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# SOME OBSERVATIONS ON IMPORTS AND EXPORTS OF FLORICULTURAL PRODUCTS WITH SPECIAL REFERENCE TO LATIN AMERICA

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ABSTRACT

During the past five years there has been a rapid growth in the commercial floricultural industry in various areas of the world. A large share of the expansion has taken place in Central and South America. Major countries exporting to the United States and other foreign markets include Brazil, Costa Rica, Colombia, Ecuador, Guatemala, Honduras and Panama.

Four key factors—(1) an abundance of labor, (2) climates favoring year-round production, (3) availability of air freight transportation at reasonable cost and (4) adoption of modern technological break-throughs in production techniques — have contributed to the growth of the Latin American floricultural industry. Despite a myriad of problems facing this industry, prospects are for further continued growth. The threat of competition to U. S. producers is more long-term than immediate in nature. Much of this competition may be offset by increased exports of flowers from the United States to other countries. Available data show that current flower imports are less than the $2.6 *million* in annual exports of floricultural products.

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## INTRODUCTION

A marked upward tendency has occurred during the past five years in the production and marketing of flowers in various nations of Latin America and elsewhere in the world. A large percentage of these flowers has found its way into the United States market. These imported flowers consist almost entirely of types presently grown commercially in the United States. Although many latin flower growing operations are locally owned, a number of growers in the Latin American floricultural industry are from the United States. Most locally controlled firms rely on United States technological consultation and marketing contacts.

Current information on the extent of these floricultural operations in Latin America and elsewhere is sketchy. Data on the quantities of various specific floricultural commodities imported into the United States are incomplete. Many refinements will be required for the series of statistics on foreign trade in floricultural products to be of maximum effectiveness to interested users.

Objectives of this paper are to present available statistical data on U. S. imports and exports of floricultural products, especially from the tropical Americas, and report observations made by the authors and others on the developing ornamental industries in Latin America.

## U. S. Import and Export Trends

Statistical data on commodity imports and exports are published periodically for most commodities by the U. S. Department of Commerce. Since floriculture and ornamental horticulture consist of a more complex conglomerate of products than most other commodity classifications, many of the available data are for groups of products rather than for individual items such as carnations or roses.

*Imports.*—Data released by the U. S. Department of Commerce showed that the annual value of all imports of nursery and greenhouse stock ranged from $13 million to $15 million in the seven fiscal years from 1962 through 1968 (Table 1). Bulbs, roots and corms were the major crops imported; in the seven years reported the value of imports of this group varied from $12.7 to $14.4 million. Bulbs and associated products accounted for more than 90 percent of the value of all imports of greenhouse and nursery products in the years from 1962 to 1968 (3).

The two commodity groups with the largest increases over the 1962 to 1968 period were fresh cut flowers and orchid plants. The value of cut flower imports increased from $110,000 in 1962 to $548,000 in 1968. A 72 percent increase was registered in the value of cut flower imports from 1967 to 1968. The value of orchid plant imports tripled over the eight-year time span.

Another series of statistics released by the U. S. Department of Commerce pertains to the value of imports of flowers and cut foliage (Table 2). These increased from $1.1 million in 1965 to $1.9 million in 1968. Shipments from Europe have been the major source of cut flowers and foliage produced outside the United States over this four-year period. Nevertheless, the major European exporter, Italy, sustained a decline in value of its sales to the United States from $621,000 in 1965 to $476,000 in 1968.

The most obvious increase noted in the whole group of exporting countries was that in Canada. Its flower and cut foliage exports to the United States rose from $21,000 in 1967 to $210,000 in 1968.

Latin America showed a more sustained growth in its level of exports to the United States than any other area. Exports of flowers and cut foliage increased from $153,000 in 1965 to $629,000 in 1968. Rises of approximately $200,000 were registered from 1966 in 1967 and again from 1967 to 1968. Although Brazil was the major exporter in each of the four years, large increases were reported by Ecuador, Colombia and other countries.

Specific data on cartons of selected floricultural products coming from overseas destinations into the Miami Customs District during four monthly periods in 1969 are noted in Table 3 (1). Sufficient previous data to establish sea-

Table 1.--Total U. S. imports of nursery and greenhouse stock, fiscal years, 1962-1968

| Commodity group | Year ending June 30 | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
| | -- 1,000 dollars -- | | | | | | |
| Bulbs, roots and corms | 13,616 | 12,855 | 12,652 | 13,627 | 13,182 | 14,393 | 14,058 |
| Fruit stocks, cuttings or seedlings | 61 | 54 | 89 | 100 | 99 | 126 | 99 |
| Orchid plants | 34 | 49 | 45 | 59 | 91 | 110 | 105 |
| Flowers, cut, fresh | 110 | 131 | 97 | 192 | 285 | 318 | 548 |
| Rose stocks and plants | 21 | 17 | 15 | 7 | 18 | 16 | 19 |
| Other nursery and greenhouse stock | 321 | 305 | 326 | 337 | 349 | 328 | 493 |
| Total | 14,163 | 13,411 | 13,224 | 14,322 | 14,024 | 15,291 | 15,322 |

Source: I. E. Lemon, "U. S. Foreign Trade in Nursery and Greenhouse Stock," Foreign Agricultural Trade of the United States, April 1969, p. 18.

Table 2.--Total imports into the United States of cut flowers and cut foliage valued in dollars[a], 1965 to 1968

| Source | 1965 | 1966 | 1967 | 1968 |
|---|---|---|---|---|
| | Dollars | | | |
| Canada | 18,817 | 34,297 | 21,409 | 209,926 |
| Argentina | - | - | 1,909 | 5,210 |
| Brazil | 132,660 | 114,627 | 241,813 | 285,443 |
| British Honduras | - | - | - | 304 |
| Chile | - | - | 332 | - |
| Colombia | - | 24,748 | 41,033 | 73,098 |
| Costa Rica | 3,160 | 8,516 | 20,721 | 11,932 |
| Ecuador | 12,111 | 78,294 | 118,468 | 216,800 |
| Guatemala | 2,227 | - | 2,329 | 16,765 |
| Mexico | 719 | 3,274 | 1,183 | 11,982 |
| Panama | 1,801 | 622 | 3,841 | 3,190 |
| Peru | - | - | - | 265 |
| Uruguay | - | - | - | 2,485 |
| Venezuela | 814 | 269 | 1,062 | 2,023 |
| Cen. and So. America[b] | 153,492 | 230,350 | 432,691 | 629,497 |
| Bahamas | 784 | 282 | - | - |
| Bermuda | 9,548 | 6,885 | 2,906 | 723 |
| Haiti | - | - | 252 | - |
| Dominican Republic | - | - | - | 3,398 |
| Jamaica | 151 | - | - | - |
| Caribbean[c] | 10,483 | 7,167 | 3,158 | 4,121 |
| France | 15,391 | 21,559 | 21,097 | 37,180 |
| Italy | 620,812 | 591,142 | 486,480 | 476,345 |
| Netherlands | 13,635 | 16,267 | 14,193 | 34,935 |
| Switzerland | - | - | 6,894 | 51,515 |
| West Germany | 35,320 | 27,291 | 48,489 | 42,490 |
| Other Europe | 30,390 | 31,052 | 62,360 | 68,389 |
| Europe | 715,548 | 687,311 | 639,513 | 710,854 |
| Japan | 85,883 | 77,937 | 97,881 | 88,818 |
| Other Asia | 6,701 | 16,672 | 38,925 | 47,007 |
| Asia | 92,584 | 94,609 | 136,806 | 135,825 |
| Australia | 124,191 | 140,434 | 152,614 | 170,638 |
| Other countries | 439 | 674 | 1,662 | 3,140 |
| Oceania | 124,630 | 141,108 | 154,276 | 173,778 |
| Africa | 3,979 | 22,265 | 12,734 | 22,687 |
| WORLD TOTAL | 1,119,533 | 1,217,751 | 1,400,587 | 1,886,688 |

[a]Excludes shipments valued at less than $250.

[b]Also includes Mexico and British Honduras. [c]Also includes Bermuda.

Source: U. S. Bureau of the Census, U. S. Imports--General and Consumption, Schedule A, Commodity and Country (FT-135 Series). Washington: U. S. Government Printing Office, 1966 to 1969.

Table 3.--Receipts of imports of specified floricultural products in the Miami Customs District, selected months, 1969

| Product and origin | Month | | | |
|---|---|---|---|---|
| | January | April | July | September |
| | Cartons | | | |
| Carnations | | | | |
| Chile | - | 1 | - | - |
| Colombia | 167 | 360 | 174 | 436 |
| Costa Rica | 10 | 65 | 78 | 93 |
| Ecuador | 134 | 155 | 126 | 182 |
| El Salvador | - | 4 | 3 | - |
| Guatemala | 10 | 22 | 24 | 24 |
| Panama | - | 71 | 11 | - |
| Venezuela | - | 6 | - | - |
| Total | 321 | 684 | 416 | 735 |
| Pompon chrysanthemums | | | | |
| Colombia | - | 109 | 31 | 40 |
| Costa Rica | - | 119 | 233 | 193 |
| Ecuador | - | 460 | 261 | 127 |
| El Salvador | - | - | 26 | - |
| Guatemala | - | 53 | 131 | 96 |
| Panama | - | 33 | 14 | - |
| Total | - | 774 | 696 | 456 |
| Standard chrysanthemums | | | | |
| Colombia | 422 | 364 | 294 | 341 |
| Costa Rica | 171 | 117 | 223 | 193 |
| Ecuador | 614 | 336 | 441 | 271 |
| El Salvador | - | 12 | 11 | - |
| Guatemala | 77 | 35 | 153 | 129 |
| Panama | 46 | 82 | 49 | - |
| Total | 1,330[a] | 946 | 1,171 | 934 |

[a]Includes all chrysanthemums for January 1969. No breakdowns between pompon and standard types were made by the Plant Quarantine Service in that month.

Source: U. S. Department of Agriculture, Plant Quarantine Service, Miami (Data made available by Federal-State Market News Service, Orlando).

sonal patterns are not available. Nevertheless, the receipts figures indicate heavier shipments of pompon and standard chrysanthemums in July than in other months and the highest level of carnation imports in September and April.

The cut flower for which most packages were received was standard chrysanthemums. Major suppliers included Colombia, Costa Rica, Ecuador and Guatemala.

Data on the value of receipts of floricultural products through the Miami port of entry are contained in Table 4 (4). Receipts rose from less than $17,000 in 1965 to more than $250,000 in 1968. In each year the major shipper, Ecuador, accounted for more than half the value of imports recorded. Colombia was in second place.

*Exports.*—Exports of nursery and greenhouse stock from the United States to foreign countries rose from $6 million to more than $10 million during the 1962 to 1968 period (Table 5). Items classified as cut flowers, buds, foliage, etc., increased in value from $1.8 to $2.6 million over this time span.

A growing export market has been developed in the past few years for Florida gladiolus and other flowers in Germany, the Caribbean and elsewhere. Canada has continued to be the major foreign market for U. S. floricultural products. As consumer incomes expand in these and other countries and the capacity of air cargo space increases, further rises in exports of floricultural products are expected.

During recent seasons the Florida State Marketing Bureau (1) has reported export shipments to various locations. The number of containers of chrysanthemums and gladiolus exported to Canada, the Caribbean* and Europe are noted in Table 6. In 1968-69 Canada was the leading importer for gladiolus as the Caribbean area was for chrysanthemums. Buyers in Europe purchased nearly 8,000 hampers—some 175,000 bunches—of gladiolus in the past season.

Table 4. Value of fresh cut flower imports for consumption through the Miami Customs District,[a] 1965, 1966, 1967 and 1968

| Country of origin | 1965 | 1966 | 1967 | 1968 |
|---|---|---|---|---|
| | ---------- Dollars ---------- | | | |
| Brazil | - | - | - | 654 |
| Chile | - | - | 332 | - |
| Colombia | - | 16,868 | 36,259 | 65,000 |
| Costa Rica | 3,160 | 8,516 | 20,721 | 11,332 |
| Ecuador | 11,682 | 69,578 | 80,272 | 162,041 |
| Guatemala | 420 | - | - | 14,600 |
| Netherlands | - | - | - | 521 |
| Panama | 1,404 | 622 | 2,923 | 2,232 |
| Venezuela | - | 269 | 799 | - |
| Total | 16,666 | 95,853 | 141,306 | 256,380 |

[a]Includes ports and airports of Miami, Fort Lauderdale, Port Everglades, West Palm Beach, Key West and Fort Pierce.

Source: U. S. Department of Commerce, Miami Field Office. Data from computer printouts of import statistics.

## Notes on Latin America

The leading countries in Latin America in the production and marketing of floricultural products are Brazil, Costa Rica, Colombia, Ecuador and Guatemala. In addition to cut flowers, which consist primarily of carnations, chrysanthemums and orchids, substantial quantities of rooted and unrooted foliage plants for propagation and other purposes and of cut foliage utilized as florists' greenery are exported to the United States. Import duties of 10 and 9 percent, respectively, are charged on cut flowers and on foliage plants. Florists' greenery, classified by customs as a crude vegetable substance, enters duty-free.

Better grades of flowers from approximately 15 acres of chrysanthemums, 15 acres of carnations and 2 acres of roses are currently being exported to the United States from growers in northern Latin and Central America (2). Specific data on the area in cultivation in Guatemala are not available.

The floricultural industry in Central and South America has reached its present stage with the assistance of United States capital and entrepreneurship or with local capital supplemented by specialists from the United States utilized as technical consultants and with U. S. marketing firms closely associated in the sale of their output. Other technical assistance is rendered by the firms supplying various specialized inputs. W. D. Holley is probably correct in classifying the rising volume of flower imports in winter and spring from tropical zones or the southern hemisphere as possibly being a boon to the floricultural industry as they may be the added supply needed to develop successful mass marketing of cut flowers (2). Holley further stated that adequate summer and fall supplies of United States cut flowers can possibly be supplemented with high-quality imports during periods of shortages. Similarly, off-shore foliage

*Includes shipments to Puerto Rico, which should technically be classified as domestic shipments rather than exports.

Table 5.--Total U. S. exports of nursery and greenhouse stock, fiscal years, 1962-68

| Commodity group | Year ending June 30 | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 |
| | -- 1,000 dollars -- | | | | | | |
| Bulbs, corms, roots, pips and tubes | 728 | 897 | 1,176 | 1,536 | 1,700 | 2,201 | 1,981 |
| Cut flowers, buds, foliage, etc. | 1,808 | 1,574 | 1,762 | 1,881 | 2,376 | 2,641 | 2,608 |
| Other nursery and greenhouse items | 3,559 | 3,411 | 3,958 | 4,494 | 5,197 | 5,755 | 5,676 |
| Total | 6,095 | 5,882 | 6,896 | 7,911 | 9,273 | 10,597 | 10,265 |

Source: I. E. Lemon, "U. S. Foreign Trade in Nursery and Greenhouse Stock," Foreign Agricultural Trade of the United States, April 1969, p. 20

plant industries supply some of the stock required for further domestic growing operations.

A number of inherent advantages have favored, and will likely continue to favor, the growth of the floricultural industry in Central and South America. One major advantage is the wide variety of natural climatic conditions in tropical America which favors a wide choice of producing conditions for a multitude of floricultural crops. In most instances there is little danger of cold weather with subsequent crop damages or losses. A minimum of protection is required against heavy rainfall and other weather conditions. A second key advantage is a readily available supply of labor. A third advantage is availability of cargo space on airplanes between producing points and American markets. In some instances shipping costs are very low; e.g., a 4 cents per pound rate from Guatemala City to Miami and a 7 cents rate from San Jose, Costa Rica to Miami. Another favorable point is the probable continued advance in technology which has made possible flower production in certain areas and under conditions impossible even 25 years ago. An example is the application of photoperiodism in the culture of chrysanthemums and other flowers. Another key advantage is the expanding market for products of floriculture in Latin countries.

The daily wages paid labor apparently range from $0.90 to $1.50. Generally, because of the vast population boom in Latin America, the fast growing florists' industry is able to obtain labor which is essentially surplus rather than bid it away from other industries. In nearly all Latin countries minimum wages are set by governmental agencies. Nevertheless, flower growers may find the apparent cheap costs of labor nullified by problems in training, efficiency and reliability. On balance, it is probable that labor costs per unit of output are lower in Latin countries than in the United States.

Problems experienced by flower producers in the Latin American area relate not only to labor but also to a number of other factors. One of these is the high cost of specialized supplies of production inputs and the accompanying delays and other difficulties in importing necessary supplies and equipment. For example, import duties and shipping costs may result in a truck costing five times as much in a Latin nation as in this country. Many production supplies are unavailable in the country where flowers are produced and must be imported. In certain areas expenses must be incurred for irrigation and water control.

Still other problems relate to shipping. Delays due to cancellations of flights, changes in schedules and the impossibility of shipping supplies of flowers when they exceed specified amounts have been expensive. Petal burn, due probably to temperature conditions in flight, has been experienced on many flower shipments. Available information indicates that air cargo space is often extremely cold as well as dry. The complex customs, laws and regulations in other cultures often inhibit the successful initiation and operation of a business by an operator

Table 6.--Exports by air of Florida chrysanthemums and gladiolus to various destinations, 1968-69 season

| Destination | Chrysanthemums | Gladiolus |
|---|---|---|
| | Cartons[a] | Hampers[b] |
| Canada[c] | 6,969 | 17,988 |
| Caribbean[d] | 12,607 | 11,325 |
| Europe | - | 7,917 |
| Total | 19,576 | 32,230 |

[a]Average 26 bunches. [b]Average 22 bunches.

[c]Includes only air shipments, which made up 83 percent of the total to Canada. The remaining 17 percent went by truck.

[d]Includes shipments to Puerto Rico.

Source: Federal-State Market-News Service. Marketing Florida Ornamental Crops, Summary 1969 Season. Orlando: 1969, p. 26.

without experience there.

During July of this year, while on a trip to Colombia, Costa Rica and Guatemala, the authors visited a number of firms actively engaged in the production and export to the United States of various floricultural products. Observations made on this trip and information collected from other sources are reported.

*Costa Rica.*—The oldest floricultural firm, located in Cartago, produces hybrid petunia and coleus seed for export to the United States and Europe. A small amount of cut flowers has been produced over a period of many years. Currently about an acre and a half of roses are being harvested for shipments to United States markets. An additional five acres were propagated for planting in 1969 and for harvest in the following winter. In 1968 a related firm began planting roses as part of a projecter 20 to 30-acre operation. The organization also produces carnations and chrysanthemums for sale in local and foreign markets.

Another firm began operations about five years ago near Heredia with carnations as its major product. Experimentation has been done to determine the optimum elevation for carnation production. Nearly all of the flowers are shipped by air to United States markets.

The largest grower of cut flowers in Costa Rica is located near the El Coco Airport at Alajuela. This firm was formed to grow gladiolus corms on to a larger size. Several years ago a structure was built for the culture of chrysanthemums and carnations. Currently the firm is shipping these products to New Orleans and Miami with some 90 percent of its output going to markets in the United States.

*Guatemala.*—Some seven firms are engaged in the commercial production of cut flowers, foliage plants and flower seed in Guatemala. One large grower produces large supplies of cut flowers, foliage plants and potted flowering plants for the expanding local market. Still another ships cut flowers to markets on both coasts of the United States. Others produce flower seed for United States and other foreign firms.

A large firm located in Guatemala's Pacific zone is concerned primarily with the production of foliage plants. This firm sells stock, used primarily in plant propagation, to foliage plant producers in Florida and elsewhere in the United States. Some of the bulbs grown by this firm are shipped to Europe.

Guatemala is also a major exporter of *Chamaedora.* These palm leaves, used as florists' greenery, are also imported into the United States from Mexico and Honduras.

*Colombia.*—Two exporters of flowers are located in the Sabana of Bogota at an elevation of some 8,600 feet. The climate in this area is cool and ideal for growth of carnations and chrysanthemums, but is slightly too cold for rose culture unless additional heat is supplied (2). Other flower producers are located in the Medellin and Cali areas.

The major flower-exporting firm in Colombia is a combine financed by Colombian capital and managed by a Colombian who was formerly stationed as a diplomat in the United States (2). This firm started operating in mid-1965 and made its first shipment of flowers in January 1966. At the current time it has five houses each of carnations and chrysanthemums with a total of about five acres in production. Chrysanthemum cuttings root in about two weeks and, after transplanting, are then lighted for two to three additional weeks, depending upon growing conditions. Eight to ten more days are required for chrysanthemums to flower in Colombia than in the United States. Colombian carnations probably would do better if photoperiodic control were improved (2).

A number of other firms are in commercial flower production in Colombia. The authors visited several of these in the Cali area where

the major products, grown at an elevation of some 2,000 feet, were roses, orchids and potted plants. Although some of the orchids have been exported to the United States, most of the output was marketed locally and to buyers elsewhere in Colombia.

*Ecuador.*—The largest flower-growing operation in Latin America, a firm in which Ecuadorean and United States interests are combined, is in Ecuador. A sustained effort was made to locate this growing operation in a suitable micro-climate within an hour's drive of Quito Airport which, with its 9,200 feet elevation, is too cold for commercial flower production (2). This firm aims to have its maximum production available for export to the United States in seasons when market prices are high; it markets lower quality flowers to florists in the local area.

## Outlook

With the continued increase in affluence of American consumers and other developments, the floricultural industry in Latin America will probably continue to expand materially from its present base. Many American producers fear that it will increase to a much larger size and offer stiffer market competition. As relatively few reliable statistics on costs, prices and other factors relating to relative profitability and other trends are available, only a qualitative judgment of future directions can be made. At the present time they indicate a continued growth in the Latin American floricultural industry. As competition to the U. S. flower industry, it is more of a long-run than an immediate threat.

Foreign trade is also a two-way street. Much of the competition from imports has been offset by expanded exports to foreign buyers. Although the current projected increase in air cargo space will facilitate the transportation of flowers from foreign sources to the United States, it also increases the opportunity for American flower growers to expand their marketings of floricultural products in Canada, Europe, the Caribbean and other potential trade areas.

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