline of the marketplace: most were accustomed to government and donor assistance even though government assistance often involved interference and manipulation. Cooperatives were often unable to respond flexibly and quickly to new opportunities, and their operating costs were high.

Agribusiness programs did not succeed in attracting significant foreign direct investments, but they did help facilitate collaborative arrangements between U.S. firms and local entrepreneurs. Such arrangements involved raw-material sourcing, production technology, shipping, and export marketing.

Agribusiness programs succeeded to varying degrees in facilitating regulatory reform. They were effective in privatizing fertilizer distribution in Cameroon and Bangladesh. But efforts to create effective sustainable government organizations offering support services to agribusiness firms were largely unsuccessful.

Agribusiness programs created and assisted membership-based private sector organizations of agricultural producers, processors, and exporters. These organizations were able, over time, to institutionalize their activities; they emerged as powerful voices that articulated the interests of their members and pressed for regulatory reform. They could provide standardized services to members but have been ineffective at customized assistance requiring firm- or product-specific expertise. Whether USAID-supported service organizations can provide such customized services remains a question because the organizations operate at a high cost and rely too much on expatriate staff.

Most of the programs aimed at increasing nontraditional agricultural exports produced promising results. They succeeded not only in increasing nontraditional exports (producing precious foreign exchange) but also in creating a business climate conducive to growth of the private sector.

Overall, the performance of most of the agribusiness programs studied has been satisfactory. Two programs (Bangladesh and Guatemala) performed very well and three (Cameroon, Ecuador, and Thailand) did reasonably well. The other two (Uganda and Sri Lanka) were still struggling at the time of the assessment.

What impact did agribusiness programs have on income and employment? Did they benefit small farmers?

Agribusiness programs had significant positive effects on employment and incomes in most of the countries studied. Employment increased in agribusiness firms, but the highest jump in employment occurred on farms producing raw materials for those firms. The crops promoted by USAID programs were generally more labor-intensive than traditional crops produced by small farmers, and diversification created additional demand for farm labor—not only generating employment for landless labor, but exerting an upward pressure on wages as well. Gross and net returns on new or improved crop varieties ran significantly higher than for traditional crops, so farmers incomes in-

creased. In many cases, farmers were able for the first time to produce new crops during the dry season or along with traditional crops.

With the growth of agroprocessing and marketing, related industrial and service firms emerged to provide packaging, advertising, land transport, shipping, and accounting services. These firms created more off-farm employment opportunities. Finally, there was a multiplier effect of agribusiness expansion throughout the economy; increased incomes and expenditure in agriculture generated new demand for goods and services, creating new employment and income economywide.

Small farmers were major beneficiaries of agribusiness programs. They actively participated in and profited from agribusiness programs in nearly all case-study countries. In some countries, the land tenure system and national policies ensured that most producers would be smallholders. In others, both large and small farmers benefited from the cultivation of new and improved varieties of crops.

Contract farming proved to be an effective institutional mechanism for giving small farmers access to national and foreign markets as well as to production technology. In practically all host countries with a focus on nontraditional exports, contract farming spread rapidly, generating unprecedented opportunities for small farmers.

Agribusiness firms were disposed toward entering into contractual obligations with smallholders for several reasons. For one thing, small farmers did not value family labor at market prices in their calculation of production costs and therefore sold their produce at prices that were lower than the production costs of agribusiness firms. For another, dealing with small farmers conferred political legitimacy and protection from political protest. In many cases, land tenure systems left few alternatives. Most important, however, agribusiness discovered that small farmers were generally more efficient producers of nontraditional exports than larger farmers, once production technology was standardized and agricultural inputs were readily available.

Yet it should be recognized that not all nontraditional exports promoted by USAID programs were suitable for contract farming by smallholders. For some export crops that are capital- and technology-intensive (such as cut flowers), large farmers and firms have a comparative advantage over their smaller competitors. And there are economies of scale in the production of some crops (such as melons).

How did the agribusiness programs affect women? Did they increase women's workloads? Did they improve their economic welfare?

Women represented a negligible minority of agribusiness owners, especially among medium-size and large firms. Women benefited not from asset ownership but from employment in agribusinesses and from working on contract farms. In six of seven countries studied, 10 to 50 percent of agribusiness employees were women. An even higher percentage of contract farming employees were women, partly because women were deemed more skilled than men in several operations (such as pollination). Still, women were paid slightly less than their male counterparts.

Women's workload increased as agribusiness expanded. Even though they got work on farms or in factories, women were still responsible for cooking, washing, child care, and other household chores. But, as their incomes rose, women in some countries could purchase simple productivity-enhancing appliances (such as fuel-efficient stoves) or marginally processed foods (such as milled grains), which reduced their domestic workload.

The extra income also made many women more economically independent. As they become more aware of their legal rights, fewer and fewer women who worked in agribusinesses or farms automatically passed their earnings on to their spouses or other male householders. Increasingly, they were able to

keep their income and decide how to spend it—except for women working on household farms managed by male members of the family. Presumably, however, women who were not directly compensated for their time benefited indirectly from a general improvement in the household economy.

Finally, employment in large agroprocessing industries gave women new identities and a new sense of empowerment. It seems most women would rather work in large agribusiness plants under impersonal, bureaucratic management than in the informal sector. In large firms they have more personal freedom and enjoy a sense of solidarity with other women employees. The factory environment has had a modernizing effect on their identities and self-perceptions.

How were farmers and agricultural workers affected by increased use of chemical pesticides, especially for nontraditional agricultural exports?

To meet demand for blemish-free produce, especially for nontraditional exports, farmers generally increased their use of chemical pesticides. Extensive pesticide use, however, can create problems. First, indiscriminate application of pesticides results in the proliferation of nontarget or chemically immune pests, which leads farmers to use still more pesticides. In this vicious cycle, increased usage often wipes out the pests' natural enemies. The Costanza Valley of the Dominican Republic, for example, has become dangerously vulnerable to a pesticide-resistant strain of the greenhouse whitefly.

Second, excessive use of pesticides produces unacceptable levels of pesticide residues in fresh produce, which destination countries then detain or reject. This has become a common problem in some Latin American countries, causing significant losses to farmers and exporters.

Third, the growing use of pesticides poses a significant threat to the health of farmers and agricultural workers. Direct exposure to deadly poisons can produce many harmful short- and long-term conditions, including allergies, birth defects, skin and nerve damage, even cancer. Several studies have highlighted health hazards from chemical pesticides in the countries studied.

At the time of the assessment, farmers and firms were becoming aware of the health hazards of pesticides and had started following safety procedures. Host country governments were also taking initiatives to improve rules and regulations governing the application of chemical pesticides and to educate people about their hazards. Regulations in importing countries and programs for "green labeling" will eventually force producers to control use of these products or lose out in international markets

Did the economic benefits generated justify the cost of the agribusiness programs?

The case studies did not provide a clear, unequivocal answer to this question. Because of the complexity of agribusiness programs, disagreements about their direct and indirect effects, and uncertainties about their final impact, calculations of the internal rate of return were viewed as tentative, even speculative. Bangladesh, Cameroon, Ecuador, and Guatemala showed returns of 10 percent or more, suggesting that economic outcomes justified USAID investments. Sri Lanka and Uganda did not show positive returns. For lack of data, the internal rate of return was not computed for Thailand.

What factors affected the performance and impact of the agribusiness programs?

Several factors affected the performance and impact of the agribusiness programs:

- A focused and empirically grounded strategic framework tended to produce positive results. One important element of effective strategies was a realistic assessment of constraints on the growth of agribusiness. Many programs were originally based on simplistic, flawed assumptions. Some posited a rigid design,

which caused implementation delays and problems. But most of the programs acquired a sound strategic focus over time.

- Suitable macroeconomic policy and regulatory reform were crucial to the success of agribusiness programs. Many of the countries studied had committed themselves to such reform, but progress was slow, and that limited the performance and impact of agribusiness programs.

- The success of export-oriented agribusiness interventions also depended heavily on the adequacy of physical and institutional infrastructure for agricultural—especially private sector—activity.

- It was important that the governments be committed to program objectives, especially in programs involving privatization, policy reform, and infrastructure components. The success of the two fertilizer privatization programs depended greatly on the continued support of the governments involved. Tangible positive results early in a program were key to generating and nurturing such public commitment.

- The extent of the private sector's involvement in, and the nature of its relationship to, an agribusiness program was a key variable in explaining program success. Most agribusiness programs had little input from agribusinesses and entrepreneurs at the design stage, so design documents did not focus on their needs, problems, and expectations. In some cases, however, private institutions were asked to implement program components to reduce red tape and give managers autonomy. This was a significant advance over the earlier tradition of locating technical advisers in government bureaucracies, but such placement alone did not make programs responsive to agribusiness firms or the discipline of the marketplace. The agribusiness programs that established close relationships with private firms were more successful than others.

- The nature and quality of technical assistance was important. A major problem early in the programs was that most of the technical advisers trying to help private agribusiness improve their management and operations knew little about the private sector themselves, because they had been associated mainly with public institutions. Fortunately, they did learn from experience. As they became more familiar with the workings of the private sector, the performance of the agribusiness programs improved.

- The success and impact of the agribusiness programs were also affected by such sociocultural factors as public officials' and planners' distrust of agricultural middlemen, the short time horizon of many farmers and entrepreneurs, and a limited tradition of entrepreneurship.

Recommendations

- Agribusiness programs require a realistic, coherent, but flexible long-term strategy based on rigorous analysis of the constraints on agribusiness growth and on a dialogue with the government and the private sector. USAID Missions should take the time required to formulate such a strategy before initiating agribusiness interventions.

- The main focus of the USAID agribusiness programs should be to improve the policy, regulatory, and institutional environment. Direct and indirect assistance to individual enterprises should be secondary.

- Agribusiness development programs should follow the lead of the private sector, rather than assume the lead. This requires that program managers enjoy considerable freedom to effectively re-

spond to the emerging needs of agribusiness firms and farmers within the given strategic framework for the program.

- Foreign direct investment in agribusiness is an effective means of transferring production technology and developing export markets. At the outset, however, it is more realistic to promote limited sourcing, technology licensing and franchising, and marketing arrangements between international firms and local entrepreneurs than to try establishing fully owned foreign subsidiaries or joint ventures in host countries.

- Contract farming has been an effective mechanism for linking small farmers with processors and marketers of many high-value cash crops (especially nontraditional exports). Such arrangements have been mutually beneficial, and USAID programs should continue to explore them.

- USAID efforts to assist agribusiness cooperatives have not been encouraging. Producer and marketing cooperatives have been neither efficient nor sustainable, despite generous outside assistance. USAID should support agribusiness cooperatives only when it is certain that they have the will and ability to subject themselves to the discipline of free markets.

- Although women have benefited from the growth of agribusiness—especially of nontraditional exports—they were not full and equal beneficiaries from the ownership of firms. USAID programs should promote entrepreneurship among women.

- The improper use of pesticides emerged as a major problem, resulting in health hazards and serious economic losses to farmers and exporters. USAID agribusiness programs promoting nontraditional exports must give priority to ensuring the proper use of pesticides.

- Small and medium-size firms dominate the agribusiness sector in developing countries, so USAID should continue to design interventions geared to them.

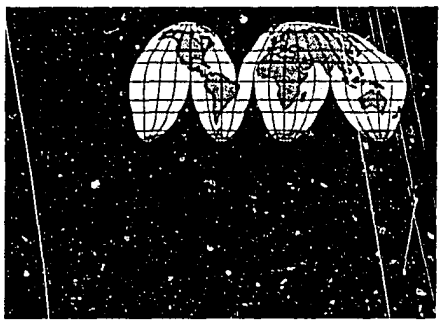
- Direct technical assistance is useful to private sector agribusiness firms. USAID enterprise development interventions should focus on the transfer of production technology and the establishment of export links (with importing firms in destination markets), the two areas in which direct technical assistance has proven most effective.

- USAID agribusiness assistance to firms, private sector intermediary organizations, and producer and marketing associations should include sunset clauses. USAID should specify early on when assistance will end and stick to that timetable.

Glossary

APEF	Africa Private Enterprise Fund
AgEnt	Agro-Enterprise Project (Sri Lanka)
Agromart	A Sri Lankan foundation that promotes entrepreneurship among women and other disadvantaged groups
ANDE	National Association of Business Owners (Ecuador)
ANEPP	Agricultural Nontraditional Export Promotion Project (Uganda)
APEF	Africa Private Enterprise Fund
BADC	Bangladesh Agricultural Development Corporation
CAAS	Cooperative Agriculture and Agribusiness Support (Uganda)
CEPLAES	Centro de Planificación y Estudios Sociales
CDIE	Center for Development Information and Evaluation
CIF	Price inclusive of cargo, insurance, and freight
EPADU	Export Policy Analysis and Development Unit (Uganda)
EXITOS	Export and Industry Support Project
FDI	Fertilizer Distribution Improvement (project, Bangladesh)
FEDEXPOR	Federation of Ecuadorean Exporters
FONADER	Cameroonian agriculture parastatal
FSSRP	Fertilizer Sub-Sector Reform Program (Cameroon)
GDP	gross domestic product
GNP	gross national product
GREMIAL	Guild of Exporters of Nontraditional Products of Guatemala
IRR	internal rate of return

IDEA	Investing in Developing Export Agriculture (Uganda)
IMF	International Monetary Fund
JACC	Council for Agribusiness Cooperation and Coinvestment (Dominican Republic)
MARD	Mahaweli Agricultural and Rural Development (project, Sri Lanka)
MED	Mahaweli Enterprise Development (Sri Lanka)
NACO	a private consortium
NGO	nongovernmental organization
NPV	net present value
parastatal	State-owned enterprise
PROEXAG	Nontraditional Agricultural Exports Support Project (Central America)
PROEXANT	Nontraditional Agricultural Exports Project (Ecuador)
PVO	private voluntary organization
RAA	Restructuring Agriculture and Agribusiness Project (Eastern Europe)
UIA	Uganda Investment Authority
USAID	U.S. Agency for International Development



Introduction

This assessment gives senior managers of the U.S. Agency for International Development (USAID) recommendations on policy and operations based on a critical review of Agency agribusiness programs.[1] This assessment was not designed as an academic exercise, with strict attention to the canons of quantitative research. Rather, we have marshaled quantitative and qualitative information to answer basic questions so the Agency can formulate a coherent, consistent policy on agribusiness.

The following questions are addressed in this assessment:

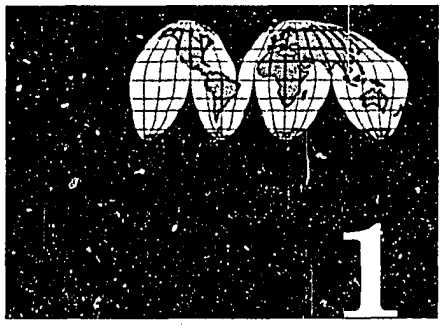
- What were USAID's basic strategies to promote agribusiness?
- How did the agribusiness programs perform overall? What did they accomplish?
- How did the agribusiness programs affect income and employment? Did they benefit small farmers?
- How did they affect women? Did they increase women's workloads? Did they contribute to their economic welfare?
- How did the increased use of chemical pesticides (especially on nontraditional exports) affect farmers and agricultural workers?
- Were the costs of agribusiness programs justified by the economic benefits they generated?
- What factors influenced the performance and impact of the agribusiness programs?
- What are the implications for policy and programs of USAID's experience with agribusiness programs?

1 By "agribusiness" we mean all businesses involved in the production and distribution of equipment and inputs used in agricultural production, and all businesses involved in the processing and marketing of agricultural products. Medium- and large-scale commercial farmers actively involved in the postharvest handling and marketing of their products are considered to be agribusinesses. Smallholders who supply processors or marketers on an "outgrower" (contract) basis, although they do not fall strictly within this definition, are also examined because of their close link to agribusiness. The term "program" includes all project and nonproject assistance to a country intended to achieve certain strategic objectives. An agribusiness program may include many agribusiness projects or the agribusiness components of different projects along with nonproject assistance. Even when a country assessment team focuses only on a single project (as in Bangladesh and Cameroon), the term "program" has been used for linguistic consistency.

To answer these questions, CDIE followed a simple research strategy described in the appendix. Its cornerstone was seven case studies based on a single analytical design applied to a representative sample of programs. After analyzing USAID projects that focused on agribusiness, CDIE identified seven country programs (Bangladesh, Cameroon, Ecuador, Guatemala, Sri Lanka, Thailand, and Uganda) covering 21 projects. It prepared comprehensive case studies of these programs on the basis of limited fieldwork. The case-study approach enabled CDIE investigators to examine agribusiness interventions in their natural settings. In addition to case studies, CDIE undertook a literature review of relevant documents and interviewed USAID program managers and outside experts.

A major limitation of the assessment was the incompleteness of quantitative data about the performance and impact of agribusiness interventions. In most cases agribusiness programs did not collect time-series data, and when such data were gathered, they were incomplete. Constraints of time and resources generally prevented case-study researchers from conducting sample surveys. They had to rely heavily on secondary data, qualitative information, and, in three countries (Ecuador, Guatemala, and Sri Lanka), on minisurveys of agribusinesses.

In the seven sections of this report, we discuss the evolution of USAID's agribusiness interventions and outline USAID agribusiness promotion strategies; describe the economic environment in the seven countries studied and the purpose, scope, and nature of USAID's agribusiness programs there; assess the programs' accomplishments and failures; explore how agribusiness programs affected employment and income, small farmers, women, and the environment; describe the program's economic costs and benefits; identify the factors that influenced program performance and impact; and offer recommendations on policy and operations for USAID agribusiness programs.



1 USAID Agribusiness Projects and Strategies

In the 1960s and 1970s, USAID agricultural programs focused largely (although not exclusively) on increasing farm production by providing agricultural inputs (including credit), supporting agricultural extension systems, developing rural infrastructure, fostering public sector input supply and marketing boards, and building capabilities for agricultural research. USAID did fund agribusiness projects, but they represented only a fraction of its total investment in agriculture. Moreover, many of these projects were designed to support public sector agricultural marketing and distribution systems. Production was emphasized, because of widespread food shortages, especially of cereals, and the ever-present threat of famine in developing countries. In this section we discuss changes in USAID's agribusiness interventions and describe its strategies for promoting agribusiness.

USAID's Support for Agribusiness Projects

USAID started shifting its focus toward the development of private sector agribusiness in the early 1980s for several reasons. First, the success of the green revolution in many Asian and Latin American countries alleviated acute food shortages, and farmers began looking for more profitable alternatives to traditional crops. Second, USAID's long experience with production projects highlighted the critical importance of agricultural marketing. Production projects did not succeed when there were no markets for increased output, and developing these markets was the job of agribusiness. Third, in developing countries where per capita income was rising, demand for processed agricultural products was growing, generating opportunities for the growth and expansion of agribusiness.

Fourth, the failure of government agencies and parastatals, which had been established to provide agricultural inputs and to market agricultural produce, had been too dramatic to be ignored. Disappointed by the performance of state-owned enterprises, the development community began to advocate their privatization. Fifth, USAID enthusiastically embraced the strategy of "open societies" and "open markets" that emphasized private initiative and entrepreneurship. This strategy involved promoting macroeconomic and agricultural policy reform conducive to the growth of agribusiness. Finally, USAID saw in agribusiness growth opportunities for mutually beneficial relationships between U.S. and developing-country firms.

Since the early 1980s USAID has designed and implemented numerous agribusiness projects. How many it has funded is difficult to ascertain because it has not consistently fol-

lowed well-defined criteria to label agribusiness interventions. But a search of the USAID Development Information System turned up 763 projects with some elements of agribusiness promotion.[2]

Strategies for Promoting Agribusiness

For analytical purposes, we discuss four strategies for developing agribusiness: institutional development, enterprise development, market development, and privatization. These strategies are related, and most projects follow more than one of them (see Table 1).

Institutional development

The rationale for this strategy is straightforward: public and private institutions needed for agribusiness to grow are weak and ineffective in most developing countries, especially those with the lowest per capita income. USAID has targeted two types of organizations for assistance:

- *Government ministries and agencies of agriculture, trade, industry, commerce, and finance.* These organizations not only regulate and provide a legal framework for private agribusiness; they also often provide key services, including technology development, market information, financing, export promotion, and assistance in setting up collaborative arrangements between agricultural producers and agribusinesses or between exporters and importers.

- *Private trade and business associations, guilds, cooperatives, foundations, financial intermediaries, producer organizations.* These organizations offer a wide range of services, including advocacy, management and technical training, market information, and marketing services. It is often through these organizations that donor assistance is channeled to individual businesses.

Projects following this strategy provide grants, training, and technical assistance to targeted organizations. The grants can be for office expenses, equipment and furnishings, promotional and advertising materials, or conference, seminar, and training costs. The objective is usually to create effective, sustainable institutions that will continue to provide services to agribusinesses even after USAID assistance ends.

Enterprise development

Unlike institutional development strategies, which focus on creating sustainable supporting organizations, enterprise development strategies provide direct assistance to existing or potential agribusiness firms and entrepreneurs. The assumption is that macroeconomic and sectoral reform is usually not enough to stimulate agribusiness. Firms often lack the requisite management experience, technical skills, technology, financial resources, market information, and marketing expertise, and need various forms of assistance to invest effectively in value-added production, packaging, and processing technologies.

Some projects provide direct assistance to private firms, but most channel assistance through such intermediaries as trade organizations, banks, NGOs, or government agencies. Some agribusiness projects promote contract or commercial outgrower schemes connected to a processing plant or packing house. Others develop agroprocessing enterprises, including

2 The key words used in the computer search were "agribusiness," "agricultural enterprises," "agricultural product marketing," "agricultural storage facilities," "agricultural exports," and "food processing."

Table 1. Strategies and Activities for Promoting Agribusiness

Activity	Strategy: Institutional development	Enterprise development	Market development	Privatization of parastatals
Training				
Long- and short-term participant training	✔	✔	✔	✔
Study tours to U.S. agribusinesses/institutions	✔	✔	✔	✔
Management/accounting training	✔	✔		✔
Technical assistance				
Feasibility and project studies		✔	✔	✔
Policy analysis	✔			✔
Management	✔	✔	✔	✔
Production/handling/processing/transport		✔		
Monitoring/management information systems	✔		✔	✔
Information and facilitation				
Market information systems	✔	✔	✔	✔
Technological information	✔	✔	✔	✔
Sources of finance	✔	✔	✔	✔
Export market regulations	✔	✔	✔	✔
Deal making				✔
Technology				
Procurement of equipment		✔	✔	
Storage/cold storage		✔		
Processing/packaging/handling		✔		
Farming operations		✔		
Financial assistance				
Public/private banks		✔		
Revolving funds	✔	✔	✔	✔
Project loans		✔		✔
Input supply				
Fertilizer and seeds		✔		
Agricultural chemicals		✔		
Farm machinery		✔		

cold storage, handling, and packaging operations. Still others promote joint ventures between host country entrepreneurs and foreign businesses.

Many projects also offer assistance for credit and financial services. Local businesses are helped to develop business plans and financial analyses for new or expanding enterprises and to locate sources of financing. Often such projects provide credit directly or through a financial intermediary. Finally, the enterprise development strategy is generally the one fol-

lowed by microenterprise projects. Many microenterprises are in the agribusiness sector.

Market development

The strategy of facilitating market development for agriculture-based products generally involves providing market information systems, establishing trade offices in regional market centers, financing trade missions, setting up regional market outlets, and promoting sourcing and marketing arrangements with foreign firms. Some projects have supported the export of traditional products (such as coffee, bananas, livestock, cocoa, and rubber), but USAID activities have focused largely on nontraditional agricultural exports: fruits, vegetables, flowers, ornamentals, herbs, spices, and other products, which are exported fresh (after cooling and packaging), frozen, dried, or canned. Nontraditional exports have been the thrust in Latin America and the Caribbean, and they are now emerging as an Agency emphasis in Asia and the Near East and even in Africa.

Privatization of marketing and input supply parastatals

The strategy of privatizing parastatals for agricultural marketing and input supplies is generally adopted to improve market efficiency and promote entrepreneurship.

USAID's agribusiness interventions have not been designed and implemented as part of a coherent global policy. In fact, the Agency has yet to issue a policy paper on this subject, as it has for other program areas; consequently, the geographic bureaus and overseas missions have taken the lead in formulating their own strategies, which often remain implicit, not explicit. They have initiated agribusiness projects reflecting host country needs, institutional capabilities, and policy environments.

2 Agribusiness Programs in the Case-Study Countries

Host Country Economic Context

It is impossible in a short space to adequately describe the economic background of the seven countries for which case studies were prepared. National statistics alone do not satisfactorily represent complex economic landscapes; they conceal significant variations within countries. Moreover, many government interventions in agriculture are crop-specific, making generalizations about agriculture policy difficult. In addition, institutional arrangements are invariably complex, involving unwritten rules, varying degrees of autonomy between or within governments, and powerful interest groups. Consequently the brief descriptions provided here give, at best, a very incomplete picture of the economic context of each country.

Table 2 provides general statistics for the seven countries that hosted case-study USAID agribusiness programs: Bangladesh, Cameroon, Ecuador, Guatemala, Sri Lanka, Thailand, and Uganda. A brief economic profile of each country follows.

Bangladesh, among the poorest of the seven countries, also has the highest population density. Economic growth since the mid-1970s has been steady but not spectacular. Growth of gross national product (GNP) has averaged about 4 percent a year, nearly 2 percent per capita. Heavy-handed public controls—such as an overvalued currency and government oversight of key inputs and crop markets—cramped economic development. In recent years, the government has reduced its control by decontrolling markets for farm inputs and currency and privatizing public enterprises.

Agriculture dominates the economy, accounting for 38 percent of gross domestic product (GDP), 70 percent of the labor force, and 9 percent of exports. Rice constitutes three-fourths of farm output. Growth in agricultural production barely exceeded the 2 percent population growth rate over the past decade.

Cameroon's large agricultural sector contributes 27 percent of GDP, 60 percent of employment, and 19 percent of exports. A large petroleum sector affects the wider economy, accounting for half of exports. In the late 1970s and early 1980s, rapidly rising oil revenues resulted in high demand-push inflation that, in the absence of exchange rate adjustments, undermined economic competitiveness. The economy grew a rapid 7 percent a year between 1970 and 1985, after which the collapse of oil prices created a downturn from which the country has not yet recovered. Per capita GDP fell steadily after 1986. Declining world prices and export revenues for Cameroon's two major

Table 2. Country Statistics (in constant dollars)

Country	Population (millions)	GNP Per capita ($)	Agriculture Sector: Output ($ billion)	Agriculture Sector: Share of GDP (%)	Agriculture Sector: Share of Total Exports (%)
Bangladesh					
1985	97	150	8.0	42	23
1991	110	220	9.1	38	9
Cameroon					
1985	10	830	1.5	21	65
1991	12	860	1.4	27	19
Ecuador					
1985	9	1180	2.1	13	20
1991	11	1000	2.6	13	35
Guatemala					
1985	8	1210	1.5	NA	77
1991	9	940	1.6	26	66
Sri Lanka					
1985	16	390	1.9	25	55
1991	17	500	1.8	24	34
Thailand					
1985	52	810	12.5	17	45
1991	57	1570	13.5	12	21
Uganda					
1985	14	170	2.2	62	94
1991	17	170	2.8	62	96

NA = not available.

agricultural exports—coffee and cocoa—aggravated the downturn.

In 1990 Cameroon began a program of economic stabilization and market reform with the support of the International Monetary Fund (IMF), the World Bank, and other donors. New policy targets include reducing government expenditures, restructuring and privatizing public enterprises, liberalizing agricultural exports, and reducing tariff and nontariff barriers to imports. The IMF and World Bank suspended nonproject assistance because of the slow pace of policy change. In 1994 Cameroon devalued its currency by 50 percent—a move likely to enhance agricultural exports if appropriate macroeconomic policies follow. A long tradition of government control of the economy and a low level of infrastructure development have deterred the rapid growth of agribusiness in Cameroon.

Ecuador's oil boom in the 1970s launched a round of economic growth, at an average annual rate of 9.6 percent. But GDP dropped dramatically after oil prices fell in 1982 and 1986; per capita income has still not recovered to its 1982 level. Economic growth since 1985 has averaged only 2.5 percent annually, the same as the rate of population increase. Oil sales—long the bulwark of public revenues—fell faster than public expenditures, driving inflation to between 40 percent and 60 percent, higher than anywhere else among the seven countries studied.

Notwithstanding oil's importance, agriculture contributes 13 percent of GDP, 35 percent of the labor force, and 30 percent of exports. The two main traditional agricultural exports are bananas, produced by large agro-industrial firms in the thinly populated coastal area, and coffee, produced by small- to medium-size growers in the highlands. A large highland population of indigenous small farmers grows corn and beans but has limited access to markets.

Market principles long drove much of the nation's economy despite price controls, parastatals, and a substantial public sector. Government's role began to change in the mid-1980s as Ecuador let interest rates float above the level of inflation, freed the exchange rate and currency market, and sold some parastatals.

Guatemala also has a large agriculture sector, providing 26 percent of GDP, 50 percent of the labor force, and 66 percent of exports. Until recently, agricultural production concentrated on beef, four traditional export crops (coffee, bananas, sugar, and cotton), and basic grains for the domestic market. As in Ecuador, much of the agricultural labor force lives in the highlands, where indigenous farmers work small plots and provide seasonal labor for large, export-oriented plantations in the lowlands.

Private enterprise organizes most of the agricultural sector; agribusinesses handle input and crop marketing, for example. Guatemala's public sector is the smallest among the seven countries studied and indeed among the smallest in the world. Except for a period of instability in the early 1980s, fiscal policy has generally been conservative. Exchange rate policy has followed market forces, and monetary policy has restrained inflation. But repressive military regimes, rural violence, and the generally closed nature of society have limited the scope for developing the agriculture sector.

Sri Lanka's agriculture sector provides 24 percent of GDP, 50 percent of the labor force, and 34 percent of exports. The two major sectors of the agricultural economy are traditional plantation crops (tea, rubber, and coconut) and smallholder rice production. Most small farms cover less than 1 hectare, and output per worker is low. GDP growth since 1985 averaged a modest 3.5 percent, but it was 2 percent above the population growth rate.

Civil strife, ethnic violence, and a legacy of public controls in agriculture (import barriers, cropping and land-use regulations, and plantation parastatals) cramped agribusiness development. Recently, the government has pulled back from the sector, opening a window for private sector input and crop marketing. As a result, fruit and vegetable exports and food processing are on the rise. Abundant natural resources suitable for agricultural production, plus a highly literate labor force, enhance Sri Lanka's prospects. But political strife, persistent antibusiness public policies, and weak rural infrastructure continue to dampen expectations.

Thailand's agriculture sector plays a major but diminishing role in overall economic development. Thai agriculture makes up only 12 percent of GDP but 21 percent of exports and fully 65 percent of the labor force. The gap between productivity in agriculture and other sectors is wider in Thailand than among any of the sample countries, in large measure because supportive macroeconomic policies and selective industrial protection have drastically increased investment in manufacturing and exports.

With annual GNP growth running at 8 percent since 1986, the Thai economy is widely touted as the "fifth Asian tiger." Processed foods lead the boom in manufacturing exports. Thailand surpassed Brazil in 1991, taking fifth place in the ranks of the world's top consumer-oriented processed-food exporters. Fresh and processed vegetables, fruits, juices, fish, poultry, sugar, and tobacco lead Thai agro-exports. A strong infrastructure base, a skilled labor force, and pro-growth public policies set strong prospects for the continued rapid growth of agribusiness.

Uganda has an overwhelmingly agricultural economy, providing 62 percent of GDP, 80 percent of the labor force, and 96 percent of exports. Perverse economic policies and a devastating civil war set Uganda back in the 1970s and early 1980s: in 1965, per capita GNP was $400, more than double the 1991 level of $170.

Since the restoration of political order in 1986, the economy has grown an average 5 percent a year. Uganda recently launched one of the most impressive economic liberalization programs in sub-Saharan Africa. It introduced a market-based exchange rate, eased exchange controls and import barriers, removed export taxes, and plans to exempt imports used for export production from a variety of duties and sales taxes. Uganda has also expedited investment licensing, eliminated or simplified export and import licensing, simplified customs procedures, and abolished parastatal monopolies for marketing coffee and cotton. Donor-funded expatriate advisers formulated and implemented many of these policy reforms with high-level public support. But middle- and lower-level government officials often lack the will and skill to carry reform policies forward effectively.

The case-study countries represent a wide range of policy environments. Those in Thailand and Guatemala are probably most supportive of the growth of agribusiness, and those in Bangladesh and Cameroon the least supportive. The policy environments in Ecuador, Sri Lanka, and Uganda fall somewhere in between.

Program Descriptions

The objective of USAID's agribusiness efforts in the last decade has been sustainable economic growth based on private sector–led agricultural development. This required more than direct assistance to existing or emerging agribusiness firms. It required macroeconomic policy reform; the cultivation of pro-business institutions; the privatization of parastatals (which stifle entrepreneurship and exacerbate inefficiencies); the research, development, and the diffusion of agricultural technologies; and the construction of such physical infrastructure as roads, transport systems, and communication networks. The Agency crafted agribusiness programs to fit country needs and conditions, and—over and above direct service to agribusinesses—tried to cultivate an environment conducive to the expansion of agribusiness. (Table 3 gives a brief description of the case-study programs, constituent projects, and allocated funds.)

Bangladesh's USAID agribusiness program focused on increasing farm productivity by privatizing fertilizer distribution. The first phase of the Fertilizer Distribution Improvement (FDI–1) project (1978–86) committed $144 million to import 527,000 tons of fertilizer, $60 million to construct warehousing facilities for the Bangladesh Agricultural Development Corporation (BADC), and $18 million for technical assistance and training. FDI–1 also facilitated the deregulation of subdistrict fertilizer distribution and the decontrol of prices and marketing margins below those at BADC primary distribution points.

FDI–2 (1987–94), with a budget of $66 million, was designed to help the government disengage totally from fertilizer distribution. Its key components were a $44 million fertilizer import program, with local currency generated by the sale of imported fertilizer to be used to create a fertilizer credit fund; $6 million for construction of storage, bagging, and handling facilities; and $5 million for technical

Table 3. Country Programs

Country	Program Focus and Project List			Life of Project ($ million)
Bangladesh	Privatized the fertilizer distribution system. Phase 1 was limited to subdistrict-level deregulation. Phase 2 sought government's total disengagement from fertilizer import distribution.			$288.0
	Fertilizer Distribution Improvement 1	1978-86	222.0	
	Fertilizer Distribution Improvement 2	1987-94	66.0	
Cameroon	Replaced a parastatal-administered, subsidized fertilizer distribution system with a fully privatized, unsubsidized system.			15.0
	Fertilizer Subsector Reform	1987-94	15.0	
Ecuador	Promoted nontraditional exports by assisting farmers, agribusiness firms, and producer organizations. Provided market information, supported horticultural research, and gave technical assistance on harvest handling and grading.			12.5
	Nontraditional Agricultural Exports 1	1984-88	8.0	
	Nontraditional Agricultural Exports 2	1989-94	4.5	
Guatemala	Shifted from establishing regional buying centers, strengthening cooperatives, and building infrastructure to promoting nontraditional exports. Provided market information and technical assistance to firms and farmers, and support to producer and marketing organizations.			70.2
	Small Farmer Marketing	1977-86	4.2	
	Agribusiness Development	1984-92	13.5	
	Cooperative Strengthening 1 and 2	1986-94	15.5	
	Highland Agricultural Development	1989-94	37.0	
Sri Lanka	Started with crop diversification in Mahaweli System B. Then developed regional and national focus, high-value crops, value-added agroprocessing, and nontraditional exports.			54.2
	Mahaweli Agricultural and Rural Development	1987-95	23.0	
	Mahaweli Enterprise Development	1990-95	15.0	
	Agro-Enterprises	1992-95	14.0	
	Entrepreneurship Development Training Program	1982-93	0.2	
	Commercial Small Farm Development Program	1990-93	2.0	
Thailand	Promoted high-value crops for processing and seed multiplication, primarily by facilitating contacts between small farmers and agribusiness firms. Confined to a remote, undeveloped area (Lam Nam Oon).			11.2
	Integrated Rural Development	1977-85	4.1	
	Agricultural Technology Transfer	1985-88	0.1	
	Integrated Agro-Production and Marketing	1987-91	7.0	
Uganda	Shifted from rehabilitating business firms (including agribusinesses) and support to cooperatives to promotion of high- and low-value nontraditional exports. Supports macropolicy reform, institutional strengthening, and agribusiness enterprises.			95.0*
	Rehabilitation of Productive Enterprises	1984-91	30.0	
	Cooperative Agriculture and Agribusiness Support	1988-94	20.0	
	PL480 Title II (currency generating)	1989-95	20.0	
	Agricultural Nontraditional Export Promotion	1988-93	51.5	
	Investing in Developing Export Agriculture	1991-96	25.0	

*As of 1993. An additional $40 million is expected.

assistance and training. In the course of implementation, technical assistance outlays rose to $20 million, and the fertilizer credit fund ran just under $25 million. The two-step FDI program contributed significantly to the privatization of Bangladesh's fertilizer distribution system.

Cameroon's primary objective in the Fertilizer Subsector Reform Program (1987–94) was the timely provision of fertilizer for both food and export crops at minimal cost to farmers and the government. This was to be achieved by replacing the subsidized distribution system administered by FONADER (a parastatal) with a fully privatized, unsubsidized system. USAID envisioned four major benefits from the program: lower marketing costs, government savings, more timely and flexible fertilizer supplies, and more optimal fertilizer use by farmers. The program budget totaled $15 million: $1.5 million for technical assistance and $13.5 million for a revolving credit fund. Cameroon now has a fully privatized fertilizer distribution system that has significantly reduced the user cost of fertilizer without cost to the government.

Ecuador, unlike Bangladesh and Cameroon, focused its USAID agribusiness program primarily on nontraditional agricultural exports. Financial outlays for the first phase (1984–88) was $8.0 million; for the second (1989–94), $4.5 million. The Agency provided technical assistance touching on nontraditional export-related policies, promotions, product selection, production technology, and marketing. In the first phase, the program provided market information to Ecuadorian exporters and established a trade office in Miami. In the second phase, the program focused on horticultural research, the provision of plants and seeds, the dissemination of information about U.S. phytosanitary standards and the global marketplace, and the improvement of postharvest handling and quality grading.

The program's product focus was on cut flowers, fresh fruits and vegetables, specialty crops, and processed fruits and vegetables. The program was run by two private sector organizations—the Federation of Ecuadorean Exporters (FEDEXPOR) and the National Association of Business Owners (ANDE)—along with the Agribusiness Advisory Board, which was created under the program. The program also provided and packaged long-term loans to exporters of nontraditional agricultural products.

Guatemala. USAID efforts were more varied than in some other countries. There were four projects: Small Farmer Marketing (1977–86, $4.2 million), Agribusiness Development (1984–92, $13.5 million), Cooperative Strengthening I & II (1986–94, $15.5 million), and Highland Agricultural Development (1989–94, $37 million). The Small Farmer project aimed at establishing regional buying centers with cooling and grading facilities to facilitate the marketing of horticultural products. These buying centers were to be managed by a cooperative. The Cooperative Strengthening project, designed to bolster the cooperative federation, expanded to include direct assistance to independent cooperatives as well as farmer organizations. It assisted agricultural cooperatives in production, processing technology, marketing, and general management.

The Highland Agricultural Development project began by providing infrastructure to help increase agricultural output. Early efforts included the construction and maintenance of access roads, a pilot reforestation program, and development of small-scale irrigation and soil conservation systems. Later the project added a substantial marketing component, implemented through the Nontraditional Exporters Guild. The project exemplified USAID's worldwide shift in emphasis away from production and toward marketing. The Agribusiness Development project had three components: loans to agribusiness firms, support for cooperatives, and establishment of information and support services through the Guild of Exporters of Nontraditional Products (GREMIAL).

Sri Lanka saw USAID efforts to increase incomes and employment through crop diversi-

fication and value-added agricultural processing. Five projects at different sites followed different strategies. Two large projects were in the Mahaweli region, a newly irrigated, recently settled area in the east-central part of the country. The 8-year Mahaweli Agricultural and Rural Development project (MARD, 1987–95) is a $23 million intervention designed to make irrigation systems more efficient, promote crop diversification through agricultural extension, give farmers easier access to exporters and brokers, and assist agribusiness firms in quality control, transport, storage, packaging, and harvesting.

The second project, Mahaweli Enterprise Development (MED, 1990–95), covers the entire Mahaweli region. It was designed to accelerate the creation of private enterprise employment at all levels—from microenterprises to large-scale ventures—through increased private investment and the promotion of high-value crop production, processing, and export. The $15 million in USAID funding for MED is allocated to three components: the reform of policies, regulations, and procedures affecting agribusiness ($1.5 million); direct assistance to small-scale enterprises and microenterprises ($8.5 million); and direct assistance to medium-size and large enterprises ($5 million).

The Agro-Enterprise project (AgEnt), which covers the entire country, began operations in December 1992 with a $14 million grant. The project helps emerging and expanding agribusinesses through a combination of technical services (in production, processing, and marketing), research and training, commercial loan packaging, and cofinancing grants.

The other two projects are cofinanced by private voluntary organizations. The Entrepreneurship Development Training Program, implemented through the Agromart Foundation, promotes business development among women and other disadvantaged groups in northwest and southern provinces by offering training to potential entrepreneurs. The other intervention, Commercial Small Farm Development Program, began in 1990 under a cooperative agreement with Agricultural Cooperative Development International. Total USAID assistance to this project is about $2 million. This project has established a pineapple nursery and has entered into a joint venture with an agribusiness firm to produce and market gherkins.

Thailand's program consisted of three projects. The Integrated Rural Development project (1977–85), which received $4.1 million of USAID assistance, was designed to establish an irrigation management system and to develop and disseminate technologies for increasing productivity and product diversity. During implementation, the project also tried to develop agricultural marketing channels.

One element of the multisite Agricultural Technology Transfer project (1985–88) was located in Lam Nam Oon, in northeastern Thailand—the most undeveloped area of the country. The objective was to strengthen public institutional capacity by educating officials in the production and marketing of nontraditional agricultural exports. The project also sought to establish links and working relationships between farmers, processors, marketing firms, and the government. The project effectively diffused new production technologies and facilitated the formation of connections between farmers and marketing firms. It also trained grassroots agricultural workers, many of whom were later employed by agribusiness firms in management and technical positions.

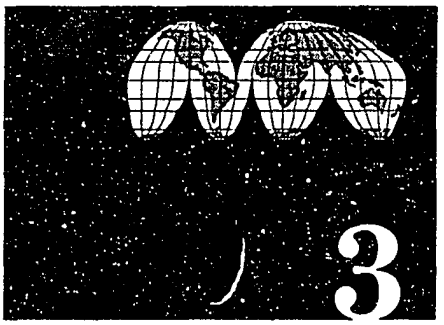
The third project, Integrated Agro-Production and Marketing (1987–91), aimed to identify producers and markets for new high-value crops using labor-intensive technologies. It identified areas, crops, and farmers that would attract agribusiness firms. Then, when firms were willing to operate there, the project helped them directly. The project recruited agribusiness firms, fostered contract farming in both seed crops and fresh vegetables and vegetables for processing, and stimulated processing and marketing activities.

Uganda originally intended, with USAID support, to resuscitate businesses, including agribusinesses, that had faltered before and after the fall of the regime of Idi Amin. The Rehabilitation of Productive Enterprises project (1984–91) provided foreign exchange and credit for equipment purchases by firms that had shut down or operated well below capacity. In 1988 two new activities began. One project, Cooperative Agriculture and Agribusiness Support (CAAS), was designed to increase the availability of agricultural inputs, rehabilitate cooperatives, and increase the local production of agricultural equipment and inputs. The planned expenditure of $20 million was mainly to strengthen cooperative federations. The other project, Agricultural Nontraditional Export Promotion Project (ANEPP), with a planned outlay of $51.5 million mostly for nonproject assistance, focused on instituting trade and exchange rate reform and developing the government's capability for policy analysis.

In 1990 the mission redesigned the CAAS and ANEPP projects to focus on nontraditional exports and to increase direct assistance to agribusinesses (including cooperative district unions and cooperative primary societies). In 1994 USAID committed $25 million to a new agribusiness project, Investing in Developing Export Agriculture (IDEA). IDEA mostly provides long-term technical assistance, including direct assistance to individual businesses to increase exports of selected nontraditional products, and to support private sector trade associations. The objectives are to move agribusinesses from pilot production to full financial viability and to create self-sustaining private sector support institutions that can provide individual businesses with technology and market resources for nontraditional exports.

Of the seven case-study countries, two (Bangladesh and Cameroon) focused on privatizing input markets and five on processing and marketing of agricultural produce. Technical advice for the two fertilizer privatization programs differed in duration and extent. The Cameroon program used limited outside technical assistance and lasted 6 years; the Bangladesh program has had a big technical assistance team, both expatriate and Bangladeshi, for 12 years.

The five other programs focused heavily on nontraditional exports, but there were differences worth noting. Two of the programs (Uganda and Ecuador) covered the entire host country; the other three targeted relatively undeveloped regions. Two programs (Thailand and Guatemala) started with a focus on traditional agricultural production or integrated rural development programs and shifted their focus toward agricultural marketing and agribusiness development. Two others (Guatemala and Uganda) started with a heavy emphasis on cooperatives and shifted to providing direct assistance to private agribusinesses. All five evolved into multifaceted programs encompassing regulatory reform, as well as the development of institutions (public and private), enterprises, and markets. And all five became increasingly attentive to the tasks of identifying and tackling key constraints on agribusinesses for nontraditional exports.



3 Program Performance and Outcomes

This section assesses the performance and outcomes, the accomplishments and shortcomings of agribusiness programs in the sample countries. The analysis of the programs was done globally, not individually, across the seven countries. It addressed issues in six categories. Three concerned the growth and expansion of agribusiness enterprises (private firms, cooperatives, and collaborative arrangements with foreign firms); two concerned the growth of supporting institutions (public and private); and one covered the growth of agricultural exports. Obviously, none of these categories is appropriate for every program, nor do they capture each facet of the programs. But taken together, they present a coherent picture of program performance.[3] That picture is summarized in Table 4.

Certain points must be kept in mind. For one thing, in most of the sample countries, factors outside the agriculture and business sectors—including macroeconomic policy reform, shifts in political stability, changing world markets, and improvements in infrastructure—seem to have affected the performance of agribusiness more than have direct program assistance to agribusinesses. Moreover, USAID is only one of many organizations—bilateral, multilateral, and host country—active in agricultural and agribusiness development. Thus, it is often difficult to isolate the economic impact of USAID interventions. Finally, many agribusiness programs have been pilot interventions, experimental in nature. Their significance lies less in bankable outcomes than in demonstrating the feasibility of a new approach. When pilot programs succeed, their ability to generate a bandwagon effect may be far more significant than the outcomes directly attributable to a specific program in a specific place.

Growth and Expansion of Private Agribusinesses

USAID agribusiness programs generally sought to create and expand agribusinesses, but strategies to realize this objective varied. There were three basic approaches. First, most programs provided assistance to existing or new firms, either directly or through intermediaries. For example, they provided training, technical assistance, information sharing, mar-

3 This section is based mainly on the seven case studies but draws on evaluations of other bilateral and regional agribusiness programs as well.

Table 4. Case-Study Country Performance and Outcomes

Country	Growth & Expansion of Agribusiness	Growth of Cooperative Agribusinesses	Direct Foreign Investment & Other International Collaborative Arrangements	Reforming Agribusiness-Related Government Organizations	Creating & Empowering Private Sector Support Organizations	Growth in NTAEs
Sri Lanka	2	2	1	2	?	2
Thailand	3	NA	2	2	NA	3
Bangladesh	3	NA	NA	2	NA	NA
Cameroon	2	NA	NA	3	NA	NA
Ecuador	3	NA	2	2	3	3
Guatemala	3	3	2	2	3	3
Uganda	?	1	NA	2	?	2

Note: 3 = Successful; 2 = Moderately Successful; 1 = Unsuccessful; NA = Not Applicable; ? = Uncertain.
NTAE = Nontraditional Agricultural Exports

This table was prepared by the CDIE assessment manager in consultation with case-study country team leaders.

ket intelligence, credit or credit facilitation, or production technology. Some programs subsidized new entrepreneurs' startup or expansion of agroprocessing and marketing ventures. Second, most programs helped create or improve private and public institutions supportive of agribusiness. Third, USAID programs facilitated the privatization of parastatals responsible for the supply of inputs, or for the marketing and distribution of produce. That allowed agribusinesses to take over functions once served by the government.

The most successful programs were in Bangladesh, Ecuador, Guatemala, and Thailand. In Bangladesh, when the fertilizer subsector was privatized, hundreds of firms emerged to import and distribute fertilizers. Thousands more engaged in fertilizer retailing despite a mixed policy environment. Why did privatization have so great an impact? Fertilizer is critical to Bangladesh's rice production, which accounts for 75 percent of agricultural output, so demand for the services of fertilizer marketing firms was immediate throughout the countryside. Entrepreneurs entered the marketplace to meet demand from rice growers with little or no direct assistance from USAID or the Bangladeshi government.

The Lam Nam Oon region of Thailand also witnessed an unprecedented expansion of activity among firms involved in marketing agricultural produce and inputs, as a result of USAID interventions. Thailand was experiencing an agribusiness boom, but Lam Nam Oon had not participated in it because it lay in a remote part of the less developed northeastern part of the country. After helping to finance Lam Nam Oon's irrigation system, USAID helped establish contracting arrangements between agribusinesses and small farmers. It accomplished that by informing local farmers about markets for new crops and informing agribusinesses about local growing conditions.

The USAID program in Guatemala had similar impact. In the early years the focus was on infrastructure development and the introduction of new technologies. Later the focus shifted to market development, especially of markets for nontraditional exports. USAID facilitated contacts first between Guatemalan agribusinesses and U.S. importers and then between the same agribusinesses and small producers in the highlands. The result was a vibrant agribusiness industry centered on the production and marketing of nontraditional exports to U.S. markets. Ecuador's experience was similar but with more emphasis on field trials and direct assistance to individual firms.

Agribusinesses did not grow as much in the three other countries. In Sri Lanka, the agribusiness program had only limited impact. Basic policy, infrastructure, and institutional constraints must be addressed before agribusiness can grow substantially in Sri Lanka's Mahaweli region. In Uganda, too, entrepreneurs' response to the opportunities created by the agribusiness program was weak, mainly because of poor physical infrastructure, weak supporting institutions, and lack of private sector experience and expertise. But the Uganda program created a number of pilot activities, some of which appear ready for the sort of rapid growth achieved in Guatemala and Ecuador. In Cameroon, many private firms began importing and distributing fertilizers, but there was a sharp drop in production because world demand for Cameroon coffee declined. With the recent devaluation, it has once again become profitable to use fertilizer in coffee cultivation, and the anticipated growth in agribusiness may now take place.

Country studies suggest four significant, although by no means conclusive, findings:

Direct assistance to agribusiness firms is useful but not critical to the growth of agribusiness. In Bangladesh, Ecuador, Guatemala, and Thailand—the countries that have registered significant agribusiness growth—direct program assistance reached only a small proportion of firms. Moreover, it did not cover all the problems faced by agribusinesses. That shows that private firms can grow and flourish even without direct assistance. In general, improving the policy and regulatory environment, privatizing parastatals, disengaging government from direct participation in agribusiness activity, and developing physical and institutional infrastructure do more to promote the creation and expansion of agribusinesses than does direct assistance to individual firms. Box 1 gives a suggestion of the relative growth of agribusiness firms in three diverse countries.

USAID promotions benefited small- and medium-size agribusinesses most.[4] Country studies do not support the perspective of dependency theorists that large domestic and foreign firms—endowed with financial, technological, managerial, and marketing advantages over small and medium-size firms—monopolize lucrative high-value exports. Many high-value, nontraditional exports (such as fresh fruits and vegetables, ornamentals, herbs and spices) are typically grown by small farmers using highly labor-intensive technologies and are processed by small- and medium-size firms. USAID emphasizes these products, precisely because they create opportunities for small farmers and small- to medium-size agribusinesses.

Effective assistance often targeted two concerns: export links and production and processing technology. Successful assistance in countries covered by USAID's PROEXAG

4 Many USAID projects focus on micro and small agribusinesses. The MED project in Sri Lanka, for example, has a component that targets microenterprises for assistance. A more interesting example is the private voluntary organization (PVO)-implemented FAAD project in Ghana, which was designed to assist farmer organizations and rural enterprises with input supplies.

Box 1. The Varying Growth of Agribusiness Firms

Bangladesh

"Dealers and retailers have emerged in virtually every one of the 65,000 villages in Bangladesh.... There are 1,271 private distributors, 10,000 dealers, and over 100,000 subdealers (individual retailers). In addition, the distributor survey indicated that each distributor owned two warehouses and rented two more, and that half purchased their own transport facilities."

Guatemala

"According to the data from the Nontraditional Exporters Guild, the number of exporters of nontraditional agricultural products increased from 23 in 1980 (mostly small exporters of ornamental plants and seeds) to 98 in 1990 and 161 in 1992. This blossoming of the number of firms ... [represented] an enormous diversification of types and sizes."

Uganda

"The number of agribusinesses moving into the more sophisticated high-value nontraditional exports is small, the range of products is narrow, and production levels, for the most part, are extremely low."

—From USAID country case studies

(Nontraditional Agricultural Exports Support Project in Central America) targeted nontraditional export technology and links with importing firms in destination countries. Help is needed with technology because most small- and medium-size firms lack the production and marketing technologies needed to compete in, or meet the quality standards of, developed countries. Assistance is needed in developing market links because import markets for nontraditional products are highly competitive and volatile. Many local firms require hands-on assistance—first, in breaking into new markets, and second, in providing reliable supplies with consistent quality. Box 2 relates how one entrepreneur parlayed hands-on experience with a foreign firm to start up a successful agribusiness of his own.

Bandwagon effects often dwarf immediate outcomes in importance. Successful pioneering firms set examples for others to follow. They make others aware of agribusiness opportunities and show ways to earn profits. More important, firstcomer firms develop and disseminate expertise to latecomers through both formal and informal channels. In Bangladesh, Ecuador, Guatemala, and Thailand, for example, new businesses were often established by former employees of pioneering firms. This process is just now getting under way in Uganda.

Growth of Cooperative Agribusinesses

USAID has long assisted cooperatives both as grassroots organizations and as agribusinesses. Four country studies, Cameroon, Guatemala, Sri Lanka and Uganda, examined the performance of such programs. Most "cooperatives" did not originate, grow, and operate as voluntary organizations. Rather, they were created by governments for political and ideological reasons, nurtured and sustained by outside technical and financial assistance, and operated for all practical purposes as parastatal organizations. In fact, governments in many cases sabotaged genuine cooperatives to undermine the power of potentially threatening grassroots movements (Lele and Christiansen 1989).

Box 2. An Ex-Employee of a Foreign Subsidiary Starts a New Firm

Somchai Para, a Thai entrepreneur, established his own agribusiness in Lam Nam Oon. After studying agricultural economics, he worked 5 years in Lam Nam Oon for a Taiwanese company, Adams International, rising to the level of manager before moving on to S&P Food Supply. After 3 more years of experience, in 1990 Somchai founded Euro–Asian Seed, which now has three full-time and three part-time employees. He began by contracting with farmers to produce tomatoes for processing. Later, he supervised the production of fresh sweet peppers.

Somchai is optimistic about the future. "My expansion depends upon getting the market. If I succeed in getting orders, I can get farmers [to produce on contract] because I have a good credit rating in this area, and I do not delay in paying farmers." He does not see competition as a problem: "If a company comes to the Lam Nam Oon area, it is really good for farmers. And there is no lack of farmers ready to work with me."

A central element of the program in Uganda has been to develop cooperatives first as suppliers of agricultural inputs to farmers, then as producers and marketers of agricultural products. The program's objectives were twofold: (1) increase the effectiveness of two national federations, the Uganda Central Cooperative Union and the Uganda Cooperative Alliance, and make them financially sustainable, and (2) strengthen selected district unions and primary societies as suppliers of agricultural inputs as well as producers and marketers of agricultural products. In the end, the program achieved neither objective, mainly because few district unions and primary societies had the management expertise and economic base to become commercially viable. Without commercially viable members, there was no way for the federations to become financially sustainable.

Guatemala's cooperative development program was almost identical to Uganda's and only slightly more successful. The effort to make the federations financially sound did not always succeed, and many primary cooperatives receiving assistance in the production and marketing of nontraditional agricultural exports failed as commercial enterprises. The few that succeeded did so by limiting their activities to what they knew how to do and focusing on remaining financially viable. Many of those that failed did so either because of weak management or because they undertook sophisticated processing and marketing activities for which they did not have the necessary expertise.

The effort in Sri Lanka was much smaller and somewhat more successful. The USAID program formed farmer organizations to manage shared irrigation systems, supply inputs to members, and produce nontraditional crops for domestic and export markets. The effort fell far short of its targets, but some of the organizations are now carrying out agribusiness functions, including input supply and agricultural marketing—even contracting production to Colombo-based agribusinesses. These farmer organizations have also improved farmers' bargaining positions with export firms. The level of commercial activity is still low, but it appears to be sustainable.

USAID was also involved in strengthening cooperatives in Cameroon. Before privatization, coffee cooperative unions handled all wholesale fertilizer distribution. The privatization program eliminated their monopoly, and private distributors replaced the cooperative unions. The primary cooperative societies are still involved in fertilizer retailing, mainly because they still retain a monopoly or privileged position in coffee marketing.

A second USAID project in Cameroon aims at liberalizing and privatizing the marketing of arabica coffee while strengthening the coffee cooperative union enough in one producing province to compete on the open market. This program has been a moderate success, substantially reducing the union's operating costs and making it more responsive to global markets. As a result, marketing margins from the producing areas to the port have fallen and producer prices have increased.

The experience of many other USAID projects with "official" cooperative components has not been encouraging.[5] They seem to have succeeded to a limited extent in uniting farmers in marketing networks, establishing cold storage and other facilities, and facilitating contacts between producers and buyers. Whether these endeavors are sustainable is questionable. An evaluation of a cooperative production and marketing project in El Salvador, for example, indicated that cooperatives rely increasingly on project assistance over time, "decreasing the potential for sustaining project achievements" (Checchi and Company 1990). This is typical of most USAID projects for "strengthening" cooperatives.

The most important reason for the relatively poor performance of government-sponsored cooperative agribusinesses was probably their limited exposure to the discipline of the marketplace. Many cooperatives were founded and developed more as bureaucratic organizations than as agribusinesses. Not enough attention was paid to means for achieving commercial and financial sustainability. USAID assistance encouraged a cooperative spirit that distinguished these organizations from agribusinesses, tending to ignore business considerations without which they could not survive.

The Guatemalan case study mentions two weaknesses common to cooperatives: high operating costs and rigid, slow responses to problems and opportunities. With perishable agricultural products, processors and producers must make quick decisions about procurement and processing. The participatory decision-making and consensus valued by cooperatives mean decisions lag behind market movements. And cooperatives' operating costs are often high because the member–owners are unable to insist on oversight of managers to ensure that they put organizational interests above their own personal interests.

Experience in developed and developing countries suggests that these weaknesses are not intrinsic to cooperatives. Many well-managed independent cooperatives have demonstrated the ability to operate at least as efficiently, flexibly, and competitively as their noncooperative agribusiness counterparts. Cooperatives have exported high-value agricultural commodities from Israel, Kenya, and Mexico, for example. Cooperatives receiving USAID support in Eastern Europe and the newly independent states show potential for growth with suitable technical assistance and infusions of capital (Chemonics International 1993). Box 3 describes the experience of a successful cooperative in Guatemala.

The experience in Sri Lanka also shows that under the right conditions cooperative organizations can perform agribusiness functions, even under difficult economic circumstances. Farmer organizations in Mahaweli enjoyed considerable autonomy and were flexibly organized. That enabled them to respond quickly to opportunities and to undertake business activities when the chance arose. But other factors also explain their success: their homogeneous socioeconomic background and

5 For example, Bolivia Private Agricultural Organizations Project, El Salvador Cooperative Production and Marketing Project, Haiti Cooperative Marketing Project, Jamaica Small Farmer Marketing Project, and Egypt Agricultural Marketing Project.

high literacy rates, a supportive political environment, and the widely felt need for grassroots organizations.

These critical factors have been absent in many USAID cooperative development projects, for which the impetus has often come from well-meaning (or corrupt) bureaucrats rather than from farmers. Most agribusiness cooperatives as they now exist and operate suffer from weaknesses that put them at a competitive disadvantage to private entrepreneurs. Most USAID programs to develop cooperatives have been fairly simplistic in approach and have seldom addressed the cooperatives' organizational limitations.

Direct Foreign Investment and Other International Collaborative Arrangements

Agribusiness programs, especially those focused on nontraditional exports, often sought to facilitate joint ventures and other collaborative arrangements between international agribusinesses and host country firms. Even when this activity was not explicitly mentioned in project documents, it was widely believed that such partnerships were essential for bringing production technology and management skills to host country firms and for giving them access to exports. In addition to the seven country programs, the assessment studied three regional agribusiness projects: PROEXAG in Central America, the Africa Private Enterprise Fund (APEF), and the Restructuring Agriculture and Agribusiness (RAA) project in Eastern Europe. Each project actively promoted direct foreign investment and collaborative arrangements (Swanberg 1993a; Swanberg 1993b).

To attract international firms, agribusiness programs organized site visits for business executives, conducted feasibility studies, identified potential partners and, in a few cases, offered subsidies to investors. To help local firms and entrepreneurs, programs funded foreign-study tours and training within international firms, prepared promotional materials, and held seminars and meetings on foreign investment. Government officials were often invited to participate. Thus, USAID's agribusiness programs followed a two-pronged strat-

Box 3. An Agricultural Cooperative in Guatemala

Cuatro Piños is a successful Guatemalan agricultural cooperative whose members—indigenous farmers—cultivate small plots (averaging 0.6 hectares) about 25 kilometers west of Guatemala City. Membership grew from about 150 families in one town to 2,000 families in eight towns.

Cuatro Piños' first effort, with substantial Swiss Government aid, was to rebuild members' houses destroyed by the earthquake of 1976. After reconstruction, the Swiss provided technical assistance for a series of agricultural and social projects. Beginning in 1978, the Swiss and then the cooperative acted as intermediary for cauliflower production under contract to Alcosa, a freezing plant exporting to the United States (apparently the first case of Alcosa sourcing from an intermediary).

By 1981, the cooperative had produced snow peas for another exporter and had experimented with other crops. In the 1980s, snow peas represented three-fourths of the value of Cuatro Piños production. USAID added to ongoing Swiss support by helping to finance the coop manager's salary. This competent manager provided continuity as the cooperative expanded exports until his departure in 1992 to form his own snow pea–exporting firm.

egy: they encouraged international firms to make investments and they helped host country officials and firms find foreign partners.

Attempts by regional agribusiness projects to attract direct foreign investment have met with limited success. APEF, after spending a considerable amount of time and resources to get U.S. firms to invest in Africa, showed few positive results. Pioneer Hybrid International's investment in a seed multiplication facility in Cameroon was a failure, for example. Even in the few cases where APEF succeeded, the fate of the subsidiaries or joint ventures remains uncertain. RAA's experience in promoting direct foreign investment (including joint ventures) in Eastern Europe has also been less than encouraging. U.S. agribusinesses have been reluctant to invest in enterprises with outdated technologies and a bloated labor force. PROEXAG has been more successful in attracting foreign direct investment, partly because Latin America is near the United States and is counterseasonal to the U.S. marketplace, so its countries can provide summer-season produce in the U.S wintertime.

Agribusiness programs in some case-study countries have been more successful at attracting foreign investment than the regional programs have. In Thailand's Lam Nam Oon area, three of eight firms operating were joint ventures, one with a U.S. firm and two with Taiwanese enterprises. A quarter of the 24 firms CDIE interviewed in Guatemala were U.S. subsidiaries or joint ventures. At least one began operating in the country even before USAID agribusiness efforts. Box 4 describes an example of a successful direct foreign investment in Uganda.

Agribusiness programs seem to be more successful as facilitators for sourcing and marketing arrangements between local and international firms than as facilitators for direct foreign investment. PROEXAG, for example, facilitated sourcing agreements between 33 U.S. companies and more than 100 Central American firms, cooperatives, and producer organizations from 1986 through 1991. Many exporters of vegetable and horticultural products in Ecuador and Guatemala rely on U.S. firms for transnational shipping and marketing. In Uganda, the USAID program helped Uvan Ltd., a domestic firm, reach an agreement with McCormick of Baltimore under which McCormick would buy cured vanilla beans for several years. Also in Uganda, Japanese firms supplied silkworms to two local agribusinesses and contracted to purchase raw silk. In Thailand, many agribusiness firms in Lam Nam Oon made export agreements with foreign concerns.

Such offshore sourcing and export marketing arrangements confer on international firms the advantages of vertical integration without

Box 4. Promising U.S. Direct Foreign Investment in Ugandan Agribusiness

In 1990, Agro Management Group Inc., a California firm, invested in the production, processing, and marketing of pyrethrum in Uganda. A daisylike flower that thrives on marginal soil, pyrethrum is a natural insecticide. After conducting a feasibility study, the company launched a cash-crop production scheme among small farmers in southwest Uganda. It reproduced selected plants in nursery beds to develop planting material for local contract farmers. It also created its own extension service and established nine buying centers.

By the end of 1993 the company had 3,000 contract farmers with 1,000 acres under cultivation and a waiting list of 3,000 farmers who wanted to join the scheme. Originally, the company made arrangements to process the flowers in Rwanda, but because of political uncertainties and civil strife there, the firm now plans to establish its own processing facility in Uganda. Company officials are optimistic.

the risks of direct investment. If arrangements falter, they can be terminated without substantial loss. But if the experience is positive, sourcing and marketing arrangements can lead to direct investments in production and processing. The implications of this are obvious: USAID programs should give priority to the facilitation of sourcing and marketing arrangements with international firms rather than to the promotion of direct investment, especially in politically and economically unstable countries that have poor track records in foreign investment.

Officials at international agribusiness firms suggested that they would benefit from USAID assistance in three areas: (1) the preparation of feasibility studies with information on agroecological systems, crop selection and cultivation, technical skills and capabilities, local markets, and government policies and regulations; (2) overseas training of host country personnel selected for a proposed subsidiary or joint venture (an expenditure they felt should be considered a USAID investment in local manpower development); and (3) in-country training of farmers and, if necessary, extension staff.

Reforming Agribusiness-Related Government Organizations

Agribusiness programs also provided assistance so host governments could rationalize bureaucratic procedures for agricultural investments and exports, privatize input-distributing parastatals, and build capabilities for policy analysis. The premise underlying such assistance was that the appropriate role for government was not to engage in agricultural processing, marketing, or input supply, but to create a policy and regulatory environment conducive to the growth and expansion of agribusiness.

USAID efforts to simplify, streamline, and rationalize bureaucratic procedures and regulations governing agribusiness have been modestly successful. In four case-study countries, Ecuador, Guatemala, Sri Lanka, and Uganda, USAID was instrumental in reducing the number of unnecessary and unproductive rules and regulations, upgrading the technical capabilities of regulatory agencies, and even promoting "one-stop windows" for foreign investments and exports.[6] (Box 5 describes a successful experience in Ecuador.) But the process tended to be painfully slow and uncertain, except when host governments were committed to reform. The experience of many other USAID-supported projects has been less than encouraging.

Box 5. Rationalizing Government Regulations in Ecuador

Until mid-1992, Ecuador's regulatory regime stifled exports. Shippers were required to fill out 40 forms and to submit multiple copies of them; to get 254 signatures; to get permits from several agencies, including the Central Bank, the Ministries of Agriculture and Commerce, and the Customs Agency; to undergo many inspections; and to comply with detailed certification procedures. According to a USAID study, exporters had to spend an average 138 hours per shipment to comply with these requirements. USAID-supported programs and producer and marketing organizations played a major role in getting these procedures simplified.

6 Such efforts often fell under USAID efforts to promote the private sector, which were not aimed only at agribusiness.

Programs in Cameroon and Bangladesh show that USAID efforts can succeed in privatizing the supply of inputs, marketing, and distribution. In both cases, USAID aimed to dismantle existing government structures rather than strengthen them. Cameroon abolished FONADER, the parastatal responsible for administering a subsidized fertilizer sales program. Bangladesh downsized BADC and relieved it of its responsibility for fertilizer distribution. The political commitment of the U.S. and host governments and a focused intervention strategy contributed to the success of these interventions. So did Bangladesh's firm assurance—designed to diffuse labor resistance—that BADC employees would not lose their jobs. The entire Cameroon government was already bankrupt and unable to pay FONADER salaries, so it was relatively easy to dismantle that parastatal.

USAID attempts to foster sustainable government institutions that provide support services to agribusiness have been less successful than efforts at regulatory reform and privatization. Whether newly created government structures—especially to build those policy analysis capabilities—are sustainable is an open question. Their future is clouded by inadequate resources, interagency rivalries, and sometimes lack of political support. The case of Uganda is instructive. The USAID agribusiness program there helped establish two units, the Export Policy Analysis and Development Unit (EPADU) and the Uganda Investment Authority (UIA). Whereas EPADU conducted policy studies on issues related to exports, UIA regulated and promoted investment. Operating costs for these units are covered almost entirely by external donors, mostly USAID. Several highly qualified key expatriate staff are also financed by donors. Local staff are generally paid "living salaries" several times higher than civil servants would earn. Without donor support, these organizations would probably be unable to attract equally competent staff, given the government's salary structure and poor working conditions. Similarly, the case studies on Ecuador, Guatemala, and Sri Lanka found that newly created or revitalized government institutions might not remain effective when USAID assistance ended.

Development programs often underestimated the obstacles to reform posed by a widespread propensity for rent-seeking by entrenched bureaucratic interests. Efforts to simplify bureaucratic procedures or dismantle old structures met with remarkable resistance from the affected organizations. Cumbersome procedures allowed government officials to engage in rent-seeking. Consequently, their officials viewed reform as a threat and undermined it.

Reformed or newly cr[illegible] a government organizations may not be a[illegible] institute change and ongoing reform. Unless pressure is exerted by outside political constituencies, such as producer and processor organizations, new or reformed organizations stagnate, behaving much like other government organizations (CDIE 1990). Often, highly qualified expatriate staffers initiate change and, once they leave, the impetus for change disappears. There are, however, grounds for optimism. In countries such as Ecuador and Guatemala, where reform has contributed to the growth of agribusiness, a constituency of reform-oriented groups has been able to exert pressure on the government.

Creating and Strengthening Private Sector Support Organizations

USAID programs have helped create and strengthen private sector support organizations, such as membership-based associations of agricultural producers, processors, and exporters, as well as service organizations that help agribusiness enterprises. USAID provided training, technical assistance, and financial resources so these organizations could articulate the interests of the agricultural and agribusiness sectors and provide needed services.

Private sector support organizations have been able to institutionalize their functions and are emerging as powerful voices to articulate members' interests and to mobilize support for institutional reform. In both Ecuador and Guatemala, such organizations were instrumental in changing government policies and regulations. The establishment of "one-stop windows" in Guatemala, for example, is attributable partly to efforts of GREMIAL. The guild's lobbying was also a factor in the dissolution of a government-owned shipping company that provided no services but imposed taxes on other transport purveyors. Export cargo handling in the Guatemala City airport was also privatized as a result of guild complaints, and the new setup permitted much more efficient handling of perishable products. Trade organizations also share credit for the streamlining of cumbersome rules and regulations governing agricultural exports from Ecuador (see Box 5).

In many Latin American countries, exporter organizations successfully provided standardized services to their members—organizing trade fairs, for example, disseminating information on export markets (and even on production technology), and giving them access to trade publications and directories. According to a CDIE study (McKean and Fox 1994), GREMIAL, Council for Agribusiness Cooperation and Coinvestment in the Dominican Republic (JACC), and FEPROEXAH in Honduras were able to deliver high-quality services to meet members' needs. But the assessment found that membership organizations were not good at providing customized services for their members. Exporter organizations in Latin America were not effective in solving firm-specific or crop-specific production problems that required technical expertise and resources. The reason was simple. Such organizations must have a broad-based membership to support the resources and expertise they need, but having a broad-based membership means they must focus primarily on problems and issues of interest to most, if not all, members. Individual members see no reason to subsidize services provided only to select groups within the membership.

Realizing that export promotion federations were not viable channels for customized assistance to agribusiness firms led PROEXAG to review its earlier strategy. PROEXAG management discovered that the high cost of maintaining specialized staff prevented the federations from addressing the crop- and firm-specific problems that individual firms faced. So PROEXAG itself identified priority crops and began giving agribusiness firms customized help solving technical and marketing problems. Similarly, USAID recognized that FEDEXPOR, which coordinated the first phase of the Ecuadorian agribusiness program, was not in a position to provide customized technical assistance while it had other administrative responsibilities. USAID converted FEDEXPOR into a nonprofit organization under the umbrella of the Ecuador Foundation, so that, it could provide assistance directly to firms and farmers.

Growth in Nontraditional Agricultural Exports

Most USAID agribusiness programs focused on increasing high-value nontraditional agricultural exports. There were several reasons for this. First, domestic and regional demand for agricultural products was limited, and programs that increased commercial production would quickly saturate local markets. Second, attempts to increase the domestic value-added of agricultural products were largely unsuccessful because most developing countries could not easily compete with efficient processors in developed countries. Third, the 1980s was a period of declining terms of trade for traditional agricultural exports, including coffee, cocoa, sugar, cotton, and palm products. With those trends likely to continue, alternative sources of foreign-exchange earnings were needed. And wealthy consumers in other countries sought nontraditional crops year-round.

Finally, many high-value, nontraditional crops were highly labor-intensive, and some could be produced more efficiently by small farmers than on large commercial farms.

Performance varied greatly among the five case-study programs where growth of nontraditional agricultural exports was a major objective. In the period covered by USAID programs, nontraditional-export revenues in Guatemala and Ecuador increased from near zero to $60 million and $70 million, respectively. At the other extreme, high-value nontraditional-export sales increased only $5 million in Uganda and only slightly more in Sri Lanka. Thailand was a special case because it was becoming a world leader in agricultural exports during the period of USAID intervention. Its agricultural exports grew from $3.7 billion in 1980 to $12.7 billion in 1992. Although the Lam Nam Oon program had a significant impact on several thousand farmers, its impact on national nontraditional-export sales did not exceed $5 million.

Several factors were important in determining the volume and rate of growth of nontraditional exports: the general economic environment; the infrastructure base, both physical and institutional; political stability; the regulatory environment; and the strength of the entrepreneurial class. In Thailand the dramatic growth in agribusiness investment reflects that country's high level of infrastructure development and favorable economic policies. In Guatemala and Ecuador, sustained growth of nontraditional exports was linked to increased political stability, improved macroeconomic policies, and investments in infrastructure. In Uganda, nontraditional-export activity, though still low, rose considerably when the political situation stabilized, macroeconomic policy reforms were implemented, and the government started to rehabilitate the nearly demolished infrastructure base.

Even when external factors are considered, however, one can see that USAID agribusiness programs made a difference, especially in Guatemala and Ecuador. USAID programs not only helped agribusinesses directly in technology and market development, but they also significantly influenced the regulatory environment that affected nontraditional exports. USAID convincingly demonstrated the costs of inappropriate and excessive regulation and the benefits of reform.

Similar efforts were made in Sri Lanka and Uganda, but because general economic conditions were less favorable, the effects were more modest. Ugandan agribusinesses benefited considerably from direct USAID assistance, but their response was limited because of adverse production and marketing conditions that could not be ameliorated in a few years. In Sri Lanka a major reason for USAID's limited success was the program's focus on the Mahaweli area, a remote region with little physical infrastructure and few supporting institutions. The national growth rate for Sri Lanka's nontraditional agricultural exports was low, and the Mahaweli region accounted for only a tiny portion of that growth. The country study shows, however, that USAID helped Sri Lankan leaders recognize the importance of nontraditional exports and begin identifying and addressing the main constraints on growth. Nontraditional exports are beginning to grow in Uganda and Sri Lanka as a result of USAID programs, but it will be many years before the volume matches levels in Guatemala and Ecuador, much less Thailand.

A final point should be made about USAID's focus on nontraditional exports. One reason for focusing on nontraditionals rather than on traditional crops was that the terms of trade were moving drastically against traditional products, and the declining trend in earnings was not likely be reversed. In retrospect, the hope that nontraditional exports could go far to replace the foreign exchange earnings of traditional crops proved unrealistic. In Guatemala, nontraditional-export sales grew by $60 million, but export earnings from traditional crops dropped by over $1 billion because of sharp declines in world prices for coffee, cotton, and sugar. The situation is similar in Ecuador and, to a lesser

degree, in Uganda. Exports of traditional agricultural products in Uganda declined by $150 million from 1986 through 1992, while exports of high-value nontraditionals increased by $5 million. The assessment found that, in all these countries, the volume of traditional agricultural exports was so high and the number of producers so great that even a small increase in the rate of growth or a small reduction in the rate of decline had more impact on farmer incomes than dramatic increases in nontraditional exports, especially in the short run.[7]

7 In Uganda, sales of low-value nontraditional agricultural exports significantly exceeded those of high-value nontraditionals.

4 The Program's Social Impact

In this section, we explore the impact of the case-study agribusiness programs on employment and income, small farmers, women, and the environment.

Effects on Employment and Income

How agribusiness programs affect income and employment can be analyzed at three levels: agribusiness enterprises (including cooperatives), the farm, and related commercial and industrial enterprises (related to but distinct from agribusiness), which grow as a result of value-added processing and marketing. Country studies provide partial data on all these levels.

Firm-level effects

Employment in agribusiness firms has grown during the life of agribusiness programs.[8] In Bangladesh, with the privatization of fertilizer distribution, 45,000 additional jobs were created in the agricultural input supply sector. In nontraditional agricultural exports alone, Ecuadorian and Guatemalan firms employed an estimated 16,448 and 8,400 people, respectively. In Lam Nam Oon, Thailand, agribusiness firms employed 145 people, but the number of employees in agribusiness processing and marketing countrywide tallied in the thousands. Cameroon, Sri Lanka, and Uganda enjoyed only modest expansion of employment in agribusiness firms.

The proportion of women employed in agribusiness was usually slightly lower than that of

8 The average number of employees in agribusiness enterprises varied considerably among case-study countries. In surveys undertaken by case-study teams of regions covered by USAID programs, the figure was lowest in the three Asian countries, Bangladesh (10), Thailand (18), and Sri Lanka (22); it was highest in the two Latin American economies, Ecuador (146) and Guatemala (266). Cameroon and Uganda fell in between. In this sample, the average Latin American firm employed 7 to 26 times as many people as the average Asian firm. Why such a big difference? Many of the Latin American firms vertically integrated the cultivation, processing, and marketing of nontraditional exports. In Asia most of the sample firms only processed and marketed agricultural commodities. Many firms in Ecuador and Guatemala also grew at least some of their own farm products.

men, although there were country- and region-specific variations. The Ecuador case study reports, for example, that "63 percent of the firm-level full-time workers were women in the highland mountains, whereas only 37 percent of these workers were women in the coastal areas. For seasonal workers, 48 percent were women in the highlands and 40 percent were women in the lowlands." In Guatemala 49 percent of full-time and 45 percent of part-time employees in processing plants were women. Among agribusiness firms in Sri Lanka, Thailand, and Uganda, the proportion of female employees ranged from 20 percent to 50 percent. No statistical data were available for Bangladesh, but the proportion of women employed in fertilizer distribution was undoubtedly low because of cultural and economic barriers.

Wages varied with the size, ownership, and location of agribusiness firms. Working conditions, including wages, in foreign subsidiaries and international joint ventures were usually better than in wholly domestic operations. Large established firms, especially in Ecuador, Guatemala, and Sri Lanka, tended to pay slightly more than their smaller counterparts. Urban workers in agroprocessing units typically enjoyed better terms of employment than workers in comparable semiurban or rural units. Despite agribusiness owners' typical contention to the contrary, there is considerable evidence that firms paid women less than men for comparable work. Except in foreign subsidiaries and joint ventures, women were usually paid 10 to 15 percent less than their male counterparts in processing (Glover and Kusterer 1990).

Farm-level effects

The main effects of agribusiness programs on employment and income were felt not in agribusiness firms but on agricultural farms. The growth of agricultural processing and marketing, especially for export, generated demand for new species and improved varieties. Usually these crops were far more labor-intensive than traditional crops (see Figure 1). Nontraditional crops produced in Sri Lanka's Mahaweli region required from 2.5 to 5.0 times the labor of paddy, per hectare. Similarly, nontraditional crops grown in Guatemala absorbed between 2.8 and 11.4 times the labor of corn or beans, per hectare. In Bangladesh

Figure 1. Person-Days Needed for Alternative Crops

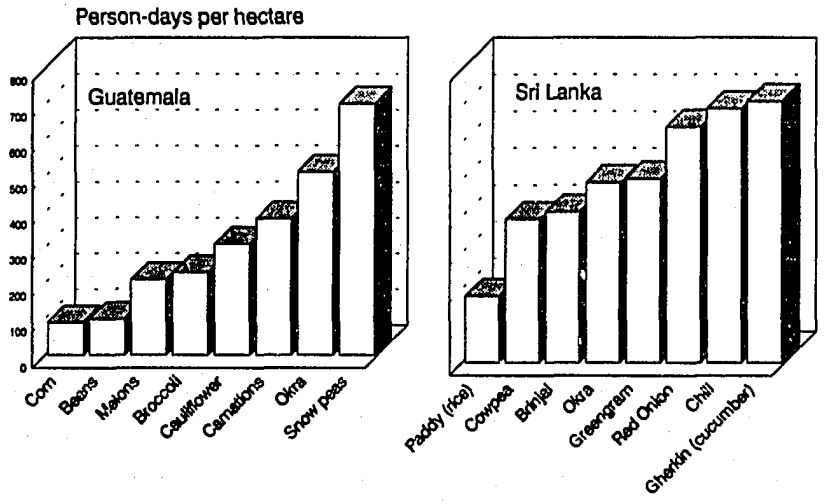
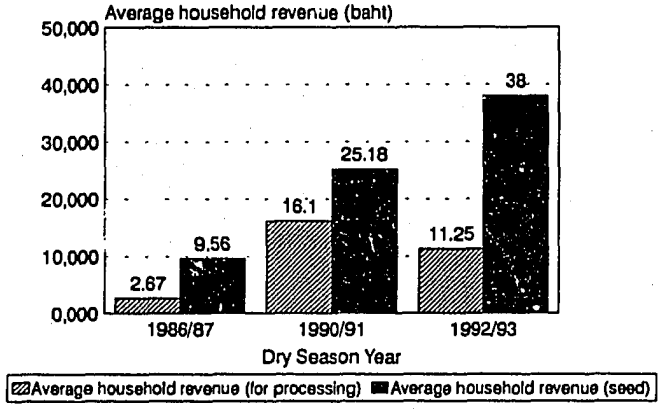


Figure 2. Increased Farm Household Revenue In Lam Nam Oon



Source: CDIE survey data.

high-yield paddy required 26 more person-days per acre than the traditional variety, during the wet season. *The new labor-intensive crops increased the demand for farm labor, which was filled by either household or hired labor, alleviating problems of rural underemployment and unemployment.*

The increased demand for farm labor also tended to raise rural wages. Farm wages increased in Thailand's Lam Nam Oon area, for example, once farmers began cultivating export crops and seeds. Wages and working conditions improved modestly in the gherkin-producing areas of Sri Lanka. In Ecuador and Guatemala, the rapid expansion of nontraditional export activities also boosted rural wages.

The income of farmers producing new or improved varieties of crops increased in the case-study countries for at least three reasons. First, returns on nontraditional crops were invariably higher than those on traditional crops. For example, a study conducted in Sri Lanka during the maha season, with its unpredictable rainfall, showed net returns on chili and red onions to be more than 2.5 times those on traditional paddy. The return on gherkins was four times as high as the return on paddy.[9] The story is similar in other countries, especially for export crops. Moreover, many nontraditional crops generated additional income because they were grown during the dry or off-season, when crops had traditionally not been cultivated. In Lam Nam Oon, for example, cash crops were grown during the dry season, so farmers could continue producing traditional crops during the wet season.

Finally, there were productivity gains because of improvements in technology or the availability of agricultural inputs. In Bangladesh, for example, the cultivation of high-yield paddy increased farmer profits 35 percent. The expansion of agricultural processing and marketing fostered higher incomes among linked independent farmers in Thailand and Guatemala. Incomes increased among the farm households surveyed (see Figure 2). Box 6

9 The net returns on irrigable land for maha season paddy, chili, red onion, and gherkin were $356, $903, $968, and $1,405, respectively.

Box 6. Two Small-Scale Farmers' Stories

Thailand

In 1989 Khun Nukum started contract farming for NACO, a private Thai consortium. After 2 years, he switched to the Thai Soon firm. The first year, he planted 2 rai (0.32 hectare) of tomatoes for processing and earned a net profit of 1,000 baht. The next year, his net profit was 18,000 baht. The third year, he increased his planted area by 50 percent and netted 35,000 baht, or 35 times his first-year profits. With the additional income, the family was eating better, Nukum had bought a television and an electric fan, and he planned to buy a hand tractor. He was also saving to build a house. Asked what life was like in the past, he replied: "I cannot explain how bad it was. We were poor just like any other family."

Guatemala

Marcos Bajan, a small-scale highland farmer, prospered after introducing two new crops in 1985: he purchased an additional half hectare, rented another half hectare, and hired seven more farm workers. Bajan says he and his wife make decisions jointly. They can now buy meat regularly; they recently improved their house and purchased a pickup truck.

The Bajans are particularly successful, but thousands more small farmers in the cooperative Cuatro Piños have benefited from new crops. The cooperative, which processes members' snow peas and broccoli, now numbers 2,000, up from 650 in 1985. Co-op members have invested in both land and housing. For the most part, small farmers have purchased land from larger farms. In general, farmers with more than one hectare have reduced their landholdings and those with less land have increased theirs. As for living conditions, 70 percent of members in 1985 had homes of cane or wood. That figure dropped to 15 percent in 1991, as most members put up sturdier walls of brick from local kilns.

...es individual contract farmers' experiences in Thailand and Guatemala.

Related firm-level effects

With the growth of agroprocessing and marketing, new industrial and service firms emerged in case-study countries, particularly in Ecuador, Guatemala, and Thailand. Firms involved in packaging, advertising, transporting, shipping, and accounting sprang up, creating off-farm, often urban, employment opportunities. Although these firms were established with a view to exports, they also began to serve the domestic processed-food market.

USAID agribusiness programs contributed to the growth of employment and income in the seven countries studied. Beneficiaries included farmers, agricultural workers, employees of agribusiness firms, and workers in related industrial and service firms (see Box 7).

Benefits to Small Farmers

Did small farmers benefit from USAID agribusiness programs? It is commonly believed that small farmers lack the resources to capitalize on economic opportunities opened by agribusiness programs and hence do not benefit from Agency interventions.

Box 7. Agribusiness Programs Created Farm Employment

Bangladesh

Privatization increases the availability of fertilizers, which was an essential element of the new high-yielding variety technical package. About 2 million hectares were brought under cultivation in the wet season and 1.7 million more hectares in the dry season. USAID estimates that this translates into 1.69 million new farm-level, full-time equivalents (240 8-hour days).

Ecuador

Field surveys tally 20,677 people working for the 54 firms interviewed in the highland area and 32,750 working for 19 firms in the coastal area, or a total of 53,427 working for 73 firms.

Guatemala

The Guatemala team estimates 14,000 jobs in agribusiness firms, 21,000 full-time job equivalents in agricultural production, and perhaps 5,000 in firms supplying agricultural inputs, for a total of about 40,000. When the project began in 1978, only about 4,000 people were employed in the sector. Thus, the USAID projects were associated with a 10-fold increase in sectoral employment in the last 15 years.

Sri Lanka

In Mahaweli, the number of contract farmers producing nontraditional export crops increased more than sixfold (from 975 to 6,224) in 4 years.

Thailand

In Lam Nam Oon, new managed-production schemes created about 600,000 new person-days of work (2,400 full-time equivalents) in 1991, a year of particularly active cropping.

Five case studies that addressed this question concluded that *smallholders have been major beneficiaries of USAID programs.* In Bangladesh, 61 percent of the farmers who used fertilizer and now receive more reliable, responsive service own less than 1 hectare. In Guatemala, small highland farmers increased their incomes by cultivating nontraditional crops. In Guatemala, the production of nontraditional crops actually improved the distribution of income. The bottom quartile (by income) received no less than one eighth of the value-added for each nontraditional crop, far more than the quartile's 3 percent share of GDP. That is, bottom quartile shares of value-added averaged 18 percent, ranging from 12 percent (for melons) to more than 50 percent (for snow peas); shares for broccoli, Brussels sprouts, cut flowers, and minivegetables also ran somewhere between 12 and 50 percent.

Similarly, in Sri Lanka's Mahaweli area, practically all nontraditional crops were produced by small farmers, as all farmers own roughly the same amount of land and none have large holdings. In the Lam Nam Oon area of Thailand, although the size of landholdings varies, smallholders fully participated in the cultivation of seeds and crops for agroprocessing. Firms decided to contract for no more than 2.4 and no fewer than 0.4 acres per farm family. This included nearly all households. Even landless workers could rent land from their neighbors and join the ranks of outgrowers. In Uganda, too, most producers of nontraditional crops were smallholders.

Contract farming enabled smallholders to participate in, and benefit from, USAID agribusiness programs in many countries. Under the contract farming system, farmers agree to plant specific crops and to sell a fixed share (if not all) of their produce, at a preset price to a contracting agribusiness (Minot 1986; Roy 1972). Country studies show contract farming as the key link between agribusinesses and small farmers. In Lam Nam Oon, the number of households farming under agribusiness contracts increased from 788 in 1986–87 to 6,504

in 1992–93. In the Mahaweli area of Sri Lanka, the number of contract farmers increased more than sixfold in 4 years: from 975 in 1990 to 6,224 in 1993, and even more farmers wanted to participate. Contract farming has proliferated in Guatemala, where the CDIE survey team found that 11 out of 13 vegetable-processing firms used contract farming to get crops for processing and export. Contract farming of nontraditional crops has been growing in Ecuador as well. Even in Uganda, where agribusiness was in its infancy, a few high-value export crops were grown through contract farming. Vanilla was cultivated by 3,000 small farmers under contract to a local firm that supplied the vanilla to McCormick, a major U.S. spice retailer.

Many factors explain why agribusiness firms increasingly prefer to sign contracts with smallholders. For one thing, agribusiness firms usually get better terms from small farmers, who are willing to accept lower profit margins and do not calculate household labor at market prices. Because of their high management and labor costs, especially for labor-intensive crops, agribusinesses and other large farmers often find it difficult to compete with small farmers. Moreover, large firms (foreign or domestic) have learned the political advantage of dealing with small farmers: they gain legitimacy and are spared political protest. Often, of course, firms have little choice because of local regulations and institutional arrangements. Countries that have ceilings on the size of agricultural holdings (Sri Lanka, for example) do not have large farmers. Sometimes agribusiness firms come under pressure from the government and international donor agencies to contract out to small farmers. Most important, however, firms have learned that if technology is standardized and agricultural inputs are available, small farmers can be the most efficient producers.[10]

Historically, there has been a shift from large farmers to smallholders in the production of horticultural exports (Islam 1990). In many countries, export horticulture was initiated by large expatriate farmers. In Kenya, for example, British and Asian settlers pioneered horticulture; French settlers launched export horticulture in the Ivory Coast. In each case, foreigners joined cultivation with processing and exports, and they favored large estates. But gradually production was separated from processing and marketing. Instead of producing horticultural crops, export firms began contracting with a few large farmers. Over time, many exporters realized it was risky to depend on only a few suppliers. Often large farmers could not supply the entire market, and charged higher prices than small farmers. Production technology also became standardized for many crops. For these reasons, export firms began to contract with a large number of small farmers for many horticultural products.[11]

Conditions for small farmers producing new or improved varieties of agricultural commodities for agribusiness firms have undoubtedly improved, but largeholders have also benefited from USAID interventions. Not all nontraditional crops promoted by USAID agribusiness projects are suitable for smallholder contract farming. For export commodities that are technology- and resource-intensive, large farmers and firms enjoy advantages over small producers. In both Ecuador and Guatemala, for example, agribusiness firms that export melons, seeds, flowers, and ornamental plants tend to grow their own products, presumably to ensure standardized quality and volume. The same was true for cut flowers in Uganda. For many ex-

10 The Bangladesh case study, for example, shows that farmers with less than 1 hectare are the most productive in paddy cultivation.

11 In the same way, large farmers were the first to adopt high-yield wheat varieties, and small farmers gradually followed suit. The diffusion of modern rice technology in Southeast Asia follows the same pattern (Hayami and Herdt 1977).

port crops, economies of scale favor large farmers, so there is little scope for contract farming with smallholders.

Impact on Women

Women constitute a negligible minority of agribusiness owners in the CDIE case studies. In most of the case-study countries, no major agribusiness firms appeared to be owned and managed by women. Only in Guatemala were two in a sample of 22 firms owned by women. However, in many of these countries women did hold senior management positions and had minor equity participation in agribusiness.

How can this be true when women play such a major role in marketing and processing of agricultural commodities in many parts of the world (Spring and Trager 1988; Blumberg 1989)? Part of the reason is that female entrepreneurs typically operate in the informal sector, and, except for Sri Lanka, agribusiness interventions among case-study countries did not focus on the informal sector where women entrepreneurs are most active (as small retailers and home-based processors, for example). A more important reason is the discrimination women encounter all over the developing world. Historically, women in developing countries have limited access to the ownership of agricultural lands and other productive assets. So even if lending policies were not explicitly gender biased, women would not have collateral against which to borrow money. As business owners, they suffer from limited access to institutional credit, despite evidence that women are better credit risks than men (Blumberg 1985; Blumberg 1989; Lycette 1984; Timberg 1988).

Barriers to land ownership explain the underrepresentation of women among contract farmers. In Sri Lanka, for example, all the initial allotments of land in the Mahaweli settlement scheme were registered to men. A woman received land only if the male owner died after allotment or on special concessions. Consequently, only 3 to 6 percent of farms in Sri Lanka were formally owned by women. Similarly, men owned nearly all the farm land in Ecuador and Guatemala, so women held only 2 to 4 percent of farming contracts. However, de facto ownership by women is higher because of the migration, illness, and death of male householders. For example, in Uganda, where women accounted for only 16 percent of farmholders, the percentage of women farmers cultivating vanilla, silk, or flowers reached far higher levels (between 30 and 50 percent).

Growth in the agribusiness sector has indeed generated employment opportunities for women. Women benefited not from ownership but from employment in agribusiness firms and on contract farms as well as from unpaid work on farms owned by male members of their household. In the case-study countries, between 30 and 50 percent of employees in agribusiness firms were women. More important, they were employed by other farmers or worked on farms owned or rented by their households. Women were needed as agricultural workers for nontraditional crops partly because cash crops were labor-intensive and partly because women were considered more skillful than men at certain agricultural tasks. The country study for Thailand, for example, explains that members of the household work together in planting, spraying, and so forth, but that "women and teenagers pollinate for the household" as they are supposed to have "better eyes and more nimble hands." In Ecuador and Guatemala, women are preferred in the flower industry because of the widespread belief that they tend flowers better than men.

As one consequence of expanding employment, women's workloads are getting heavier. More work on farms or more employment in factories does not typically mean that women's traditional household responsibilities decline significantly. Rather, women continue to be responsible for cooking, washing, child care, and other household chores. Whenever they get extra help it is usually from young girls or old women in the household, not from men. The traditional role of men is also changing, but

slowly. Women's problems with overwork, especially domestic drudgework, may diminish somewhat as their increased purchasing power enables them to buy simple productivity-enhancing appliances (such as fuel-efficient stoves) and partly processed foods (such as milled grains). Indeed, this is happening in many case-study countries.

At the same time, women seem to like the impersonal, bureaucratic structure of many agribusiness firms, and the opportunity to work alongside other women has given many women new confidence. Glover and Kusterer (1990) report: "The women in Guatemala had gone on strike in the plants' early days of operation, and in Peru they held a sit-down strike that lasted for weeks. Ironically, it is a testament to the self-confidence and personal empowerment brought out by these jobs that women were able to act so strongly when they felt that specific grievances warranted action." This generalization is valid, however, only for women working in large, modern agroprocessing facilities. Women tend to earn less than men and have less power (see Box 8), yet they seem glad to have their foot in the door to paying work. Box 9 contains excerpts from interviews from USAID case studies.

Box 8. Women Employment in Agribusiness Firms

A 1993 Ecuadorian survey of 160 women (120 working on plantations and 40 working in processing plants) showed that 70 percent of the women on plantations earned $33 to $67 a month. Monthly earnings were higher in processing plants: $68 to $101. The majority of women on plantations and a minority in plants did not enjoy basic rights and benefits. Workers' organizations did not exist in many firms surveyed. As expected, higher positions were reserved for men. But despite tough working conditions and low wages, about 60 percent of respondents did not want to give up their jobs. Most of them used their earnings to supplement family income.

The survey was conducted by CEPLAES (Centro de Planificación y Estudios Sociales) with the support of the World Resources Institute and Universidad San Francisco de Quito. Most of the women were very young: in the processing plants 73 percent were under 24, and 60 percent of the women on plantations were under 29.

Effects on Environment and Health

Chemical pesticides are used, and misused, intensively in the cultivation of high-value cash crops, including nontraditional export crops. The most obvious reason for intensive use of chemical pesticides is probably the farmers' common belief that it is "essential for meeting the phytosanitary standards, quality requirements, and yield goals for foreign markets" (Thrupp 1994). This problem is aggravated by the demand for blemish-free produce in industrial nations. The indiscriminate application of pesticides often creates a vicious cycle in which increased use is followed by still greater application: pesticides destroy both nontarget organisms and natural-enemies of several pests that keep them in check. Some pests also become immune to pesticides, and farmers react by increasing the frequency and amount of application. The misuse of pesticides can be disastrous for a region. For example, the greenhouse whitefly has become highly resistant to pesticides in the Costanza Valley of the Dominican Republic. And now the valley does not have a natural-enemy complex to attack the greenhouse whitefly (Murray and Hoppin 1992).

Ignorance of safe procedures for applying pesticides and weak public regulation compound the problem of overuse. Many countries have not set clear standards and procedures for

Box 9. Perceptions About Programs' Effects on Women

"Because most of the pollinators are women, more than 50 percent of our staff are women. Although hiring women is not a company policy, it just works out that way when we seek the most capable staff."

Thai agribusiness manager

"Of course, the economic lot of women who can get work in agribusiness firms or commercial farms is better than those who work on paddy farms. But you should know, women get better pay in garment factories established in Mahaweli."

Sri Lankan agricultural economist

"Yes. Their workload has increased. So what? If you ask women to choose between outside work or no work at all, all will invariably prefer employment. They live in abject poverty, and whatever little money they earn makes a difference in their lives."

Sri Lanka program staff member

"We are concerned with families, and not women alone, and families have no doubt benefited tremendously."

Woman manager of a Thai firm

"You should not underestimate the change in the attitudes, beliefs, and behavior of women when they get employment in the formal sector. They invariably become more independent and self-reliant. Employment in agroprocessing units transforms women as it transforms agricultural commodities."

USAID agribusiness specialist

the use of toxic pesticides. Even when guidelines exist, they often are not effectively communicated to farmers and workers. What's more, the guidelines may involve procedures and equipment many farmers are likely to consider too costly. Inspection and monitoring are almost nonexistent in many developing countries. Labeling and packaging tend to be inadequate and inappropriate, technical advice is often in a language few farmers understand, and dosages are often not fully spelled out.

When some chemical pesticides are applied excessively or too close to harvest time, residues above acceptable levels accumulate in foods. Many pesticides are not permitted to enter the U.S. market at any level. *Most importing countries have stringent standards for pesticide residues, so entire crops can be rejected by inspecting authorities, resulting in serious losses to farms and farmers.* In many Latin American countries, the problem of pesticide residue has become a major issue. The detention and rejection of Guatemalan produce has been common over the past 10 years. A 4-month prohibition on the export of Guatemalan snow peas was imposed in 1993 because of the heavy incidence of detentions.

The situation is less serious in Ecuador and other Latin American countries but cannot be ignored. For example, the United States rejected Ecuadorian shipments of string beans in 1992 and of strawberries in 1993. Between 1985 and 1992, 10 shipments of Ecuadorian products were rejected at U.S. ports for containing excessive pesticides. As for the Dominican Republic, the problems of pest interceptions and import detentions have been so severe that the country is currently under automatic detention status, in effect raising the cost of marketing the country's agricultural exports (Byrnes 1993). Comparable data are not available for Sri Lanka, Thailand, and Uganda, where pesticide residues in nontraditional exports were apparently not a major problem.

The growing use of pesticides also poses a serious threat to the health of many farmers

and agricultural workers. Direct exposure to these poisons results in many harmful conditions, including allergies, birth defects, cancer, and skin and nerve damage. In 1985, the World Health Organization estimated that 3 million people were poisoned by pesticides each year, resulting in 220,000 deaths and 37,000 incidents of chronic long-term disease. A 1990 study estimates that 25 million agricultural workers suffer an episode of pesticide poisoning each year.

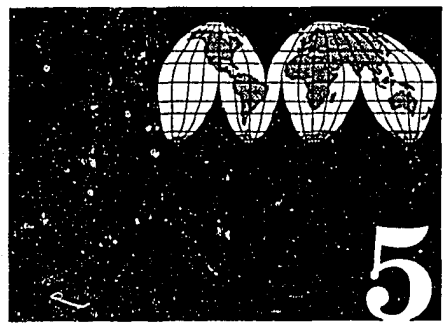
Several other studies have reported health hazards from pesticides. In Ecuador, for example, one survey (Thrupp and Waters 1993) found that 62 percent of workers in nontraditional agricultural exports reported suffering from health disorders because of exposure to pesticides. Of these, almost one-quarter experienced more than three symptoms, 36.5 percent experienced two or three, and the other 10.5 percent only one. The problem is especially serious in flower production, where highly toxic nematicides are widely used in unventilated greenhouses. Even workers who do not spray chemicals are affected. Many workers not only report symptoms of low-level pesticide toxicity, but test positive for it in blood tests (Thrupp 1994). Blumberg (1992) cites a study reporting declines up to 30 percent below normal in the cholinesterase levels of 27 workers in a flower firm, suggesting the potential for long-term kidney or liver damage.

Two recent studies in Guatemala identified hazards associated with the use of pesticides for nontraditional exports. Hoppin (1991) found that 23 percent of the pesticides commonly used by farmers of nontraditional export crops are classified by the World Health Organization as extremely or highly toxic. Only trained, licensed applicators have access to them in the United States and other industrial nations. According to another study (cited in Byrnes 1993), more than 70 percent of Guatemalan broccoli and melon producers reported poisoning symptoms associated with the application of pesticides.

In Thailand the widespread use of pesticides in the Lam Nam Oon area posed health risks to farmers and workers when new crops were introduced. Farmers were not knowledgeable about pesticides and found safety suits uncomfortable. Anecdotal evidence suggests that the situation has now improved.

Over time, both farmers and agribusiness firms have become more aware of the hazards of pesticides and have started to follow safety procedures. In Thailand many agribusinesses now provide farmers with safety suits. One firm even invited a private voluntary organization to train farmers in safe pesticide practices. In Guatemala and Ecuador, the governments have established and begun to enforce standards for applying highly toxic pesticides. Periodic U.S. import detentions have stimulated stricter enforcement of pesticide regulations in Guatemala, but much remains to be done.

Environmental problems may well threaten the sustainability of efforts to boost nontraditional agricultural exports in many of the case-study countries. The pesticide problem may limit small farmers' access to opportunities in this sector as many agribusinesses begin to minimize risk by growing produce on their own land or buying it from larger landholders in a better position to improve production practices and technologies.



5 The Costs and Benefits of Agribusiness Programs

Findings presented in this section are tentative.[12] Applying cost–benefit analysis to this assessment is a problem for two reasons. First, the case-study programs included activities ranging widely, from technical assistance to institutional reform. Many of the programs did not succeed initially but laid the groundwork for more successful efforts later. Such "learning by doing" means that recent successful activities often benefit from the high costs of earlier failures. Second, "without-program" benefits are difficult to specify for multicomponent, multiphase interventions. Without reliable empirical evidence and theoretical foundations, assumptions about without-program benefits are somewhat arbitrary. In any case, it is difficult to reach a consensus about them.

Methodology

Social cost-benefit analysis goes beyond the analysis needed for private sector decision-makers and takes into account all costs and benefits to society. Social costs and benefits may differ from costs and benefits to individual firms because of externalities (costs or benefits accruing to members of society other than the firm making the investment) or because market prices fail to reflect accurately the costs or benefits of products or inputs to society (for example, through taxes, subsidies, or market imperfections).

The basic premise of cost–benefit analysis is that a project should not be carried out if its net present value (NPV) is zero or less.[13] In comparing alternative projects, efficiency requires selecting the project with the highest NPV, calculated at the appropriate discount rate. An alternative, less reliable criterion is that the internal rate of return (IRR) on a project must not fall below an appropriate discount rate.[14] When comparing projects, however, a higher IRR does not necessarily imply a higher net social benefit.[15]

12 This section is based on Bertrand (1994), available from CDIE, which describes more fully the rationale and methodology of these analyses.

13 The NPV of a project equals the difference between its discounted benefit and cost streams. Discounting acknowledges that resources arising from (or required for) a project are less valuable (or costly) in the future than in the present.

14 The appropriate IRR of a project is the discount rate at which its NPV equals zero.

15 In comparing two alternative projects with positive NPVs, the one with a lower NPV may have a higher IRR if its net benefits are less sensitive to discount rate changes.

NPV and IRR calculations are meaningless without an explanation of the underlying assumptions. When these assumptions are carefully formulated and analyzed, cost–benefit analysis becomes an important component of project evaluation. It provides a quantitative framework for comparing costs with benefits and a consistent scale for evaluating alternative approaches and project designs; it also subjects implicit understandings to rigorous scrutiny. To focus on the results of cost–benefit analysis without reviewing the underlying assumptions is to invite advocacy rather than evaluation. The results may be counterproductive.

Findings

Bangladesh

The agribusiness program in Bangladesh was designed to privatize the fertilizer distribution system. Two major projects, FDI–1 and FDI–2, had outlays, respectively, of $222 million and $66 million. The program eventually succeeded in privatizing fertilizer marketing, realizing substantial efficiency gains for the country.

Two assumptions underlie the computation of program NPV and IRR. First, fertilizer use after 1982/83 without the FDI project would have grown at a slower pace than with FDI—reaching a 1992/93 level of 1.7 million tons (instead of the actual 2 million tons) and 2.9 million tons in 2003 (instead of the 3.9 million tons projected with FDI). Second, FDI programs increased the efficiency of fertilizer procurement so that with imports plus domestic distribution savings are $10 a ton for 1981/82–1985/86, $15 a ton over the next 3 years, $20 a ton for the 3 years thereafter, and a projected $35 a ton for the 12 years beyond 1991/92.

Cost–benefit analysis yields an IRR of 12 percent and an NPV of $44 million (based on a 10 percent discount rate), even with a full accounting of all costs for FDI–1 and FDI–2. But it is probably inappropriate to include all project costs, because nearly 60 percent were devoted to fertilizer imports, which generated funds to support general government expenditures. *When the cost of fertilizer imports is excluded, the program IRR increases to 21 percent and estimated NPV is $160 million, very respectable returns on investment.*

Cameroon

The Fertilizer Sub-Sector Reform Program (FSSRP) in Cameroon also addressed the problem of inefficient, parastatal-controlled fertilizer marketing and distribution. The program had two components: $13.5 million of nonproject assistance and $1.5 million of technical assistance. The nonproject assistance, budgeted to finance a revolving credit fund for commercial lending to private importers and distributors, was never used. Nonetheless, the USAID program helped facilitate the phased abolition of fertilizer subsidies. The program also introduced substantial efficiency gains by privatizing the marketing and distribution system.

In the program's first 5 years, private importers and distributors reduced the cargo, insurance, and freight (CIF) cost of fertilizer to the port by 58 percent and the internal distribution cost by 18 percent. These combined to yield a [illegible] percent reduction in full-delivered cost to the farmgate. Between 1987 and 1993, the full-delivered cost fell from $446 to $257 a ton. The reduction was due, according to CDIE's assessment team, "almost entirely to increased efficiencies associated with FSSRP liberalization and privatization measures." If these savings alone were treated as the sole stream of benefits, the FSSRP would have an IRR of 35 percent and an NPV of $11 million, making it an extremely successful development intervention.

But the large CIF price savings appears to be unrealistic, because prereform CIF prices were apparently artificially inflated. Most if not all CIF price savings would have been realized even without USAID efforts: the government simply could not afford to pay subsi-

dies. Moreover, the budgeted but unused revolving credit fund of $13.5 million could have been used otherwise, to generate benefits. Arguably, these $13.5 million should not be counted as program costs. When cost–benefit computation (1) limits benefits to the savings on internal fertilizer distribution, and (2) deducts the unused $13.5 million from total program costs, *the program still had a positive IRR and an NPV of almost $7 million (based on a 10-percent discount rate).*

Ecuador

USAID's program, designed to promote nontraditional agricultural exports, fostered the production of several new products and facilitated the formation of an institutional and policy environment more favorable to nontraditionals. The program cost $12.5 million: $8 million in 1984–88, and $4.5 million in 1989–94.

Cost-benefit analysis is based on the growth of nontraditional agricultural exports revenues, which rose from $1 million in the mid-1980s to more than $60 million in 1993, and which were expected to exceed $70 million in mid-1994. Three assumptions were made in computing net social benefits: (1) nontraditional agricultural exports would continue to expand rapidly from $326.7 million over 1984–94 to $1.56 billion over 1985–2003; (2) the without-program growth rate of nontraditional-export revenues would be 90 percent of the past (observed) and future (projected) with-program rates; and (3) net social gains were one-fourth the value of exports—after accounting for the costs of intermediate products, returns on resources accruing to foreigners and the opportunity costs of factors of production. On this basis, *the IRR came to 22 percent and the NPV (using a 10-percent discount rate) to $15 million.* Returns to program components supporting policy change and technology transfer would be higher, if the calculations were to omit failed components for information and direct-lending systems.

The assumption of rapid, continual growth of nontraditional exports is open to question. Foreign competition, domestic institutional and political constraints, and a reduction in U.S. demand could slow expansion. Only time will tell. At the time of CDIE's country assessment, the prospects for Ecuadorian nontraditional exports were encouraging.

Guatemala

The Guatemalan agribusiness program aimed to improve the highlands' comparative advantage in horticultural crops and to improve the local processing and marketing of value-added products. Efforts focused on crop diversification—first for the home market, then exports—emphasizing agricultural cooperatives as the preferred means for marketing. Of the $70 million in project costs, $22 million went to support for cooperatives, $20 million to improving infrastructure, $15 million to technical assistance, $9 million to loans for agribusinesses, and $4 million to support the Exporters' Guild.

Two assumptions underlay cost-benefit calculations. First, the growth rate in revenues from nontraditional agricultural exports under the USAID program was twice what it would have been without USAID involvement. Second, net social benefits were one-fourth of nontraditional-export, revenues, allowing payments for all inputs and to all resource owners involved in production. *Analysis showed an IRR of 15 percent and an NPV of $8 million at a 10-percent discount rate.* These figures are respectable, especially considering the failed cooperative and centralized marketing components of the program.

Sri Lanka

Separate analyses were done for the two major Mahaweli-area program components, MARD and MED. The $23 million MARD project promotes agribusiness development and crop diversification in Mahaweli System B. Its benefits were calculated on the basis of

increased farmer income through crop diversification. Two factors severely limit such benefits. First, crop diversification has been modest. In 1993, out of 10,000 to 12,000 hectares, nonpaddy cultivation covered only 160 hectares in the maha season, and 597 hectares in the yala season. Second, the incremental income benefit for farmers who did diversify was low: an estimated $67 per farmer in maha and $62 in yala. Estimates of net profit do not factor in the substantially higher inputs in family labor needed for nonpaddy cultivation. If this nonwage labor were priced at a dollar a day (about two thirds of the local market rate), the calculated benefits from diversification would be halved for maha and virtually eliminated for yala. If family labor were priced at the prevailing wage rate, crop diversification would generate losses in both seasons.

Some MARD project costs have been incurred in activities with no close tie to crop diversification. Perhaps as little as $5.6 million has been spent directly on diversification. Furthermore, it is possible that diversification will increase rapidly in the near future, as the demonstration effect takes hold, and only later taper off. A revised analysis, taking these considerations into account, yields a 14-percent IRR and an NPV of $470,000 (based on a 10-percent discount rate). But this second scenario ignores the higher costs of family labor (and fewer opportunities for alternative employment or leisure). *If, to elaborate on this scenario, the cost of family labor were imputed at half the prevailing daily rate, returns would be negative.* Only when family labor is priced at one-third the market level does the IRR grow barely positive and the NPV is still a negative $1 million.

The MED project, with $15 million in USAID assistance, seeks to increase incomes by accelerating the creation of private sector jobs. So analysis here is based on the incomes created by new jobs to date, or new jobs projected for the Mahaweli area. Jobs in garment factories were not included, as they were not directly related to MED activities. Employment is expected to grow rapidly, to 16,000 in 1996, and then to grow slowly after project completion. If, as assumed, each job creates a net gain of $150 per worker per year, the MED project will have an IRR of 21 percent and an NPV of $3 million (based on a 10-percent discount rate). But to assume that all new jobs outside the garment industry are attributable to MED is unjustified; it is more reasonable to attribute half of them to MED. In that case, *the IRR is about 1 percent and the NPV is a negative $2 million.*

Uganda

The cost of USAID efforts to promote agribusiness that started in 1984 grew to $95 million by 1993. And it is expected that another $40 million will be allocated to strengthening a cooperative bank, creating a venture-capital fund, and continuing a technical assistance program for agribusinesses. The Ugandan study provides cost-benefit analyses based on three alternative scenarios.

Scenario 1 assumes that (1) the USAID program will result in an incremental increase in nontraditional agricultural exports (over increases that occurred anyway) of a few million dollars in the early 1990s, increasing to about $100 million at the turn of the century and about $183 million by the year 2006 (representing about 25 percent of projected growth for the period); and (2) one-fourth of these export earnings represents a net gain to the economy, after deducting half of the earnings to account for raw material and investment costs and deducting half of the residual value-added payments, on the assumption that these are twice the real opportunity costs of primary factors of production used in producing these earnings. The IRR on the project comes to 8 percent and the NPV is negative (at a 10 percent discount rate).

Scenario 2 assumes that the incremental exports attributable to USAID programs are twice as high as for Scenario 1, because the

program is responsible for half of increased nontraditional exports. Under this optimistic assumption, the IRR would be 16 percent. But attributing half of growth is generous in view of the very substantial support provided by other donors, especially the World Bank and the IMF.

Scenario 3 focuses more on the costs and benefits of direct assistance to agribusiness, including agribusiness-specific policy assistance—by excluding $15 million in project costs connected to macroeconomic reform under the ANEPP, while delaying and substantially reducing the incremental amount of exports attributed to the program (expanding to about $42 million by the turn of the century and $92 million by 2006). This scenario assumes that the gestation period for establishing a nontraditional agricultural exports sector is over and that rapid growth can be expected. Under this scenario, the IRR is barely 1 percent.

On balance, as the Uganda study concludes, *"It seems very unlikely that the program can achieve a significant positive rate of return on the entire $120-million investment (excluding the macro policy reform support)."*

6 Factors Affecting Program Performance and Impact

Several variables are key in explaining the performance and impact of agribusiness interventions. Some of these variables are among the factors that analysts have determined influence other development programs as well. Therefore, the discussion here is brief and selective. One point needs emphasis. It is the interplay of variables against the backdrop of a host country's social and economic environment that determines program performance and impact. Analysis of individual factors, considered alone or out of context, generally has little explanatory value.

Strategic Framework for Agribusiness Programs

Field studies discerned that a focused, empirically grounded strategic framework for agribusiness initiatives tended to have a positive effect on program performance and impact. Lack of such a framework tended to have negative effects.

Except for the fertilizer privatization programs in Bangladesh and Cameroon, nearly all programs lacked a strategic focus that was clearly articulated and rigorously grounded in an analysis of constraints on agribusiness growth. The only consistent element in the seven case-study programs was the general development goal of increasing agricultural production and rural incomes, either in specific backward regions (Guatemala, Sri Lanka, and Thailand) or nationally (Ecuador and Uganda). For lack of focus, many programs carried a portfolio of projects that funded inappropriate activities and pursued questionable objectives.

Most of the programs struggled several years before arriving at an appropriate focus. They often began by concentrating on the commercial production and marketing of traditional crops. Gradually, they often shifted attention to the production and marketing of nontraditional export crops, but with little understanding of what increasing nontraditional exports actually entailed. Later, many programs sharpened their aim by focusing on the needs of private sector agribusinesses, including public policy and institutional reform. This trial-and-error process entailed substantial costs to USAID, host country governments, and participating businesses. It also limited performance and outcomes early in the program.

USAID had little experience promoting agribusiness, so many projects in the early 1980s were built on simplistic, even flawed assumptions and wasted time and resources. For example:

- The Ecuador program began with the implicit notion that better access to information and credit were the primary needs of exporting agribusinesses. The U.S. contracting firm helped only to develop

and manage an information system and overlooked the need for hands-on assistance in, for example, production, marketing, and quality control.

- In Guatemala and Uganda, agricultural cooperatives were assumed to be well positioned to deliver agricultural inputs to farmers efficiently and to market nontraditional crops successfully. The failure to critically examine this premise allowed missions to proceed with projects aimed at strengthening agricultural cooperatives in both countries. Neither cooperative-focused project realized its stated objectives.

- An unstated premise guiding both the APEF, a regional project, and the Sri Lankan agribusiness program was that international agribusiness firms can be induced to invest quickly in a country simply because policy and institutional reforms are under way and the country has some comparative advantages. On the basis of this assumption, considerable time and resources were spent contacting international agribusiness firms, meeting with their representatives, generating information packages, and financing overseas trips for businesspeople. These efforts did not produce the expected results. It became clear that international firms make overseas investments only after considering many other factors.

In many instances, strategic frameworks articulated a rigid design that caused implementation delays and problems. For example, some projects tried to specify the crops to be promoted, the precise nature and scope of technical assistance, the number of agribusiness enterprises to be established, and even the number of direct investments to be made by foreign firms. An inflexible structure imposed unnecessary burdens on program managers, often stifling their creativity and initiative. Because of such rigidities, program components in Ecuador, Guatemala, Sri Lanka, and Uganda had to be revised and reformulated to meet new challenges and opportunities.

A strategic framework should stick to identifying a program focus, appropriate intervention strategies, and a program architecture. Which mix of products to promote, which types of firms to contact, and how to assist them should be left to program managers. Answers to these questions probably differ from crop to crop, from firm to firm, and with changing domestic and international market conditions.

Policy and Regulatory Reform

A liberal policy and regulatory environment tends to improve the effectiveness of the agribusiness program. Ecuador, Guatemala, and Thailand achieved notable advances with nontraditional agricultural exports because they had supportive policy environments. Thailand's export-oriented economic policies, conservative monetary and fiscal policies, and minimal government controls of economic activity allowed firms and farmers to invest—and succeed—in response to clear market signals. Similarly, in Ecuador and Guatemala USAID programs capitalized on a shift to stable monetary policy, a market-based currency exchange, and export promotion. As part of a careful national policy mix, Bangladesh's government refused to put a ceiling on paddy prices, thus preserving incentives for a shift to high-yield varieties and increased use of fertilizer.

In contrast, Cameroon's overvalued currency, economy-dominating parastatals, and stiff import barriers sent agribusiness decision-makers distorted market signals, so they benefited far less from agribusiness programs than did their Thai counterparts. Sri Lanka's move from socialist to liberal policies proceeded more slowly than USAID agribusiness initiatives, and the legacy of public control cramped private sector programming in the Mahaweli region. Uganda instituted major policy and regulatory reform, but because of weak

physical and institutional infrastructure, reform has yet to significantly affect agribusiness. A supportive policy environment is useful but not sufficient to nourish agribusiness programs.

Physical and Institutional Infrastructure

Physical and institutional infrastructure needed to support agribusiness activity were both the focus of program interventions and key determinants of program success. In Ecuador and Guatemala, firms could respond to new opportunities offered by agribusiness programs because infrastructure for the cultivation and export of nontraditional crops was adequate. Firms from these two countries were familiar with U.S. markets, and U.S. importers knew about Central America. No major infrastructure constraints prevented the establishment of market links between farmers in Ecuador and Guatemala and consumers in the United States. In Thailand, the conditions were even more favorable. When the Lam Nam Oon area started value-added processing, the country already had a vast infrastructure of roads, communications, and agricultural research, marketing, and advertising, much of it established with USAID assistance. The national economy was also in the process of integrating internationally, and that stimulated progress in USAID's Lam Nam Oon agribusiness program.

Weak infrastructure worked against program efforts in Sri Lanka and Uganda. In Sri Lanka, Mahaweli projects were impeded by unsatisfactory transport, communication, and marketing channels, channels rendered weaker still by civil strife. Conditions were even worse in Uganda, where prolonged civil war had devastated roads, bridges, airports, transport facilities, and educational and research institutions. Despite great improvements in Uganda's transportation infrastructure in the last 5 years, major deficiencies remain.

Government Commitment to Program Objectives

Government is not a monolithic, unitary organization but an amalgam of separate units, pulling in different directions and sometimes working at cross purposes. Still, it is useful to speak of government commitment to a program objective. *Government commitment is as important to the success of agribusiness programs as policy reform, physical infrastructure, and privatization.* Success was not possible without the support and participation of essential parts of government.

The success of fertilizer privatization programs depended on strong, continuous commitment of host governments in Bangladesh and Cameroon. Fertilizer subsidies had become unaffordable in both countries, and distribution systems were highly inefficient. Faltering economies made it almost impossible to continue subsidies and government monopolies, and international donors exerted pressure to reduce budget deficits and liberalize trade. Both governments had little choice but to institute reform, simply to survive. Empirical studies conducted during program preparation reinforced the public resolve by demonstrating that privatization would ultimately increase agricultural production—benefiting, not hurting, farmers. These studies alleviated genuine concerns about the private sector's ability to distribute fertilizers efficiently. Prolonged high-level discussions and negotiations between USAID Missions and senior government officials ultimately resulted in shared ownership of the programs.

But commitment at the highest level of government does not always extend to relevant departments or regional and local offices. Regulatory reforms in case-study countries met stiff resistance from government bureaucracies whose power base was threatened by reform. In Ecuador and Guatemala, USAID-supported trade associations and organizations successfully countered bureaucratic resistance by ex-

erting political pressure. In Sri Lanka, despite unequivocal support for regulatory reform from the central government, the regional Mahaweli bureaucracy often stalled implementation out of fear of accentuating social differences.

Quick tangible benefits went far toward solidifying public support for agribusiness programs. Weak governments in the developing world, struggling constantly to preserve their legitimacy, cannot easily incur political risks and costs when the promise of benefits is uncertain. Entrenched interests in Bangladesh and Cameroon could have undermined political resolve, except that fertilizer liberalization cut budget deficits from the very start. Gains up front strengthen public commitment to sometimes painful programs.

Private Sector Involvement

A major weakness of many agribusiness programs was the paucity of input from agribusiness firms and entrepreneurs at the design stage. Design teams sometimes interviewed people in private enterprises or trade associations, but more to inform interviewees about proposed programs than to ascertain their needs, expectations, and likeliness of collaborating on the initiative. Private sector firms targeted for intervention were often excluded from the prolonged design dialogue between USAID Missions and government officials. Not surprisingly, program design documents did not focus adequately on the needs, concerns, and problems agribusiness enterprises faced. Where programs did succeed, private sector participation in the design and implementation of agribusiness interventions was a key factor.

In several cases, program components were placed in the hands of private sector institutions to ensure relative autonomy and to reduce bureaucratic red tape. This was true of the AgEnt project in Sri Lanka, the PROEXAG regional project in Guatemala, and PROEXANT in Ecuador (first located in FEDEXPOR and later incorporated as a nonprofit). Placing program components with private sector organizations marked a definite advance over the earlier practice of locating agricultural marketing and processing projects in the public sector. Private sector placement did not automatically make programs more responsive to the needs of agribusiness firms, however, or subject them to market discipline in the delivery of services, so long as USAID was providing much of the funding.

Agribusiness programs that established close relationships with private firms during implementation were generally more successful than those that did not. The Guatemalan and Thai programs began to have a significant impact only when USAID began interacting with private agribusiness enterprises and focusing on their needs and problems. In Guatemala, USAID's close collaboration with and support for GREMIAL increased program effectiveness and facilitated the growth of nontraditional-export activities. In Thailand, a positive shift occurred when the government field staff began using market-based approaches to help agribusinesses and small producers. The key to the success of the private sector–based approach was effective communication with agribusinesses. Thai field staff members consulted closely with farmers and firms to identify and solve problems in the production, processing, and marketing of new crops. Neither Sri Lanka nor Uganda engaged in comparable public–private communication, and they did not enjoy comparable results.

Appropriate Technical Assistance

The nature, quality, and timeliness of technical assistance were also major factors in the initial success or failure of agribusiness pro-

grams. Well-targeted, timely assistance contributed significantly to progress in programs in Bangladesh, Cameroon, Guatemala, and Thailand.[16] The most promising pilot ventures in Uganda were those in which technical experts had backgrounds in the private sector.

Technical advisers in early phases of the programs often lacked training and experience working with or advising private enterprises. Advisers usually had backgrounds in economics, agriculture, or even the humanities, and had been associated mainly with public institutions. U.S. contracting firms employed them because of their availability and knowledge of developing countries. Moreover, they couldn't easily find many consultants from the private sector to stay and work in developing countries. Contracting firms had few contacts with agribusiness firms and therefore had difficulty identifying private sector consultants. Even when they were recruited, private sector consultants had difficulty understanding both the development process and the way donor agencies, governments, and private firms could work together to promote value-added processing and marketing. Generally, advisers with public sector expertise ended up advising private agribusinesses on business affairs. Technical advisers did gradually learn from experience, and the performance of agribusiness programs improved over time.

PROEXAG was perhaps the only project examined that provided targeted, hands-on assistance to farmers, processors, and exporters. It recruited technical staff who understood not only agricultural production and processing but also the requirements of U.S. importers. Its technical advisers were familiar with U.S. customs and regulatory requirements, U.S. importers' quality standards, and problems in the packaging and marketing of perishables. They could provide timely assistance to interested firms.

Heavy reliance on U.S. technical advisers undermined the effectiveness and sustainability of agribusiness programs. Programs often had to depend on U.S. advisers, because host countries had too few qualified experts. But the high cost of U.S. experts increased the unit cost of technical assistance to an agribusiness enterprise, so relatively few entrepreneurs or potential entrepreneurs could benefit from such advice. And once USAID funding ended, technical assistance could not be sustained.

Sociocultural Setting

Three sociocultural variables affected the performance and influence of agribusiness interventions. *First, mistrust of agricultural middlemen was pervasive among public officials and planners.* In practically all case-study countries, prejudice against agricultural traders was deep rooted. Middlemen were perceived as exploiters, extracting unfair profits from the labor of farmers. Derogatory terms for middlemen typify this attitude: "coyote" (Guatemala), "Asian trader" (Uganda), and "vyapari" (Bangladesh). Even in government, there was usually little or no appreciation of the middleman's role. This mistrust often stood in the way of regulatory reform and assistance to small businesses and led to excessive reliance on cooperatives.

There was a strong preference, at least at the outset, for short-term returns rather than long-term business development.[17] In Guatemala,

16 The technical assistance provided in Bangladesh and Cameroon differed from that provided in other programs. In both countries, technical assistance focused on investigations, analysis, and feedback to the government about the effects of privatization. Unlike technical assistance elsewhere, the programs in Bangladesh and Cameroon lacked enterprise development components.

17 The short time horizon of farmers and firms is often a rational response to highly volatile environment.

Sri Lanka, and Thailand, when market prices for selected nontraditional exports fell, agribusinesses at first tended to adopt unusually stringent standards for purchasing produce to avoid buying the contracted amount. And when market prices exceeded the contract price, farmers often sold crops on the free market, despite standing agreements. Gradually firms and farmers both realized that the loss of trust, and of future business, outweighed the short-term gains of such opportunistic behavior. Both firms and farmers learned to honor their agreements in good faith.

The tradition of entrepreneurship was weak in certain settings. Uganda had expelled the Asian minority that had long played an important entrepreneurial role. Mahaweli settlers in Sri Lanka also lacked the business experience to build on new opportunities. Ugandan and Sri Lankan program outcomes fell short of targets in some measure because of inadequate local entrepreneurial spirit and experience. To be sure, political uncertainty and capital scarcity compounded the difficulty of adopting new business practices. But the very expectation of difficulty blunted farm- and firm-level responses to opportunities afforded by new or changed policies and direct assistance, especially in Sri Lanka and Uganda.

7 Recommendations

On the basis of our critical review of USAID agribusiness programs, we present the following recommendations to senior managers. Certain approaches to policy and operations will, we believe, improve the performance of current programs and the effectiveness of future interventions.

1. *Agribusiness programs require a coherent, realistic, evolving, long-term strategy based on a rigorous analysis of the constraints on the growth of agribusiness and on a dialogue with both the government and the private sector. USAID Missions should formulate such a strategy before initiating agribusiness interventions.*

The key requirement for an effective strategy is sound analysis—developed with the full participation of agribusinesses—of constraints on the growth of agribusiness. Such constraints include macroeconomic policy, the infrastructure base, and the regulatory environment. Critical to the success of the privatization programs was a realistic strategy based on rigorous empirical studies and prolonged consultation with the two governments. In Bangladesh, privatization took 12 years, and serious setbacks could have derailed the program had there not been a sound strategy. The Guatemala and Uganda programs, and to a lesser extent the Thailand program, lacked such strategies and floundered until clear, focused, realistic strategies were formulated in the late 1980s and early 1990s. The Sri Lanka program had a coherent strategy but suffered from a grossly inadequate analysis of constraints facing the agribusiness sector, especially in the Mahaweli region.

2. *The main focus of USAID agribusiness programs should be to improve the policy, regulatory, and institutional environment. Direct and indirect assistance to individual enterprises should be secondary.*

The most important obstacles to agribusiness growth in the case-study countries have been economic policies, regulations, and institutional environments. Experience in Bangladesh, Ecuador, Guatemala and, to a lesser extent, Uganda shows that even with limited policy and regulatory reforms, agribusiness enterprises and entrepreneurs responded to new economic opportunities and generated new income and employment. In these four countries, direct assistance to local firms and entrepreneurs was important but not decisive. It produced results mainly because of the improved policy and regulatory environment. The primary thrust of agribusiness programs should be to improve the enabling environment rather than to give direct assistance to individual firms.

3. *Agribusiness development programs should follow the lead of the private sector, not take the lead. This requires that programs not be too narrowly or rigidly designed.*

USAID experience shows that program design should articulate a broad evolving strategy but should not specify the commodities to be supported, the markets to be developed, or the types of assistance to be provided. Agribusiness programs should offer the full range of assistance: regulatory reform, public and private institutional development, and direct assistance to agribusinesses in the development of technology and markets, in contract farming arrangements, and in collaborative arrangements with international firms.

Once these assistance mechanisms are in place, the design should be flexible enough to allow program managers to support private agribusiness initiatives expeditiously and effectively. USAID experiences in Guatemala, Sri Lanka, and Uganda show that programs can be too proactive in identifying the commodity and type of assistance. The resulting activity often ends up being of little use to agribusinesses and having little or no impact on their growth.

4. *Foreign direct investment in agribusiness is an effective means of transferring production technology and developing export markets. At the outset, however, it is more realistic to promote limited sourcing, technology licensing and franchising, and marketing arrangements between international firms and local entrepreneurs than to try to establish fully owned foreign subsidiaries or joint ventures in host countries.*

It is difficult to attract direct foreign investment in countries with poorly developed institutional and physical infrastructure and an inappropriate business climate. International firms avoid investing in unknown or uncertain economic and political environments. Therefore, it is more realistic for agribusiness programs to facilitate links between international enterprises and local firms that do not require foreign equity participation. The most fruitful areas in which to promote such mutually beneficial links are sourcing, the transfer of production technology, and international marketing.

5. *Contract farming has been an effective institutional mechanism for linking small farmers with processors and marketers of many high-value cash crops (especially nontraditional export crops). Such arrangements have been mutually beneficial, and USAID programs should continue to explore them.*

Agribusinesses have three options: they can grow their own crops on commercial farms, purchase produce in the open market after the harvest, or contract with farmers in advance of production. For many products, especially those that do not enjoy economies of scale, agribusiness firms find it more profitable to contract with smallholders. The country studies of Guatemala, Sri Lanka, Thailand, and Uganda show that such arrangements have benefited thousands of smallholders and landless workers. Two factors in particular improved small farmers' bargaining position: farmers' organizations and competition among agribusiness firms. USAID agribusiness programs should explore the feasibility of promoting contract farming arrangements whenever possible. The success of contract farming depends on, first, demonstrating to agribusinesses that small farmers can be reliable suppliers of quality products and, second, showing farmers how to shift from quasi-subsistence farming to market-oriented production.

6. *USAID efforts to assist agribusiness cooperatives have not been encouraging. Producer and marketing cooperatives have been neither efficient nor sustainable, despite generous outside assistance. Therefore, USAID should support agribusiness cooperatives only when it is certain that they have the will and ability to subject themselves to the discipline of free markets.*

USAID has been singularly ineffective in promoting agribusiness cooperatives. A major

effort in Uganda was an almost total failure, and only a few cooperatives benefited from a major program in Guatemala. The experience of many programs not covered in this assessment has been similar. There are reasons for these failures. First, most "cooperatives" in developing countries are really government-sponsored institutions, created to exercise government control over production and marketing and to facilitate the delivery of government services. Second, cooperative structures, from apex organizations to primary societies, are too costly and heavily staffed to be competitive in farm input and output markets. Even those cooperatives that are not government organizations were formed more as participatory grassroots organizations than as commercially viable agribusinesses. They tend not to have the necessary commitment to competitiveness and financial sustainability.

7. *Although women have benefited from agribusiness programs—especially those of nontraditional exports—they were not full and equal beneficiaries, especially from the ownership of firms. USAID programs should try to solve this problem by promoting women's entrepreneurship.*

The growth of nontraditional agricultural exports has increased employment and income for women in many case-study countries. Most nontraditional exports are labor-intensive, and much of the labor is provided by women. In all of the countries studied, horticulture crops are traditionally produced by women, who are considered more skillful and productive than men at many of the tasks involved in producing and processing nontraditional exports. In Ecuador, Thailand, and Uganda, women are significant beneficiaries of USAID programs. Not only have their incomes increased, but they have kept substantial control over the extra income and used it to meet family needs, especially for their children's nutrition and education. Only a few agribusinesses are owned by women, however, and women generally earn less than men, especially in rural areas. Therefore, agribusiness programs should encourage women's entrepreneurship.

8. *The improper use of pesticides emerged as a major problem, resulting in health hazards and significant economic losses to farmers and exporters. USAID agribusiness programs promoting nontraditional exports must give priority to ensuring the proper use of pesticides.*

Developed countries demand unblemished products. In many countries, farmers mistakenly assume that the more pesticides they use, the more valuable and marketable their crop will be. This has had three serious results. First, inappropriate pesticide use has caused serious health problems for producers. Second, excessive pesticide residues have caused many shipments to be rejected by importing countries, at great cost to agribusinesses and farmers in exporting countries. Third, as a result of the inappropriate application of pesticides, pests have developed resistance, with disastrous consequences for affected regions. Although most countries are now improving their management of pesticides, USAID was often negligent about anticipating and actively addressing the problem. Regulations in reporting countries and programs for "green labeling" will eventually force producers to control use of these products or lose out in international markets.

9. *Small- and medium-size firms dominate the agribusiness sector in developing countries, so USAID should continue to design interventions geared to them.*

Small- and medium-size firms have been the major beneficiaries of USAID agribusiness programs. The premise that large national and international firms monopolize lucrative markets for high-value cash crops in developing countries—by dint of greater financial, technical, and managerial resources and better access to international markets—is not supported by country studies. The truth is more complex.

Large firms do tend to dominate such traditional high-volume, low-value agricultural ex-

ports as coffee, sugar, cotton, rubber, bananas, and pineapple. These firms do not need and have not received direct USAID assistance; they already have the technical and marketing expertise they need. Moreover, this segment of the agricultural export industry tends to have large economies of scale and is relatively capital-intensive. USAID programs in developing countries paid special attention to high-value *nontraditional* exports, including fresh fruits and vegetables, ornamentals, herbs, and spices. These products are grown mostly by small farmers and are processed and marketed, mostly by small- and medium-size firms.

10. *Direct technical assistance is useful to private sector agribusiness firms. USAID enterprise development interventions should focus on the transfer of production technology and the establishment of export links (with importing firms in destination markets), the two areas in which direct technical assistance has proven to be most effective.*

USAID agribusiness programs have provided technical assistance to firms and entrepreneurs in areas ranging from accounting to production technology, depending on their needs and conditions. Experience in Ecuador, Guatemala, and Sri Lanka indicates that for nontraditional exports, technical assistance in production technology and overseas market networking have the greatest impact. Small and medium-size farms need technological assistance because most do not have the know-how or equipment to compete on the basis of price or quality in developed-country markets. They need help forming links with importers in destination countries because export markets for nontraditional products are volatile and highly competitive. Agribusiness firms need hands-on assistance to break into these markets and to generate reliable supplies of consistent cost and quality.

11. *USAID agribusiness assistance to firms, private sector intermediary organizations, and producer and marketing associations should include sunset clauses.*

In many countries, USAID programs provided direct assistance not only to agribusiness firms, but also to private sector intermediary organizations and producer or trade associations. This assistance is useful initially, but recipients risk becoming dependent on assistance. USAID should specify early on when assistance will end and stick to that timetable.

Appendix

Assessment Methodology

CDIE devised a multidimensional research strategy to answer the evaluation questions. The cornerstone of this strategy was a series of case studies based on a shared analytical design. The case-study approach enabled field teams to examine agribusiness interventions in their natural settings. Seven case studies of 20 projects (or their components) were prepared on the basis of research in seven countries.

In addition to these case studies, CDIE undertook a comprehensive desk review of all the evaluations of agribusiness projects conducted by USAID Missions and geographic bureaus. It also prepared background papers on two major regional projects. Finally, CDIE interviewed USAID managers and technical experts about critical issues and the implications of the field study findings.

Sample for Case Studies

To select the sample for case studies, we identified all projects with some level of agribusiness activity and then narrowed the sample to those projects focused primarily on agribusiness and also suitable for field study. For the first step, we searched the USAID Development Information System for projects with agribusiness components by using such keywords as "agricultural processing," "storing and marketing," "agricultural exports," and "food industry." Eleven key words generated a list of 763 projects.

A review of project descriptions showed that agribusiness components of most of the 763 projects usually represented only minor elements. Most projects emphasized agricultural production or support for public agricultural institutions, and therefore these were excluded. So were projects completed before fiscal year 1982—for which documents and interviewees would be difficult to find. As a result, the list was narrowed to 136 projects with a primary or strong secondary focus on agribusiness. Each member of the three-person assessment design team reviewed project summaries from the CDIE Development Information Division and participated in project selection. Recommendations about additions to the list, or deletions, as well as other comments, were solicited from USAID managers responsible for agribusiness programs in each geographic bureau.[1]

The next step was to eliminate projects that were prematurely terminated, regional in

1 See methodological details in CDIE (1993).

scope, or still in the planning stage. No data were available for two projects that were terminated—whether because of political turmoil, changing USAID priorities, or nonperformance is unclear. CDIE lacked funds for the multiple-country visits needed to assess regional programs. And there was no value in focusing on projects that had not started yet. This second round of selection narrowed the list of projects to 57.[2]

Next, CDIE used a more informal procedure to ensure representation in the sample of all major geographic regions (Africa, Asia, and Latin America and the Caribbean) and four intervention strategies pursued by USAID. CDIE also excluded projects for which adequate documentation and data did not exist or could not be developed.

The assessment design team read project documents, visited geographic bureaus, and consulted with experts familiar with individual agribusiness projects in several regions. This narrowed the sample selected for fieldwork to 19 projects in seven countries (Bangladesh, Cameroon, Ecuador, Guatemala, Jordan, Sri Lanka, and Uganda). The sample was revised during implementation. Two projects in Thailand that had agribusiness components were added, and an agricultural marketing project in Jordan was eliminated because of time constraints. Two agribusiness projects in Sri Lanka that were cofinanced by PVOs were added, but two seed-multiplication projects in Cameroon were eliminated because the USAID assessment team could not get government permission to include them. (The list of the projects finally covered in seven case studies is given in Table 3 of the report.)

Sources of Case Study Information

CDIE sent assessment teams to prepare case studies of agribusiness interventions. Each team spent 2 to 4 weeks in the field gathering details. Efforts were made to ensure that all teams use the same framework, topics, and variables so findings and conclusions could be compared. The assessment teams used the following materials:

Project records and documents. The project records and documents examined included project design and planning documents, progress reports, implementation schedules, records detailing project inputs and outputs, monitoring data, midterm and final evaluations, project completion reports, records of intended or actual beneficiaries, and reports from related Mission activities, such as analyses and feasibility studies for regional or centrally funded projects. Many records and reports were available from CDIE's Development Information Division. These were reviewed before teams departed for fieldwork.

A review of CDIE's archives indicated that past evaluation reports were available for 20 agribusiness projects. CDIE examined these evaluations by geographic bureaus and overseas USAID Missions. The quality of the evaluations varied, and practically all of them focused on the activities and outputs of agribusiness interventions rather than their impacts.

Statistical data. Field teams reviewed relevant statistical data available from host governments, international donor agencies, and PVOs

2 These 57 are listed in Appendix III of CDIE (1993).

to study the context, design, implementation, and impact of interventions.

Minisurveys of agribusiness firms. In three countries, minisurveys were undertaken to solicit information, ideas, and suggestions from targeted agribusiness firms. The sample size ranged from 15 to 50 enterprises per survey.

Key informant interviews. Interviews were conducted with key informants, including USAID managers, project staff and contractors, host government officials, representatives of targeted firms, and staff from local intermediary and business organizations.

Each assessment team prepared a report that was reviewed by CDIE and revised in light of CDIE comments.

Desk Studies of Regional Projects

To complement the case studies, CDIE prepared background papers on two major regional agribusiness projects, PROEXAG and APEF which provided significant assistance for agribusiness promotion in Central America and Africa, respectively.

PROEXAG developed in response to the rising need for technical assistance in Central American USAID Missions, as the focus of Agency efforts shifted from the production of locally consumed, basic food crops to the production, marketing, and export of nontraditional exports. The project, which started in 1986, was designed to support regional export promotion organizations, which help local entrepreneurs, producers associations, and agribusiness firms. The second phase of PROEXAG, known as EXITOS (Export and Industry Support Project), goes even further. It assists private corporations, cooperatives, and individuals active in nontraditional exports. The background paper provided considerable insight into the PROEXAG and EXITOS experiences.

APEF, established in 1984, promoted agribusiness investment in Africa. It encouraged U.S. firms to invest in agribusiness. To facilitate direct foreign investment, APEF financed technical assistance, training, input supply, and market and other research. The background paper analyzes project achievements and failures and draws lessons about policy and programs.

Limitations

Two limitations of the information gathered by these field teams should be mentioned. First, field teams were able to find only limited data on the impacts of agribusiness interventions. Most programs did not collect time series data to monitor changes in agricultural and agribusiness activity during the life of an intervention. As a result, the assessment team relied heavily on findings from the minisurveys and on fresh analysis of data gathered earlier for other purposes.

Second, the critical issue of causality was not fully resolved by the field studies. The teams generally succeeded in documenting changes contemporary with agribusiness interventions, but could not consistently establish whether, and how much, those changes were attributable to USAID programs. CDIE evaluators often relied on anecdotal evidence or plausible inferences rather than hard statistical data to establish causal relationships.

The limited availability of statistical data underscores a need for instituting a cost effective information system in major agribusiness projects, which can gather and analyze quantitative and qualitative data. Such information systems should focus on both the performance of agribusiness projects and their effects on income and employment. Particularly attention should be given to the effects of agribusiness expansion on small farmers, farm workers, agribusiness processors and exporters of nontraditional agricultural products.

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