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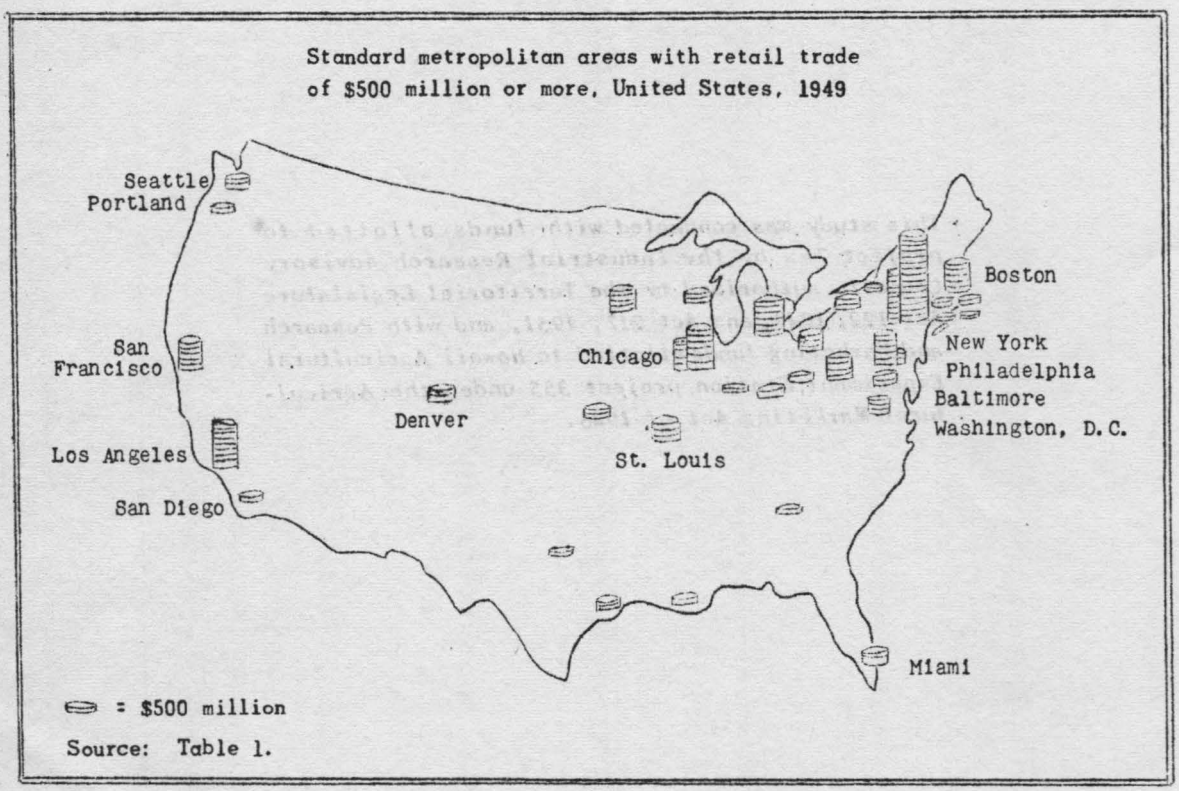
HAWAIIAN FLOWERS AND FOLIAGE

Production, Markets, and Shipments, 1949-52



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HAWAIIAN FLOWERS AND FOLIAGE
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By Alice Kono[1]

Marketing Hawaiian flowers and foliage on the U. S. Mainland is a relatively new industry in the economy of the Hawaiian Islands, and, like all young industries, it is continually facing new problems. Timely information often helps shippers avoid costly trials and errors, and the purpose of this report is to present briefly more recent data on Hawaii's volume of floral exports and general marketing information for the United States. It is hoped that the industry will find these data useful in marketing Hawaiian flowers and foliage.

Mainland Markets

In 1949 a population of about 150 million, earning $200 billion, spent $130 billion at the retail level in the United States. Of this latter amount, sales of retail floriculture amounted to 0.50 percent and sales of retail ornamental horticulture were 0.25 percent. About 0.33 percent of the population's disposable income was spent on retail floriculture and 0.17 percent was spent on retail ornamental horticulture--an average of $4.30 and $2.30 per capita respectively.[2]

The wholesale value of floricultural crops and of ornamental horticultural products represents 29 percent of total retail and service trade of floriculture and 24 percent of retail ornamental horticulture respectively. A breakdown of the total wholesale value of horticultural specialties shows as follows: floriculture, $191 million; nursery products, $71 million; bulbs, $9 million; and flower seeds, $2 million.[3]

Retail sales of floriculture and ornamental horticulture by metropolitan areas, each having total retail trade value of $250 million or more, have been tabulated in table 1. The reader should not be mislead by the high per capita sales in some areas because they sometimes include purchases of consumers living beyond the metropolitan boundaries. Percentagewise, there was little difference in horticultural or floricultural sales between one metropolitan area and another, but in nearly all areas floricultural sales grossed two to three times as much ornamental horticultural products. The cover chart portrays graphically the metropolitan markets, each of which had a total 1949 retail sales volume of more than half a billion dollars.

The bulk of United States retail sales are concentrated in the populous industrial areas of the northeastern section. The eight Middle Atlantic and East North Central states account for about 45 to 50 percent of the retail floricultural trade and a comparable percentage of the wholesale value of floriculture products. They also produce about 30 percent of the total wholesale volume of ornamental horticulture and account for 40 percent of the retail trade in these products. The Pacific states, Washington, Oregon and California, produced about 15 percent of the wholesale and 10 percent of the retail value of floriculture. In addition, they raised 25 percent of the wholesale and 10 percent of the retail value of ornamental horticulture.[4]

Production in Hawaii

According to the 1950 United States Census of Agriculture, $1,173,867 worth of flowers and flowering plants were sold at the farm level in the Territory of Hawaii in 1949 (see chart 1). Of this amount, almost 52

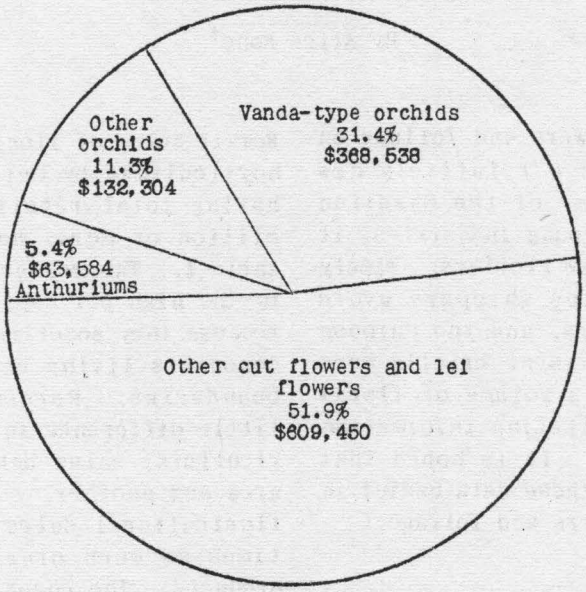
[1] Special economic assistant, Dept. of Agr. Econ., Hawaii Agr. Expt. Sta.

[2] Fossum, M. Truman, *Marketing Information for Commercial Floriculture* (preliminary report), *Marketing Information for Commercial Ornamental Horticulture* (preliminary report), U. S. Dept. of Agr., Bureau of Agr. Econ., Washington, D. C., July 1952.

[3] *Ibid.*

[4] *Ibid.*

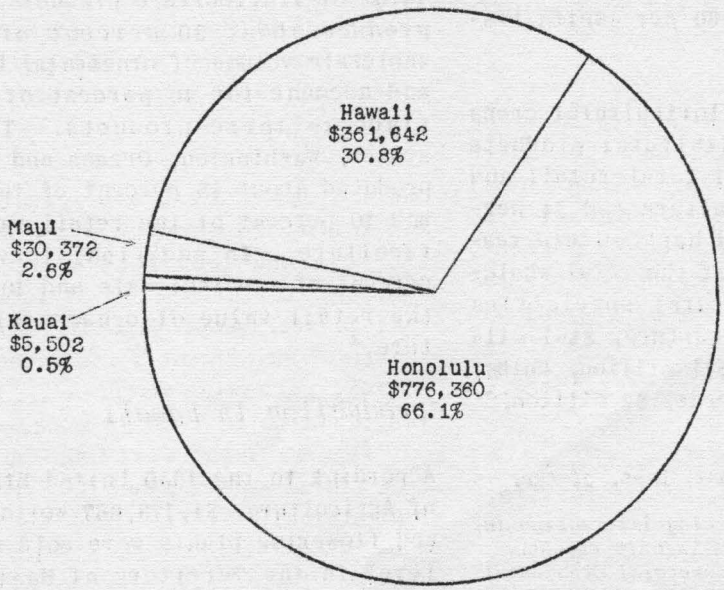
Chart 1. Value of flowers and flowering plants sold in the Territory of Hawaii, by types of flowers, 1949.



Source: *1950 United States Census of Agriculture*, U.S. Dept. of Com., Bureau of the Census, Vol. 1, pt. 34.4.

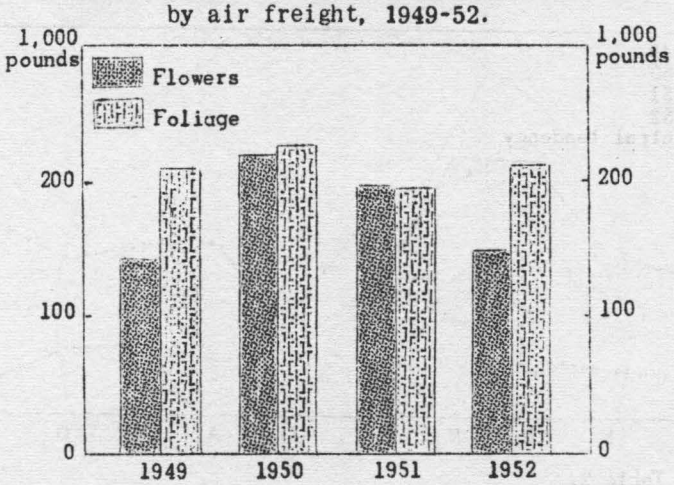
percent, or $609,450 was accounted for by lei flowers and cut flowers (other than orchids and anthuriums). Vanda-type orchids (including plants and flowers) comprised the next largest sales group with 31 percent, or $368,538. Plants and flowers of other orchids and anthuriums made up the remaining 17 percent. The great bulk of

Chart 2. Value of flowers and flowering plants sold in the Territory of Hawaii, by counties, 1949.



Source: *1950 United States Census of Agriculture*, U.S. Dept. of Com., Bureau of the Census, Vol. 1, pt. 34.4.

Chart 3. Gross weight of flowers and foliage shipped from Hawaii to the U. S. Mainland by air freight, 1949-52.



Source: Table 2.

lei flowers are grown for local use, vanda-type orchids are chiefly for export, and anthuriums and other cut flowers are for both local and mainland consumption.

A breakdown of these items by islands reveals that growers in the city and county of Honolulu produced and sold 53.5 percent of the anthuriums, 91 percent of other cut flowers and lei flowers, and 69 percent of orchid varieties other than vandas. The island of Hawaii produced and sold 75 percent of the vanda-type orchids.

Oahu's production thus leads in three of the four major groupings, and the entire earnings of Oahu growers were 66 percent of total floral sales (chart 2). Growers from the island of Hawaii grossed 31 percent, and Maui and Kauai growers shared the remaining 3 percent. The sum of $28,061 was earned from other cut flowers and lei flowers in Maui county (out of a total of gross sales of $30,372).

Trees, shrubs, and vines in the Territory were valued at $151,884 in 1949. However, this figure includes fruit and nut trees, as well as ornamental plants, and thus cannot be interpreted as representing ornamental horticulture only.

Exports

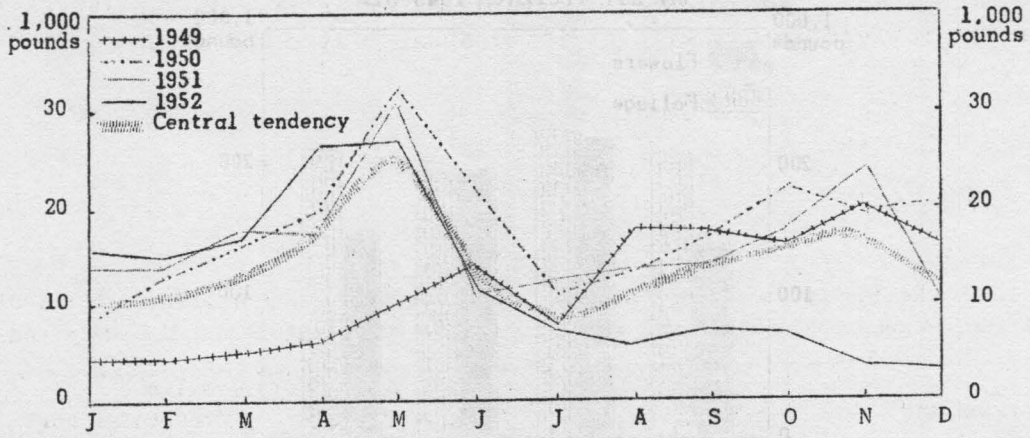
Floral exports grew rapidly between 1947 and 1950,[5] then diminished slightly in 1951 and 1952. However, the 1952 total of 360,400 pounds was still substantially larger than the 1947 and 1948 exports of 60,000 and 213,000 pounds. Lower air freight rates and an increase in the availability of air freight service had a definite influence on the increased volume. Many observers believe that further development of the export market depends on the formation of an effective shippers organization to resolve common marketing problems.

Chart 3 shows the gross weight of flowers and foliage shipped by air from Hawaii to the Mainland from 1949 through 1952. A sampling in the spring of 1950 indicated that an average package of fragile flowers contained 30 percent floral products and 70 percent packaging material. The reverse was found to be true in packages of bulky cut flowers which were made up of 85 percent floral material and 15 percent packaging material.[6]

[5]Rada, Edward L., *Mainland Markets for Hawaiian Flowers and Foliage*, Hawaii Agr. Expt. Sta., Agr. Econ. Rpt. 9, February 1952.

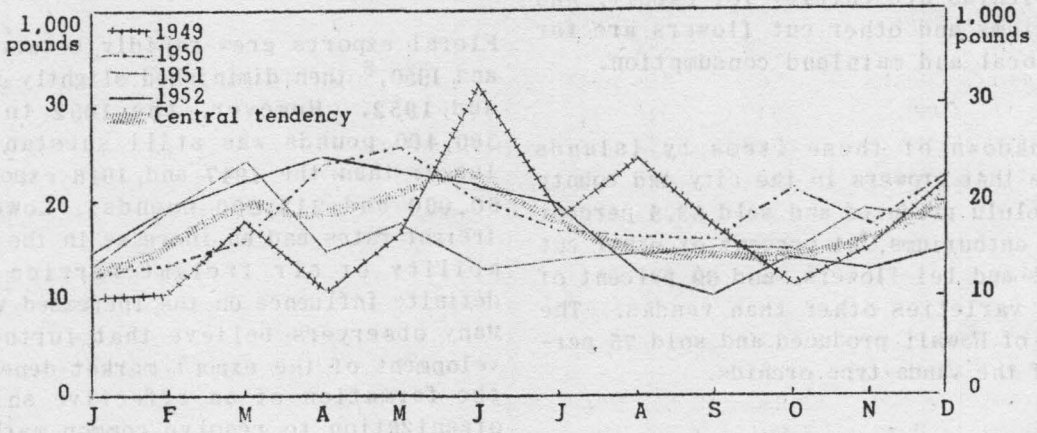
[6]*Ibid.*

Chart 4. Seasonal variation in Hawaiian flower shipments to the U. S. Mainland, air freight, 1949-52.



Source: Table 2.

Chart 5. Seasonal variation in Hawaiian foliage shipments to the U. S. Mainland, air freight, 1949-52.



Source: Table 2.

Prior to 1951 no statistics on boat shipments of floricultural and ornamental horticultural products were compiled. Comparison between 1951 and 1952 indicates that more were sent by boat in 1952 than in the previous year. While 41,000 pounds of foliage and 35,900 pounds of plants were shipped during 1951, 47,900 pounds of foliage and 68,700 pounds of plants were shipped in 1952, despite the shipping tie-up in June and July of 1952. More plants are shipped by boat than by plane; only a negligible amount of about 2,000 pounds was sent annually by air freight in 1951 and in 1952. The small movement of flowers by boat had increased from 2,800 in 1951 to 3,100 pounds in 1952.

The seasonal variation in the air shipments of the Hawaiian flowers and foliage for 1949 through 1952 is shown in table 2 and charts 4 and 5. Several influences affect the seasonal volume of shipments. Holidays are a major factor in demand. The supply of floral products from other areas, as well as from Hawaii, has an important bearing on shipments. Peak shipments of flowers are sent to the Mainland in time for Mother's Day and for the holiday season at the end of

the year. Three times as many flowers are sent in May as in January. January and July are the low months for exports. Such a clear-cut pattern is not evident in foliage shipment, but even here, more foliage is exported in May, June, November, and December than during the months of January, July, and August.

Table 1. Marketing information: General, floricultural, and ornamental horticultural retail trade, by geographic divisions and standard metropolitan areas, U.S. Mainland, 1949.[1]

Division and metropolitan area	Population	All retail trade	Retail sales			
			Floriculture		Ornamental horticulture	
			Per capita	As percentage of all retail trade	Per capita	As percentage of all retail trade
	Thousands	*1,000 dollars*	*Dollars*	*Percent*	*Dollars*	*Percent*
New England:						
Boston, Mass.	2,858	2,675,555	5.45	0.6	1.97	0.2
Providence, R.I.	680	635,800	4.93	.5	1.95	.2
Hartford, Conn.	536	554,336	8.20	.8	3.42	.3
Bridgeport, Conn.	503	535,924	8.22	.8	3.43	.3
New Haven, Conn.	542	518,974	6.12	.6	2.55	.3
Worcester, Mass.	543	478,286	5.94	.7	2.15	.2
Springfield, Mass.	454	415,307	6.40	.7	2.32	.3
Fall River, Mass.	381	317,432	4.79	.6	1.74	.2
Total	6,497	6,131,614	5.96	.6	2.27	.2
Middle Atlantic:						
New York, N.Y.-Northeastern, N.J.	12,832	12,652,074	5.46	.6	2.30	.2
Philadelphia, Penn.	3,661	3,345,506	4.96	.5	2.38	.3
Pittsburgh, Penn.	2,206	1,985,201	5.27	.6	2.53	.3
Buffalo, N. Y.	1,086	1,027,228	4.97	.5	2.10	.2
Albany-Schenectady-Troy, N.Y.	513	562,302	5.65	.5	2.39	.2
Rochester, N.Y.	485	491,277	5.64	.6	2.39	.2
Allentown-Bethlehem-Easton, Penn.	435	401,807	4.95	.5	2.39	.3
Syracuse, N.Y.	341	353,617	4.85	.5	2.04	.2
Wilkes-Barre-Hazelton, Penn.	391	305,435	4.60	.6	2.23	.3
Harrisburg, Penn.	291	265,132	2.85	.3	1.38	.2
Utica-Rome, N.Y.	284	258,150	6.88	.8	2.92	.3
Total	22,525	21,647,729	5.29	.6	2.32	.2

[1] Only metropolitan areas with total retail trade of $250 million or more are included.

(Continued)

Table 1. Marketing information (Continued)

Division and metropolitan area	Population	All retail trade	Retail sales: Floriculture: Per capita	Retail sales: Floriculture: As percentage of all retail trade	Retail sales: Ornamental horticulture: Per capita	Retail sales: Ornamental horticulture: As percentage of all retail trade
	Thousands	*1,000 dollars*	*Dollars*	*Percent*	*Dollars*	*Percent*
East North Central:						
Chicago, Ill.	5,476	5,989,723	6.68	0.6	2.68	0.2
Detroit, Mich.	2,973	3,014,275	4.92	.5	2.45	.2
Cleveland, O.	1,454	1,523,834	6.45	.6	3.17	.3
Milwaukee, Wis.	864	926,279	6.20	.6	2.43	.2
Cincinnati, O.	898	879,847	5.16	.5	2.55	.3
Indianapolis, Ind.	549	627,565	6.88	.6	3.94	.3
Columbus, O.	502	506,564	5.47	.5	2.70	.3
Youngstown, O.	527	468,623	4.36	.5	2.15	.2
Dayton, O.	453	446,616	5.72	.6	2.81	.3
Toledo, O.	393	442,946	4.84	.4	2.38	.2
Akron, O.	408	403,116	4.26	.4	2.10	.2
Grand Rapids, Mich.	287	296,140	5.91	.6	2.94	.3
Canton, O.	282	268,010	6.02	.6	2.96	.3
Total	15,066	15,793,538	5.91	.6	2.68	.3
West North Central:						
St. Louis, Mo.	1,673	1,567,167	5.36	.6	4.10	.4
Minneapolis-St. Paul, Minn.	1,107	1,263,527	6.82	.6	4.60	.4
Kansas City, Kans.	808	990,626	6.39	.5	3.33	.3
Omaha, Neb.	362	383,009	4.06	.4	3.44	.3
Des Moines, Ia.	225	267,871	7.22	.6	4.41	.4
Total	4,175	4,472,200	5.93	.6	4.04	.4
South Atlantic:						
Washington, D.C.	1,458	1,485,845	5.97	.6	3.24	.3
Baltimore, Md.	1,321	1,227,103	5.19	.6	3.34	.4
Atlanta, Ga.	664	675,307	6.12	.6	3.48	.3
Miami, Fla.	489	581,134	6.14	.5	4.82	.4
Tampa-St. Petersburg, Fla.	406	364,475	4.00	.4	3.14	.3
Norfolk-Portsmouth, Va.	410	347,279	4.49	.5	2.24	.3
Richmond, Va.	327	339,794	10.05	1.0	5.02	.5
Wilmington, Del.	267	276,834	5.97	.6	3.56	.3
Jacksonville, Fla.	303	272,034	3.90	.4	3.06	.3
Wheeling, W.Va.-Steubenville, O.	353	268,024	5.15	.7	1.69	.2
Charleston, W.Va.	319	259,302	3.75	.5	1.23	.2
Total	6,317	6,097,131	5.57	.6	3.25	.3

(Continued)

Table 1. Marketing information (Continued)

Division and metropolitan area	Population	All retail trade	Retail sales: Floriculture: Per capita	Retail sales: Floriculture: As percentage of all retail trade	Retail sales: Ornamental horticulture: Per capita	Retail sales: Ornamental horticulture: As percentage of all retail trade
	Thousands	*1,000 dollars*	*Dollars*	*Percent*	*Dollars*	*Percent*
East South Central:						
Louisville, Ky.	574	517,109	4.17	0.5	2.33	0.3
Memphis, Tenn.	480	485,432	4.91	.5	2.60	.3
Birmingham, Ala.	554	441,752	3.87	.5	3.18	.4
Nashville, Tenn.	320	278,083	5.82	.7	3.08	.4
Knoxville, Tenn.	336	250,505	5.81	.8	3.07	.4
Total	2,264	1,972,881	4.73	.5	2.81	.3
West South Central:						
Houston, Tex.	802	818,603	5.24	.5	3.06	.3
Dallas, Tex.	611	704,804	7.13	.6	4.16	.4
New Orleans, La.	681	553,211	5.49	.7	4.07	.5
Forth Worth, Tex.	359	402,891	8.68	.8	5.04	.5
San Antonio, Tex.	496	392,717	3.75	.5	2.18	.3
Oklahoma City, Okla.	328	317,913	6.81	.7	3.19	.3
Tulsa, Okla.	249	254,405	4.70	.5	2.20	.2
Total	3,526	3,444,044	5.86	.6	3.47	.4
Mountain:						
Denver, Col.	560	594,701	5.81	.5	2.17	.2
Phoenix, Ariz.	329	311,336	3.36	.4	2.43	.3
Salt Lake City, Ut.	274	267,573	6.82	.7	2.23	.2
Total	1,163	1,173,610	5.35	.5	2.26	.2
Pacific:						
Los Angeles, Calif.	4,339	4,721,241	4.16	.4	2.72	.2
San Francisco-Oakland, Calif.	2,214	2,366,588	5.00	.5	3.27	.3
Portland, Oreg.	701	772,318	5.65	.5	3.10	.3
Seattle, Wash.	726	753,744	5.16	.5	2.25	.2
San Diego, Calif.	536	507,440	3.39	.4	2.21	.2
Sacramento, Calif.	276	297,303	3.06	.3	3.06	.3
Fresno, Calif.	274	285,519	4.52	.4	2.91	.3
San Jose, Calif.	289	279,967	4.08	.4	2.67	.3
Total	9,355	9,984,120	4.48	.4	2.83	.3

Source: Fossum, M. Truman, *Marketing Information for Commercial Floriculture* (preliminary report), *Marketing Information for Commercial Ornamental Horticulture* (preliminary report), U. S. Dept. of Agr., Bureau of Agr. Econ. Washington, D. C. July 1952.

Table 2. Gross weight of flowers and foliage shipped from Hawaii to the U. S. Mainland by air freight, 1949-52.[1]

Commodity and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
	Pounds												*Pounds*
Flowers[2]													
1949	4,326	4,496	5,113	6,429	10,321	14,315	8,211	17,868	17,607	16,349	20,217	16,210	141,462
1950	8,556	13,273	16,654	21,166	32,206	22,046	11,345	13,767	17,383	22,042	19,411	20,825	218,674
1951	14,084	13,619	17,867	17,285	30,805	11,237	12,394	13,768	14,037	17,650	23,838	9,533	196,117
1952	15,942	15,029	16,842	26,602	27,012	11,792	7,996	6,012	7,529	7,124	3,701	3,530	149,111
4-year av.	10,727	11,604	14,119	17,870	25,086	14,848	9,986	12,854	14,139	15,791	16,792	12,524	176,341
Foliage[3]													
1949	10,075	10,752	18,198	10,960	16,910	32,800	18,817	24,963	17,653	11,423	15,009	21,912	209,472
1950	12,604	13,799	16,468	24,074	25,455	20,695	17,101	16,495	16,142	21,219	17,723	22,604	224,379
1951	13,083	19,135	23,573	14,979	17,597	12,943	13,744	13,974	15,072	14,513	19,032	17,983	195,628
1952	14,708	19,261	22,471	24,959	23,013	21,909	19,464	12,645	10,251	14,447	13,101	15,061	211,290
4-year av.	12,618	15,737	20,178	18,743	20,744	22,087	17,282	17,019	14,780	15,400	16,216	19,390	210,192
Total flowers and foliage													
1949	14,401	15,248	23,311	17,389	27,231	47,115	27,028	42,831	35,260	27,772	35,266	38,122	350,934
1950	21,160	27,072	33,122	45,240	57,661	42,741	28,446	30,262	33,525	43,261	37,134	43,429	443,053
1951	27,167	32,754	41,440	32,264	48,402	24,180	26,138	27,742	29,109	32,163	42,870	27,516	391,745
1952	30,650	34,290	39,313	51,561	50,025	33,701	27,460	18,657	17,780	21,571	16,802	18,591	360,401
4-year av.	23,344	27,341	34,296	36,614	45,830	36,934	27,268	29,873	28,918	31,192	33,008	31,914	386,533

[1]Including minor quantities shipped to other destinations.
[2]Including orchids and leis, woodroses and all other cut flowers not shown in footnote 3.
[3]Including cut birds-of-paradise, gingers, anthuriums, and heliconias.

Sources: Shipping records of principal air freight carriers.