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**Costa Rica's Non-Traditional Agricultural Exports:  
Analysis and Recommendations**

**Submitted to:**

**Consejo Agropecuario Agroindustrial Privado  
CAAP**

**Submitted by:**

**Export Management Program  
Instituto Centroamericano de Administracion de Empresas  
Alajuela, Costa Rica**

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## **INTRODUCTION**

The 1985 precursor to this study, "Costa Rica's Non-Traditional Agricultural Exports: Analysis and Recommendations," analyzed the sector over the period 1978-1984. It provided a picture of the strengths and barriers existing at the start of the country's many efforts to raise non-traditional exports. Specific export-promotion activities were formulated in response to some of its recommendations. In the four years since then, much has changed. This study's objectives are to identify improvements so that we might take note of successful efforts, and to identify new and continuing problem areas. We hope the analysis and recommendations will contribute to the continued effort to promote the sector's growth and its contribution to Costa Rica.

## **ABSTRACT**

Costa Rica's non-traditional agricultural and agro-industrial export sector represents less than a quarter of all exports, but it is the fastest growing. Market opportunities, export incentives, and assistance, have ignited unprecedented export activity and private sector learning. Some barriers to growth which existed five years ago have been reduced. At the same time, some barriers which existed earlier have worsened considerably. Others have developed only recently. Exports of agro-industrial goods have largely fallen behind. Approximately 35 in-depth interviews with exporters across the spectrum suggest that unless these barriers are reduced, the continued rapid growth of the sector may be in jeopardy.

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## I. OVERVIEW

Costa Rica's non-traditional agricultural and agro-industrial (NTA) exports have been highly volatile over the last 10 years--more so even than industrial exports. However the sector has experienced tremendous growth since 1983. Between 1980 and 1988 the average annual compound growth rate (CGR) of agricultural exports was 20.1%. The CGR of agro-industrial exports was 29% per year. In contrast, the CGR of total and industrial exports was only about 5% per year for each over the same period.

Since 1986 Costa Rican exports of relatively unprocessed agricultural exports have almost doubled, causing growth in agro-industrial and other exports to pale in comparison.

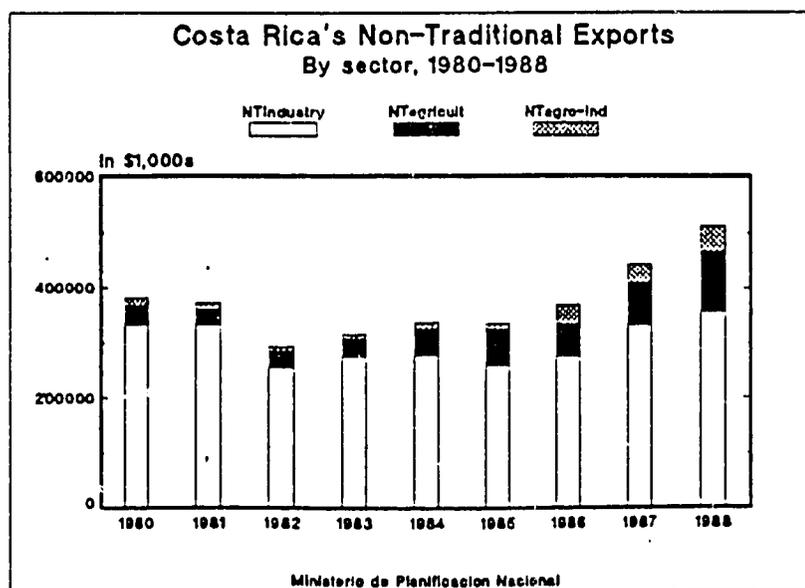
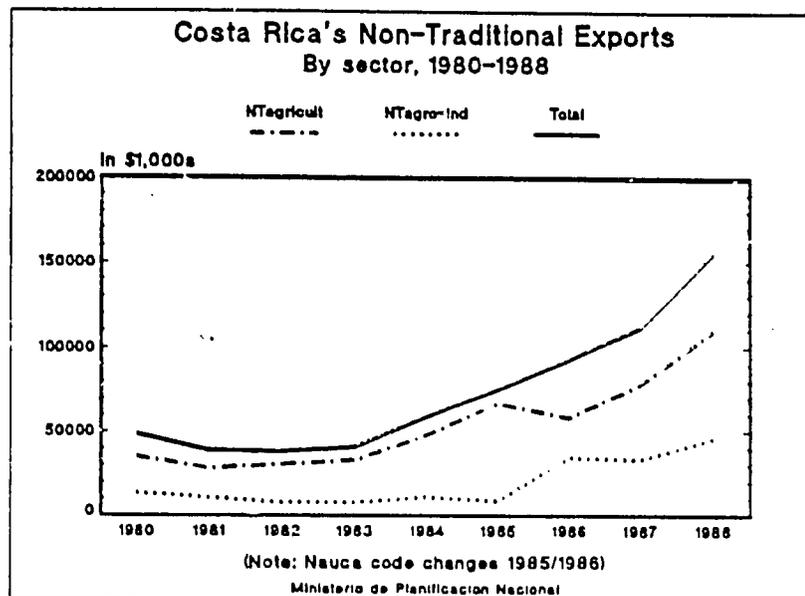
Although much progress has been made in the last several years--particularly in public and private sector services and private sector sophistication--serious barriers exist which threaten to dampen future export growth.

Of all problems, the lack of enough refrigerated storage space at the airport appears to be the most pressing. An issue already four years ago, this infrastructure problem remains unresolved, while the volume of exports handled by the

1/ This analysis is based on Estadística y Censos data collected by the Ministerio de Planificación Nacional y Política Económica in their "Non-Traditional Exports" data series. "Non-traditional agricultural" exports are defined as including agricultural, animal and forest production; "Non-traditional agro-industrial" exports are defined as products whose raw materials come from agricultural activities and require processing.

Statistical analysis is impeded by the apparent lack of official non-traditional export series tabulated and released regularly by the Central Bank. Studies seem to be completed sporadically by individuals at the Bank, on the basis of varying definitions of terms. As a result trend analyses vary greatly.

Comparisons of sector growth between 1985 and 1986 are difficult since Nauca classification code changes between these two years introduce significant inaccuracies.



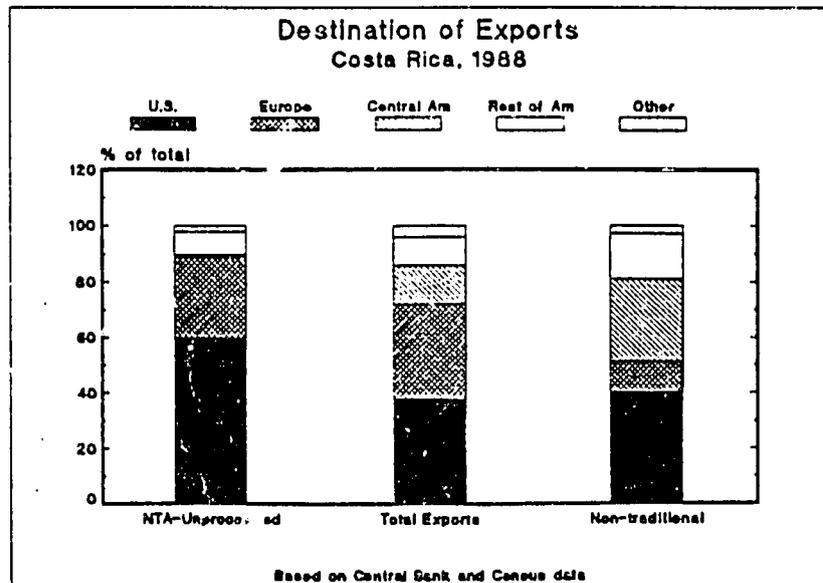
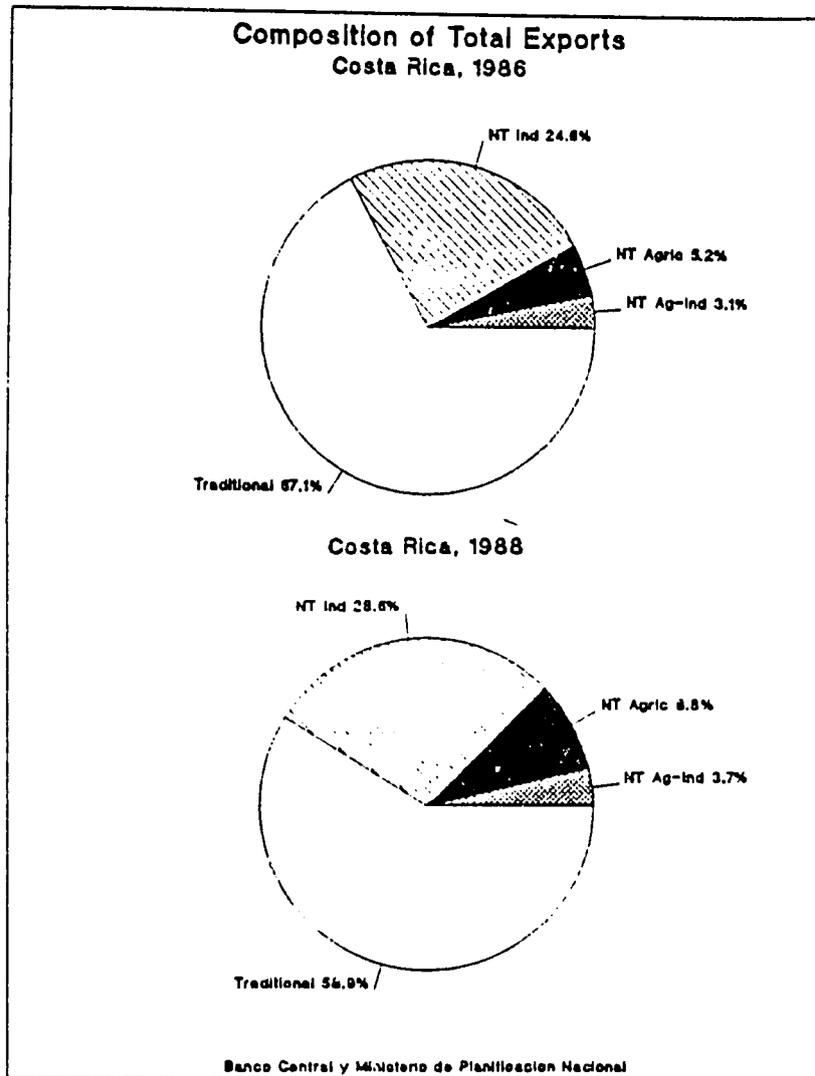
airport has grown by 600% according to one estimate.

Interviews with exporters suggest that of all exports, seafood, plantain, roots and tubercles, and chayote are in need of the greatest immediate attention. Seafood exports are threatened by largely unregulated and wasteful harvesting of coastal waters; plantain exports have declined dramatically due to uncontrolled disease, with important social and economic consequences on the Atlantic Coast; and the root and tubercle, and chayote, export industries suffer from extreme instability and mismatches between production and market demands.

According to Planning Ministry data, NTA exports' share of total exports jumped from 4.4% in 1982 to 12.5% in 1988. During the same period traditional agricultural exports declined 7 points--from 66% to 59% of total exports. And industrial exports declined 1.5 points to 29% of total exports. Much of the NTA sector's growth has occurred since 1986. (See graphs on previous page, and "Composition of Total Exports" graph.)

Relative to other regional countries, the growth rate of Costa Rica's exports to the U.S. under the Caribbean Basin Initiative is second only to the Dominican Republic. This is true for both CBI exports, as a whole, and animal/vegetable products considered separately (see "CBI Exports" and "Animal/Vegetable CBI Exports" graphs). It should be noted that growth of CBI trade with the U.S. slowed considerably between 1987 and 1988 for almost every country in the region. For Costa Rica this and interviews with exporters suggests that much of the growth in animal/vegetable exports has occurred with Europe and other countries.

Second to the sector's growth, the most noteworthy trend is that *processed* NTA exports are growing far more slowly than NTA exports involving minimal processing. Between 1986 and 1988 the average annual compound growth rate of unprocessed NTA exports was 23.6%; of processed NTA exports it was only 9.6%. In some cases export volume is actually declining. Producers of processed goods are looking increasingly to the U.S., as opposed to regional markets. (This trend is pictured dramatically in



the "Destination of Non-Traditional Agro-Industrial Exports" graph.)

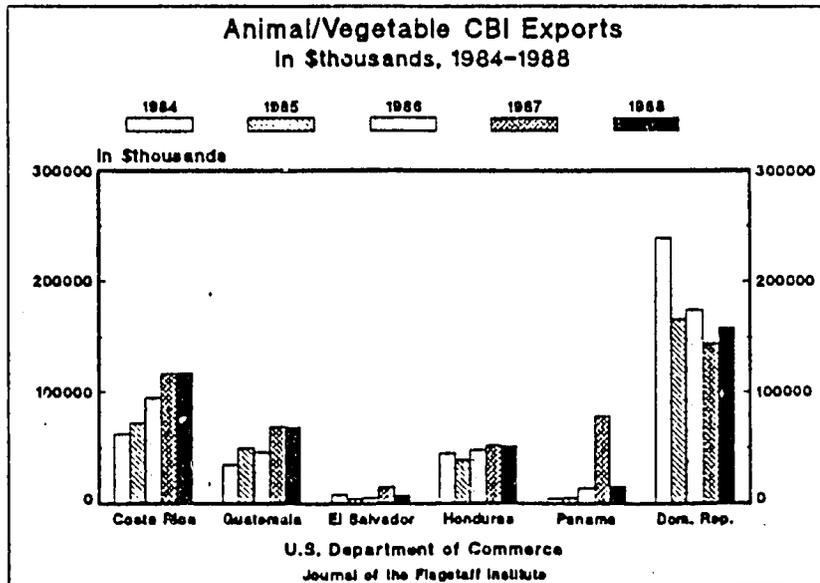
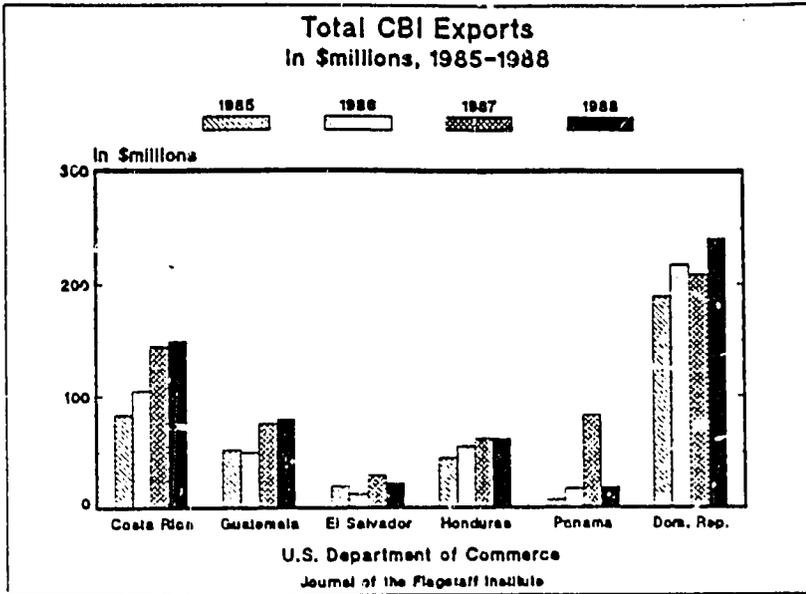
A third important trend is increased sales to Europe. The portion of ornamental plant and foliage exports to Europe has grown from 40% in 1982 to almost 60% in 1988. Exports to Europe of raicilla and yuca have also grown in importance. Exporters of almost every unprocessed NTA product are in the process of entering into the European market, principally Germany, Holland, and England. (See "Destination of Non-Traditional Agricultural Exports" graphs for the significantly increased share of exports to Europe since 1982.)

Nonetheless, unprocessed NTA exports<sup>2/</sup> are far more oriented to the U.S. market than other exports (see "Destination of Exports" graph). Compared to other non-traditional exports, they are headed more often to the U.S. and Europe, and less often to other Central American countries, the rest of Latin America and Canada, and other countries.

**HIGHEST GROWTH EXPORTS**

PINEAPPLE exports have grown the most, from less than \$1 million in 1982 to over \$31 million in 1988, at an average annual compound growth rate of 75%. One multinational company--PINDECO (Del Monte)--is responsible for most of this growth. Now representing 13% of all NTA exports, the entire sector is vulnerable to trends in pineapple prices, although exporters report that to date prices have not fluctuated widely year-to-year. In a sense, the pineapple could be considered Costa Rica's new "traditional" export, due to low opportunities for differentiating the product, and the dominant role of one multinational in both production and commercialization.

<sup>2/</sup> Including fish, shrimp, lobster, ornamental plants, foliage, cut flowers, chayote, yuca and other tubercles, raicilla, pineapple, petunia seeds, melons, strawberries, macadamia, papaya, ginger and cardamon. These represent 93% of relatively unprocessed NTA products according to our calculations. (Total relatively unprocessed NTA exports equal \$150 million.)



SEAFOOD exports have grown almost equally as fast as pineapple, from \$6 million in 1982 to \$47 million in 1988, at an average annual compound growth rate of 34%. Seafood is now the largest NTA export sector. Fish exports have grown consistently since 1982. Exports of shrimp and lobster have been less consistent. Last year shrimp exports rose back to their 1985 level. Lobster exports doubled last year after several years of little growth.

ORNAMENTAL PLANT AND FOLIAGE exports have become an important sector too, growing from \$7 million in 1982 to \$37 million in 1988 (AACGR: 27%). Changing market conditions in the U.S. and the large number of exporters now in the industry are causing problems for this sector.

A FEW VEGETABLE exports have grown fast, specifically: chayote, yuca, raicilla and other roots and tubercles. Exports of these vegetables grew from \$5 million in 1982 to almost \$19 million in 1988 (AACGR: 21%). Over half of this growth is due to the explosion of raicilla exports.

WOOD PRODUCT exports have grown from \$13 million in 1986 to \$26 million in 1988 (AACGR: 26%). Furniture exports have grown during this period, as have exports of paper products.

MELON, STRAWBERRY, PAPAYA, AND GINGER are the new high-growth exports. Each reached a volume of about \$1-\$1.5 million last year, at least double the year before.

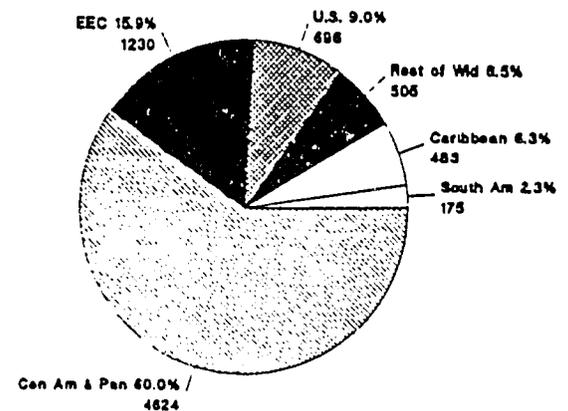
BREAD PRODUCT exports are the only processed food products whose exports increased between 1986 and 1988. Exports jumped \$2 million to a level of \$3.5 million in 1988 (AACGR: 33%).

#### LOW GROWTH AND DECLINING EXPORTS - Less processed

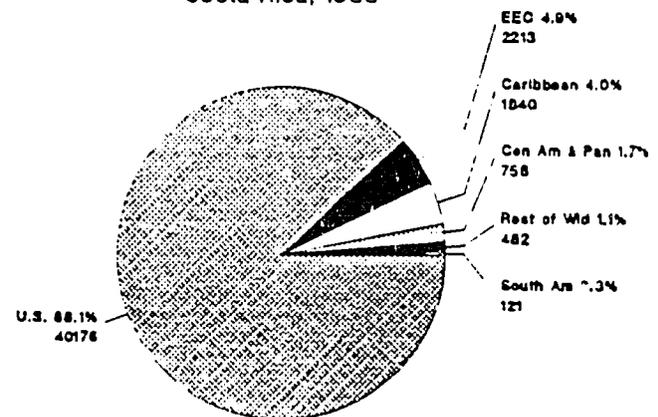
PLANTAIN exports have fallen the most, from almost \$5 million in 1982 to a little over \$1 million in 1988 (AACGR: -21%). This appears to be due largely to widespread and uncontrolled disease over the last decade.

MACADAMIA NUT exports reached \$500,000 in 1986. Since then they have not peaked \$1

#### Destination of Non-Traditional Agro-Industrial Exports Costa Rica, 1982



#### Costa Rica, 1988



In \$1,000s, Ministerio de Planificación Nacional

million. While exports are growing, growth rates do not come close to those of other new exports such as melons, strawberry, and ginger. The long lead time involved in tree development is undoubtedly responsible for slow export growth. With 5,400 hectares in development in 1988, exports are expected to rise significantly in the near future.

CUT FLOWER exports reached \$8.5 million in 1988, double their 1982 level. However this sector has been plagued by difficulty competing with Colombian exports. Export volume has been unstable, with many exporters reporting losses.

TOMATO, ONION AND GARLIC exports have remained marginal, between \$33,000 and \$129,000. Of the three, garlic exports have grown the most.

#### LOW GROWTH OR DECLINING EXPORTS - Processed

PREPARED AND PRESERVED MEAT exports declined from \$2.5 million to a little over \$1 million from 1986 to 1988.

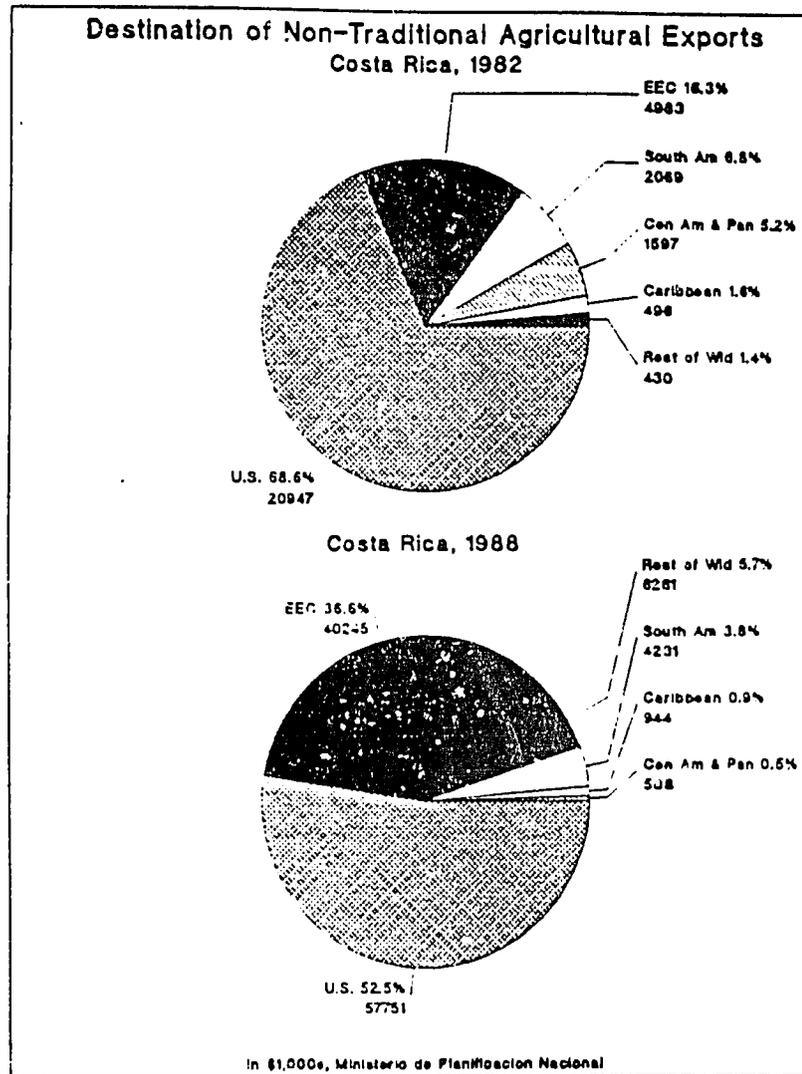
PROCESSED ANIMAL FOOD, DAIRY PRODUCT, REFINED SUGAR, AND TOBACO PRODUCT exports have all declined in the last 1-2 years.

BOTTLED OR CONSERVED FRUIT AND VEGETABLE exports, at about \$11 million in 1988, have grown by 15-20% in each of the last two years, as have DIVERSE PROCESSED FOOD PRODUCTS. This is considerably below the growth rate of their unprocessed counterparts, although it nonetheless reflects significant activity.

LEATHER SHOE exports, at almost \$5 million in 1988, grew little in the two previous years. Other leather product exports (less than \$100,000) declined in volume.

#### WHY THE RELATIVE STAGNATION OF PROCESSED NTA EXPORTS

A new preference for fresh fruit and vegetables and plants has increased demand in U.S. and European markets. Exporters who have the greatest opportunities are those in climates such



as Costa Rica's which can fill the "off-season" demand (i.e. when most U.S. production declines). There is no such new market for processed goods, such as jam, hot sauce, crackers or chocolate; and Costa Rica's climate gives it no particular advantage since there is no "off-season" for these goods.

Fixed costs and initial investments are low for most unprocessed exports relative to processed exports. This reduces the risk of exporting unprocessed products. It also means that less start-up capital is required, making entry into this activity accessible to more people. Seafood, pineapple and chayote are cases in point.

The production process for many high growth exports is familiar. Examples are pineapple, seafood, chayote, ornamental plants, and roots and tubercles. Although producers have had to adopt new growing and post-harvest practices to improve quality and productivity, much is familiar. This familiarity is important not just at the level of farm manager, but in the collective consciousness of people caring for the plants and doing the harvesting. One exporter, for example, reports far more success harvesting export pineapples on the Atlantic Coast, where he says people know how to harvest carefully from years of harvesting export bananas, than in San Carlos, an area with little experience in harvesting fresh fruit for export.

Finally, there are several other hurdles to the export of processed goods which have yet to be overcome. A major hurdle can be low-quality or high-cost supplies. A pasta producer has trouble exporting to the U.S. market because, he says, the #3 grade wheat Costa Rica purchases from the U.S. results in lower-quality dough. A chocolate producer must pay high prices for milk powder protected by the state, which he says makes it difficult for him to compete abroad.

Recently, a Costa Rican trading company received a request from a U.S. company for fruit juice to be delivered in cans of a specific size. In this case market knowledge and marketing--which is far more involved for processed than unprocessed goods--was not needed since an order was in hand. Nevertheless, the trading company has been unable to find a supplier for this order and many others like it, for the following reasons.

In many cases product supply is the problem. The most common problem is that processors cannot offer producers a high enough price for the produce they cannot sell fresh. This is the principal reason cited for extremely low exports of processed pineapple, coconut and plantain. According to producers, it is only worth delivering unsaleable produce if processing is integrated with a relatively large cultivation effort (a large farm or a marketing cooperative). This is also the only way processors can be assured of a stable supply. And stable supply is critical since it feeds an operation with high fixed costs.

The mango illustrates another supply problem. High quality processing requires a specific variety of mango. The processor is caught: without a reliable source of demand, a long-term contract cannot be struck with producers to produce the right variety. Yet without stable supplies the processor cannot commit to a client contract.

A similar quandary is found repeatedly. Producing a processed good for export generally requires a considerable investment in equipment and learning so as to produce a product of sufficiently high quality and low cost. With the entry of many low-wage countries in processing food products, productivity has become critical. Yet because the local market is so small local sales are insufficient to cover high fixed costs. The risks of making the investment without a stable buyer are therefore seen as prohibitive. Meanwhile buyers want to see the investment and samples before committing themselves to regular purchases.

Perhaps because of the greater difficulty of exporting processed goods, they have not received the attention given to the development of unprocessed goods in recent years.

Nonetheless, some processed good producers are venturing into exports despite these difficulties. Risk is minimized by devoting already existing plant capacity to export production. Furniture exports appear to have had the most success. Unlike most food products, they are a highly differentiated product targetted at a niche market. Del Campo is pursuing a similar niche strategy with the development of pickled miniature vegetables.

Several processors interviewed reported that their interest in exporting was increasing as the threat of foreign imports increases with Costa Rica's entry into GATT. All seemed confident that their relative advantages would continue (i.e. consumer loyalty and continued price advantage). However exporting was viewed as a way of reducing their vulnerability to competition in the home market.

The growth of unprocessed agricultural exports has opened possibly the most exciting opportunities for developing agro-industrial exports. This is discussed later in "*A Strategy for growing processed good exports.*"

## II. IMPROVEMENTS SINCE THE EARLY CBI YEARS

### ● EXPORTER LEARNING

**DEVELOPMENT OF LOCAL OWNERSHIP AND MANAGEMENT.** Over the last several years a huge number of locally-owned export-oriented firms has sprung up. Many of them have doubled their sales year to year. In non-traditional agricultural exports the oldest firms tend to be foreign-owned, but the newer ones tend to be home-grown. This suggests that an important group of successful outward-oriented businesspeople is developing in Costa Rica.

**ORGANIZATIONAL INNOVATION.** The rapid development of new needs--such as for various kinds of export services, the acquisition of technical expertise, risk-minimization in transactions affected by many external variables, intra-industry assistance and detailed feedback on product quality--has sparked a flurry of organizational innovation.

New industry associations (e.g. the chayote producers' organization), marketing cooperatives and other marketing firms, domestic and international contractual agreements and informal business practices are the result. Examples of marketing cooperatives formed in the last 1-6 years include *Orcoop*es for seafood, *Coopeplant* and *Coopecira* for ornamental plants, *Coopegermania* for pineapple, *Coopefresa* for strawberries, and *Coopechayote* for chayote. Examples of marketing firms include *Intertec*, *Interfruta*, and *Expo-Rica Internacional*.

Contractual agreements range from contracts for shipment of cut flowers on consignment to agreements on responsibility for perishable products and documentation methods for proving liability, to agreements between international partners of a Costa Rican business. In the last few years some of the larger exporters have opened sales offices in Miami. This requires familiarity with U.S. business regulations. Innovative cooperative agreements are exemplified by the tripartite agreement between *Coopegermania* (a pineapple marketing cooperative) and two trading companies with complimentary strengths.

This innovative environment is one of the country's keys to continued success in a competitive world market.

**QUALITY CONSCIOUSNESS.** Everyone is talking about post-harvest techniques for insuring product quality. Many exporters who purchase products from producers are not just taking the cream of the crop, but instructing producers on post-harvest and packing techniques. Most exporters had to learn through trial and error about the kind of treatment exported goods require. For most, that learning period is well underway, though struggles with implementation continue. New exporters seem to be starting with an appreciation of the importance of quality and the basics of how to insure it. This does not mean that all producers are following recommended techniques. At *Coopechayote*, for example, almost half of chayotes received from the field cannot be exported, many because they have small bruises on them resulting from inadequate care in harvesting and transporting. A seafood exporter claims to have seen an improvement in the handling of fish because after instructing fishermen on how to treat fish once in boat, he is careful to select only well-handled fish.

**TECHNICAL SOPHISTICATION.** Many requirements of exporting have forced producers to become involved in a range of technical issues: seed or starter-plant quality, reproduction and development, pesticide and fungicide use to insure product conformity with USDA regulations, the biology of product decay and preservation, cultivation methods for productivity improvement, and the economics of labor-saving equipment relatively new

to the sector such as mechanized product rinsers for root products. Again, most exporters have learned much through trial and error. Other sources of technical information have been large foreign clients, a domestic purchaser who exports, and visits to U.S. producers and packing plants such as organized by CENPRO. When exporters sell part of their harvest on the domestic market, as does *Fresas del Llano* in Cartago, Costa Ricans benefit directly from this improved production and harvesting expertise.

**MARKET CONTACTS.** The development of market contacts is happening at an incredibly rapid rate. Most export businesses are young, but most market contacts are even younger since they have come incrementally. Exporters have become more adept at developing contacts, and the networking process makes contact-development less and less difficult. Almost every exporter interviewed was in the process of developing a potential client by having recently sent samples or followed up on a lead. In many cases potential clients were in a new market, and the samples sent also served as a transportation test.

**MORE DIVERSE SOURCES OF INFORMATION AND ASSISTANCE.** As exporters have grown in size and developed contacts abroad, their sources of information and assistance have diversified somewhat. Exporters tend to get market information from brokers and other buyers. A very few large exporters have an office in Miami or a sales associate in the U.S., highly valued direct sources of information. Large buyers of a large exporter sometimes send over technical people. Small exporters who sell through trading companies and to local buyers get their information second hand if at all. The regularity and nature of feedback in all these cases varies greatly.

Trade journals are another source of information, though mostly for larger exporters.<sup>3/</sup> Friends and business acquaintances abroad also provide information, especially on business conditions in other Central American countries. Here too, large exporters have an advantage.

Finally, other producers and exporters provide assistance, although the level of cooperation varies by industry. In general, the level of formal industry organization is quite low, and often producers and exporters are not part of the same organization and communicate little. The Association of Exporters of Perishable Goods is the only exporter's association besides the broadly-defined *Camara de Exportadores de Costa Rica*.

#### ● PUBLIC SECTOR SERVICES

Several improvements in public sector services are reported by exporters to have facilitated export growth. They are: less paperwork for exporters, improved access to credit, better inspection of goods leaving the country, and improved technical and marketing assistance. That there has been improvement in these areas in the last several years does not mean that more improvement is not needed. Indeed, inspection and paperwork are still two areas cited repeatedly by interviewees as needing much improvement. Nonetheless, significant progress has been made and should be recognized.

**LESS PAPERWORK.** Exporters report that the most progress has occurred in the last year and, indeed, in the last couple of months with the adoption of the *Tramite Unico* ("Single Form") for the documentation of exports. Last year's opening of a *Ventanilla Unica*

<sup>3/</sup> Trade journals mentioned include *The Packer*, *Citrus Industry*, *Fruits & Vegetables*, *Seafood Leader* and *Florida Foliage*.

("one-stop window") at the airport is universally appreciated by exporters of perishable goods, although a consistent report is that recently processing takes several hours longer than it used to. The adoption of the Export Contract, in which exporters specify the imported inputs they will need in the future so as to get tax exonerations once and for all, is also seen as time-saving. Beyond saving exporters' time, these simplifications of the bureaucratic process make exporting accessible and attractive to more people. The simplifications have significantly improved the quality of life for many exporters, particularly small ones who don't have assistants to do the paperwork. They are also seen as proof that the government supports exporters' efforts and is trying to solve long-standing problems.

**ACCESS TO CREDIT.** Four years ago many exporters found access to credit difficult. According to a 1985 report, "many exporters felt that the banking system was unresponsive to the needs of exporters and that lenders were unable to evaluate the potential risks and returns of NTA export projects. Banks with AID lending facilities were interested in finding worthwhile projects to place loans, but stated that they received too few viable proposals, and that many projects lacked elements which they considered essential for success."

Today, most exporters don't view financing as a problem. There are two exceptions. Cut flower exporters acknowledge that banks refuse to sink more funds into that export with which so many Costa Rican producers have had such an unfortunate experience. The other exception is trading companies which are independent of any producer-exporter. These firms are not currently eligible for non-traditional export product financing. In addition, a few exporters noted difficulty getting working capital, and a strawberry exporter mentioned the difficulty of getting low-interest loans in colones as opposed to dollars.

**BETTER INSPECTION.** Both producer-exporters and trading companies have an interest in some level of quality control of exports. All it takes is the detection of one diseased shipment in a foreign port to put shipments from Costa Rica on the "watch" list. Reports on the level of inspection at the airport are not unanimous. Larger exporters note that little if any of what they ship is inspected. However many exporters, particularly smaller ones, report that their shipments are inspected thoroughly--far more than they used to be. In fact now regular delays of 4-5 hours at the airport are reportedly caused by painstaking inspection procedures. This contrasts with inspection levels in the ports.

The National Association of Perishable Product Exporters recently worked out a sanitation code which requires government sanitation officials to approve processing plants and visit farms to check on the health of plants and produce before they are packed for export. A couple of exporters reported that they had been visited by an inspection official making the first introductory inspection round. Though it is too early to evaluate implementation, this agreement is something exporters have been working towards for years.

**IMPROVED TECHNICAL AND MARKETING ASSISTANCE.** Several years ago many exporters reported a dearth of technical and marketing assistance. Now few exporters feel they are unassisted in these areas.

Almost every exporter interviewed reported having been assisted in some way by the CAAP or CENPRO during the last several years. Several small to medium-sized exporters spoke highly of the CAAP's Miami office, though they noted limitations in its resources and hence capabilities of serving all. Several large and small had attended training seminars over the last several years, a couple at INCAE. Several spoke very highly of visits to U.S. firms and international fairs organized by the CAAP and CENPRO. A new citrus exporter, for example, reported having exported \$30,000 of oranges to Colombia, the result of a

contact made during a trip there organized by CENPRO. The same exporter realized his oranges had a skin color problem when he made comparisons at "Green Week" in Germany, a trip also organized by CENPRO. A tubercle exporter is looking forward to being represented with CENPRO's assistance at London's food fair this month. He is just entering the British market.

Technical assistance received mixed reviews. Small relatively unsophisticated exporters seemed to have valued it the most. In part the need for this assistance has declined and changed as many firms have weathered the first few years of intense learning. The firms that perceive the greatest need for technical assistance are small firms and young ones.

#### ● THE POLICY ENVIRONMENT

Satisfaction regarding the basic policy framework (CATs, export tax exemptions, import tax exemptions, availability of lower-interest credit) is high, though exporters are concerned about possible CAT reductions or elimination.

An overwhelming majority of exporters assert that CATs are critical to maintaining positive profits. They report that the 15% tax rebate helps them in several ways. It is a source of working capital, reduces losses during early years, and permits them to invest in more equipment than they could otherwise and to lower prices enough to be able to enter new markets. Most are apprehensive about plans to reduce or eliminate the CAT. However, for exporters which purchase (rather than produce) most or all of what they export--such as seafood exporters and trading companies--elimination of the CAT will be less of a hardship, they say, than it will be for producers. This is because these exporters will simply offer a lower purchase price to producers.

Concern about reduction/elimination of the CAT is not unequivocal though. About one out of three producer-exporters interviewed preferred an end to all distortions--particularly in input and transport costs--including the CAT. And some acknowledged that the CAT's greatest use was during the first one to two years during start-up.

#### ● PRIVATE SECTOR SERVICES

**AIR CARGO.** Over the past several years the number of cargo planes making the San Jose - Miami route has reportedly increased from 4-5 to 15 per week run by three airlines: *LACSA*, *Florida West*, and *Challenge*. *Mudanzas Mundiales* reports that a fourth airline with cargo capabilities will be starting up in the coming months. According to the director of the CAAP's Miami office, cargo flights now leave more punctually. (Previously planes left consistently late, or the following day.) He notes that the quality of strawberry exports in particular has improved as a result.

Last year IBERIA introduced the first cargo plane to Europe--San Jose to Amsterdam--with the urging of a shipping service company which guaranteed it clients. Overall, exporters feel service to Miami has improved and is less of a problem now than service to Los Angeles and Europe.

**SHIPPING SERVICES.** An estimated 22 shipping service agencies handle getting the product to the ship or plane. According to one shipper in the last five years the number of shipping service firms has grown by a third, though many have also closed.

Some of these firms are specialized, for example handling only space reservation and cargo loading of perishable exports shipped by air. Others have become increasingly diversified, handling documentation, space reservation, packing, rental of trucks, transportation to port, loading, and receipt in the foreign port. Receipt of exported produce to ensure either proper delivery or prompt transfers for continued shipping is usually contracted out. However the trend seems to be to hire receivers at high-volume destinations.

Shippers play two increasingly critical roles. One is that because they handle large volumes and develop close working relationships with the airlines and maritime companies, they are often able to negotiate space and lower fares.

Their second key role is to facilitate what can be a logistically complex export process. With an increasingly diverse range of services, shipping companies are facilitating exports for clients of diverse levels of sophistication. These companies have also climbed a learning curve over the last several years. In many cases they can now instruct exporters on the dangers of various kinds of packaging for specific products, and on the risks at specific ports of entry and cargo lines. And they can reduce costs. A shipper at *Ortiz Hnos.*, one of the larger firms, noted that in some cases he can reduce transport costs for a client significantly by choosing an alternate route. In at least one case a shipper negotiated a new weekly cargo plane to improve service for his clients.

**TRADING/MARKETING SERVICES.** The number of trading companies of various kinds has increased substantially in the last several years, according to traders interviewed. One trader estimated that there are now about 180 such firms in Costa Rica. This suggests that new and small exporters now have safer and less immediately costly alternatives to making direct contact with foreign buyers. Trading companies can also help open up shipping space for their clients.

The majority appear to have been founded by an exporter who realized they could not satisfy all their clients' needs. By acting as intermediary, they could nonetheless profit from their knowledge of the client and its market.

As a result, trading companies are generally no more than a subsidiary or division of an exporting firm. For example, *Expo-Rica International* grew out of the fresh fruit business handled by *Mango Tico*. Most of these trading companies have a limited customer base and product lines they handle. According to *Intertec*, it is to date the only trading company in the country independent of a particular exporter. Since the company's success hinges completely on its portfolio of market contacts and product solicitations from foreign importers, it is a highly developed intermediary. Traders regularly attend diverse trade fairs around the world. Many foreign importers prefer to import through such a firm as they feel it gives them an added measure of insurance of quality and delivery.

### III. BARRIERS TO INCREASING NTA EXPORTS, AND RECOMMENDATIONS

● **THE AIRPORT.** Of all problems cited, the lack of refrigerated storage space at the airport was cited the most often and with the most extreme frustration. All except the very largest exporters of perishable goods consider their export business harmed as a result. Exporters who use air cargo--whether for seafood, ornamental plants, cut flowers, or strawberries and other highly perishable fruit--have been forced by their markets to develop highly efficient post-harvest handling and transportation systems. Much of that effort is wasted after produce has sat in tropical day-time temperatures for 4-5 hours at the airport waiting to be inspected.

Recently a small refrigerated storage unit was set up for cut flower exporters. But they report the space is limited. Other exporters across the board report consistent and significant produce losses and degradation in quality, undermining Costa Rica's reputation for quality and the reputation of their businesses.

The lack of refrigerated space also restricts the markets to which Costa Ricans can export. Perishable goods are less likely to arrive in saleable condition to destinations farther than Miami such as Boston, New York, Canada, and Europe. This restriction is particularly significant since prices tend to be better in those markets.

Exporters report that the problem has worsened in the last 2-3 years. The president of the Association of Exporters of Perishable Goods reported that while the volume of perishable goods handled by the airport has increased from 40,000 to 250,000 pounds per day, airport infrastructure remains largely unchanged. As a result regular delays have risen from one hour to five.

It is difficult to quantify the cost of continuing without refrigerated space. One exporter said that he saw it as the factor that would put him out of business. Another mentioned that after sending a sample shipment to a potential client in Europe, he decided to stay out of Europe. The risk of delays at the airport and consequent product degradation was too great. For many it affects their business indirectly too. One exporter of ornamental plants said he gets a headache every Friday morning, the day he exports. The problem has also caused profound frustration with "the government" for, in exporters' eyes, doing nothing in the face of the urgent pleas they have made for years.

Another problem cited repeatedly is the processing time taken to process the new Tramite Unico (single form) in the ventanilla unica (single window). According to several exporters processing time has increased from 15 minutes to several hours. The president of a shipping service noted also that the shortage of physical space in the cargo loading area means that produce must often sit in the sun and loading is inefficient as service companies compete for the little space that exists.

**RECOMMENDATIONS:** The provision of a refrigerated storage space at or near the airport should be the #1 priority in export promotion efforts. It should be adequate to meet the growth in demand that is likely to occur over the coming years. An enhancement of passenger infrastructure is being planned; a similar commitment should be made for exports to reduce the 5-hour delay they speak of.

Many exporters suggested simplifying further the processing of the Tramite Unico. They also suggested that arrangements be made to enable

the inspection station to accept the forms during hours when the ventanilla is closed.

● **AIR AND MARITIME CARGO AVAILABILITY AND RESPONSIVENESS, AND MARITIME TRANSPORT COSTS.** Exporters identified four problems here: (1) the shortage of cargo space on direct flights to Los Angeles in particular, (2) the lack of direct flights to many destinations that have become increasingly attractive markets for Costa Rican exporters, (3) a lack of responsiveness to exporters on the part of airlines when they were at fault, and (4) the high cost of maritime transport. Maritime transport presents similar problems of space availability and lack of direct routes.

With the advent of three air cargo lines with regular service to Miami, many felt difficulties getting space to Miami had diminished somewhat.

Exporters experiencing the most difficulty are those not exporting enough volume regularly to be able to reserve space on a regular basis. As one large seafood exporter noted, a 20-box shipment is an insignificant \$200 to LACSA; a 200-box shipment is \$2,000. Space is assured for significant customers.

Not infrequently, damaged goods are an airline's responsibility--whether for delays at intermediate points, poor temperature control, or the decision to leave part of the cargo at an intermediate point in favor of more passengers than expected. In this case the only recourse exporters have is to file for reimbursement. Large exporters report that reimbursement can take several months; smaller exporters are generally unable to get even an acknowledgement from LACSA. Florida West is reportedly less biased in favor of large exporters.

The high cost of maritime transport was cited principally by pineapple exporters who compete in the market with multinationals. One noted that he is charged \$3.50 - \$4.00 per 40 pound case to Miami while PINDECO pays only \$1.80 per case. Otherwise, transport cost disadvantages were not emphasized. However the director of the CAAP's Miami office noted that it costs only \$2,200 to ship a container from the Dominican Republic to New York, while it costs \$3,500 to ship the same container from Limon to Miami. According to him this difference gives Costa Rica a comparative disadvantage in melons and other exports to the U.S. which are shipped by sea.

**ECOMMENDATIONS:** One way of improving small exporters' access to space and airlines' responsiveness to them, is to have one commercial actor represent many exporters in transport negotiations. A transport broker with a diversified portfolio of export customers will be better able to stabilize its demand for space throughout the year as different products are harvested. *Tropicambio*, which offers air transport services to exporters, illustrates what can be done when an agency negotiates with airlines to meet the needs of a group of exporters. Last year, with eight clients requiring better service to Amsterdam, *Tropicambio* approached *IBERIA* with a proposal to begin weekly cargo service. The airline did with *Tropicambio's* assurance of cargo volume.

Export support organizations should work with industry associations and shipping companies to increase the number of direct routes available. Shipping companies may be unwilling to begin new routes until they are certain of enough demand. However if they are aware of potential demand that is currently not being met, they may be willing to start a route sooner rather than later.

One way of increasing airline accountability for poor service to smaller exporters is to increase competition among shipping lines by inviting new ones to operate the same routes. Another way may be to work with industry associations to implement and publicize a survey of transport companies. Criteria to rank companies according to level of service should be developed with the cooperation of transport companies if possible. The final ranking could be publicized. The ranking could be updated and publicized yearly, providing a reason for yearly discussions between exporters of all sizes and transport companies.

In an attempt to bring down maritime transport costs, the CAAP is currently considering several options: (1) inviting independent cargo companies to begin service; (2) contracting chartered cargo service; and (3) discouraging production of products such as melons for which shipping costs represent a significant comparative disadvantage.

● **INPUT COST AND AVAILABILITY.** The high cost of imported inputs was cited by many exporters, particularly by producers of "high-tech imported technology" exports such as strawberries and melons. Producers of these products and others (plant exporters) report that domestic pesticides and fungicides often aren't effective, and they have little choice but to buy imported goods. One melon producer noted that in certain instances the cost of imported fungicide is five times its price in the U.S. Another melon exporter, with production in several countries, had calculated that the cost of bringing a hectare of melons to harvest in Costa Rica was \$1,800, in Guatemala \$1,000, and in Venezuela \$600--the differences due in part to large differences in prices of non-labor inputs.

Exporters were equally frustrated by the difficulty of getting certain pesticides and fungicides. Only licensed distributors may import these products, and they generally have little interest in importing small quantities for a single user. Even if they are willing, the delay in arrival can be fatal to a crop. One exporter complained also about the long approval process for chemical products that are not yet registered in Costa Rica.

Some exporters also note the cost of packing material, particularly relative to the lower cost for large exporters. According to a fresh pineapple exporter, multinationals get their boxes for \$1.25/box, on credit. He is charged \$1.45/box and given 15 days for payment.

**RECOMMENDATIONS:** Problems of cost and availability can be reduced through joint purchasing by producers. Since certain fungicides and pesticides may be used by several kinds of producers, and since the economies of scale in organizing joint purchasing are so great, the effort would ideally be started by an organization representing a wide range of producers. Once savings and faster arrival are documented, the service could become fee-based. This would enable it to become self-sustaining. It may be possible to standardize the production of certain kinds of boxes. Although the size of *printing runs* would remain unchanged, the production of boxes could be done in larger and therefore less expensive runs.

Joint purchases of pesticides and fungicides would still need to be handled by distributors, and competition for these orders among distributors might prompt increases in efficiency. The participation of large producers would be key both to elicit distributor interest and reach significant economies of scale.

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The pesticide and fungicide supply and approval channel should be examined for inefficiencies, particularly time inefficiencies. Perhaps a fast-track import process should be designed for these products.

● **PRODUCER-EXPORTER RELATIONS.** This relationship is the least helpful to enhancing product quality and the consistent supply of exportable products. Small farmers who produce for export (and fishermen) number over two thousand.<sup>4</sup> The relationship of most of these producers with the exporter of their product is what brings them into closest contact with international markets.

Yet this relationship is often short-term, with little commitment from either exporter or producer. This is particularly true with chayote, yuca and other tubercles and seafood, where there are many small producers.

An exporter of yuca and other products commented bluntly on his relations with suppliers. "It's usually a buyer's market for yuca, so we take the best and leave the rest...Producers don't have many alternatives, but that benefits us. We don't offer assistance to them, that would be too expensive." This exporter also faced occasional shortages of yuca, but preferred to plant more himself during these times rather than develop stable supply relations with the better suppliers.

This kind of relationship puts producers and exporters in conflict. Producers view exporters as greedy parasites; exporters view producers as inconsistent. Because they don't plan and coordinate together both find matching harvests with foreign market demand elusive. Producers rarely have any direct contact with the exporter's foreign clients. As a result, their understanding of the needs and trends of foreign markets is limited.

Of course some exporters put more effort into developing their suppliers. Another exporter of tubercles explained that the company sponsors "field days" in which management gives technical assistance seminars for producers, provides seeds and suggestions on which inputs to use, and gives advances in payment to producers. The exporter had also given a machine to wash tubercles to a cooperative that it buys from. (It had seen a similar machine during a tour in the U.S. organized by CENPRO and reconstructed it upon returning.) Hand washing resulted in poorly washed produce and represented a bottleneck which kept exports down at one container per month. The machine has enabled them to increase to 5 to 6 containers per week.

**RECOMMENDATION:** A major effort should be started to improve the producer-exporter relationship. Export support organizations should promote the benefits of long-term relations between exporter and producer. Material should be published discussing the costs and benefits of different kinds of supplier relations. This subject has drawn increasing attention in the United States and Europe and should be presented as such, focusing on the innovative practices of specific foreign and domestic companies with similar products.

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<sup>4</sup>/ Over 100 fishermen, 250 chayote producers, 1,500 ornamental plant (mostly massageana cane) cultivators, and hundreds of other producers of tubercles, fruit, animal, and wood products.

Likewise, *producers* should be exposed to the benefits of long-term relationships with *buyers*, the costs and benefits of different kinds of buyer relations and contracts, and how to solicit and use product quality information and other feedback provided by the exporter.

Seminars could be offered to discuss the functions and specific activities of the various forms of export actors. For example, a seminar for producers of perishable products might include a panel of exporters/trading companies of different forms, discussing the benefits of exporting through each. Innovative examples from other Central American countries and the U.S. should be integrated as much as possible. Representatives from abroad might heighten the perceived importance of the exporter-producer relationship.

Export support organizations should support the development of producer organizations--whether they be for the purpose of exporting directly or simply of negotiating supply terms with an exporter. Producers are likely to get more useful feedback, and be better able to implement changes if they have the increased bargaining power and technical resources offered by joint organization. By facilitating coordination and planning between production and marketing functions, producer organizations also help stabilize their sector.

Further, export support organizations should promote the development of independent trading companies such as Intertec which are more likely to play a support role. (See "The Trading Function" below.)

- **THE TRADING FUNCTION.** Currently, independent trading companies do not have access to the low-interest capital available to other export actors. This may be because although they are seen as having something to do with non-traditional exports, their investment needs (e.g. financing to attend trade fairs where they make key contacts) are not viewed as "investments."

Yet trading companies are businesses with very high initial development costs as contacts are made and a reputation built, both of which take time and money. As a result, the development of independent trading companies has been delayed in Costa Rica. To date there is only one, according to its CEO and two clients: *Intertec*. Of all export actors interviewed, it reported being the most constrained by lack of capital. Due to the need to finance its growth from internal sources, the company has had to hold back on the development of contacts in new markets and the addition of personnel. Since each new client results in more exports, the impact on export growth is likely to be significant.

The development of independent trading companies is important because of all intermediaries, they tend to contribute most to the further development of the country's export sector.

In general, the fewer the intermediaries in trade, the better for both producers and consumers. Trading companies take a 3-10% commission continuously on all trades they broker. Often, however, producers are too small to be of interest to many importers, or they don't have the required expertise or contacts abroad. Producers who can develop direct client relations are fortunate, but not all can or wish to. Many prefer to specialize in production. In addition, the use of a trading company can be an intermediate step for exporters while they also make efforts to establish direct client relationships.

The independent (i.e. not a subsidiary of an exporter) trading company serves several useful functions. Its clients are both producers and importers. The trading company's success hinges on matching the two and charging a commission on sales. The longer-term the relationship, the better, since the initial cost of setting it up is the highest. For this reason, trading companies also have an interest in ensuring customer satisfaction by providing as much feedback to producers as possible. *Intertec*, for example, reports that it encourages communication between producers and importers, and places a high value on feedback from importers for producers.

**RECOMMENDATION:** The development and growth of professional trading companies should be facilitated. One way to do this is to make them eligible for the same lower-interest funds available to regular exporters for "investments." (So as not to discourage producers from establishing direct market links, capital should also be made available to them for such uses as fair attendance. In all cases, of course, applications should be screened carefully to assess whether the organization is prepared to use the capital wisely for market development.)

Another way to facilitate the development of trading companies is to inform producers of what they are and of the costs and benefits of using them. Finally, joint ventures can be encouraged between Costa Rican and foreign trading firms with more contacts, experience, and capital.

● **EXPORTER-BROKER RELATIONS.** The relationship between exporters and brokers varies widely. (Flower exporters consistently report the least interest and loyalty from brokers; in contrast a strawberry producer has narrowed the number of brokers he deals with to one who he says has been a pleasure to work with.) But positive long-term relationships in which brokers provide market information, feedback on product quality, and suggestions on packaging and transport to exporters are in the minority. Yet exporters depend on brokers for much of this information.

**RECOMMENDATIONS:** Costa Rica can do little to influence brokers directly since there is considerable competition among exporters of many countries to do business with a smaller number of powerful brokers. Efforts should focus on exporters' ability to identify attractive brokers, present themselves as attractive suppliers, negotiate beneficial contracts, and develop positive long-term relationships. This can be done through training and by developing an information clearinghouse on the practices and specialties of various brokers, and a registry of complaints.

● **MARKET INFORMATION.** Although exporters have more access to market information than they had in the past, the lack of information--from contacts to trends--was still viewed as a barrier by many. It is more so for smaller or newer exporters who may not be subscribed to foreign trade magazines, have fewer resources with which to travel abroad, and have a narrower client base from which to glean information.

**RECOMMENDATIONS:** Structured visits to trade fairs seem to be one of the best ways to make contacts and learn about the market. The several exporters who had participated in CENPRO organized visits, and those who had attended trade fairs on their own, spoke of their value. A

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recently-completed study<sup>5/</sup> reveals that indeed, the source of market information most often cited by almost 300 Central American exporters of non-traditional products was visits with clients abroad.

The second most often cited source of information was intermediaries. Hence the development of trading companies is another way to facilitate the transfer of market information. Because they engage so heavily in networking with foreign importers, trading companies gain considerable market information which they can pass on to their domestic clients.

An industry-specific clipping service would be valued by many exporters. Many subscribe to one or two foreign trade publications but would be interested in timely information from a wider selection of journals.

Finally, a special effort should be made to identify new markets for cut flowers, looking also at the feasibility of transport. (See industry study for more.)

● **INSPECTION.** Government efforts to improve inspection have yet to meet inspection needs identified by exporters. According to most exporters of perishable products, inspection at the airport is fairly thorough, except that large exporters (of fish, for example) are inspected far less thoroughly than smaller ones. Container inspection at the ports is reported as minimal to nonexistent.

Inspection of processing facilities and produce before packing has just begun. Exporters voice universal approbation of these measures. Conscientious exporters do not want their reputation damaged by a few less scrupulous ones who might export poor quality product (or illegal substances). Also, those investing in controlled processing facilities and methods want an even playing field ensured by enforced common processing standards (e.g. in fish). Another reason exporters support more inspection is that prior to packing, it avoids last-minute surpluses and is viewed as more useful for improving quality control methods.

However there is widespread skepticism about the governments commitment to funding and administering the new sanitation code and port inspection.

**RECOMMENDATION.** Implementation of the new Sanitary Code should be a priority. It is important that field inspectors provide helpful feedback to producers in addition to their strict inspection duties. Field inspectors may need training to enable them to integrate both functions. Lessons may be learned from other countries that have several years of experience with similar quality control efforts. Informational material on quality control for exporters should be produced, highlighting methods of some of the most effective firms.

● **PERSONNEL DEVELOPMENT.** Several exporters large enough to have several farm supervisors expressed interest in basic business training for them. An exporter of mango and other fruit described farm supervisors as "hardly having graduated from high school, with little understanding of the farm as a business organization." He said he and several other medium-sized exporters had discussed the possibility of organizing this kind of

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<sup>5/</sup> "La Empresa Exportadora Centroamericana: Evolucion, Estrategia y Desempeno," Luis Dominguez y Carlos Sequeira, INCAE, 1989.

training, but found that it would be too costly to do it alone. Others echoed this interest in basic training. One exporter expressed interest in short seminars for workers on the importance of quality to the company and the country.

Relatedly, a few exporters mentioned that they would like to see the development of advanced technical training programs in specific crops (for example citrus, pineapple, mango, chayote). Although the larger ones have risen up the learning curve by force of experience, many still bring in foreign consultants and would prefer to rely on local expertise, as it would be cheaper and more readily available.

**RECOMMENDATION:** Export support organizations already offering a range of seminars, should consider offering seminars to meet these needs. Care should be taken to cater not just to larger exporters. At the same time seminars should be designed so that they are appropriate for the differing needs of large, medium, and small producers for export.

The country should start investing in the development of highly trained technical people in crops that are, or show promise of, becoming important. One producer-exporter suggested a series of intensive 3-month courses each on a particular product. Another producer noted that the UCR researchers don't have much interest in transferring their knowledge to actual producers. One way of facilitating that transfer might be for UCR to hold weekly seminars on ongoing research and findings. This would also give researchers a chance to collect empirical information from producers.

● **VIEWING OTHER REGIONAL PRODUCERS AS "THE COMPETITION".** In many instances when asked to identify principal competitors exporters cite other Central American producers. Yet in most cases the important exporters lie outside the region. Viewing Central American neighbors as principal competitors, though quite natural particularly since brokers foster this kind of competition, has two negative consequences.

(1) This view detracts exporters attention from observing what the large producers in countries outside the region have done to become successful and what they are currently doing to remain competitive.

(2) This view can be harmful to the development of the region. Producers are less likely to share information with other regional producers, since they view them as principal competitors.

**RECOMMENDATION:** In technical training and written communication, export support organizations should focus on the relative importance of non-regional producers, new market opportunities, and the benefits of intra-regional assistance.

A commitment to regional cooperation in export development should be put into practice by promoting exchanges of information as desirable. For example, Costa Rican producers and exporters might benefit from visiting colleagues in Ecuador's seafood industry or the Dominican Republic's plantain industry, and vice versa with other exports. A seminar currently being held in Guanacaste on the Salvadorean shrimp industry is a good example of this kind of activity.

● **IMPORTANT INDUSTRY-SPECIFIC BARRIERS.** (See industry studies for more detail.)

The **seafood** industry confronts serious barriers, not only to growth but to continued exports at the present level. In addition to barriers mentioned above, the lack of wharf infrastructure, efficient fishing practices, good quality control, and the development of Palagic fishing fleets all were cited as contributing to the predicament of this sector. Although seafood exports represent the largest non-traditional agricultural export industry, they appear to be the most ignored.

The lack of integration between exporters of fresh **pineapple** and processors appears to be an important barrier to using unexportable fruit or fruit produced while international prices are low to increase exports of processed fruit.

Widespread disease has decimated **plantain** exports. To date little seems to have been done to combat the disease. The result is hardship for hundreds of former producers for export, and the loss of an important export crop.

The easy entry and exit of **root, tubercle, and chayote** exporters and the lack of long-term relations between producers and exporters is reported to have produced extreme instability of production and prices in these sectors.

#### IV. BARRIERS REQUIRING MORE EVIDENCE OF IMPORTANCE TO WARRANT ACTION

● **THE COST OF AIR TRANSPORT AND PORT FEES.** Some exporters claimed that the cost of air transport and port fees are higher for Costa Rican exporters than for competitors, other Central American exporters in particular. Honduras and Guatemala were commonly mentioned in regard to air transport. Exporters who mentioned comparative disadvantages in transport costs cited business partners or business acquaintances in other Central American countries as sources of information, so their comments had some credibility.

However in all except two cases cost was secondary to the other transport problems mentioned here. An analysis of the average cost of transporting specific exports suggests that cost is not as big a problem as space, direct route, and airport problems.

For seafood products, most of which are carried by air, the transport cost per pound<sup>6/</sup> of Costa Rican exports is indeed higher than for Honduras (see "Cost of Seafood Transport to U.S." graph in seafood industry study). Costa Rican costs are slightly lower, however, than Guatemalan costs. Most importantly in every seafood product, important competitors with greater market share than Costa Rica have equal or higher transport costs. For example, the cost of exporting Salvadorean shrimp is 40% higher, yet El Salvador's share of U.S. shrimp imports is more than double Costa Rica's (see "Share of U.S. Seafood Imports" graph in seafood industry study). Ecuador's cost of transporting fresh fish is equal to Costa Rica's, yet it held an 8.5% share of U.S. imports, compared to Costa Rica's 5%. This suggests that other competitive factors outweigh differences in the cost of air transport.

Indeed, the prices per pound received for many Costa Rican exports are so much higher than the competition, that the relative *burden* of transport costs is often considerably lower. For example, in 1988 the cost of exporting fish from Honduras was \$.21/pound, 6 cents less than it cost to export fish from Costa Rica. But Costa Rica's fish sold for a high \$2.27/lb c.i.f. on average, compared to Honduras \$1.71/lb. As a result, transport costs represented a lower percent of the sales price--they were less of a burden--for Costa Rican exporters.

The same can be said of marine transport. The cost per pound of shipping melons to the U.S. from Costa Rica is average relative to other regional producers. Since prices commanded by Costa Rican melon exports are higher than average, however, the net *burden* of transport costs is lower than for other regional producers (see melon industry study).

This analysis suggests that transport cost is not a heavier burden for Costa Rican exporter than it is for other regional exporters. However it does not enable us to conclude anything about the relative cost of air transport to countries other than the U.S. Some exporters complained specifically about the high cost of transport to Europe. It also masks differences in transport costs between multinationals which own their own cargo ships and others who pay higher prices for space on these fast ships.

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<sup>6/</sup> Transport cost per pound was calculated with data from the U.S. Department of Commerce, FT135. Transport cost includes all costs incurred between delivery of the product by the exporter at the airport or marine port, and collection at the airport or port of entry by the importer. The difference between the c.i.f. price and the customs valuation was divided by total volume imported. All data cited is for 1988.

- **CROP INSURANCE.** Among exporters who were also producers, interest in crop insurance was generally low. They felt they would inevitably be charged more than the insurance would be worth to them, particularly if administered by the INS (National Institute of Insurance). Instead, they generally preferred technical assistance.

An exception to this is the case of Coopehermania and Interfruta, a partnership between a marketing cooperative of pineapple producers, and a trading company. With experience in crop insurance for basic grains, Interfruta was able to develop crop insurance with the INS for Coopehermania's producers. In this case producers sought to pay for minimized risk. It is very possible that other producers of NTA products who wish to dedicate themselves solely to production would be interested in crop insurance, particularly since cases of farmer bankruptcies due to difficulty with risky new crops have been reported. However no pure producers were interviewed for this study. Everyone was either already exporting directly or in the process of developing foreign clients. More discussion with pure producers would be needed before crop insurance could be recommended.

- **TRANSPORT INSURANCE.** There was likewise little interest in transport insurance. One reason cited was that once the produce is on the plane or ship, it is insured by the transport company--in theory, at least. Delays in payment, or outright non-payment was viewed as a problem of bargaining power of smaller exporters and better addressed by following the suggestions found in *section III, "Air & maritime cargo availability and responsiveness..."*

The only period of transport not covered by insurance is the delay which may occur at the point of embarkation. Exporters were uninterested in insurance to cover this period, perhaps due to lack of definition of exactly how it might work. In general they supported resolution of the underlying problems associated with transport rather than paying to reduce their exposure to those problems.

- **ENTRY INTO GATT.** Firms exclusively involved in exporting felt entry into GATT could only assist them, particularly in the European market where tariff barriers currently vary between 2-18%. Producers of processed goods for the domestic market were somewhat concerned about losing market share to foreign imports, but seemed to feel customer loyalty was strong and that they would maintain a price advantage. Nonetheless, interest in exporting has increased since exporting is viewed as reducing their vulnerability to losses of share on the domestic market.

- **WORKING CAPITAL NEEDS.** Although some firms reported low access to working capital and overly restrictive credit policies, many reported no problems in this area. If there are shortages of capital in the sector, they do not seem to be extraordinarily restricting. Further, both large and small firms were represented among those noting problems with credit policies and those with no problems, providing no evidence that current credit policies are biased either way. Given the current administration's interest in controlling new debt, the liberalization of credit policies for the sector is not recommended. The exception is the recommendation that credit be provided to independent trading companies (see *section III, "The trading function"*).

## **V. EXPORT INDUSTRY STUDIES**

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## THE SEAFOOD INDUSTRY

The export of seafood has exploded since 1983, growing from \$7 million in 1983 to \$47 million in 1988. The industry's exports surpass exports of three other principal export groups: plants (including flowers), fresh vegetables, and fresh fruit. Its potential for growth was underscored by Hector Fernandez, President of the Camara de Exportadores de Productos Perecederos, who noted that Costa Rica has more square miles of fishing territory than it does land

Fish exports have grown the most, and the most consistently. The U.S. absorbs an increasing share of the over 20 species of fish exported by Costa Rica. 93% as of last year. Much of the remaining fish is sold in Canada and Puerto Rico.

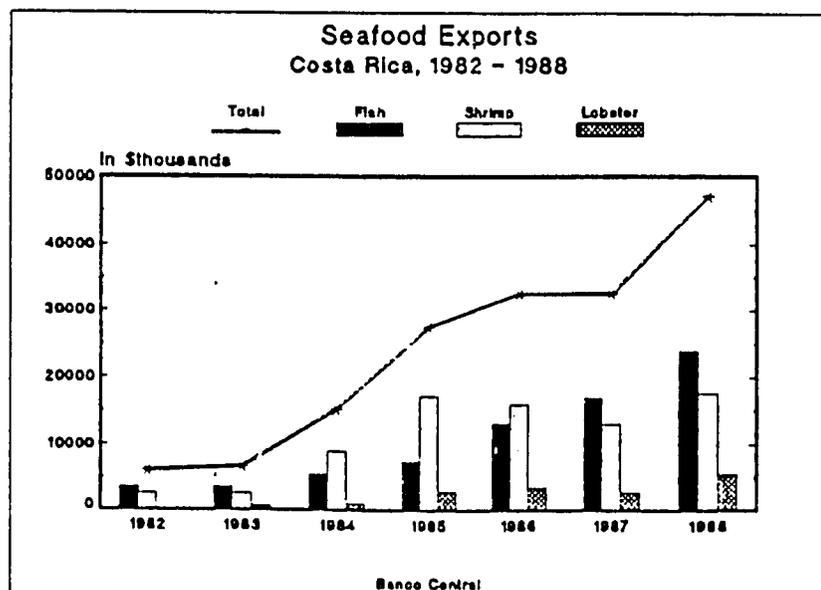
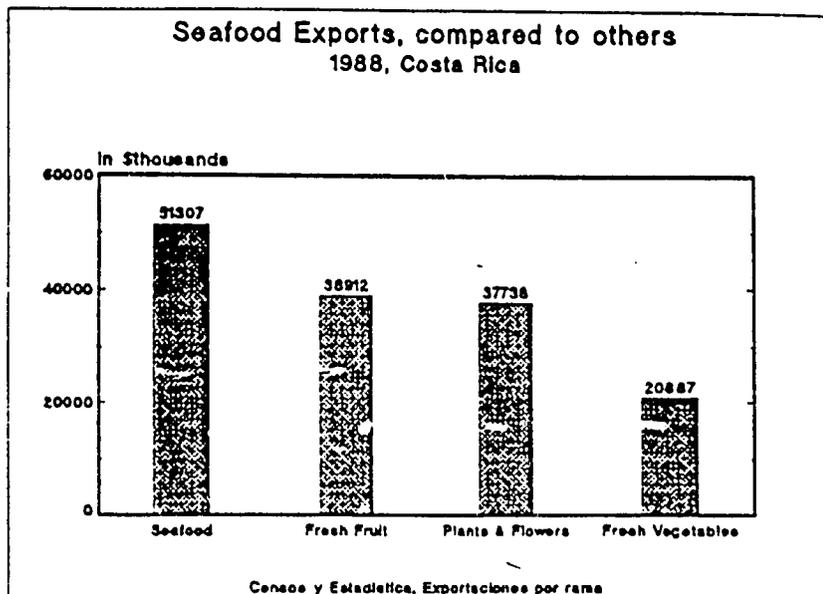
Shrimp exports rose in 1988, but have changed little in the last 4 years. After years of little growth, lobster sales more than doubled last year, to \$5.5 million. (They had decreased due in part to the migratory patterns produced by temperature changes in the Corriente del Nino.) Unlike in fish sales, export markets of shrimp and lobster have become far more diversified away from the U.S. market. While in 1982 shrimp and lobster exports headed almost exclusively for the U.S., by 1988 only half went to the U.S. Exports to Canada, Puerto Rico, and other Latin American countries, and to Europe, have grown rapidly.

Other seafoods which are exported include squid, octopus, shark, and ornamental fish. These exports amounted to less than \$1 million in 1988.

### SEAFOOD HARVESTING

Characteristics of the Costa Rican fishing and aquaculture industries provide insight into the status of seafood exports today and their future.

The fishing industry is relatively unregulated. According to one exporter, limits on licenses granted to fishermen were recently revoked. Seasonal limits on fishing have been declared for the first time only in limited areas on a limited number of species. A prohibition on harvesting lobsters of less than 4 inches was recently declared. But the wider use of seasonal limits has been avoided. There is no regulation of shrimp



harvesting. Controls on harvesting practices (such as prohibition of the use of nets, and on-board fish treatment and storage procedures) have been discussed and defined, but exporters report little implementation.

Fishing boats are generally owned by the fishermen who work on them. Fishing boat fleets are small, tending to vary in size between 1 and 10 small boats.

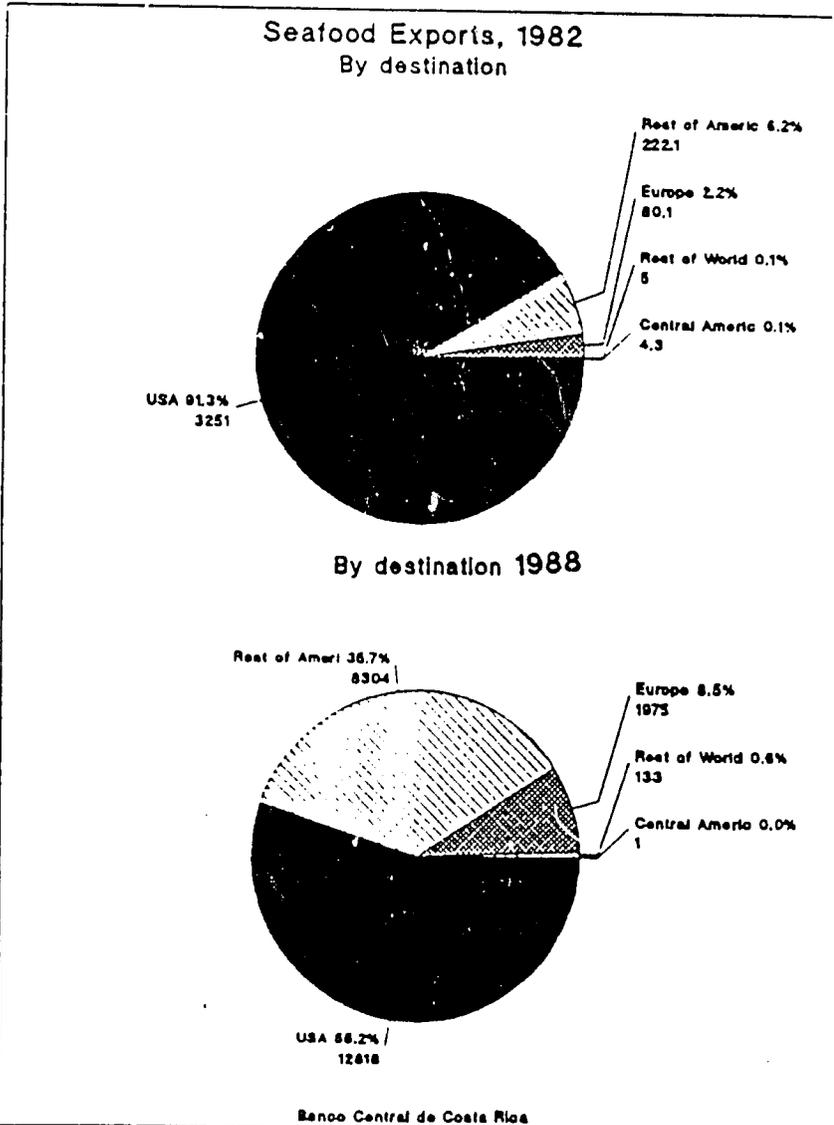
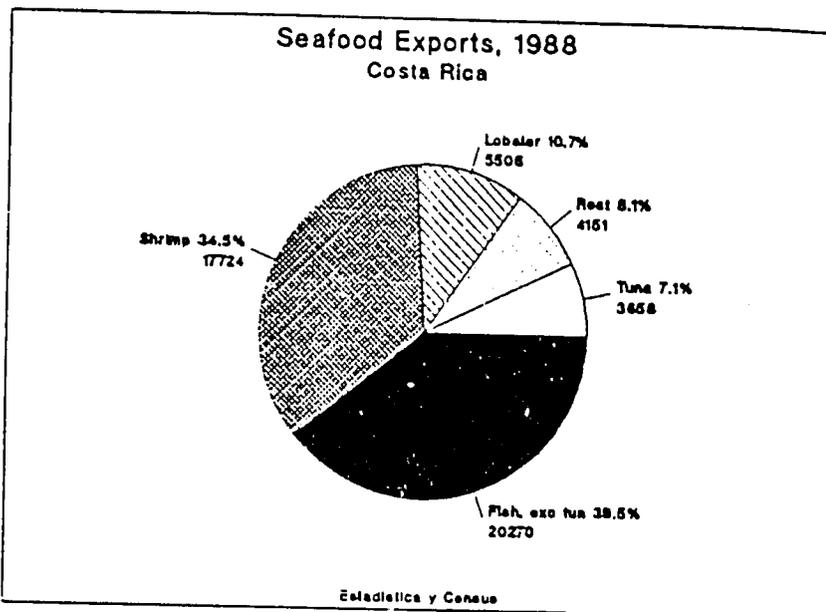
The industry has not yet ventured into off-coast fishing. It is engaged exclusively in Continental fishing. The exception is Martec which claims it is building the country's first Palagic fleet to venture beyond the immediate coastline. (Martec recently received the design and is currently building its first boat.) With a fleet of larger boats, the company hopes to go beyond the depleted coastal waters and harvest from the richer fishing territory reaching out from the coasts.

Unlike Ecuador, Mexico and China, which have well-developed aquaculture industries for the production of shrimp, Costa Rica's industry is nascent. Since shrimp can be produced more cheaply on shrimp farms, than they can be harvested from the sea, according to one industry observer in future years Costa Rican fishermen are likely to have difficulty making a profit on shrimp exports. This trend is likely to worsen as the price of shrimp keeps falling with the entry of Mexico and India as large exporters.

### EXPORT INDUSTRY STRUCTURE

In the seafood export industry, "producers" (fishermen) and exporters are two separate groups of firms and people. Fishermen harvest the fish and other seafoods, and sell them upon arrival back to land to purchasing agents of the more than 30 exporters. The industry is dominated by Coopemontecillos, the largest exporter with about 40% of total volume. Four to five medium sized firms (\$1-3 million/year) and over 25 smaller exporters (under \$1 million) make up the rest of the industry. Exporters are generally based in San Jose and truck seafood back to San Jose for processing.

The exceptions to this separation between producer and exporter are Martec and, still in the beginning stages, Orcoopes. Martec reports that



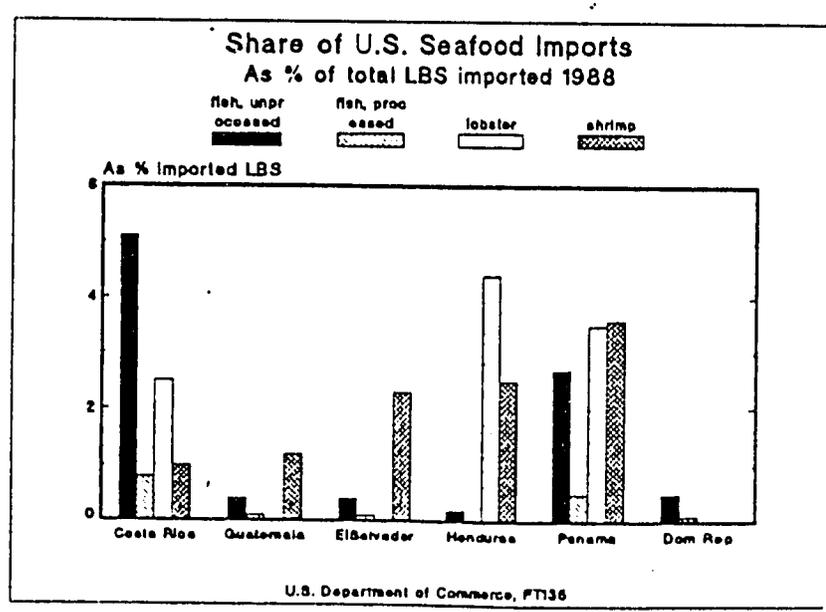
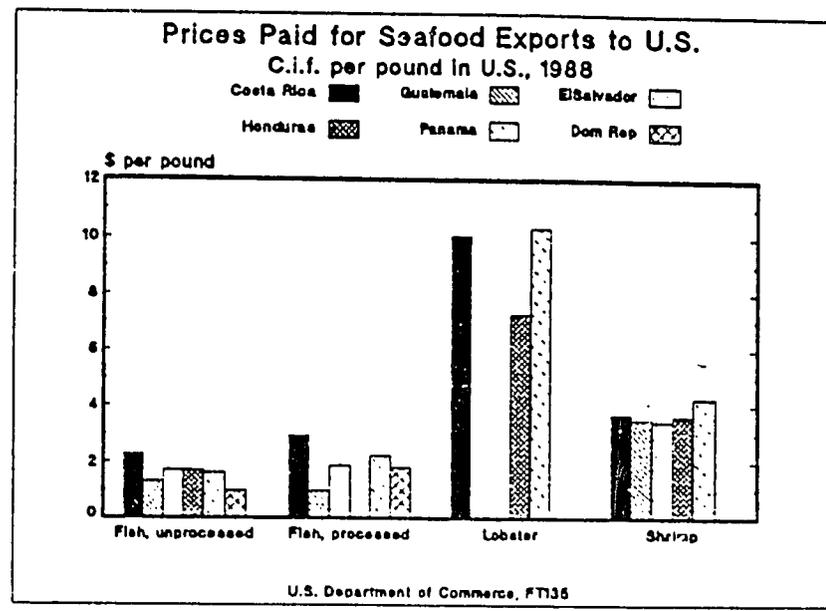
it has its own fleet and also buys from other producers to complement its own catch which is exported directly. Orcuopes is a federation of 7 fishing cooperatives which has been selling to the larger exporters, but which is developing its own commercial contacts in the U.S. and Europe for direct export in the future. At least one other exporter is considering integrating backward into fishing to insure supplies at constant costs.

An unsatiated world demand for fish and relatively close markets has made seafood exports profitable. As a result, the industry has witnessed the birth of dozens of commercial entities created within the last several years for the sole purpose of exporting seafood. These exporters handle everything from the wharf--they truck the seafood to the processing plant, process it (clean, filet or otherwise prepare, and pack it), and deliver it to the airport. The overhead investment required is small since the process is low technology and equipment such as trucks can be rented.

For the same reasons, a company can easily fold. Indeed, a study undertaken by Thermopol, the industry's only provider of styrofoam boxes, indicated that between 1982 and 1987, over 80 exporters had left the industry. This high incidence of failure is probably due in part to the notoriously high incidence of nonpayment by clients alleging the product was in unsaleable condition upon receipt. It may also be due to the firms' inability to play the speculative market of rapidly fluctuating seafood prices, both in the foreign and domestic markets. Extreme fluctuations in wharf fish prices occur in response to fluctuating foreign prices and intense competition among exporters, who purchase 100% of what they export. Prices offered in foreign markets vary with large variances in daily and weekly catches by the major exporters such as Ecuador.

Fluctuating prices have caused many fishermen to suspect exporters of exploitative speculation at their expense. However there are two ways in which the complete separation between "producers" and exporters is detrimental to producers, even assuming that a "fair" price is offered by exporters.

(1) **MARKETS:** volume/price. Exporters generally seek the highest gross profit, which they are

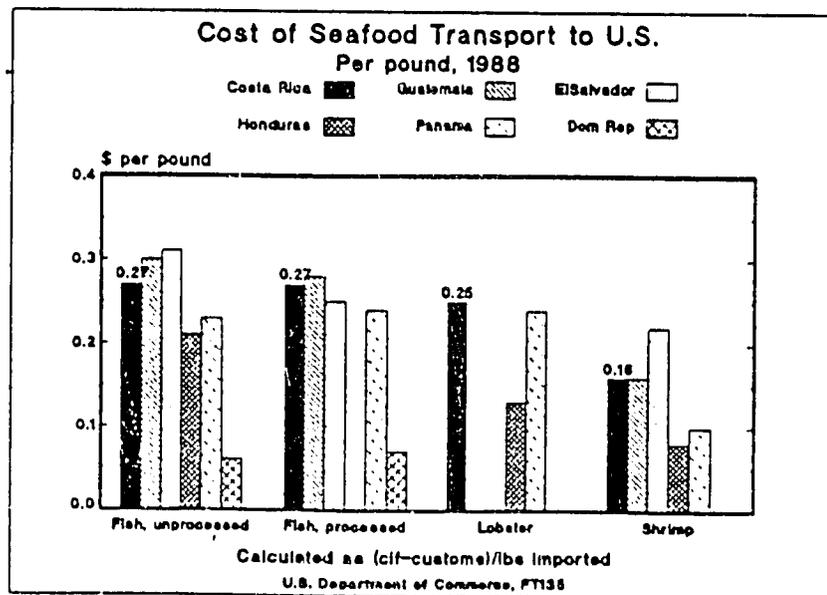
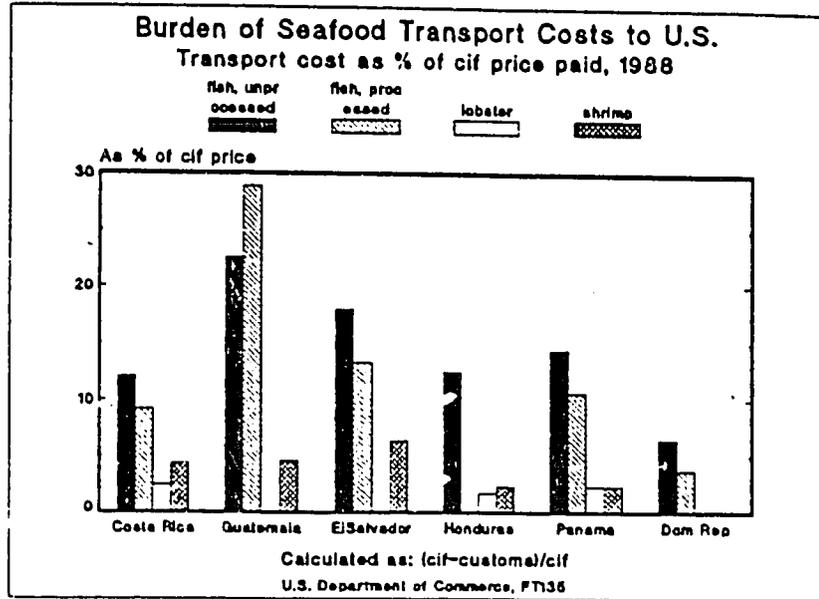


likely to achieve by selling high volume on low margin, rather than seeking out higher-margin market niches. This means they must keep the price they pay to the fisherman low, while at the same time competing hard for volume. Fishermen, though, can only catch a limited supply of fish with their equipment, so their interests might be better met by an exporter who sold to higher margin market niches, perhaps smaller customers.

(2) SUBSIDIZING. Exporters will only remain in the business if they can earn an acceptable return on their investment. But Costa Rican fishermen are likely to stay in the business even while it is no longer profitable because it is a way of life. Therefore, if international seafood prices decline, or the cost of exporting rises, the fisherman will be squeezed before, and harder than, the exporter. If fishermen also exported, they could use profits from the export end to subsidize the fishing end of the business. With the two activities separated, however, the exporter is virtually assured a reasonable profit, while the fisherman isn't. This is illustrated by the comments of exporters regarding repeal of the CAT (Certificado de Abono Tributario). Exporters are not in favor of its repeal, but only because they say they would have to lower prices offered to fishermen by 15%. This would cause hardship for the fishermen, and certain conflict between fishermen and exporters. Further, the only exporter to favor repeal of the CAT was integrated (the firm has a particularly well-developed fleet), suggesting that his strategy was indeed to use export profits to subsidize fishing. (His reason for favoring repeal of the CAT is, he argued, that it is manipulated by some exporters to boost their profit margins in exporting, thereby enabling them to bid up prices offered to fishermen.)

Input supplies are cardboard and styrofoam boxes, plastic bags, and large amounts of water and ice. Exporters did not voice difficulties associated with inputs.

The nascent aquaculture industry for the production of shrimp is based in salt harvesting areas, principally Guanacaste. Start-up costs are reported to be high since shrimp cultivation must be finely tuned and there is little local knowledge of it.



According to a producer who hopes to soon start exporting directly, shrimp farms are small and sell to large exporters. Some of the 160 members of the salt producers' cooperative, *Productores de Sal*, are considering entering the industry since it complements salt harvesting which occurs in the summer months.

This same exporter noted that a seminar on shrimp cultivation was currently being offered for area cultivators in Guanacaste.

## RELATIONS AMONG EXPORTERS: HIGHLY COMPETITIVE

With the large number of exporters and the ease of expanding processing capacity almost overnight, competition among exporters for the daily catch is intense--So much so that even *Coopemontecillos*, which exports 40% of all exported seafood, reports it must follow the price trend in the wharf seafood market.

In order to assure themselves a steady supply of seafood, some exporters (such as *Martec* and *Expun*) now encourage fishermen to sign first refusal contracts with them. This gives the fisherman a measure of security by committing *Expun* to buying all the fisherman's catch as long as it meets quality standards. And it gives *Expun* the right to buy all the fisherman's catch, or to be the first to refuse it. Obviously, these contracts also somewhat reduce price competition amongst exporters, although fishermen are unlikely to stay loyal for long to an exporter whose prices are consistently low.

The larger exporters also seem to be providing loans to fishermen to foster their loyalty. These might be used to help the fisherman buy another boat or invest in new equipment.

Despite these efforts, fisherman loyalty is low. The fact that local prices offered by the exporters fluctuate according to the supply offered by the day's catch, and not according to international market price trends is seen as evidence that the local price offered by exporters has little to do with what they receive on the international market. The highly perishable nature of the product and fishermen's lack of refrigerated storage space means that fishermen must sell the entire catch that same day, giving them little bargaining power.

In actuality, given the level of competition amongst exporters, it seems probable that if an exporter could still earn a reasonable profit and pay a higher price for its seafood, it would do that. In addition, there seems to be a fair amount of hostility among exporters, so price fixing isn't likely. Therefore the kind of conspiracy many fishermen fear isn't likely.

Many exporters expect a shakeout amongst them as intense competition forces some out. Those most likely to survive are the large exporters with well-developed purchasing networks and lower cost transportation available since they are more likely to own their own vehicles and gain through economies of scale in road and air transport. Firms that integrate into fishing are also likely to have an advantage. Competition amongst exporters in certain ports may indeed decline in the near future.

Despite highly competitive relations the sector is nonetheless organized through the Association of Exporters of Perishable Products.

## FOREIGN COMPETITION

Costa Rican seafood is considered a premium product and according to one exporter can command premium prices of up to 125% of market. (See "*Prices Paid for Seafood Exports to U.S.*" graph for confirmation.) Principal competitors are reported to be Panama, Ecuador, Venezuela, and Mexico.

## BARRIERS TO INCREASING SEAFOOD EXPORTS, mentioned only by seafood exporters

(1) Lack of wharf infrastructure. In Guanacaste, for example, there are no fishing port facilities. Small boats must unload on the beach; large boats unload away from land. In some areas there is no potable water, reducing the quality of storage.

Recommendation: The seafood industry and its growth is important enough now to justify that the government invest strategically in the most needed infrastructure. Possibly a consortium of exporters could be formed to assist in this effort.

(2) Wasteful fishing practices have already reduced the catch in Coastal waters, thereby increasing costs.

Recommendation: Regulate fishing practices, particularly the use of nets, off-season fishing of particular species, and the harvesting of under-sized ocean life. Consider limiting the granting of fishing licenses. Action in these areas is supported by both the President of the Exporters Association, and the President of *Orcoopes*, the Regional Federation of Fishing Cooperatives. Create a mandatory seminar on the importance of ecological fishing.

(3) Poor quality control, both among exporters and fishermen. Some improvement has been made in this area in the last several years, but particularly given tightening quality control standards and inspection in the U.S., more is needed. A sanitation code for seafood processors was recently enacted, but has yet to be implemented. Many fishermen have little information on in-boat quality control measures required for export-quality fish.

Recommendation: Implement the new sanitation code. Organize a visit to an important seafood exporting country with well-developed regulation of the industry. The country should start investing in training a few high level seafood industry officials in efficient and effective regulation options for long-term industry growth. On-boat quality control training should be included in a seminar on ecological fishing. Since exporters are exposed to equipment and practices in other countries, they are a source of information on methods of improvement.

(4) Lack of development of Palagic fishing fleets. Currently only one company has taken initiative in this area. Yet as Coastal waters become depleted, the cost of Continental fishing will rise. As foreign fishing industries develop their Palagic fishing fleets and reap the benefits of lower-cost fishing, Costa Rica's fishing industry risks becoming uncompetitive. Currently, the country's non-coastal waters are being harvested exclusively by foreign tuna boats.

Recommendation: Provide incentives and technical support for the development of Palagic fleets. Encourage exporters to team up with one or several of their current suppliers in an arrangement where, for example, they would help a fisherman build a first boat in exchange for a first refusal contract on its catch. Since the development of Palagic fleets is key to the long-term growth of exports, government commitments to build infrastructure and implement sanitation controls

should be met by a commitment by exporters and fishermen to developing the industry's Palagic capabilities.

(5) In general, many exporters feel that the seafood industry is a low priority for the government. Perhaps this is because although it is a critical export, domestic consumption is relatively low. Members of the industry feel that the sector's growing importance and particular needs justify creating a Ministerio de la Pesca.

**BARRIERS TO INCREASING SEAFOOD EXPORTS, mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).**

(1) THE AIRPORT: The shortage of refrigerated space at the airport for storage during the inspection process, and the lengthening delay at the airport (4-5 hours now as compared to 1 hour before). See p.13.

(2) AIR TRANSPORT The shortage of space (emphasized especially by smaller exporters), the lack of direct transport to various destinations, and product losses resulting from delays at intermediate stops. See p.14.

### THE ORNAMENTAL PLANT AND FOLLIAGE EXPORT INDUSTRY

Costa Rica is one of the largest exporters of ornamental plants and foliage in the world. In 1988 almost half of plant exports to Miami came from Costa Rica. Since 1984 exports have grown about 25% per year and reached almost \$30 million in 1988. They have maintained their share of total non-traditional agricultural exports--13%, the same share held by pineapple exports in 1988.

Overall, although the industry is less attractive than it was in earlier years, it seems healthy. It has the most diverse export markets of any of the major NTA exports, with almost 60% of exports going to Europe, 30% to the U.S., and 11% to other countries in 1988.

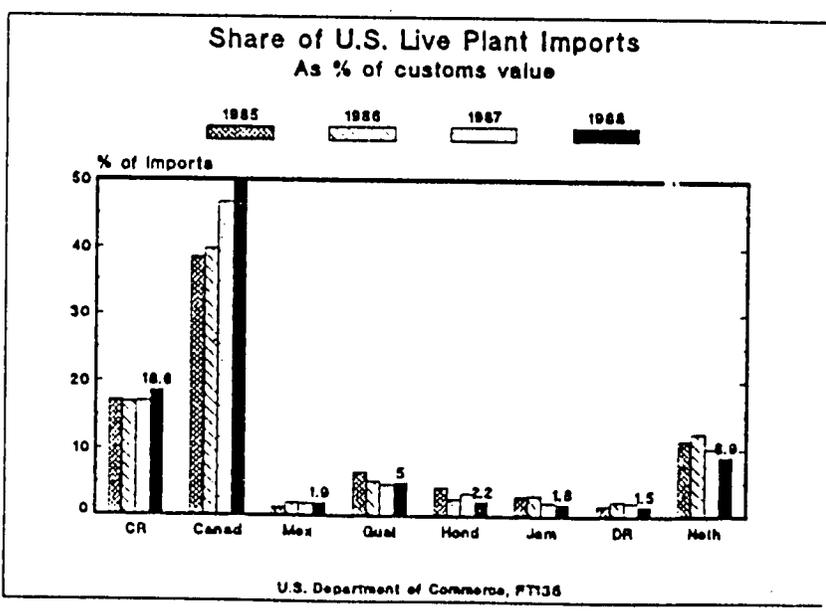
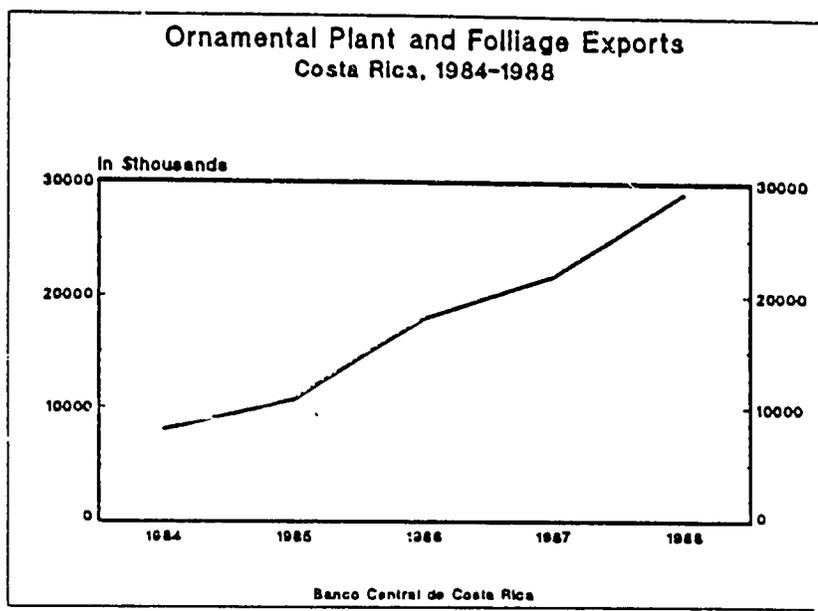
However exporters have experienced increasing competition and under-bidding in the U.S. market. Most acknowledge that too many firms have entered the market, and are bracing themselves for harsher times as U.S. demand for foliage slackens.

With slower growth in the U.S. market we can expect to see a continuation of the move towards Europe and other markets. A comparison of the distribution of export destinations between 1982 and 1988 illustrates that this shift began several years ago.

We can also expect continued efforts by exporters to break cut of Florida into the West and East Coast markets where Costa Rican exports have less of a foothold. (Note that although Costa Rican exports represent half of all Miami imports, their share of total U.S. live plant imports is only 18.6%.)

### EXPORT INDUSTRY STRUCTURE

Ten to fifteen years ago, the export industry consisted of half a dozen firms. According to interviewees, now there are almost one hundred, including cooperatives of hundreds of producers. (*Coopeindia* exports Massageana Cane for over 1,000 farmers; *Coopeplant* exports for 65. *Coopecira* was recently formed to export for 90.)



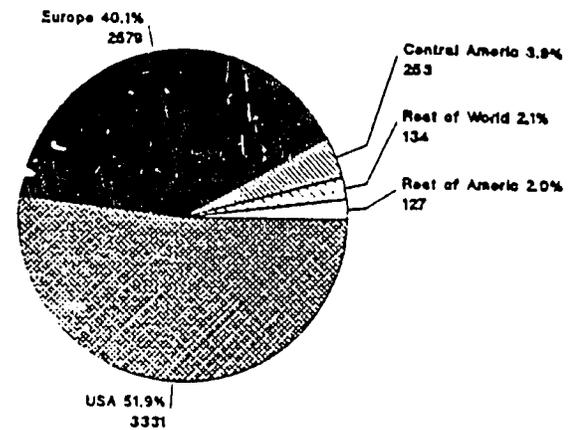
Size varies from *Matas de Costa Rica*, a North American firm which is by far the largest, to *Siempre Verde* and then *Plantas Tropicales* (50 hectares), also large, to exporters cultivating only a few hectares.

Investment in cultivation equipment varies too, with some firms investing for example in shade tents and computerized sprinkler systems. Many producers have one fifth of their cultivated area under tents. Imported inputs include construction material for shade houses, equipment for fumigating and watering, starter plants, and some pesticides. Because of the high value of imported inputs, import tax exonerations are important. Even with the exonerations, according to one exporter, start-up investment per hectare can be as high as 5 million colones.

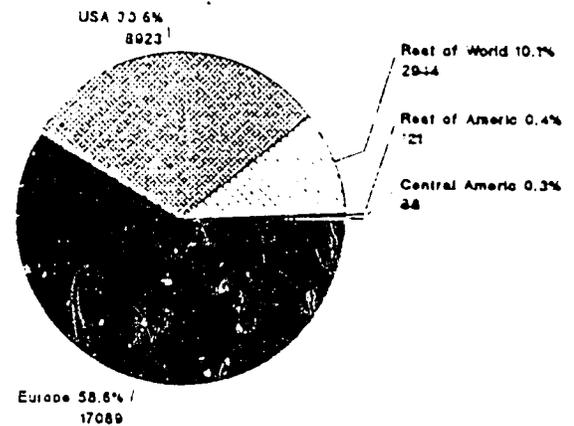
With some exceptions, such as *Corpeindia*, exporters tend to sell a diverse range of plants. (One large exporter sells 20 varieties, each in 2-3 different sizes.) This reduces risk and is a response to the diverse demands of buyers' (large greenhouses) preference for "one-stop shopping." Diversification is constrained by the other preference of buyers: high volume. Suppliers able to offer high volume are preferred since this allows greenhouses to save on transaction costs and because slight differences between the seedlings of different farms pose difficulties for mass cultivation at large greenhouses.

There are more small producers of massagena cane than of any other plant. Ten years ago, when exports of the cane were just starting, it was used in the cultivation of coffee and other products as a windbreak and property demarcation. As the export market developed, increasing numbers of farmers dedicated entire hectares to its production to sell to exporters. As a result of an explosion of cane exports from other countries as well (such as Brazil), at \$.36 per foot, prices are now less than half what they were in the '70s, according to one exporter. Established exporters now purchase only small amounts of cane from local producers. As a result, several marketing cooperatives have formed to export the cane. Unfortunately, for many late-entering producers, this cane is their first venture into exportable plants. Their investment in cane, combined with the difficulties they have faced in marketing the product make

### Ornamental Plant & Foliage Exports By destination, 1982



### By destination, 1988



In thousands, Banco Central de Costa Rica

them reticent to give it up in favor of other plants. At this point the MAG (Ministry of Agriculture) is recommending farmers reduce their exposure to market risk by returning to planting cane as a windbreak only. This way land is left available for other crops while the cane can still be harvested for export if market conditions are favorable.

### RELATIONS AMONG EXPORTERS: COMPETITORS

Relations among exporters are highly competitive. Exporters jealously guard the hybrids they have bred or created by accident, since they feel slight differences among plants can represent an edge in the market. (This means that unless they can agree on a trade, producers must often go to international plant fairs to diversify their selection.)

The small number (5) of Miami ornamental plant distributors with access to the large Florida greenhouses, combined with a slow-growing market, has put Costa Rican exporters in competition with each other. Newer exporters have under-bid in order to enter the market, and this has intensified anti-cooperative sentiment in the domestic industry. Nonetheless, some older companies with stable customer bases do exchange information informally with similar firms.

Intense competition among producers means that they must provide a combination of higher quality (consistency of results when seedlings are cultivated in client greenhouses), and lower prices. Some exporters report that they are expected to reduce nominal prices or to provide more mature, over-specification, cuttings--two ways to reduce real prices.

### THE CHANGING U.S. AND NEW EUROPEAN MARKETS

Recent changes in the U.S. ornamental plant industry also contribute to these trends. The distribution channel consists of exporter --> distributor --> greenhouse (wholesaler) --> supermarket or nursery. Nurseries are becoming more concentrated, forcing greenhouses (their suppliers) to compete on price, which transfers up the line to the exporter.

One bright spot in the U.S. market is the very recent boom in demand for potted flowering plants. Some exporters are changing their product line in response.

In general, however, the declining attractiveness of the U.S. market and huge potential demand in Europe is drawing many exporters to export to Europe, and some to Japan. Exports to Europe are facilitated by the recent opening of several offices in Costa Rica of representatives of Dutch firms. The success of exports to Europe depends heavily on a weak dollar, however, since as the dollar rises in value, Costa Rican exports become more expensive to Europeans and African sources of plants become more attractive. On the other hand, Costa Rica's entry into the GATT will eliminate tariff barriers as high as 16% in Holland and 12% in Spain.

### BARRIERS TO INCREASING ORNAMENTAL PLANT & FOLLIAGE EXPORTS, mentioned only by ornamental plant and foliage exporters.

(1) Anti-cooperative relations among exporters is likely to become a growing liability in the coming years. As plant cultivation by importers increases in scale, exporters able to offer volume and a wide selection will have an edge.

Recommendation: The way for small to medium-sized producers to compete in this market is to specialize in fewer plant species (e.g. 5 rather than 20) and to

enter into reciprocal marketing agreements with producers of other species. This model combining some specialization with joint fulfillment of buyer contracts has been successful elsewhere. It is considered responsible for the extraordinary success, for example, of the German machining industry and is being promoted in the U.S. machining and textile industries.

Export promotion organizations should encourage the development of more specialization and reciprocal marketing agreements by focusing on newer less common species, where there is already some specialization. Information should be available on which firms are producing what. Interactions with exporters should continually stress the potential benefits of reciprocal marketing and specific examples should be highlighted and commended. Marketing specialists for the industry should be invited to speak to exporters about this and other ways of competing in the new marketplace.

**BARRIERS TO INCREASING ORNAMENTAL PLANT & FOLLIAGE EXPORTS, mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).**

(1) Increasing price competition in old markets suggests that the industry's greatest need is to continue to develop a client base in new markets. Air cargo space shortages and the lack of direct routes by air and ship pose the biggest barriers here, with the development of market contacts second. See pages 14 and 18.

(2) Many exporters shipping by air need refrigerated space at the airport. See page 13.

(3) Some exporters report frustrating problems in the inspection and approval process of both plant exports and mother plant imports. See page 19.

## THE PINEAPPLE EXPORT INDUSTRY

The booming growth of fresh pineapple exports makes other fresh fruit exports pale in comparison. Since 1982, exports have grown almost 5,000%, from less than \$1 million to over \$31 million. Representing 13% of total non-traditional agricultural export income, pineapple appears to be the single product holding the largest potential liability should prices turn down or demand slacken.

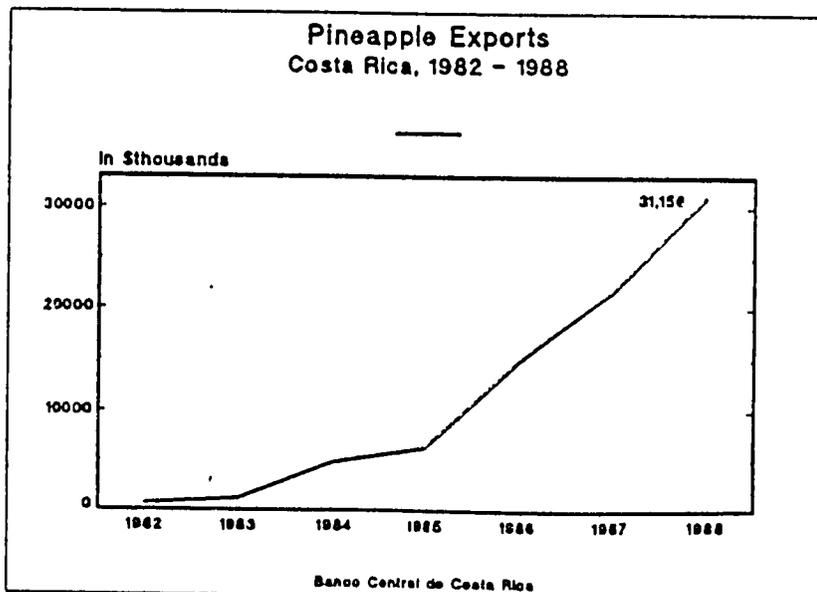
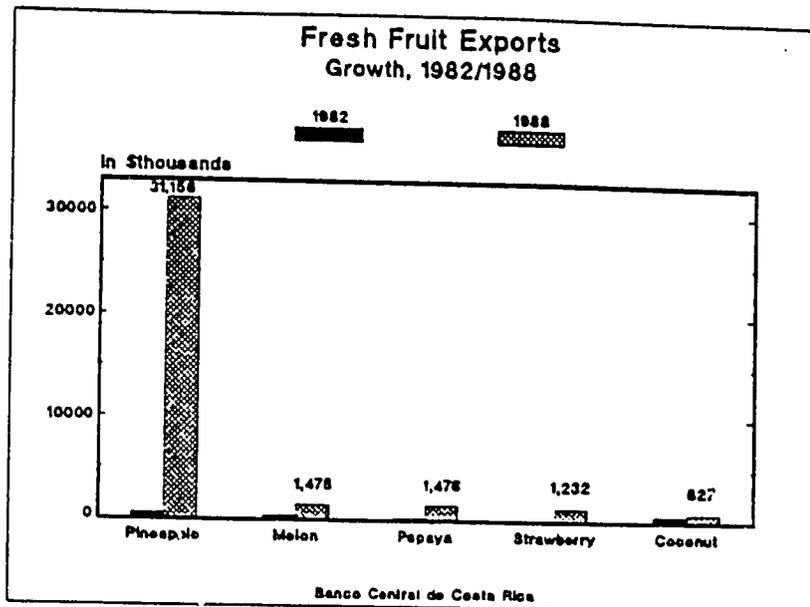
Exporters report that they have a short window--September to January--during which prices are high in the U.S. market and exporting is profitable. Hawaii reportedly enters the market in January. Exports to Europe are most profitable starting in January when prices are high, which accounts for the high level of exports to Europe (36%). During the rest of the year plants continue to produce, but international prices decline.

In seeming contradiction, export records show relatively stable prices across major markets. (See "Comparative Prices of Pineapple Exports" graph.) However this stability may reflect nothing more than the transfer pricing practices of PINDECO.

During the off-season, producers choose between filling domestic demand for fresh fruit, and processing it for export. However the return on local fresh fruit sales has reportedly been higher than the return on selling fruit for processing. This may partly explain the low volume of processed pineapple exports.

### EXPORT INDUSTRY STRUCTURE

The export industry is only a few years old. Costa Rica has traditionally produced yellow pineapple for domestic consumption. The variety that has met with greatest success on the international market is white, Hawaiian pineapple. The switch to this new variety was begun in the early 1980s by PINDECO (Del Monte). According to one exporter, PINDECO reportedly chose to destroy large numbers of excess seedlings available after the first crops, rather than sell them to local farmers looking to cultivate pineapple. As a result, Costa Rican farmers had to go to Guatemala for seedlings. In



the last 2-3 years, interviewees say, they have climbed the learning curve on their own. As a result, today the pineapple giant's relationship with Costa Rican producers of pineapple appears to be anything but paternal.

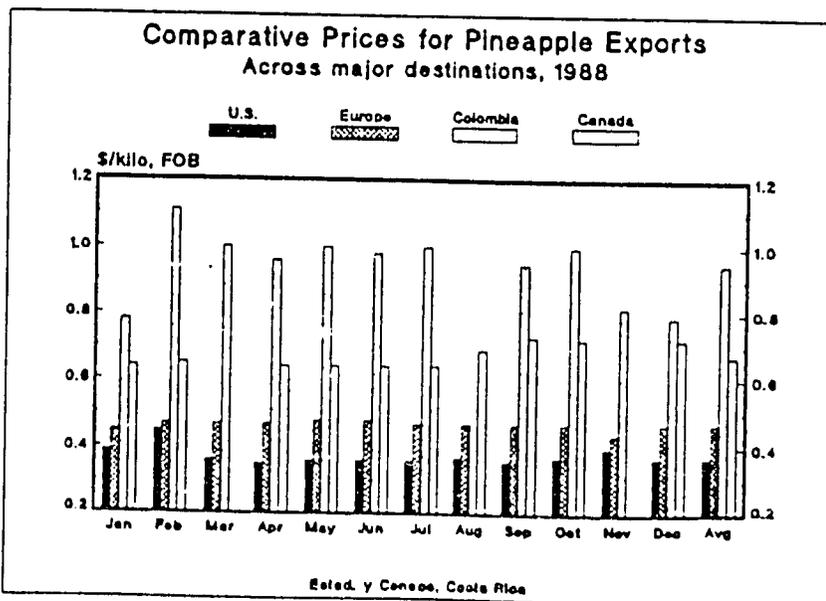
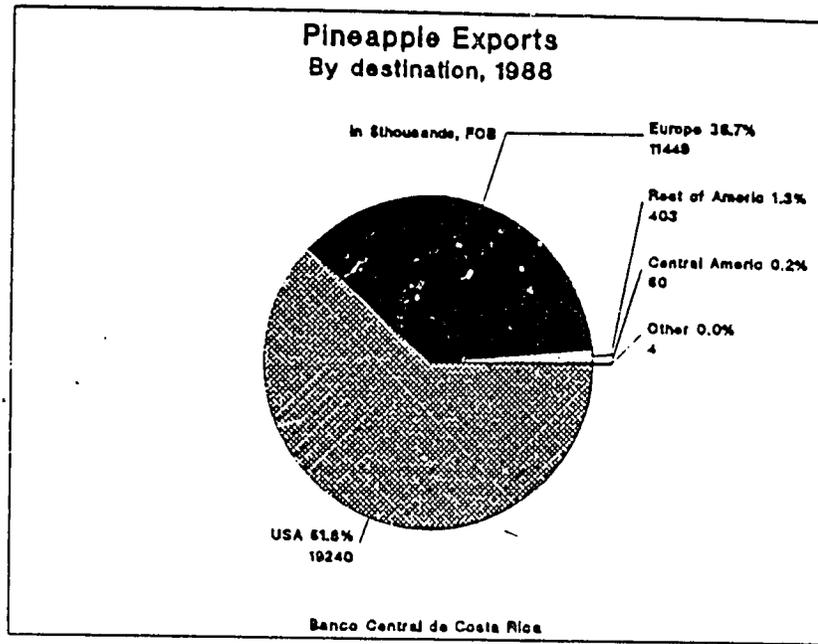
PINDECO dominates the industry, in cultivation and even more so in commercialization since it also purchases from local producers. One pineapple exporter estimated that PINDECO held 95% of fresh pineapple exports.

The processed pineapple industry (chunks and juice for institutional use) is largely undeveloped. The few processors include, for example, Hortifruti, El Angel, Del Campo and Gerber. One might expect the growth of the processing industry to follow that of fresh fruit exports. According to exporters of fresh pineapple, it hasn't for two reasons.

First, international prices for processed pineapple are low, with competition coming from Thailand, Mexico, and Hawaii, according to a trader, and an exporter of fresh pineapple. As a result, processors offer lower prices for processing pineapple than the producer can generally get for fresh fruit on the international or domestic market. So the only fruit left for processing is what isn't good enough to sell fresh: the "fruta de segunda." But even here, the fruit is often left in the field as it isn't worth the producer's while to collect it and transport it to the processing plants. So one reason for low exports of processed pineapple is that international prices are low.

Second, however, is that there is very little integration in the industry: producers don't own their own processing plants, and processors don't generally produce pineapple. According to a spokesman for a cooperative of pineapple producers, integration might reduce enough costs to make processing at least "de segundas" profitable. A captive supply of pineapple for processing would ensure steady supply, something which unintegrated processors report they lack. Such a steady supply is key to reducing processing costs and gaining consistent clients and better prices.

For these reasons, some increased processing activity through integration is likely in the next couple of years. A case in point: a consortium including Coopegermania (a cooperative of 27



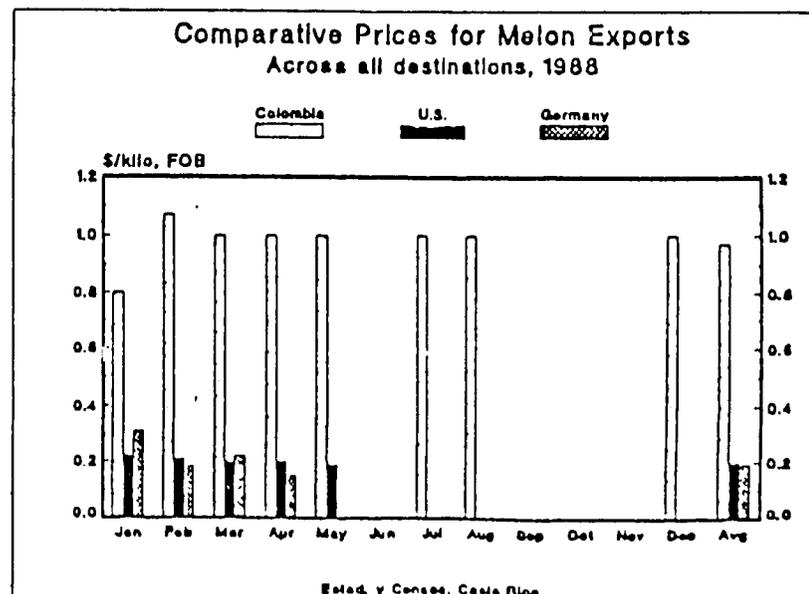
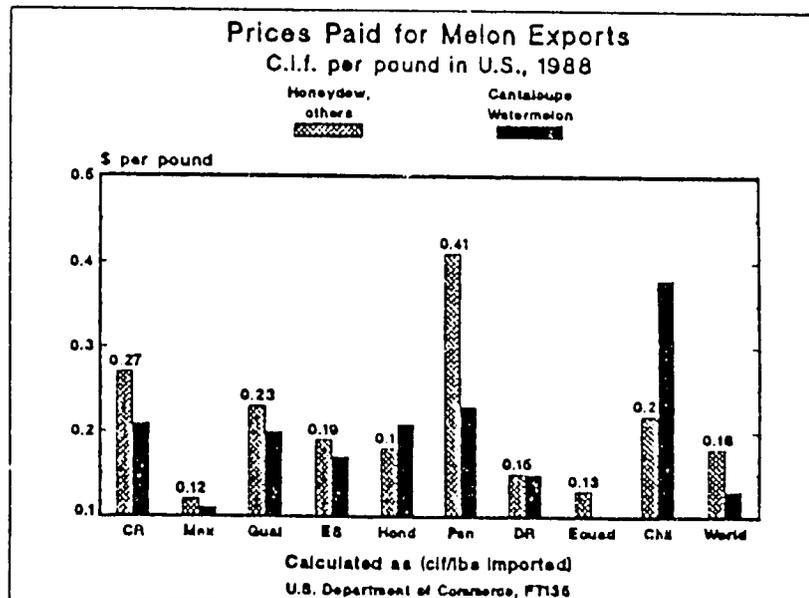
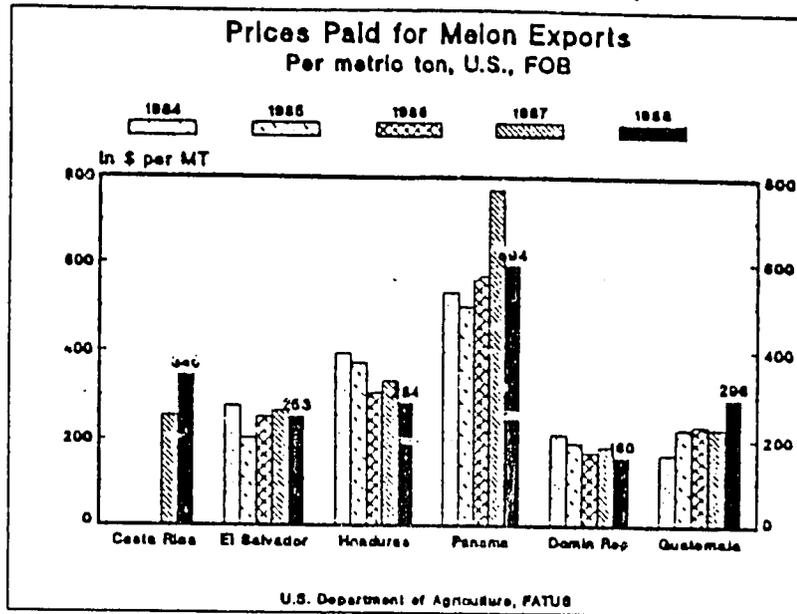
by destination" graph). The CAAP estimates that in 1989 somewhat more Cantaloups will have been exported than Honeydew (800,000 vs 600,000 boxes). Apparently producers have not ventured into the production of higher-priced specialty melons such as the Crenshaw of (Israeli) Galla. Producers also seem to have stayed away from the Mayan melon, exported by the Dominican Republic and Guatemala, and the Tendral, exported by Chile.

The price of Honeydew fell significantly in the last harvest (January-April 1989), according to one exporter, as a result of Panama flooding the market. This confirms a 1986 warning by IRI Research Consultants who noted that the Honeydew off-season market had become saturated. Cantaloupe prices however are reported to have remained stable.

As with strawberries, the key to success in melon exports is using fairly sophisticated growing techniques to achieve high quality and high productivity per hectare, and timing planting so that harvests coincide with the peak price months. One exporter noted that Costa Rican labor is twice as expensive as Honduran labor, but stressed that this effect was insignificant compared to the effect of productivity improvements. Many exporters have recently switched to drip irrigation. One of the largest reported that his exportable harvest per hectare doubled after switching. As a result he plans on sowing an additional 200 hectares this November with drip irrigation.

In the coming years as producers in all the new melon-exporting countries climb up the learning curve, successful exporters will be those who invest in productivity-enhancing cultivation and post-harvest techniques and technology, and those who have access to higher price markets and can coordinate harvesting for the peak price months.

Last year PROEXAG (based in Guatemala) investigated the feasibility of starting an air charter to Toronto Canada to facilitate access to the Canadian market. The idea has been dropped for now because producers could not guarantee the 60,000 pounds needed weekly. A Mexican overland route is currently under investigation as an alternative to maritime transport.



(2) Lack of integration of production and processing. There may be a good opportunity to process more of the fruit that cannot be sold.

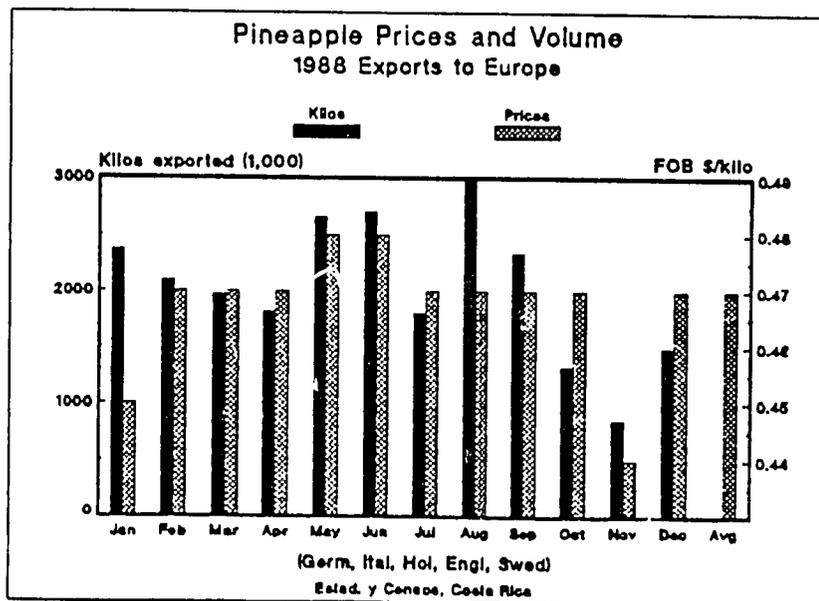
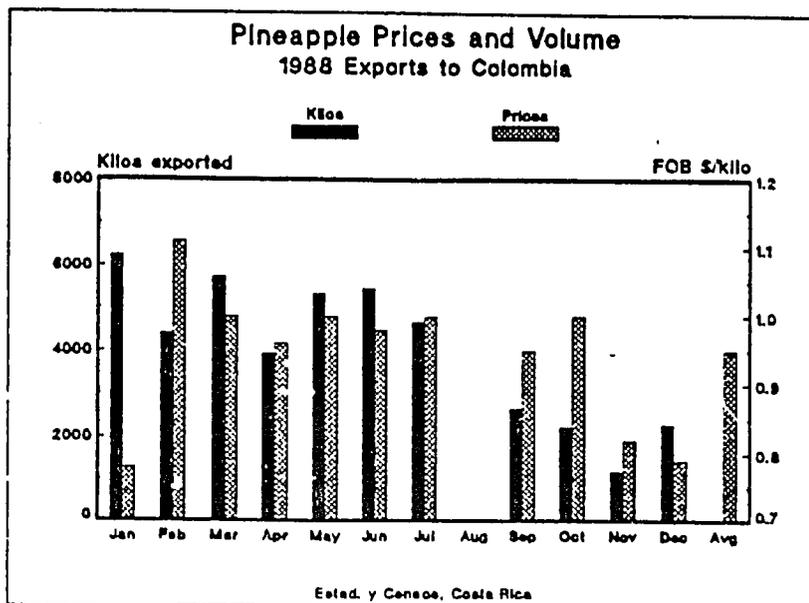
Recommendation: Efforts should focus on (1) increasing the productivity of processing technology so that higher prices can be offered to producers, and (2) getting a processing plant started on the Atlantic Coast which is integrated (in profit-sharing, for example) with as many regional producers as possible so that it can benefit from returns to scale.

**BARRIERS TO INCREASING PINEAPPLE EXPORTS,** mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).

(1) High cost of transportation. According to one relatively high-volume exporter, marine transport costs for the multinational corporations (MNCs), which own their own fleets are significantly lower than what Costa Rican exporters are charged: \$1.80/case of 40lbs vs. \$3.50-\$4.00 to Miami. This translates into a difference of \$1,980 per container. See page 14.

(2) High cost of transport cartons. According to the same exporter, the principal carton supplier (which is majority owned by the banana MNC BANDECO) provides cartons to the MNCs for \$1.25/box, on credit. This exporter was being charged \$1.45/box and given 15 days for payment. See page 15.

(3) Lack of understanding of importance of careful post-harvest handling, particularly in areas of the country with experience in cattle ranching, for example, rather than fresh fruit production. See page 19.



## THE MELON EXPORT INDUSTRY

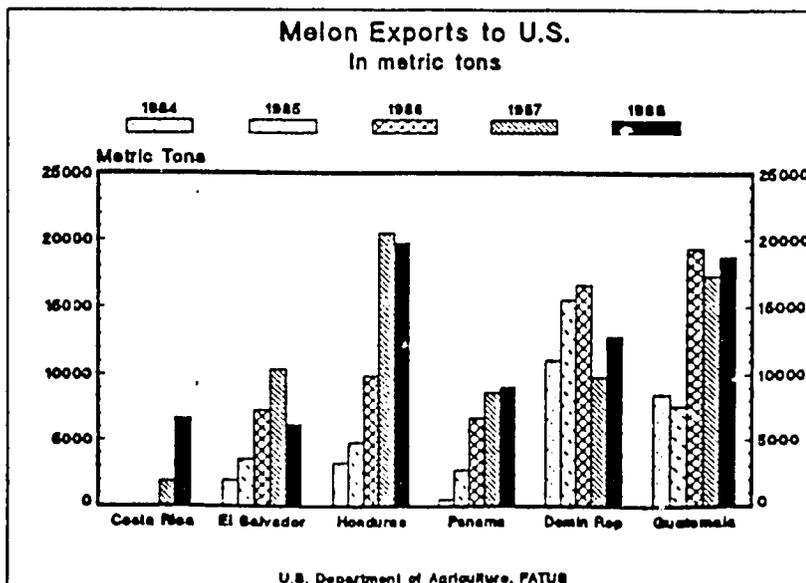
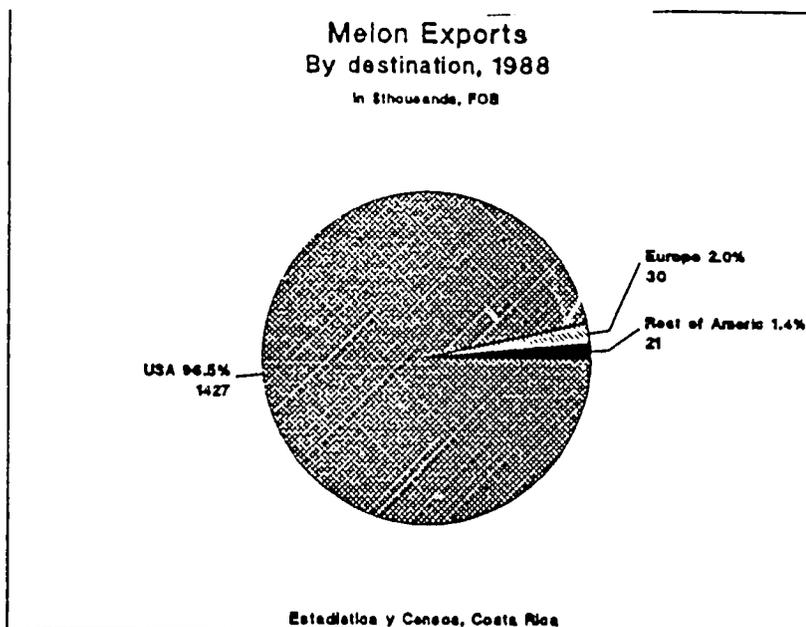
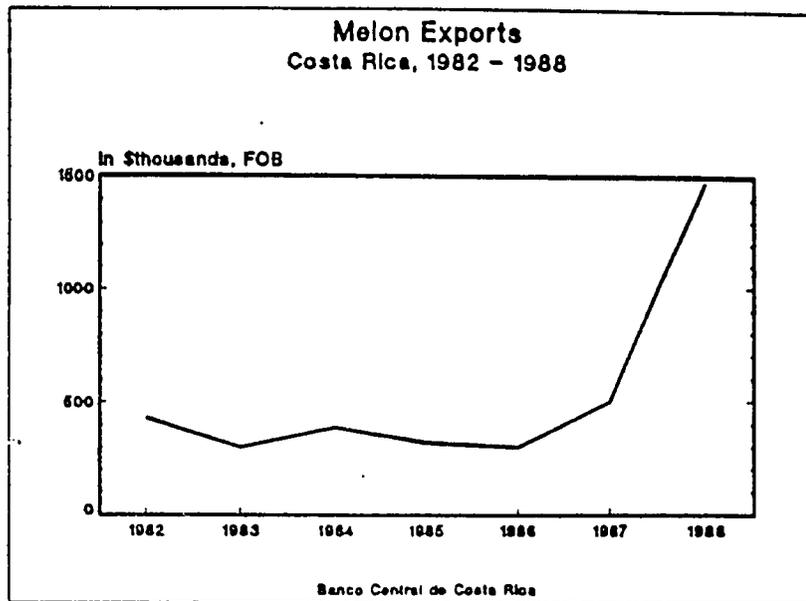
Costa Rica has been exporting marginal volumes of melons for years. In the last two years, however, exports have leapt up. During the 1988 December to April season exports tripled. The Consejo Agropecuario Agroindustrial Privado (CAAP) estimates land area devoted to melon cultivation will double over the next three years.

The industry has been slow to develop, and exports are small in comparison to those of Honduras, Guatemala and the Dominican Republic. However, Costa Rica's melon exports are growing faster than those of any other country in the region (see "Melon Export to U.S." graph). This growth is unrelated to transport costs. Costa Rican melon exporters have neither advantage nor disadvantage in these costs (including port, shipping, and insurance charges) relative to other regional exporters (see "Cost of Melon Transport to U.S." graph). It is worth noting, in addition, that due to the relatively high prices offered for Costa Rican melons, the burden of transportation costs is relatively low (see "Burden of Melon Transport to U.S." graph).

Despite the industry's late start, U.S. c.i.f. prices for Costa Rican melon (cost to a U.S. importer) are among the highest commanded by Central American exporters, second only to Panama's exports (see "Prices Paid for Melon Exports", fob and cif graphs). There are several possible explanations for this: (1) importers are willing to pay premium prices for Costa Rica's high quality melon exports, (2) producers are exporting effectively during the high-priced "window of opportunity" months, and (3) exporters have chosen to produce higher priced melons. Between 1987 and 1988, price offered per metric ton of Costa Rican melons jumped one third—the largest price increase in the region.

One importer was unsure of how to explain this, but felt that Costa Rica did not have a quality advantage over other regional exporters, for example Guatemala. In general, it is difficult to draw any conclusions from Costa Rican price data since records are not kept by type of melon.

The industry produces almost exclusively Honeydew and Cantaloup for the U.S. market, although several exporters are in the process of soliciting European clients (see "Melon Exports



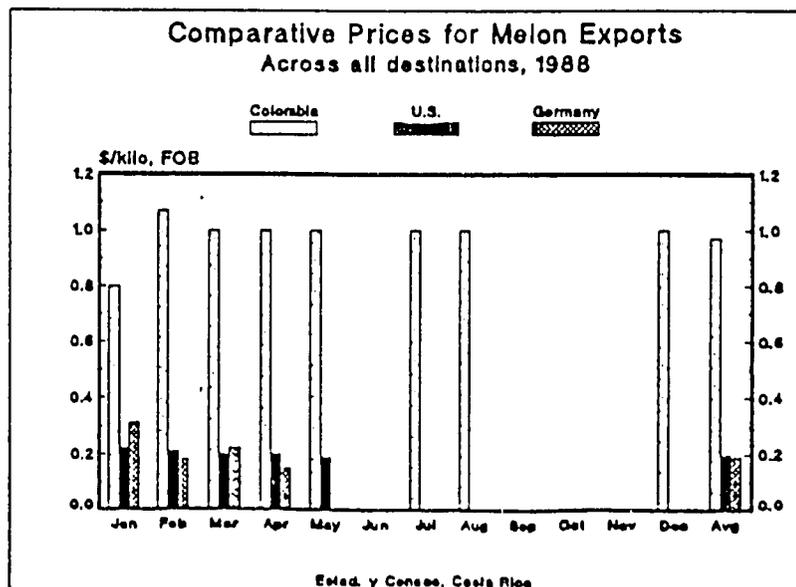
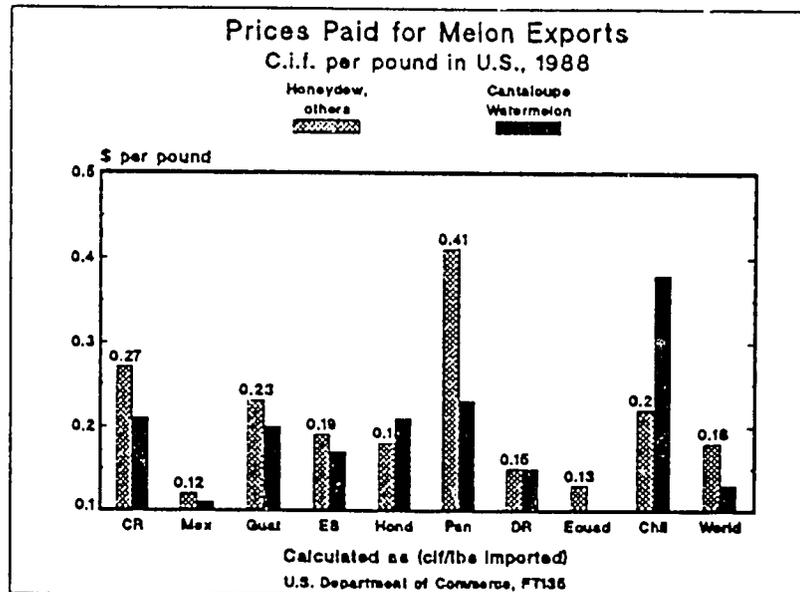
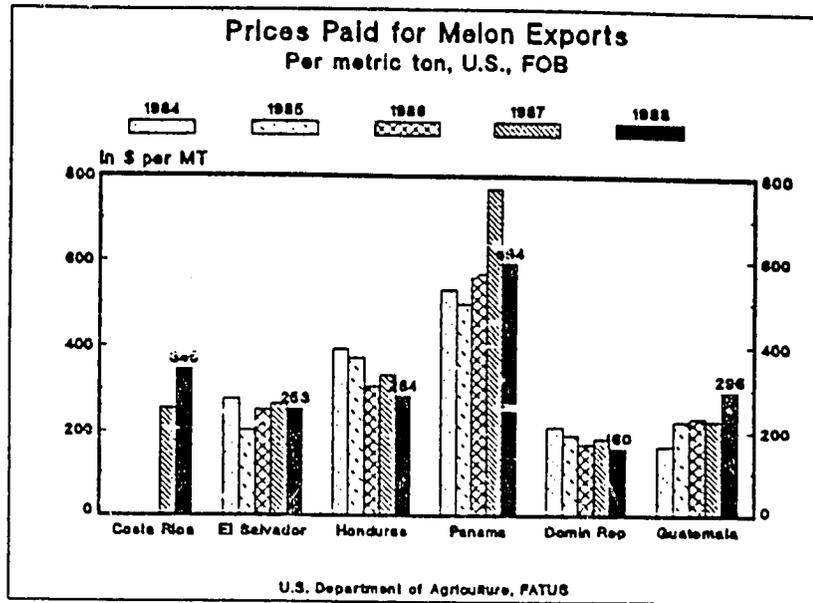
by destination" graph). The CAAP estimates that in 1989 somewhat more Cantaloups will have been exported than Honeydew (800,000 vs 600,000 boxes). Apparently producers have not ventured into the production of higher-priced specialty melons such as the Crenshaw of (Israeli) Galia. Producers also seem to have stayed away from the Mayan melon, exported by the Dominican Republic and Guatemala, and the Tendral, exported by Chile.

The price of Honeydew fell significantly in the last harvest (January-April 1989), according to one exporter, as a result of Panama flooding the market. This confirms a 1986 warning by IRI Research Consultants who noted that the Honeydew off-season market had become saturated. Cantaloupe prices however are reported to have remained stable.

As with strawberries, the key to success in melon exports is using fairly sophisticated growing techniques to achieve high quality and high productivity per hectare, and timing planting so that harvests coincide with the peak price months. One exporter noted that Costa Rican labor is twice as expensive as Honduran labor, but stressed that this effect was insignificant compared to the effect of productivity improvements. Many exporters have recently switched to drip irrigation. One of the largest reported that his exportable harvest per hectare doubled after switching. As a result he plans on sowing an additional 200 hectares this November with drip irrigation.

In the coming years as producers in all the new melon-exporting countries climb up the learning curve, successful exporters will be those who invest in productivity-enhancing cultivation and post-harvest techniques and technology, and those who have access to higher price markets and can coordinate harvesting for the peak price months.

Last year PROEXAG (based in Guatemala) investigated the feasibility of starting an air charter to Toronto Canada to facilitate access to the Canadian market. The idea has been dropped for now because producers could not guarantee the 60,000 pounds needed weekly. A Mexican overland route is currently under investigation as an alternative to maritime transport.



**EXPORT INDUSTRY STRUCTURE**

According to exporters, of the approximately 15 producers of melons for export, most sell to Del Monte. Some sell to Chiquita, in particular 7 producers in Guanacaste who have been receiving start-up assistance from PROEXAG (a Guatemala-based export development organization) and the CAAP. PROEXAG reports that this past season 80,000 boxes of melons (\$640,000) were exported successfully by these producers.

**RELATIONS AMONG EXPORTERS: COOPERATIVE**

Exporters report that they visit each other's farms and share technical information informally. One exporter attributes the level of cooperation to the fact that they know each other as friends, and have stable relationships with their customers in a large market with much potential demand for Costa Rican exports.

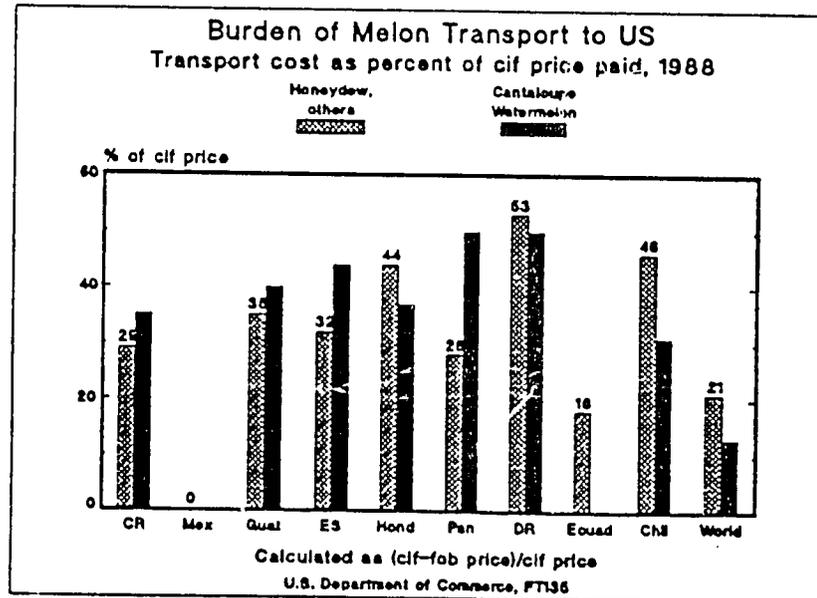
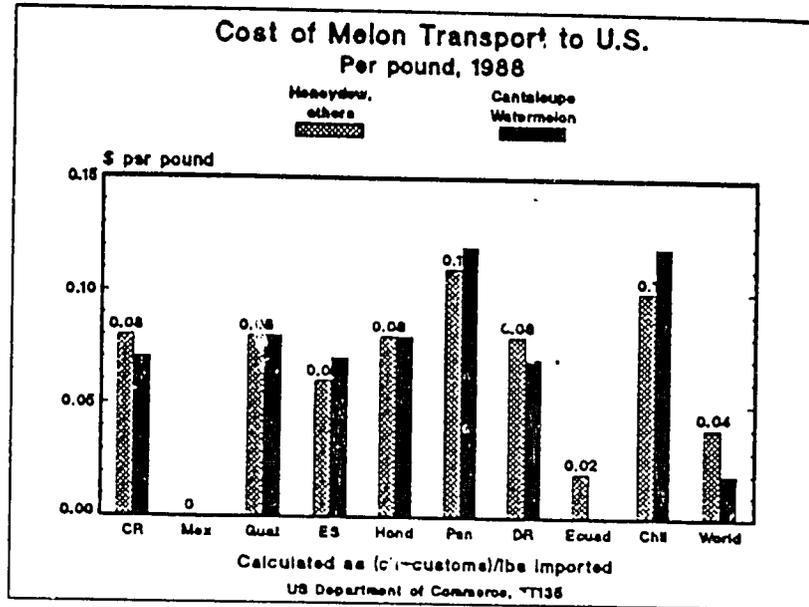
**BARRIERS TO INCREASING MELON EXPORTS**, mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).

(1) High relative cost of inputs. Seeds and certain fungicides must be imported. One exporter noted that in certain instances, fungicide prices were 80% lower in the U.S. Another exporter, with production in several countries, had calculated that the cost of bringing a hectare of melons to harvest in Costa Rica was \$1,800, in Guatemala \$1,000, and in Venezuela \$600--the differences due in part to large differences in prices of non-labor inputs. See also page 15.

(2) Difficulty importing fungicides, particularly for timely use. See page 15.

(3) High port charges relative to other exporting countries. See page 22.

(4) High interest rates for working capital. See p. 23.

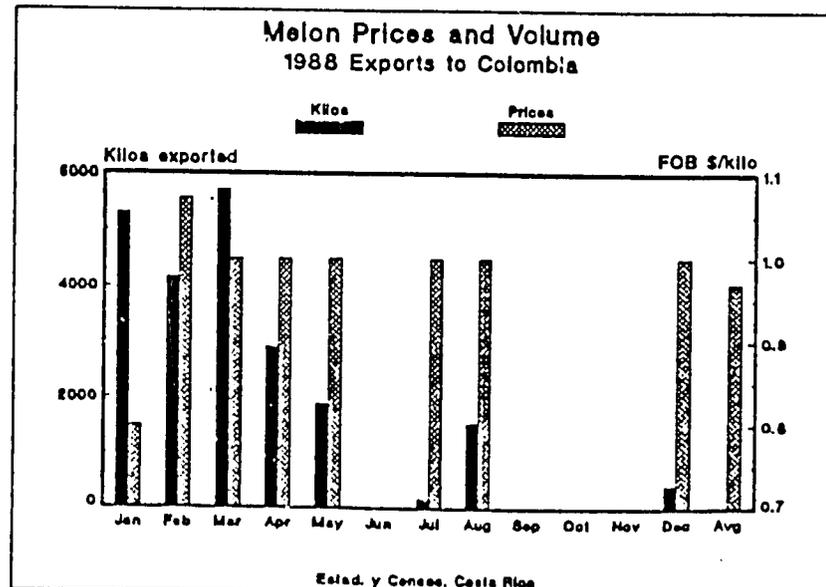
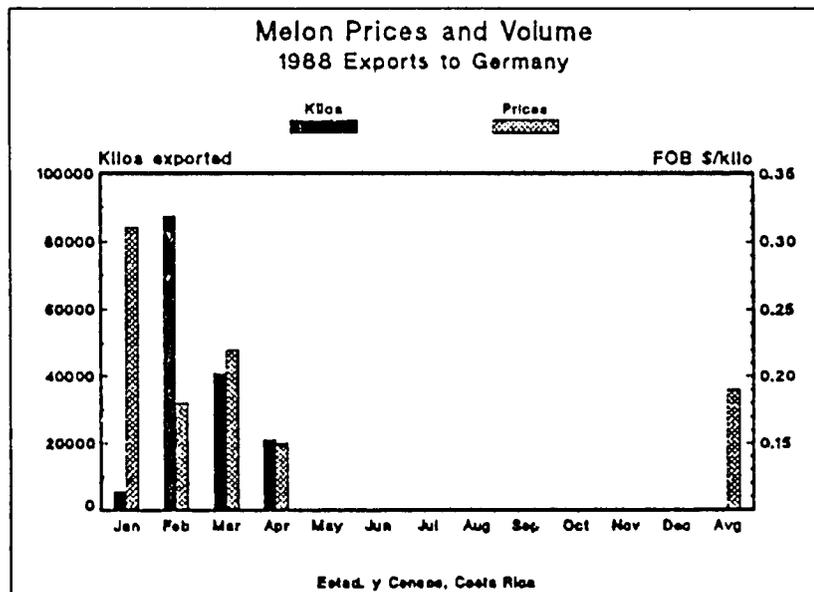
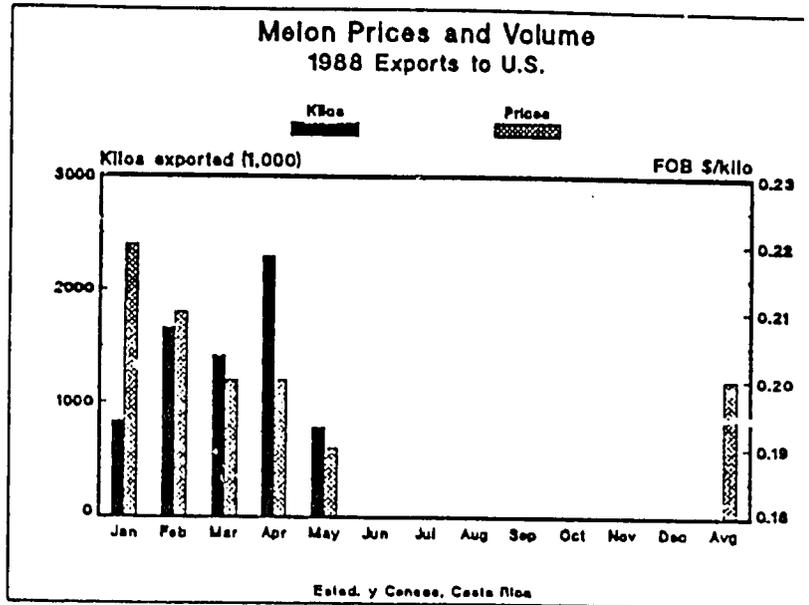


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**BARRIERS TO INCREASING MELON EXPORTS, pertaining only to melons**

(1) Export records currently do not specify type of melon. Since prices and market trends differ greatly by type of melon, lack of detail makes statistical analysis impossible.

Recommendation: The export has become important enough that several types of melons should be specified. This will assist future efforts to assist the industry and gauge progress.



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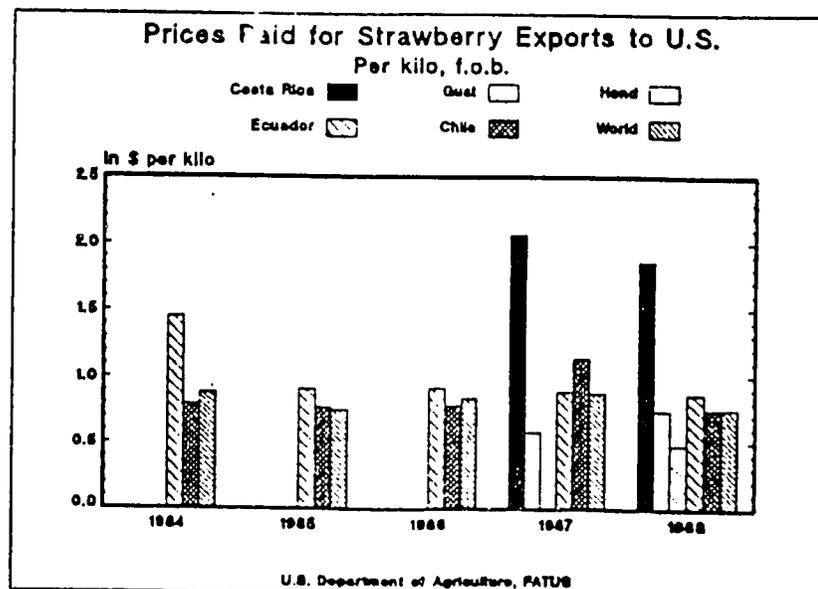
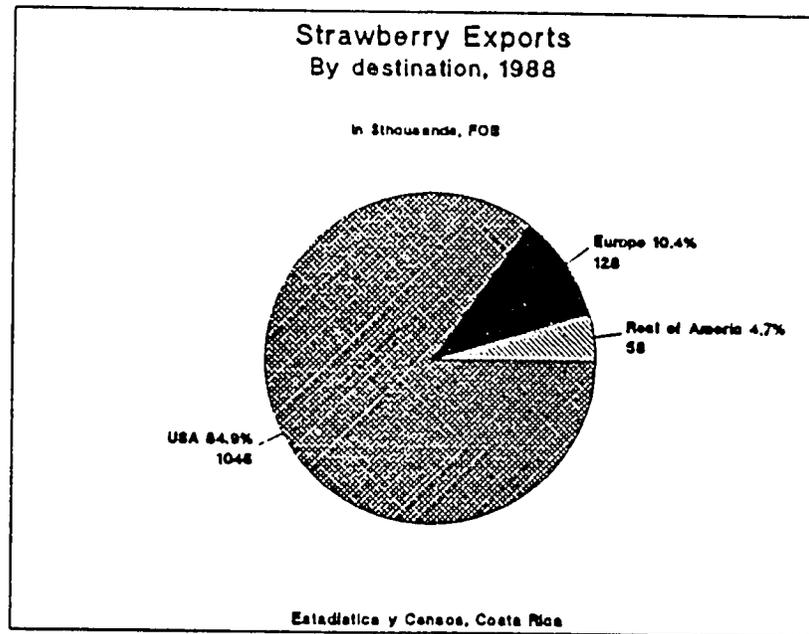
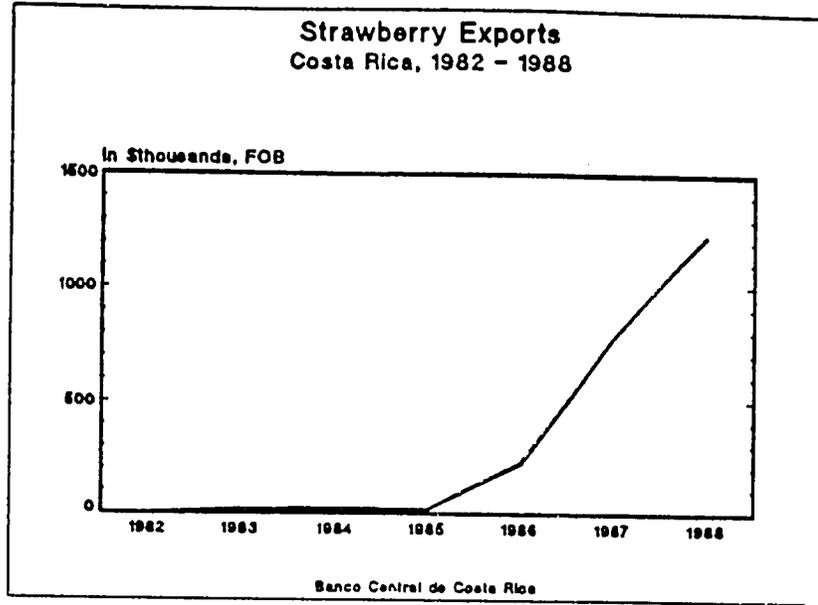
## THE STRAWBERRY EXPORT INDUSTRY

Significant strawberry exports began in 1986 with \$220,000. They had grown to over \$1.2 million by 1988.

Foreign prices for strawberries are highly cyclical and sensitive to quality. What is outstanding about Costa Rica's exports is the price they have commanded in the U.S. market. On average the Costa Rican f.o.b. price per kilo in 1988 was double that of any other regional exporter (\$1.86 vs. \$.87 for Ecuador and \$.48 for Honduras). (See "Prices Paid for Strawberry Exports to U.S." graph.) Usually it seems to take countries a year or two after entering the market to raise quality levels high enough to receive higher prices. In Costa Rica's case producers have been able to export high quality produce early on, according to one Miami importer. They also seem to have judged the peak U.S. price periods extremely well since the highest volume is exported during the peak price months of November and December. (See "Strawberry Prices and Volume, exports to U.S." graph.)

Strawberry cultivation is probably the most highly labor intensive NTA export. Much labor is required to prepare the earth and harvest the crop. Cultivation depends on a package of imported technology, including the starter plant (successful exporters have bought patented plants from California and Chile), pesticides, and packaging and presentation specifications. A high investment is required--\$170,000-200,000/hectare according to one estimate from the Instituto Inter-americano de Cooperacion Agricola (IICA), \$140,000 according to an exporter. This results in the intensive use of small plots of land. According to one exporter farm land area devoted to strawberry production varies from .25-17 hectares.

Although the vast majority (85%) of exports are currently absorbed by the U.S. market, exporters are making essays into other markets, particularly Europe. Although transportation risks and costs are higher, Europe is attractive because prices are consistently higher than U.S. or regional prices. (See "Comparative Prices for Strawberry Exports" graph.)



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However, one exporter noted that he starts exporting to Europe in January when U.S. prices start to decline. Export data confirms that exports to Europe do rise significantly in January. Unfortunately, exporters are losing out on far higher European prices in earlier months. For many, the lack of direct air routes to Europe makes it a risky and therefore less attractive market.

The importance of high quality and a good broker cannot be overemphasized. In February 1988 the FOB price of Costa Rican strawberry exports to the U.S. varied by shipment between \$.65 and \$4.97 per kilo. In October prices varied between \$1.35 and \$3.87; in November they varied between \$1.29 and \$4.58.

**EXPORT INDUSTRY STRUCTURE**

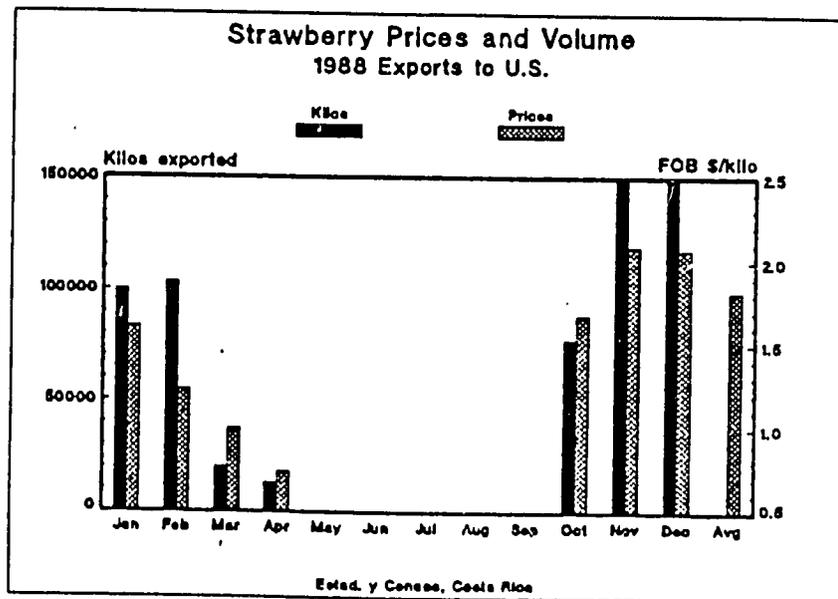
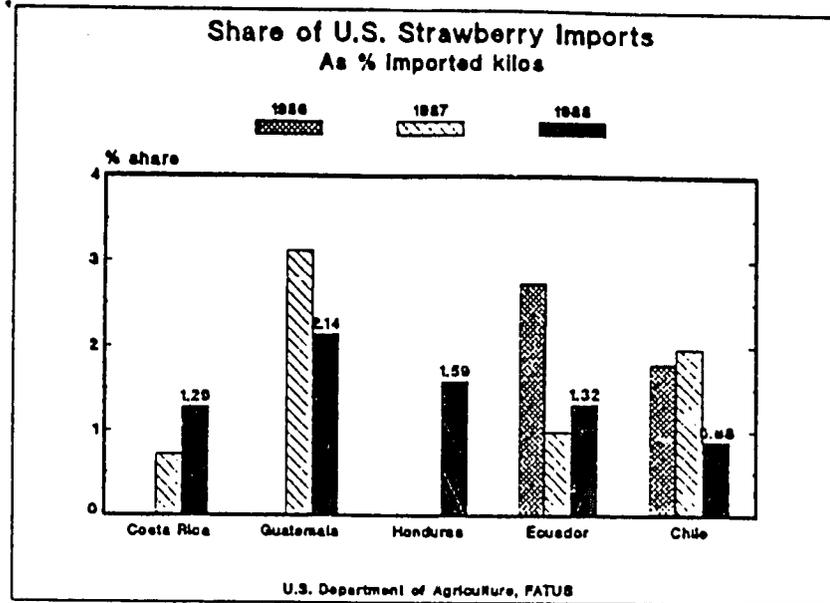
Currently 120 hectares are being cultivated by about 100 producers. According to different estimates, between five and fifteen of these export directly.

Recently *Coopefresa*, a marketing cooperative formed by producers several years ago, stopped its export activities. Currently the Association of Strawberry Producers of Fraijaines coordinates the sale of strawberry harvests to the five exporters.

**FOREIGN COMPETITION**

According to the CAAP's Miami office, in the U.S. market competition includes Florida (end of December), California, Guatemala, Mexico, New Zealand, and Chile. A Miami broker considers that Costa Rica's greatest competition is New Zealand. Its strawberries also arrive during the peak price months of October and November and are of comparable high quality.

One exporter mentioned that Guatemala exports more than Costa Rica, but of lower quality. According to him, this affects the reputation of all Central American strawberry exports and hurts Costa Rican exporters. (See the graph entitled "Prices Paid for Strawberry Exports" for evidence confirming Guatemala's significantly lower prices.)



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**RELATIONS AMONG EXPORTERS**

Although there is no formal industry organization, exporters appear to have made several efforts to organize themselves to benefit from returns to scale.

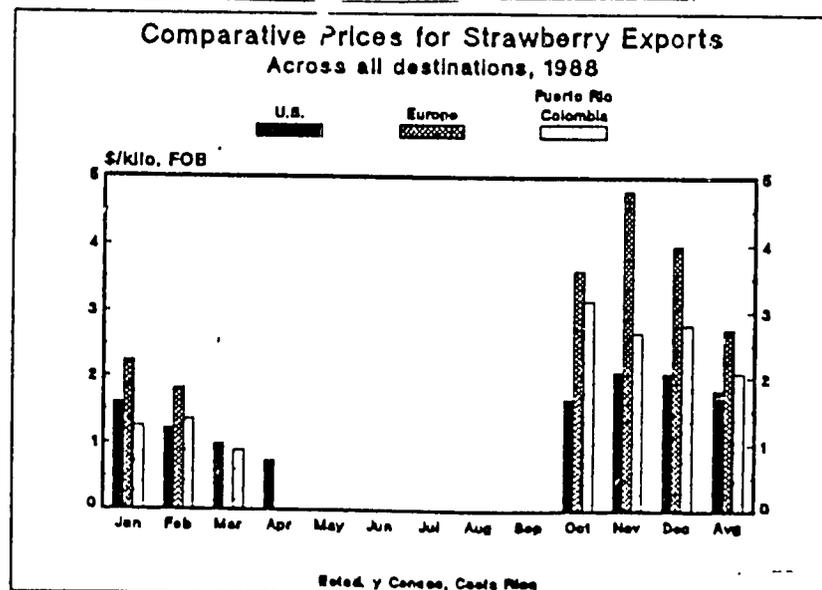
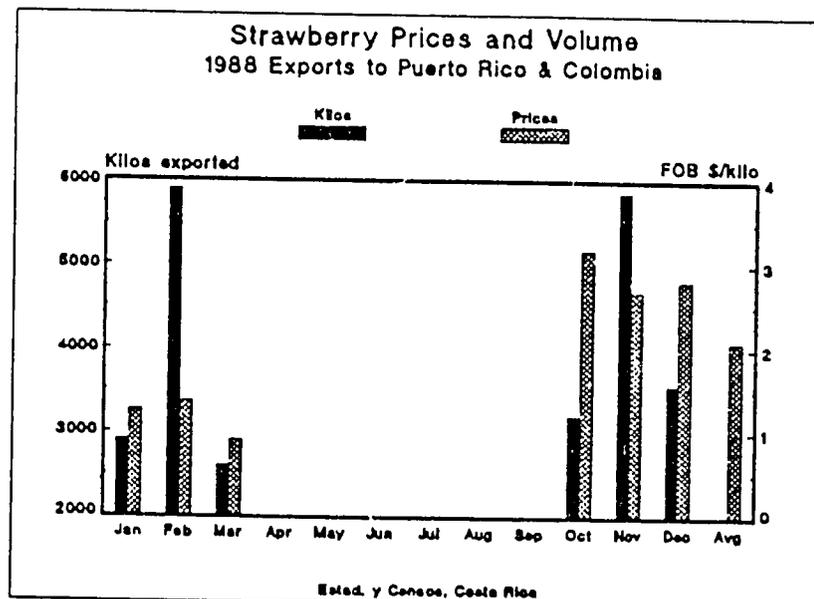
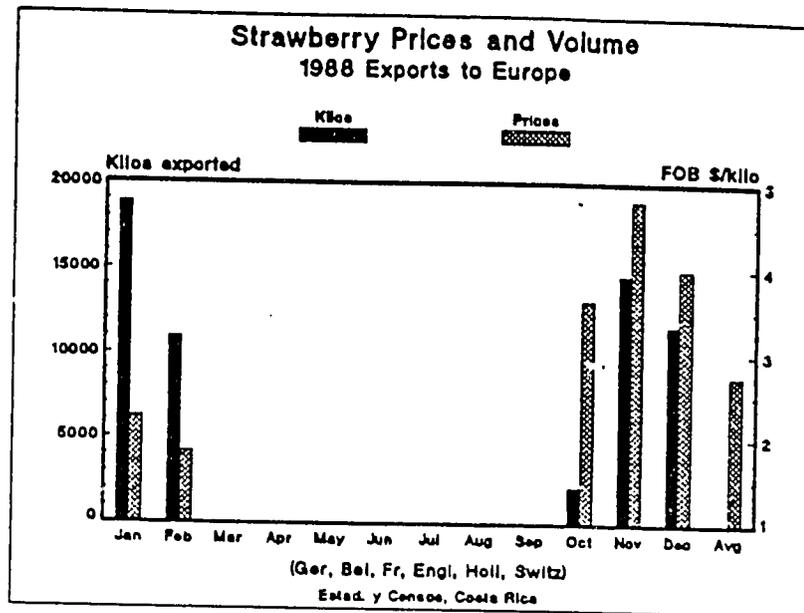
According to a representative of *Coopafresa*, the marketing cooperative was formed to enable small producers to export. Many of these are now exporting directly and maintain friendly relations.

A large exporter reported that they and 10-15 other exporters are participating in weekly meetings held at the CAAP. Participants are considering joint purchases of packaging materials (flats) to lower costs. They are also considering hiring someone to receive shipments of strawberries in Miami. The hope is that this will insure better treatment at the port of entry and a fair evaluation of its quality upon arrival.

**BARRIERS TO INCREASING STRAWBERRY EXPORTS**, mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).

(1) Airport: Shortage of refrigerated space at airport for storage during inspection process. See page 13.

(2) Expense of packaging materials for smaller exporters who require smaller runs; need to sink working capital into large single orders of packaging materials. See page 15.



## THE ROOTS AND TUBERCLES EXPORT INDUSTRY

According to exporters, Costa Rica is an important supplier of roots and tubercles to the U.S. and European markets. Exports of cassava (yuca) and other tubercles, and ipecucuanha root, have boomed, growing from \$3.6 million in 1982 to almost \$15 million in 1988--twice the size of cut flower exports.

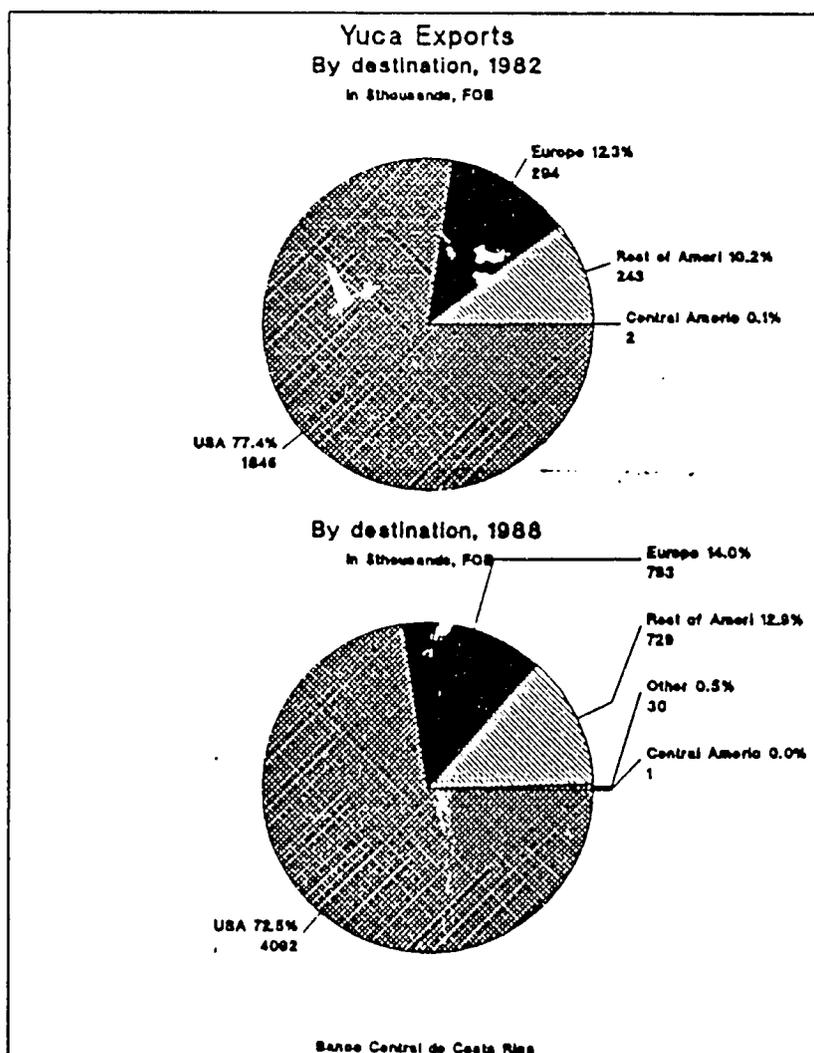
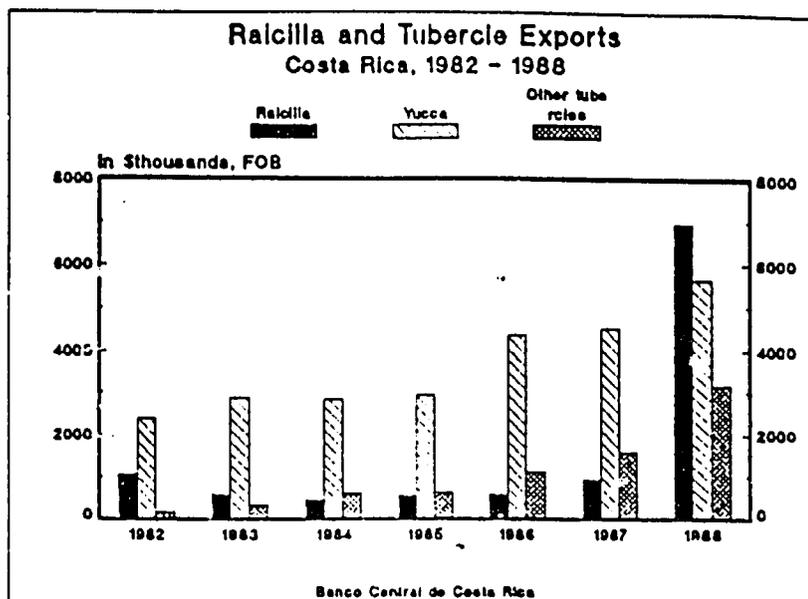
Cassava (yuca) and other tubercles such as yams (name) and taro root (tiquisque) are absorbed mostly (73%) by the U.S. market, while ipecucuanha root (raiz de ipecucua or raicilla) and eddoe (nampi) exports are shipped mostly (81%) for European--principally British--consumption. Despite overall higher prices for yuca in Europe, the share of Costa Rican exports absorbed by that region has barely increased since 1982. (See "Comparative Prices for Yuca Exports" and "Yuca Exports by destination" graphs.)

### EXPORT INDUSTRY STRUCTURE

According to one exporter who undertook an industry survey, there are now 18 exporters in the industry. About five have started exporting roots and tubercles just this year.

Some exporters produce themselves, others purchase only. Many newcomers have rented packing plants. In these cases entry and exit barriers appear minimal. As a result of the almost overnight expansion of exporters and the rapid growth of exports, quality standards and the linking of production with market demands was cited as a major problem. Large price variances of as much as 500% between shipments of yuca may be evidence of large discrepancies in quality. In February 1988, for example, prices of yuca shipments to England varied between \$.38 and \$1.50/kilo. Shipments to Colombia in May varied in price between \$.14 and \$.70/kilo. One exporter noted that prices varied in response to rapidly fluctuating supply from other exporters, not just in response to quality.

Exporters report that over-supplies of produce in certain years have resulted in price falls damaging to producers; supply shortages in other years (such as this one) result in piracy of



suppliers among exporters. The instability of prices and production year to year is viewed as damaging to the sector overall. It has made progress in improving quality of cultivation, post-harvest practices, and sanitation standards in packing plants difficult.

Since communication with the exporter is the closest most producers get to the international market, the relationship of producer to exporter appears key to effecting these changes. Two tuber exporters illustrate the wide range of producer-exporter relations in the sector.

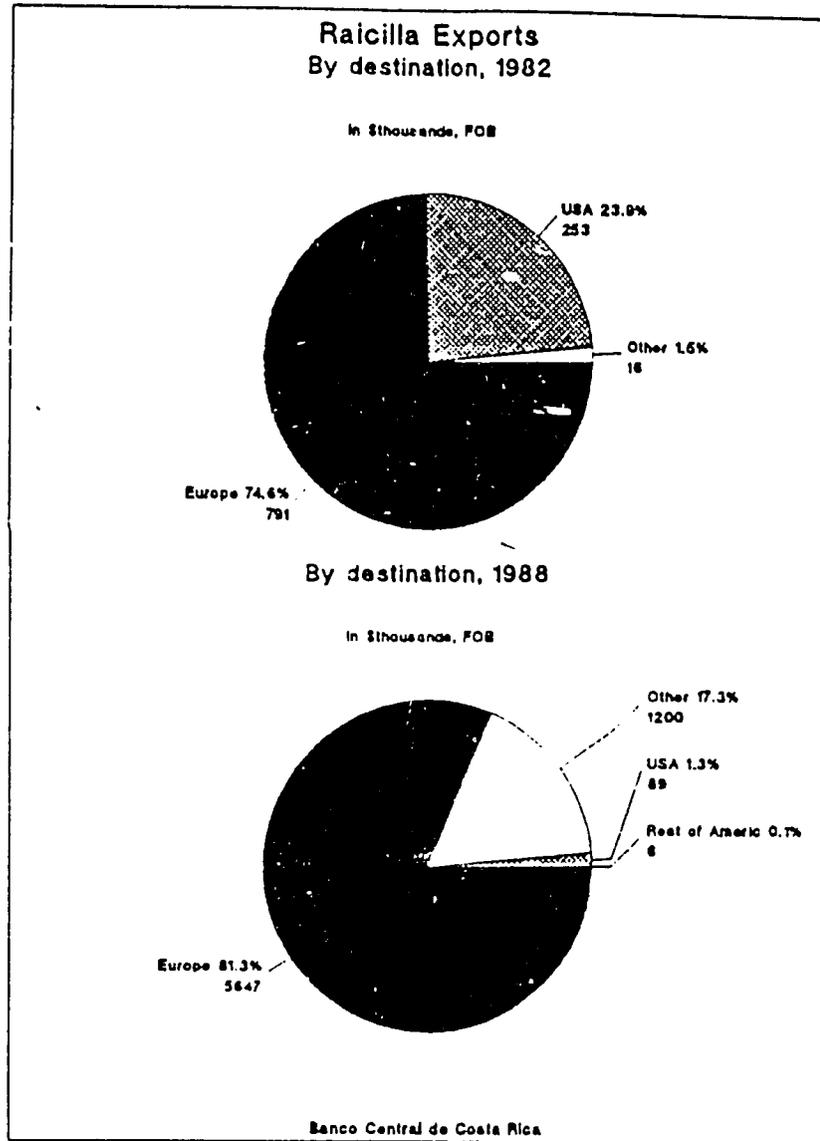
One exporter commented bluntly on his relations with suppliers. "It's usually a buyer's market for yuca, so we take the best and leave the rest...Producers don't have many alternatives, but that benefits us. We don't offer assistance to them, that would be too expensive." During shortages of yuca such as this year's, he preferred to plant more himself rather than develop stable supply relations with the better suppliers.

In contrast, another exporter of tubercles reported putting some effort into developing the company's suppliers. The exporter sponsors "field days" in which management gives technical assistance seminars for producers. It provides seeds and suggestions on which inputs to use, and gives advances in payment to producers. It had given a machine to wash tubercles to a cooperative that it buys from. (It had seen the machine during a tour in the U.S. organized by CENPRO.) Hand washing resulted in poorly washed produce and represented a bottleneck which kept exports down at one container per month. The machine has enabled them to increase to 5 to 6 containers *per week*. Despite these efforts, however, this exporter reported that he had lost suppliers to other exporters.

**RELATIONS AMONG EXPORTERS**

As noted, competition is stiff during years in which demand far exceeds supply. Several years of instability and low entry barriers for exporters have resulted in little cooperation among them.

Exporters with investments in packing plants and supplier relations decry the effect on the industry of new exporters and others who contribute to



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the sector's instability by engaging in little planning with producers.

**BARRIERS TO INCREASING EXPORTS OF ROOTS AND TUBERCLES, mentioned only by root and tuber exporters**

(1) Lack of up-to-date information available to exporters on the status of markets and the domestic industry to be used for planning.

Recommendation: Better planning should be a priority for this industry. The development of stable long-term producer-exporter relations should be encouraged. Information on cultivated land area and market trends should be collected and dispersed. The IDA's efforts in this direction should be supported and enhanced.

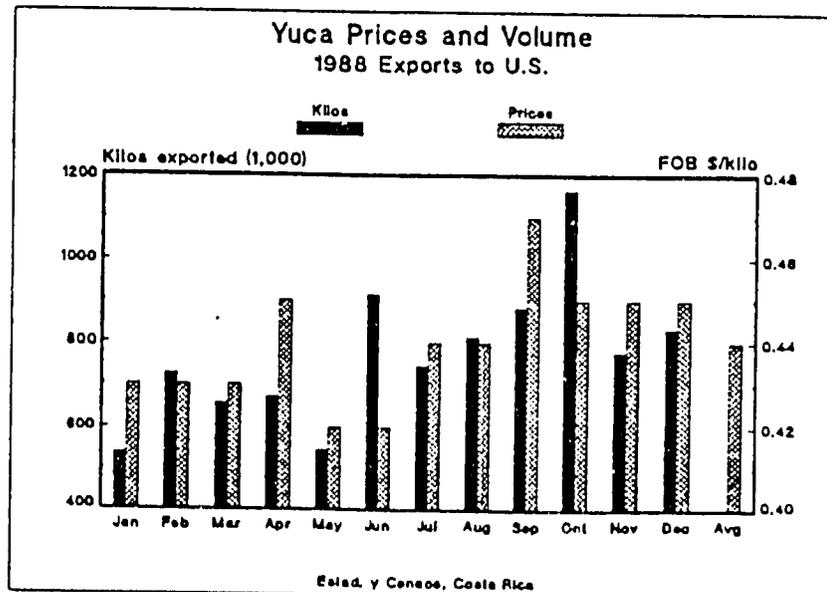
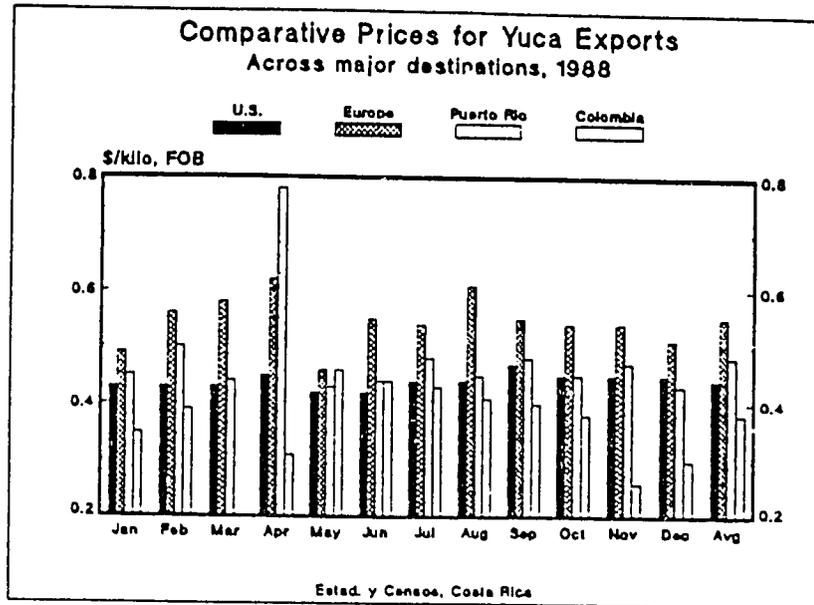
(2) Lack of printed technical assistance material for producers. One exporter explained that field visits by technical people were useful, but often information was lost because it could not all be absorbed by the producer during the visit.

Recommendation: More technical assistance material should be developed and distributed.

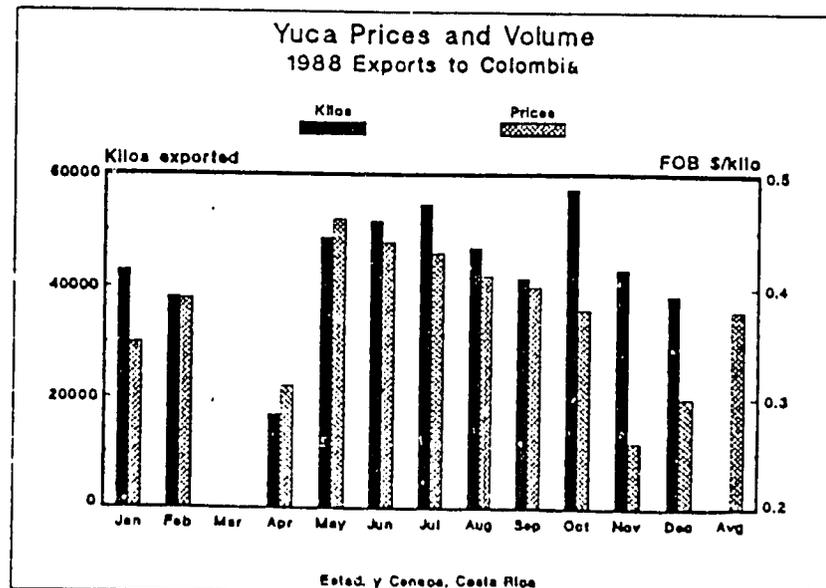
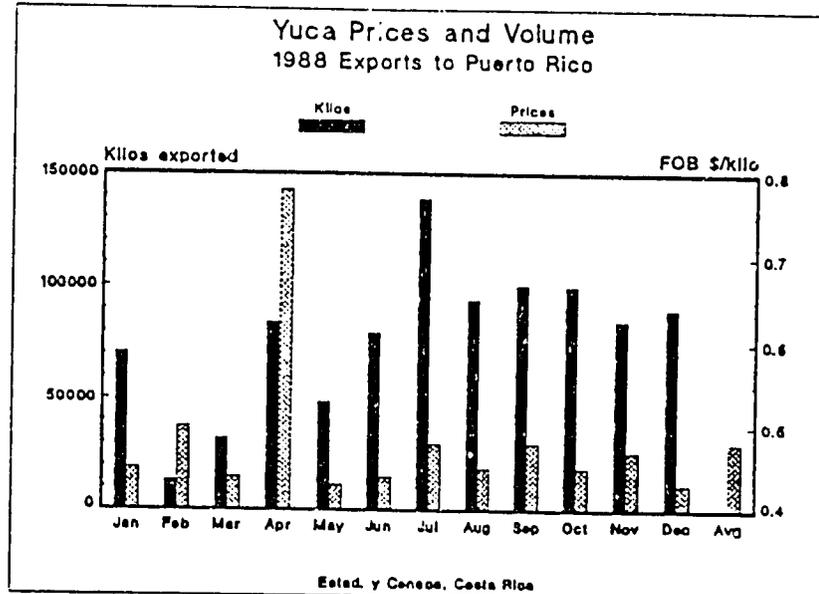
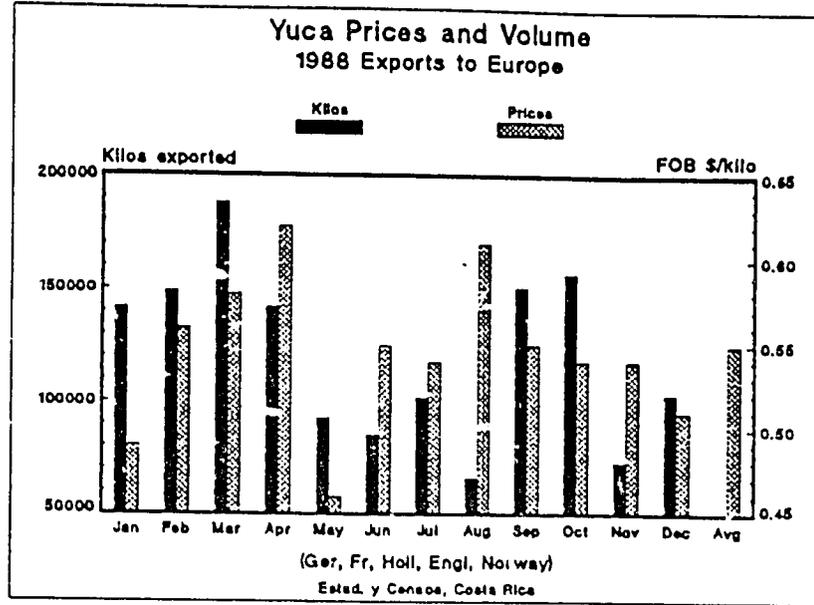
**BARRIERS TO INCREASING EXPORTS OF ROOTS AND TUBERCLES, mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).**

(1) Short-term relationship between many exporters and producers. See page 16.

(2) Lack of quality standards within the export industry, including sanitation standards for packing plants. For example, not all packing plants use potable water. This is a problem particularly for roots and tubercles, and fish, which require more cleaning than other fresh product exports. The lack of quality standards is related to the nature of the crop (traditional cultivation) and the export industry (many small producers and a few large exporters with varying levels of interest in developing long-term supplier relations).



**Recommendations:** Encourage efforts within the industry to establish common quality standards. Implement the new sanitation code requiring visits to processing plants. Publicize quality-enhancement efforts of specific producers and packers. These efforts could be reported in an industry newsletter, which could include technical and market information. Also encourage more constructive exporter-producer relations by featuring positive cases, for example in such a newsletter. See also p.19.



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## THE CUT FLOWER EXPORT INDUSTRY

Cut flower exports have doubled since 1984, growing from \$4.5 million to \$8.5 million. Despite the industry's 1987 decision to appease U.S. cultivators by foregoing tax-break incentives (the CAT), exports have increased each year since then.

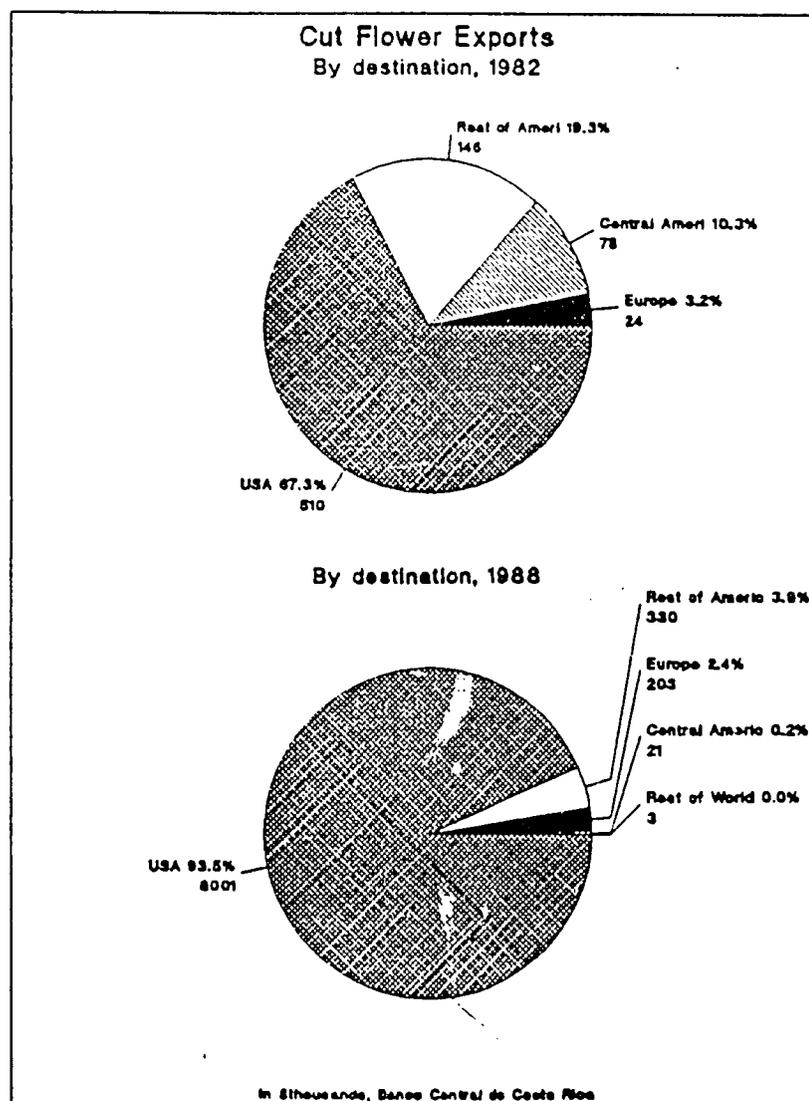
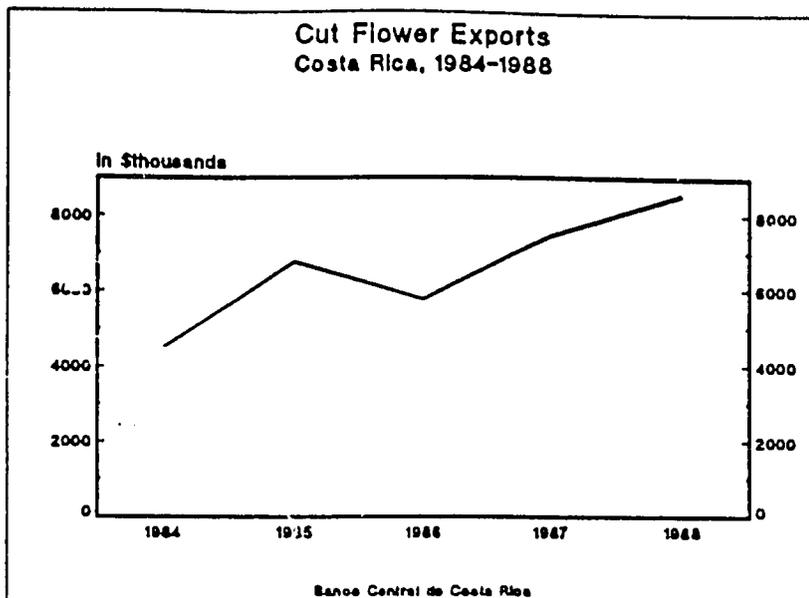
Many firms have lost money and closed. Others are considering closing, despite a major renegotiation of the sector's debt last year.

According to exporters and the industry association, ACOFLOR, two major problems have plagued the industry: the lack of sufficient refrigerated storage space at the airport, and the industry's almost exclusive reliance on sales to a few powerful Miami brokers.

Because the Miami market is flooded with Colombian imports, prices are lower than in other markets (according to one estimate, a bunch of flowers that sells for \$.70 f.o.b. in Miami might sell for \$1.15 in California); and Costa Rican exporters have little influence with the largely Colombian brokers. Exports are shipped on consignment, assuring exporters neither reasonable prices nor payment. For this reason, the CAAP's office in Miami was seen as a useful check.

Rather than moving away from the Miami market, however, over the last six years the opposite has occurred. Exports to the U.S. have grown from \$500,000 to \$8 million, whereas exports to Europe have declined (see "Cut Flower Exports by destination" graph). Due to the relative ease of marketing in Miami and the lack of direct air routes to other U.S. markets, today 97% of exports to the U.S. are received in Miami.

Price competition has been fiercest in traditional cut flower exports: mums, carnations and roses. In recent years new market opportunities have developed for tropical flower exports which tend to command better prices (heliconias, ginger, orchids, Birds of Paradise, etc). This year the CAAP reports about 60 hectares planted with tropical flowers, compared to 80 hectares planted with more traditional varieties.



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Major harvests are scheduled to meet demand in the U.S. during Valentine's Day, Mother's Day, Thanksgiving and Christmas.

### EXPORT INDUSTRY STRUCTURE

About one third of all flowers are exported by American Flowers, a U.S. company. There are about 50 other exporters. All except two are cultivators. Unlike in seafood and root and tubercle exports, there aren't many intermediaries. In addition to the 50 exporters there are other cultivators who produce for the local market and sell small quantities to the exporters.

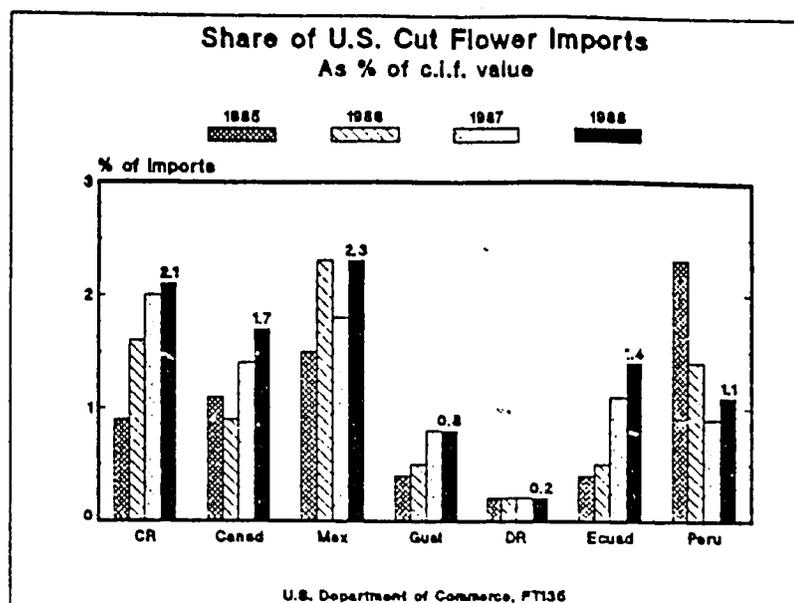
Despite losses, many exporters have stayed in the business. Given the very great investment per hectare required for flower cultivation (in 1988 \$250,000 per hectare for roses according to the trade magazine *Floricultura*), the costs of quitting are great.

In the last one to two years Costa Rican producers have begun to benefit from the development of locally grown plant cuttings ("esquejes"). When *Plantas Madres de Flores* began selling carnation cuttings last year, their quality was backed by large European cutting producers and sold for half the price of imports, according to the Costa Rican trade magazine *Floricultura*. *Fidesplants*, a company based in Holland, started production of chrysanthemum cuttings in Costa Rica two years ago to supply the European market during the cold season in Holland. It also is reported to supply the domestic industry at 50% of the cost of imports.

### FOREIGN COMPETITION

Competition comes mostly from Colombia for traditional cut flower exports (mums, carnations, roses); Hawaii for tropical flowers.

According to ACOFLOR, Colombia benefits from 25 years of experience in flower cultivation, compared to Costa Rica's five. Exporters have long-standing relationships with brokers in Miami. And a single marketing organization with an office in Miami is responsible for the sale of all flower exports—over \$700 million in 1987, 10 times the volume exported by Costa Rica.



However, the quality of Costa Rica's flower exports is reputed to rival Colombia's. Recently *La Nacion* reported that the high quality of Costa Rica's flowers was applauded in a trade conference in Colombia.

#### RELATIONS AMONG EXPORTERS: HIGHLY COOPERATIVE.

The industry association is supported. Large exporters have assisted smaller ones by sharing resources, such as a truck, during times of need.

Up until about a year ago an industry magazine was produced which featured details on the management of successful firms. This illustrates exporters' willingness to share a significant amount of information with each other. (Production of the magazine was reportedly halted for financial reasons related to the industry's health.)

**BARRIERS TO INCREASING CUT FLOWER EXPORTS**, mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).

(1) The shortage of refrigerated storage space at the airport. Often flowers are left in the rain and sun. See page 13.

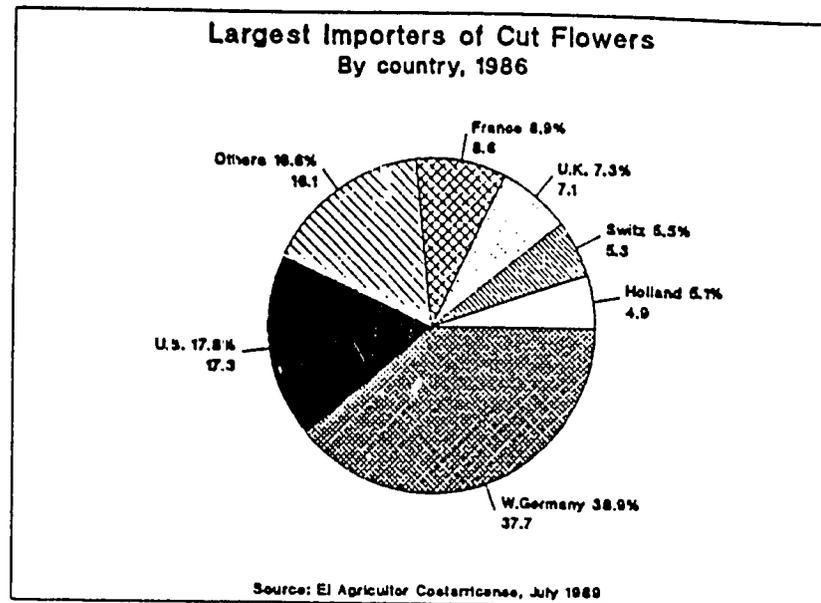
(2) LACSA and Florida West's lack of refrigerated storage space at the Miami airport for unloading flowers. See page 14.

(3) The lack of direct flights to many new markets. See page 14.

(4) The lack of information on new markets. See page 18.

(5) Difficulty finding reputable brokers.

Recommendation: This problem is likely to diminish as exporters move away from the Miami market. European importers have a far better reputation and purchasing in Holland is highly regulated. See also page 18.



## THE CHAYOTE EXPORT INDUSTRY

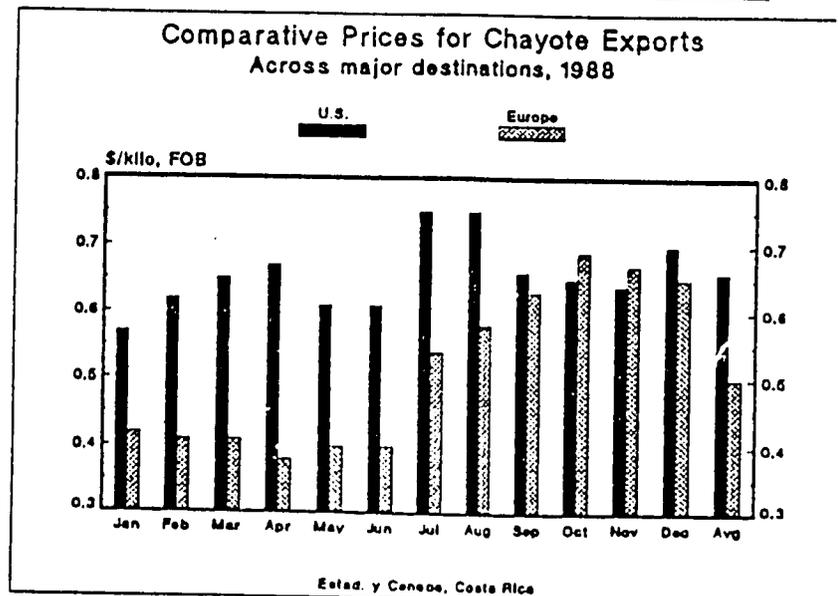
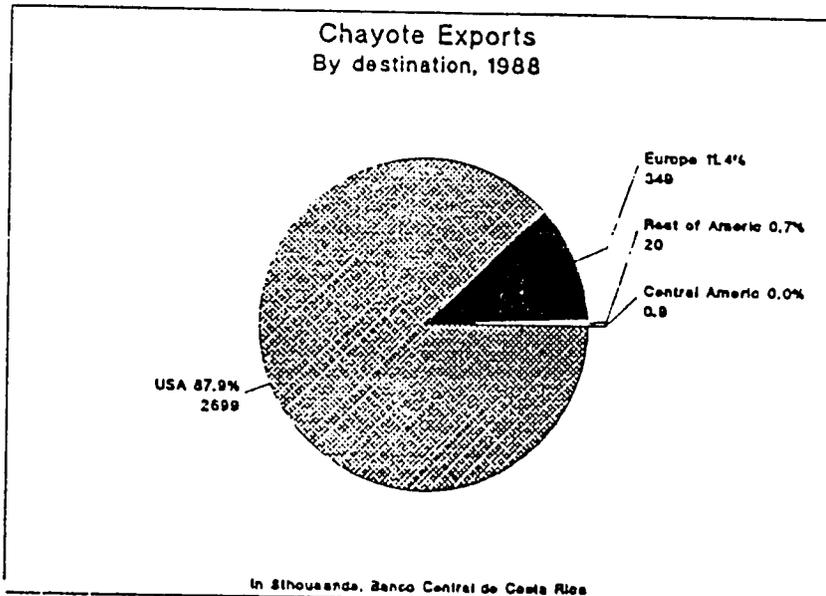
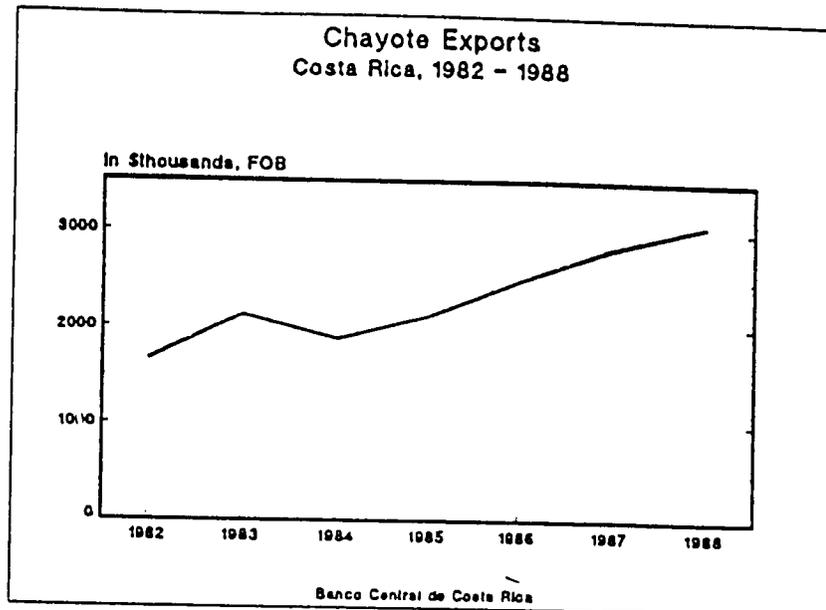
The chayote is the only vegetable grown above ground whose exports have increased significantly in the last few years. According to exporters, Costa Rica has a near monopoly on world exports, although Mexico has started producing for the California market.

The more than 250 producers who cultivate chayote tend to be small, with an average of 1.8 hectares devoted to the vegetable, according to one estimate. Producers sell on the domestic market and to about 15 regular exporters.

According to one interviewee, the largest exporters are Del Monte and Coopechayote, a marketing cooperative which started out with 47 members 6 years ago and has grown to 180. The cooperative appears to play a central role in the development of the industry.

The export industry has suffered from extreme fluctuations in price, little or no seed development for an improved product, and poor quality standards, according to one exporter. The low investment, cultivation time, and technical knowledge required compared to many other crops such as strawberries, melon, pineapple and ornamental plants, suggests that producers can enter and exit the industry relatively easily. For this reason, and because producers tend to be small, there has reportedly been little investment in improving the exported product until recently, according to one interviewee.

Last year's export records suggest that "the price problem" isn't so much seasonal fluctuations. Indeed, U.S. prices appear relatively steady and European prices rise markedly but consistently July through December. (See "Comparative Prices for Chayote Exports" graph.) Rather, price variances between shipments can vary greatly. In May, for example, prices of shipments to the U.S. varied between \$.28 and \$.93/kilo. In January they varied between \$.42 and \$.88. The problems noted by producers and exporters suggest the variance may be explained by large differences in quality, and perhaps by a producer-exporter buying environment in which producers have few alternatives to accepting an exporter's offered price.



24'

The mismatch between volume exported and price peaks in foreign markets suggests another problem. Despite year-round and pianable production of chayote, exporters are not taking advantage of price peaks. (See "Chayote Prices and Volume, exports to Europe" and "...exports to the U.S." graphs.)

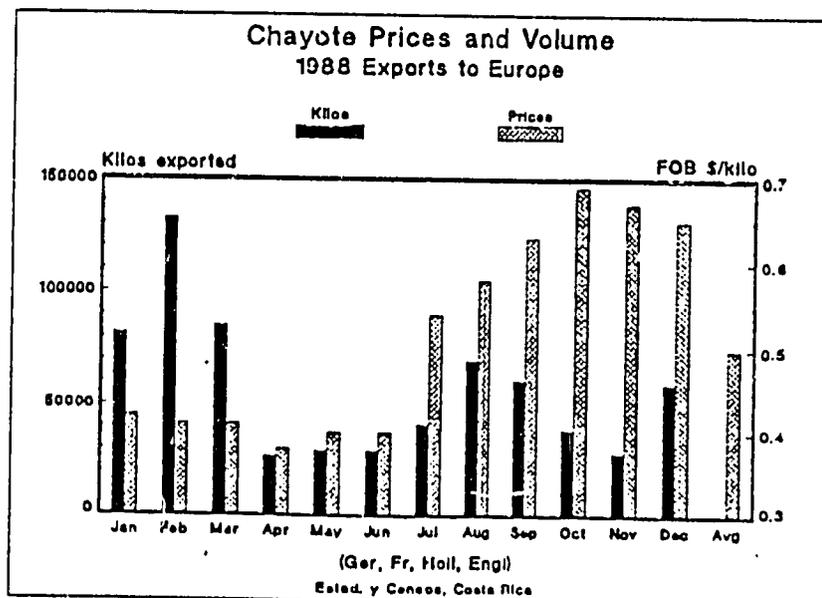
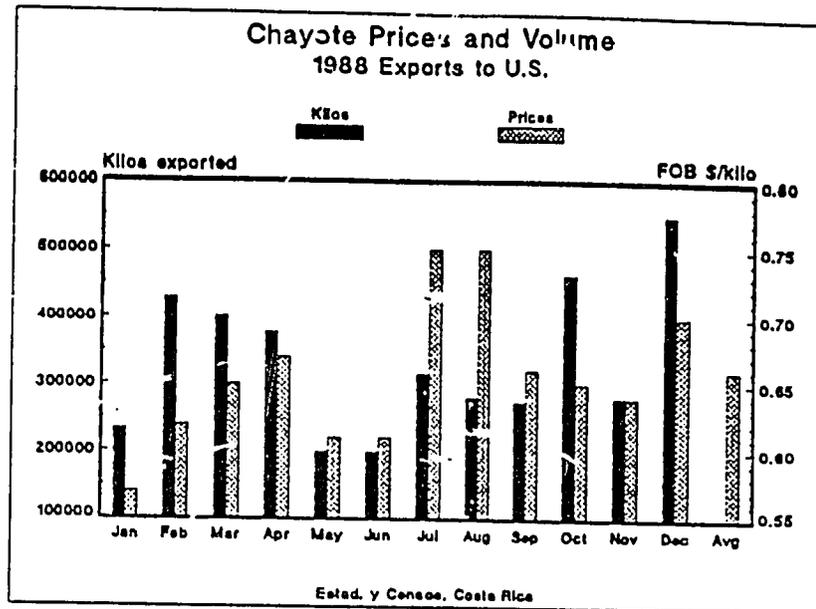
Last year the National Commission of Chayote Producers was founded with 250 members. One member reported that the Commission's goals are to foster the development of improved seeds and investigation into improved growing techniques, to establish clear "rules" for the industry (regarding competition, for example), to establish quality norms, and to offer technical assistance and market information to producers. The founders hope that better organization and communication within the industry will result in improved commercial relations, quality, and prices.

Coopechayote has taken the lead by starting a small seed development greenhouse, dedicating 2 hectares to experimental cultivation, building one of the few modern packing plants, and instructing producers on effective post-harvest techniques.

**BARRIERS TO INCREASING CHAYOTE EXPORTS, mentioned only by chayote exporters**

According to a representative of *Coopechayote*, the most important barriers to further growth are those which the National Commission of Chayote Producers was founded to tackle: the lack of a national supply of good seeds; low consistency in quality of exports; poor relations among firms.

Recommendations: Export support organizations should actively support the Commission's work. For example, they could help provide market information and seminars on techniques for increasing exportable yields. *Coopechayote's* efforts appear to be one of the few investments to strengthen the industry. As such, it could be assisted for example by assigning a seed development specialist from a university to work with it. Exporters should be encouraged to pursue long-term relations with producers, involving feedback on market results.



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## THE PLANTAIN EXPORT INDUSTRY

Plantain exports have dropped from almost \$5 million in 1982 to little over \$1.3 million in 1988. No other NTA export has fallen so precipitously and consistently. Ironically, the decline has occurred in the face of increasing and unsatiated U.S. demand, according to one would-be exporter.

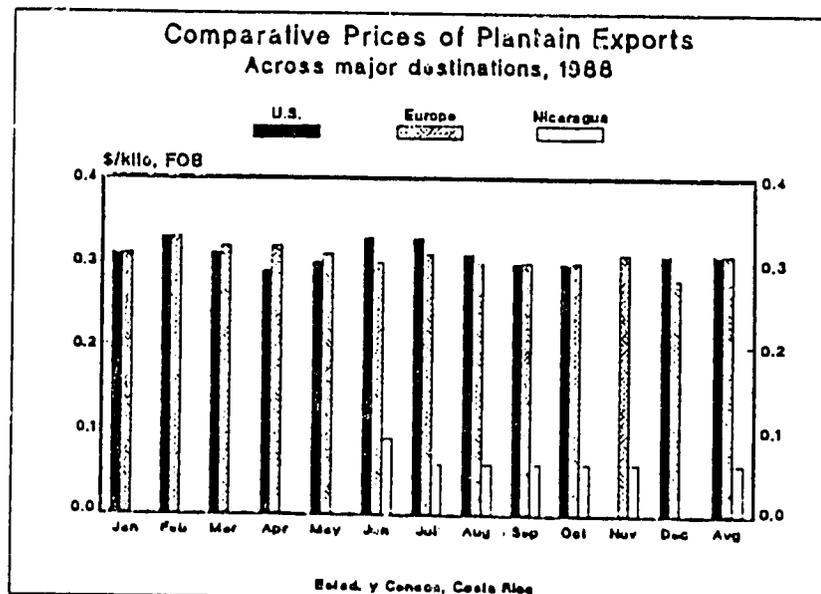
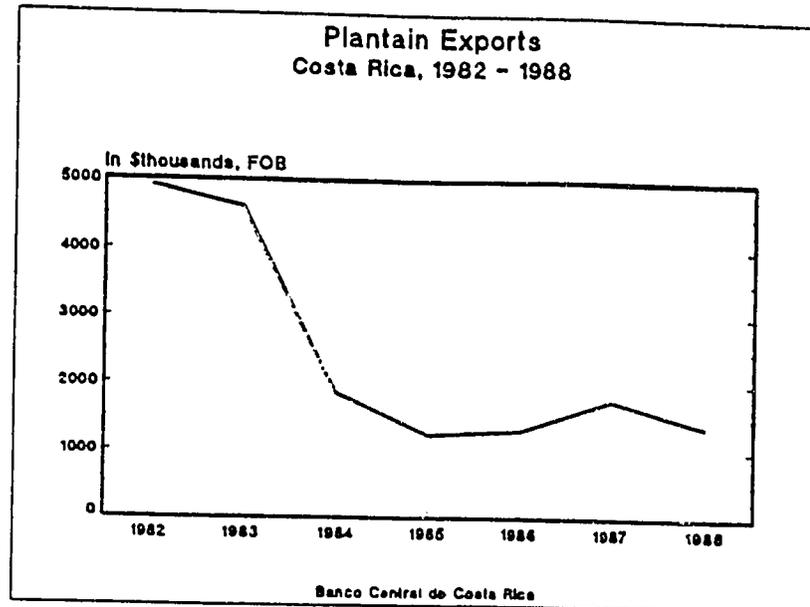
Why the decline? It seems to boil down to the sector's inadequate response to disease.

According to exporters, in 1982 the Sigatoka began to spread through plantain fields, causing the product to mature more slowly. It therefore had to be left on the tree longer, 14 weeks instead of 12. However ripening time was shortened, causing no problems for local sales, but making the product difficult to export. Previous to the disease, Atlantic Coast plantains had been known for their useful longer ripening period. The disease also produced unfavorable changes in the product's skin color and size.

Reportedly, little was done, to stop the disease. Producers tend to be small, many with 2-3 hectares devoted to plantains. Many are reported to have faced economic hardship as a result of lost export sales and the lower prices offered on the over-supplied internal market. Effective disease control would have required air-spraying the trees, something about which most producers were ill-informed and which few could afford without grouping themselves. And the level of sector organization has been low, making it difficult to plan a sector-wide response to the disease.

Since the advent of the disease productivity has also declined as producers cut costs by fertilizing less, according to a representative of a plantain marketing cooperative. Productivity has also declined relative to production in other producer countries where productivity has actually increased. Since production costs--particularly the cost of inputs such as fertilizer and pesticides--have markedly increased over this period, this decline in relative productivity makes competing particularly difficult.

The sector's difficulties in producing a product that can be exported outside the immediate area are illustrated by the high volume of exports to



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Nicaragua. Last year, Nicaragua absorbed one third of all exports, despite its offering a price of \$.06/kilo--one fifth the average U.S. and European price of \$.31/kilo. (See "Comparative Prices of Plantain Exports" graph.)

Further, price variances suggest quality varies greatly and that opportunities for capturing higher prices exist. In June 1988, for example, prices per kilo for shipments to the U.S. varied between \$.22 and \$.88/kilo.

**COMPETITION:** Colombia and Ecuador export larger quantities to the U.S. (see "Share of U.S. Plantain Imports" graph). Venezuelan and Dominican Republic plantains receive the highest U.S. prices (see "Prices Paid for Plantain Exports to U.S." graph). Only Colombia has significantly lower transportation costs (see "Cost and Burden of Plantain Transport to U.S." graph).

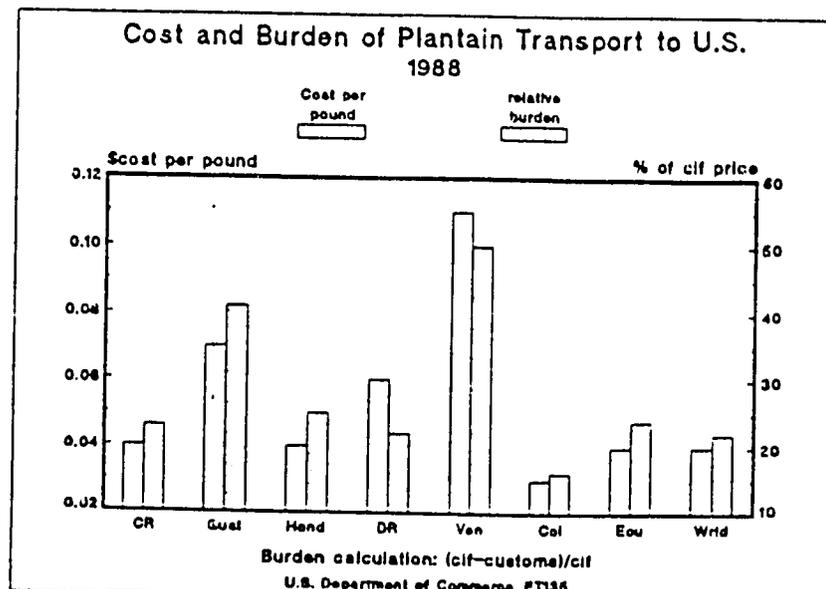
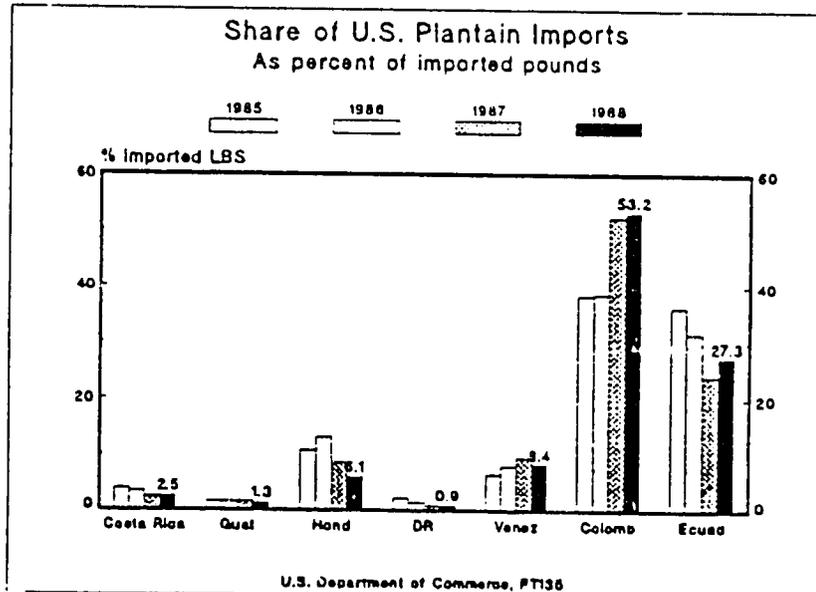
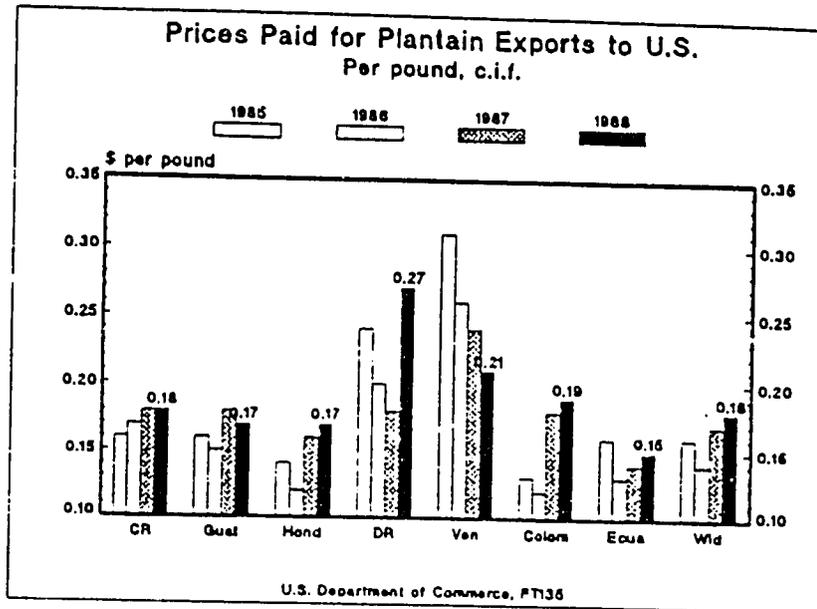
**BARRIERS TO INCREASING PLANTAIN EXPORTS,** mentioned only by plantain exporters.

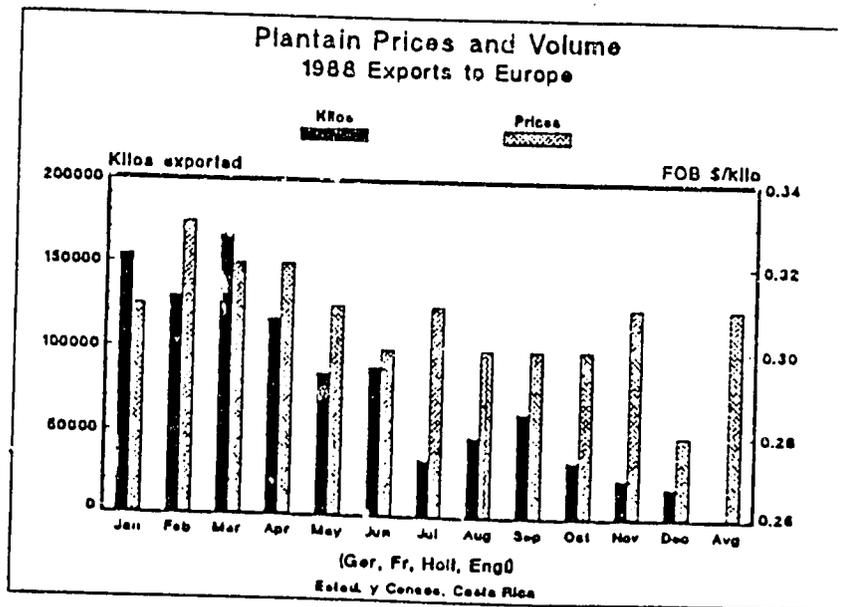
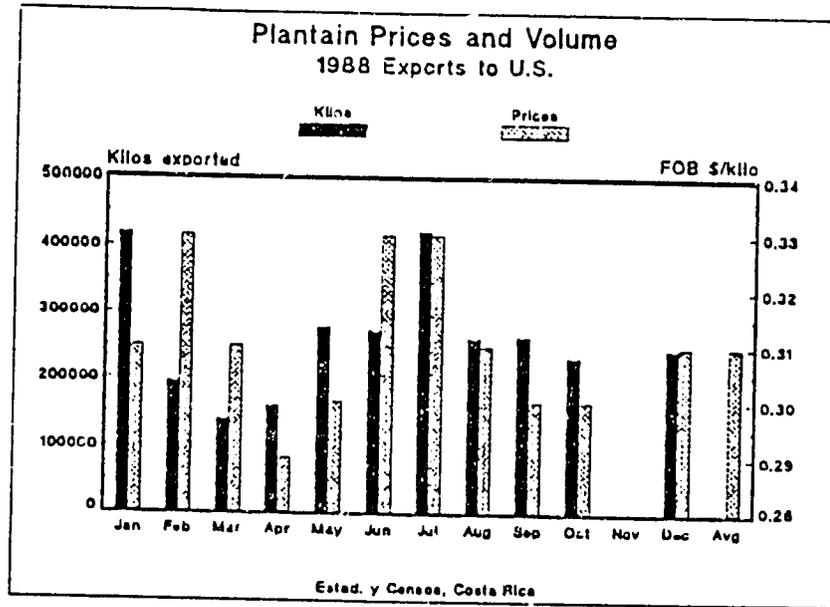
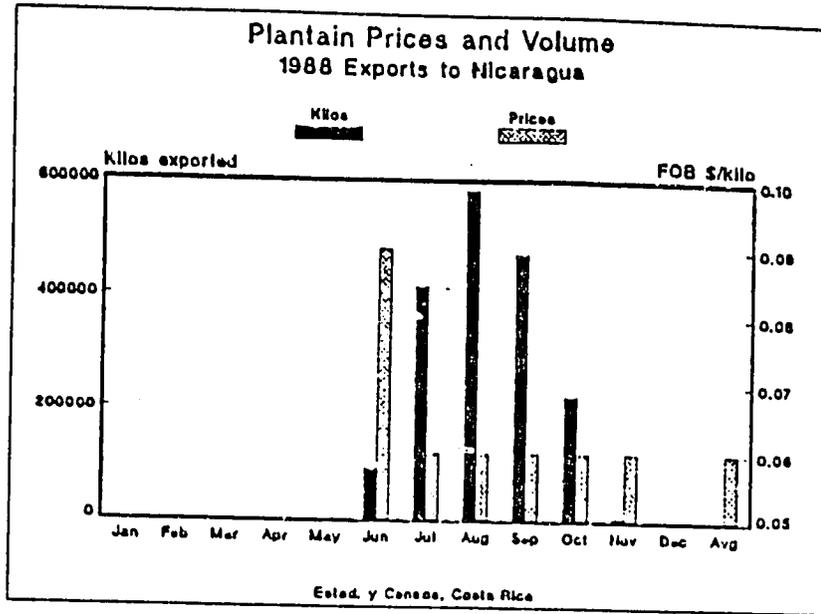
(1) Disease.

Recommendation: Export support organizations should give priority to helping the sector halt the disease. Assistance should be channeled through producer organizations as much as possible--such as Coopepalacios, a marketing cooperative recently formed by 55 plantain and cocoa bean producers.

(2) Lack of implementation of productivity-increasing measures by producers. This is in part due to the economic hardship faced by producers--fertilizers are easy costs to delay. Further, many producers are ill-informed about how to raise productivity. According to one industry observer, it is also due to producers' historically low involvement in marketing, which reduces their perview of what they need to do to be competitive in foreign markets.

Recommendation: Same as (1).





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## THE CITRUS EXPORT INDUSTRY

Although citrus has been cultivated for limited domestic consumption, much orange juice is imported (\$2 million of frozen juice per year according to one exporter). Citrus exports have begun only in the last couple of years. In 1988, fresh citrus exports reached \$83,000, the majority of which was oranges (see "Citrus Exports, by product").

Export volume and price records for 1988 show small shipments at varying prices. This probably reflects exporters' trial and first shipments to potential and new clients.

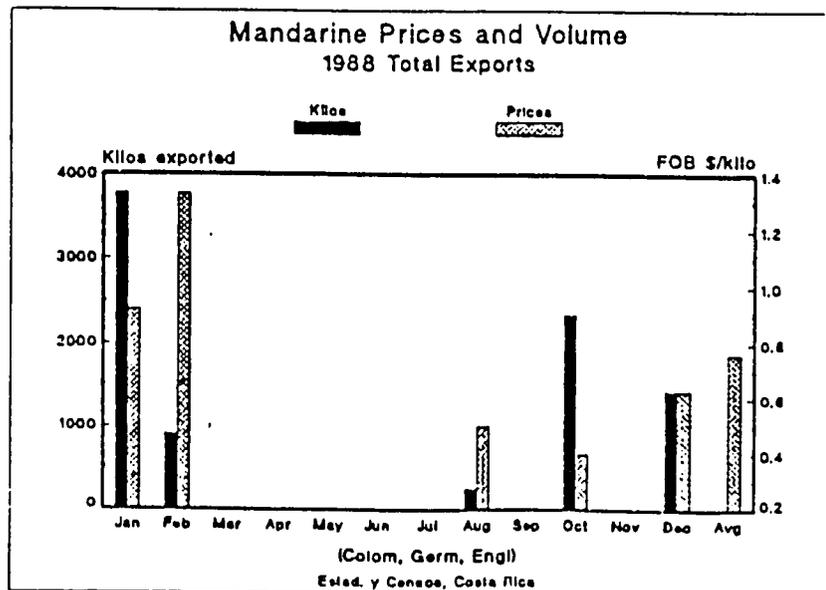
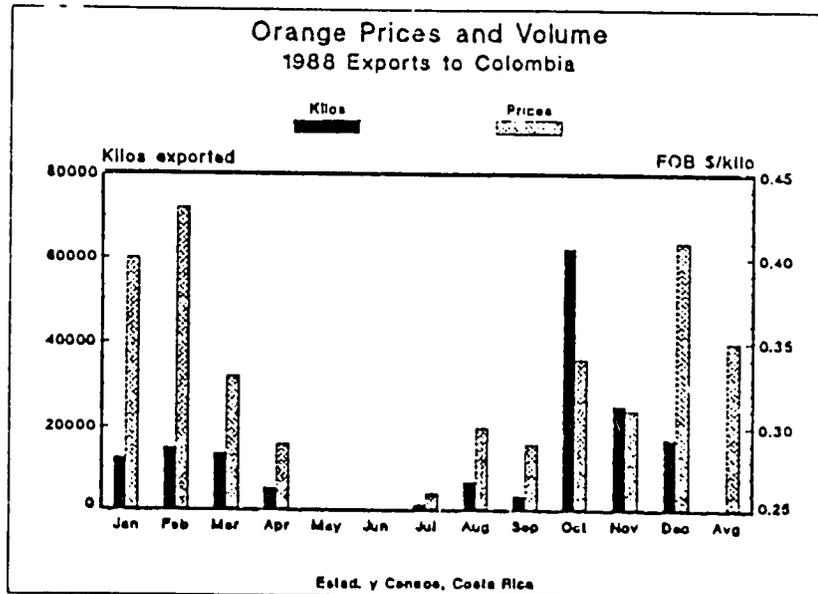
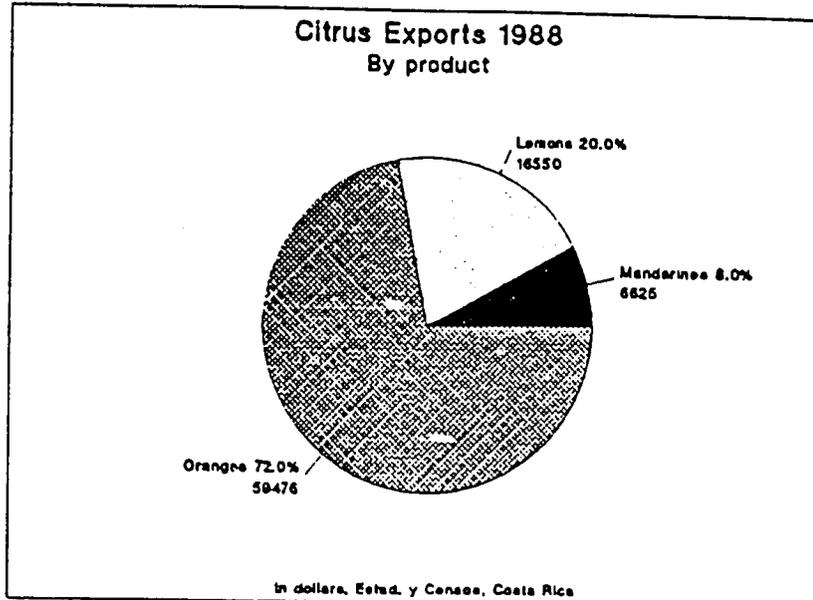
According to interviewees, development of the orchards has not been easy. One exporter described the difficulty of getting technical assistance when orchards were first planted in the early 1980s. There was no one in the country who knew how to control pest infestation. In addition, the technical person brought from Florida was unfamiliar with the requirements imposed by differences in climate between Costa Rica and Florida.

The large land area planted but not yet ready for harvest (2,500 hectares) relative to the land area of orchards ready for harvest (2,000) suggests that exports could rise steadily in the near future. It is also possible that increased harvests will be used to produce orange juice to substitute for imports on the internal market (mostly the large hotels).

Currently the U.S. and Japanese markets are closed to fresh orange exports from Latin America due to the possibility of infestation by the Mediterranean fly. As a result, 99% of Costa Rica's orange exports are absorbed by Colombia. Other potential export markets include Germany and England, which now absorb a significant volume of Costa Rica's lemon exports, and Canada.

Lemon exports are allowed into the U.S. markets since they are considered *Persian Lime*, which does not confront the same restrictions as other citrus products.

One exporter is currently developing a washing method to ensure that the fruit is free of Med fly infestation. The hope is that once this method is



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perfected in 1 1/2 years, fresh fruit exports will be accepted in the U.S. and Japan.

**EXPORT INDUSTRY STRUCTURE**

Citrus can be sold (1) fresh, (2) as fresh juice, (3) as frozen juice, or (4) as frozen concentrate.

According to one exporter, although there are six cultivators of citrus in the country, only two companies currently export fresh oranges.

The largest grower has also sold oranges to Ticofruit, the largest of the three national processing plants. Ticofruit sells orange juice on the national market and also exports frozen orange juice to the U.S. The grower is considering setting up his own processing plant since fixed costs are relatively low.

**FOREIGN COMPETITION:** Brazil and the U.S. are the two largest producers. Cuba has over 100,000 hectares in production. Morocco is also an important producer. Israel only exports fresh fruit.

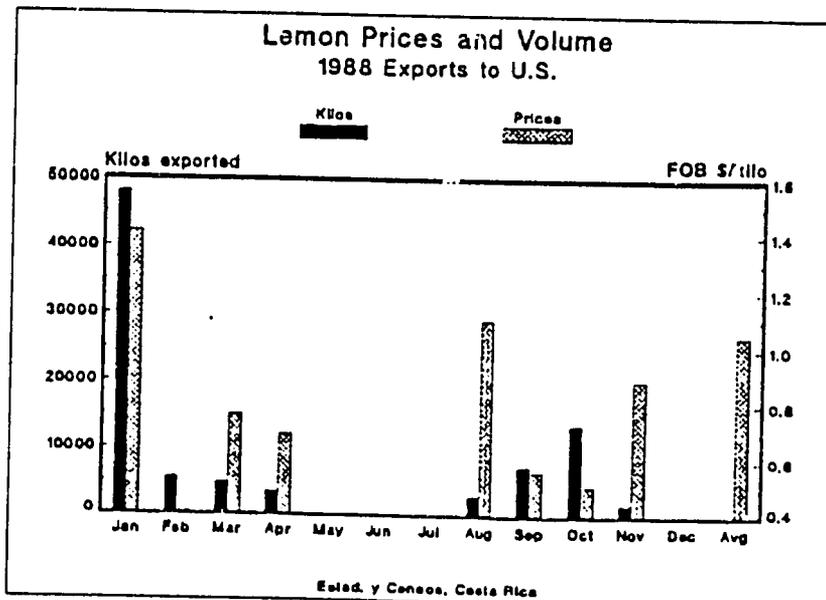
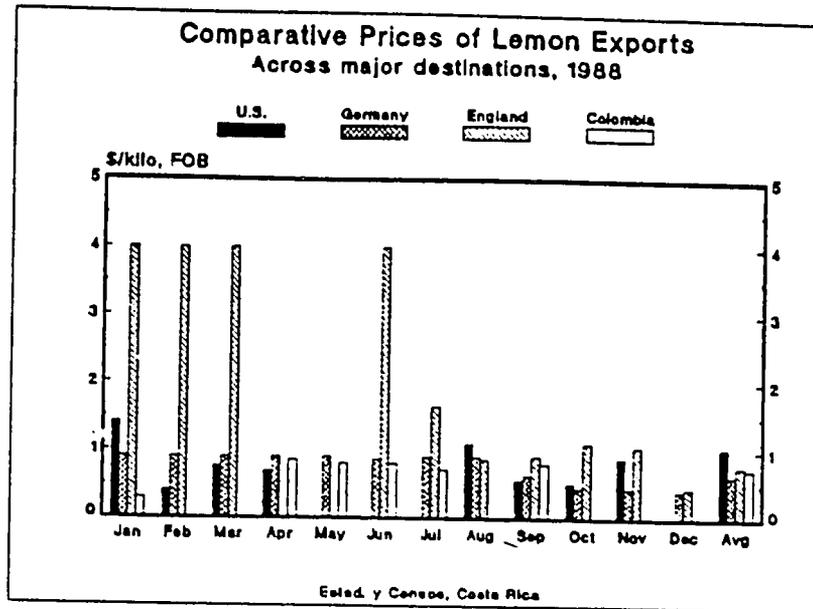
**BARRIERS TO INCREASING CITRUS EXPORTS, mentioned only by citrus exporters**

(1) Lack of a safeguard against the Med fly to enable export to the U.S. and Japan.

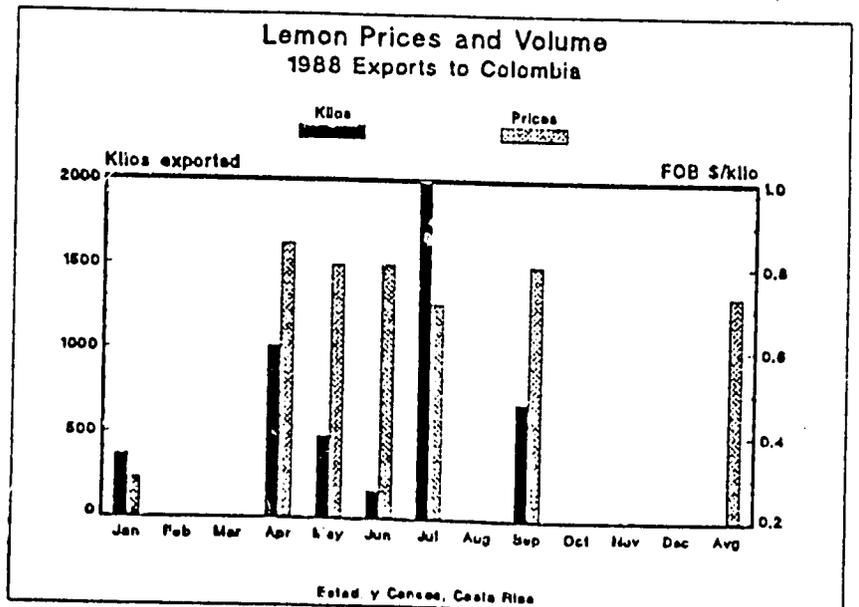
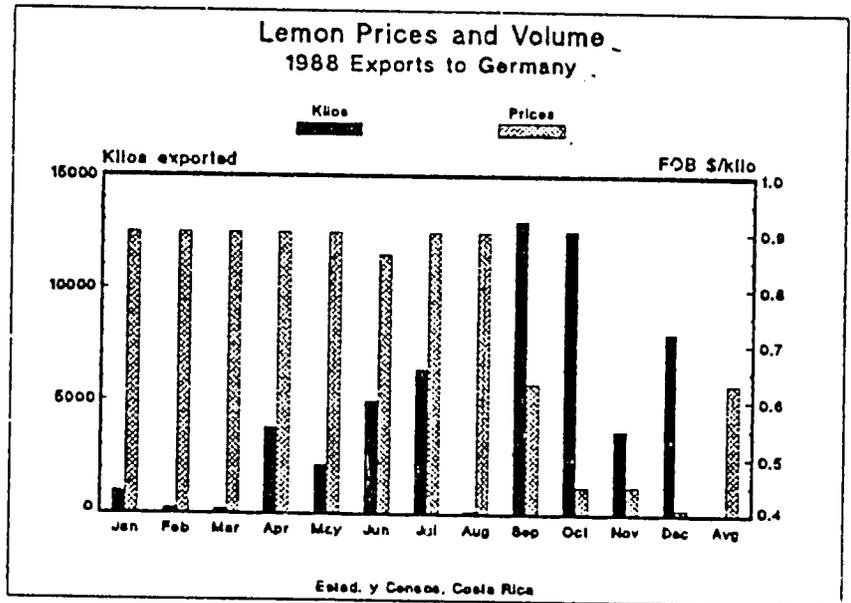
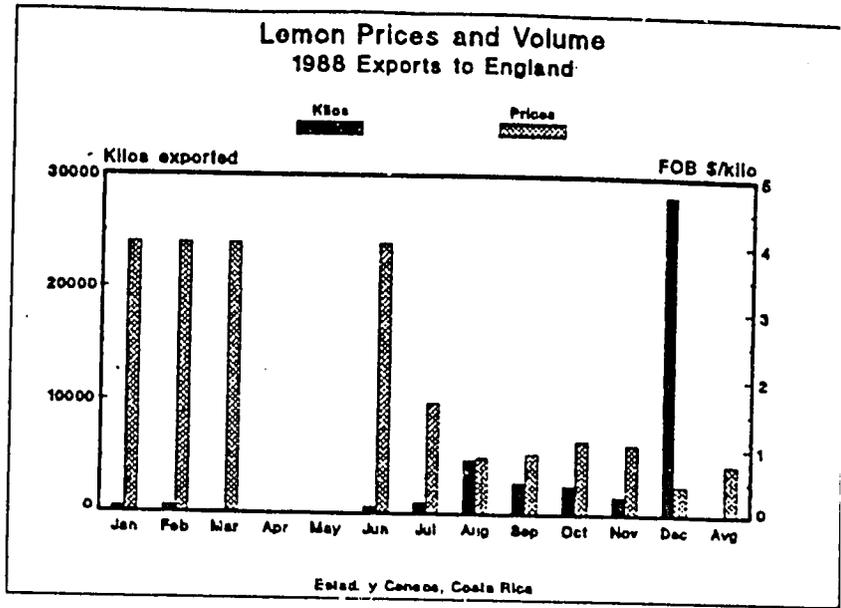
Recommendation: Export support organizations should work with producers to speed up the joint development of such a safeguard.

**BARRIERS TO INCREASING CITRUS EXPORTS, mentioned by other exporters as well (see pages noted in "Barriers" section for more detail and recommendations).**

(1) Limited maritime transport to currently open markets: Europe and Canada. One new exporter cited the lack of maritime transport to Canada from the Pacific Coast. He is informed of space availability on ships bound for Europe only two days prior to embarkation, while he needs 10 days, usually there's space, but not enough. See page 14.



(2) High relative cost of pesticide. One exporter noted, for example, that etheon costs \$68 per kilo in Costa Rica whereas only \$18 in the U.S. See page 15.



## VI. STRATEGIES FOR PROMOTING UNPROCESSED AND PROCESSED GOOD EXPORTS

### ● UNPROCESSED GOODS

The sector seems to be benefitting from many of the efforts underway. A broad strategy should:

- (1) Expand and improve airport infrastructure.
- (2) Improve transportation and development of market contacts in the highest price markets, by product. Since Costa Rica has neither the natural resources nor the infrastructure to export high volumes, and given the high cost of imported supplies, maximizing margins on current exports is key. High margins can also serve to capitalize the export sector.
- (3) Improve timing to meet peak price periods for products with seasonal markets. for the same reasons noted in (2).
- (4) Improve producer-exporter relations to reduce instability and improve quality.
- (5) Continue to facilitate direct contact of producers and exporters with foreign clients and other firms via trade fairs and tours. This seems to be a particularly effective learning process which according to exporters interviewed has been incomparably fruitful.

### ● PROCESSED GOODS

Costa Rica's large and growing volume of fresh produce exports opens a new opportunity for processing. One foreign importer reports that many products that are currently exported fresh command higher prices with some processing. Quick-frozen strawberries and breaded shrimp are examples. He reports that some of his clients in other regional countries are pursuing such processing to boost income. The boom also brings with it a large quantity of produce which is not of sufficiently high quality to export, and cannot always be sold on the domestic market.

As discussed in section I, according to interviewees the problem of sufficient and dependable supply of raw materials is the first barrier to exporting processed products. Processors and would-be processors of pineapple, plantain, coconut, mango, and corn, have cited it.

However as exporters grow and develop more business relations with more suppliers, some are considering the same option as the following packer. Now handling \$3 million in fresh produce per year all in the same food category, and having little to do with produce rejected in packing, he is considering the production of sauces. A business associate in Brooklyn, New York has assured shelf space in area food stores. The exporter-packer would first license production of the sauce, and build a production plant in the future if sales were successful.

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Few exporters are fortunate enough to have an assured market for a future processed product. However the national level of production of pineapple, coconut, plantain, strawberries, and roots and tubercles is high enough now to suggest that supply difficulties may not be impossible to overcome.

A strategy to promote processed good exports should:

(1) Identify specific cases in which a more processed version of a fresh export commands higher prices. Provide market and technical information on these to exporters of the fresh product. Encourage joint investment in processing equipment and facilities.

(2) Start with products that in one processed form or another can fill a higher-priced niche market. (Costa Rica is too small to be successful in low-margin mass processing.) For example a Costa Rican pineapple processor exports pineapple *pieces*, which he says have a better market than whole slices mass-prepared in Hawaii.

(3) Start with products where production is high enough to ensure an adequate supply of rejects.

(4) Integrate producers and processors, and a market link (special contact, broker, trading company) as much as possible. Giving producers a stake in the processed good's success is a good way of ensuring consistency of supply.

(5) Use a combination of existing processing facilities and new equipment. For example, processing coconut for human consumption can be very expensive without the right equipment, which one would-be exporter said didn't exist in the country. While risk and capital needs can be reduced by using existing facilities, often processing will only be profitable if production costs are reduced with good equipment.

## V. INTERVIEWED FIRMS

NAME	MAJOR PRODUCT	TYPE1/
Coopecira	ornamentals	MC
Coopeplant	ornamentals	MC
Plantas Tropicales	ornamentals	PE
Plantas Valle Verde	ornamentals	PE
Sol y Verde	ornamentals	PE
Flores del Caribe	cut flowers	PE
Flores	roses	PE
Mango Tico	mango, citrus, other	PE
Korobo	citrus	PE
Corporacion Karika	pineapple	PE
Agrofrut	pineapple, melon	PPE
Hortifruti	pineapple, processed	PR
Compania Los Chocuacas	melon	PE
Exporkpack	melon	PE
Fresas del Llano	strawberry	PE
Dist. de Fresas Poliandy	strawberry	PE
Coopefresa	strawberry-closing	PE
Coopechayote	chayote	MC
Sokol	chayote, plantain	PE
Inversora Nicoya	tubercles	PPE
Yucatica	Yuca, papaya, mango	PPE
Coopepalacios	plantain	MC
Ind. Parkinson	plantain&banana flour, processed coconut	PR
Coopemontecillos	seafood	EX
Inversiones Martec	seafood	PPE
Orcoopos	seafood	MC
Corp. Salinera del Golfo	shrimp	PE
Del Campo	canned vegetables	PR
Sardimar	canned tuna and sardines	PR
Pastas Roma	pastas	PR
El Gallito	candy, chocolates	PR
NUMAR	oil, margarine	PR
Agencia Aduanera Ortiz Hnos.	diverse export services	ES
Mudanzas Mundiales	diverse export services	ES
Tropicambio	air transport services	ES
Intertec	wide variety	ITC
Interfrutas	pineapple	ITC
Expo-Rica Internacional	plants, fruit	STC
Tavilla Marketing Inc.	fruit broker, Miami	ITC
Carben	broker, Miami	ITC

1/Form of exporter: MC = marketing cooperative, PE = producer-exporter, EX = exporter only (but does some handling of product), ITC = independent trading company, STC = subsidiary trading company, PPE = producer-purchaser-exporter, ES = export services, PR = processor exporter.

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