

# Cut Flowers

**1947 value estimated to have exceeded total of twenty-five million dollars**

**H. M. Butterfield**

**Commercial cut flower** production in 1947 in California's more important flower-growing counties was estimated to be in excess of \$25,000,000.

The 1947 crop of greenhouse cut flowers in Alameda and San Mateo counties—the leading counties—was valued as follows:

Roses .....	\$2,989,065
Gardenias .....	1,613,500
Carnations .....	788,228
Orchids .....	647,350
Miscellaneous .....	801,000

Los Angeles County reported a 1947 valuation of about \$13,000,000 for the crop of field-grown cut flowers.

Actual acreage planted to field crops of cut flowers will differ from year to year. Taking a so-called normal year—just before the war—this acreage showed that asters, chrysanthemums and stocks in Los Angeles County exceeded 100 acres each.

Ranging downward with less than 100 acres in each crop were delphiniums, sweet peas, gypsophila, snapdragons, larkspur, ranunculus, marigolds, carnations, anemone, daisies, godetia, phlox, cornflowers, statice, zinnias, centaurea, calendulas, roses, gladiolus, azaleas, gardenias, pansies, camellias, peach blooms, matricaria, daffodils and iris.

The list of field-grown flowers produced in San Mateo County in 1947 included:

<b>Chrysanthemums</b> (mostly under cloth).....	\$1,147,495
Heather .....	450,900
Callas .....	262,000
Asters (Chinese) .....	228,000
Violets .....	162,000
Stocks .....	132,187
Gladiolus .....	102,600
Strawflowers .....	82,933
Narcissi .....	63,250
Iris (Dutch) .....	55,475
Alstroemeria .....	33,000
Acacia .....	30,000
Marguerites .....	26,000
Shasta daisies .....	21,375
Miscellaneous .....	121,500

## Shipment

In former years most flowers shipped from California went by refrigerator express.

For example, in 1939 the express refrigerator carloads shipped from Los Angeles, Oakland and San Francisco

amounted to 1,478 carloads. In 1945 such carlot shipments had not yet quite caught up with the prewar figures and yet the San Francisco and San Francisco Peninsula shipments were 1,068 carloads.

The air shipments—of such flowers as orchids, roses, gardenias and camellias—started well before the war and may be expected to increase in importance.

Orchids may be used to illustrate air shipments of flowers before the war.

In 1940 the air shipments of orchids from California involved 21,630 blooms valued at \$22,929.50. In that same year, rail express shipments of orchids included 66,350 blooms, valued at \$69,193.25. The total shipments of orchids by air and rail express amounted to 87,980 blooms, valued at \$92,022.75—or over \$1 per bloom, wholesale.

These shipments were made in 6,120 separate lots from California shipping points.

Chrysanthemums are another important cut flower crop, being grown very extensively on the Peninsula from San Mateo to Palo Alto.

In a normal year about 200 acres of these flowers have been grown in the counties of San Mateo and Santa Clara with the flowers valued at about \$2,000,000. About 75% of the cut blooms have been shipped East. In 1945 there were 111 growers with 154 acres of chrysanthemums in San Mateo County, and the crop that year was valued at \$1,698,650.

In Santa Clara County in the same year there were 33 growers with 46 acres and with a crop value of about \$500,000 gross.

## Greenhouse

The 1947 crop of greenhouse roses reported from Alameda County was valued at \$2,651,000 and the San Mateo County crop, at \$338,065.

It is estimated that about 50% of the greenhouse roses raised around San Francisco Bay are shipped to Los Angeles. Not very many greenhouse roses are grown in southern California—perhaps only 10 acres in Los Angeles County in 1947.

The prevailing cool summer weather near San Francisco makes it easier to control greenhouse temperatures.

Other flowers also favored by the moderate temperatures are gardenias, carnations and orchids.

Baby roses as well as the large-flowered kinds are in good demand from florists. In 1947 San Mateo County reported 32,900 square feet of greenhouse space devoted to baby roses as compared with 250,875 square feet for all greenhouse roses.

Greenhouse carnations continue to be an important cut flowers crop in the counties of San Mateo, Santa Clara, Alameda and Contra Costa. Many of the cut carnations have been shipped in refrigerator trucks to the Los Angeles market area.

In 1947 the gardenias in San Mateo County were valued at \$997,000, while the crop in Alameda County was valued at \$616,500.

Because of the high cost of producing gladiolus bulbs in California, many growers have bought their planting stock in other states where bulb production costs are lower.

One California grower of cut gladiolus blooms with 26 acres in production reported a cost of about \$12 per thousand bulbs for Oregon-grown bulbs, while at the same time a California bulb grower reported a production cost of \$15 per thousand bulbs.

San Diego growers produced about 314 acres of gladiolus for cut blooms in 1946.

Easter lilies have been forced for sale as potted plants in California but few are sold as cut flowers. Many bulbs are raised in Humboldt and Del Norte counties with investment in land ranging over \$1,000 an acre.

Still other specialized flower crops are grown in California, such as the strawflower industry in San Mateo County around Pescadero.

There is considerable advantage to growers in locating where a flower industry is well organized and systematized. For example, a chrysanthemum grower wishing to buy the proper grade of cheesecloth and black cloth for shading can locate a supply when living in an area where this crop is important, but a grower living far away might have trouble in finding a supply at a fair price. The unit of production to make a crop economical is also important.

Outside of the Los Angeles and San Francisco Bay areas cut flowers may have some local importance. Cut flowers have been valued at \$266,000 in Orange County, \$290,000 in Santa Barbara County, \$255,000 in Santa Cruz County and over \$135,000 in Ventura County.

The wholesale flower markets in Los Angeles and in San Francisco handle a very large percentage of the cut flowers raised in California reaching retail florists. Such marketing facilities are as much a part of a good business as having good land or a good climate or a reasonable cost of labor.

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## PASTURES

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spaced. Broadleaf birdsfoot trefoil is an example of one of these variable species. Within this variety can be found plants which are erect like alfalfa—others which grow flat along the ground. Some plants are stemmy—others leafy and so on through numerous contrasting characteristics.

To develop an improved variety, the type of plant wanted must first be determined. These are selected and isolated so they can cross among themselves but not with the undesirable plants. A rigid selection and testing program must precede the distribution of any new crop variety. Breeding programs with forage crops move rather slowly and new varieties should not be expected too soon.

### Mixtures to Fit Conditions

Most irrigated pastures are mixtures of grasses and legumes. Some of the reasons given for seeding mixtures are that legumes maintain fertility—grasses help prevent bloat and control erosion where that is a problem. Mixtures are said to insure better stands on variable soils and may lengthen the grazing season and provide a better balanced diet.

A standard or general-purpose mixture would include the following species and seeding rates in pounds per acre:

Ladino clover .....	3
Domestic ryegrass .....	2
Perennial ryegrass .....	2
Orchard grass .....	3
Alfa fescue .....	4
<b>Total .....</b>	<b>14</b>

Soil and climatic differences as well as class of livestock will require modifications of this mixture. For example, on alkaline soils and where bloat is a problem, birdsfoot trefoil should replace a part or all of the ladino in the mixture. Birdsfoot trefoil was the only legume among several tested which gave an appreciable yield under high salt conditions in studies conducted in southern California. The growth of ladino clover was negligible under similar conditions.

Local experiences are good guides for suitable mixtures in a particular area. Such information can be obtained from the local farm advisor. At Davis emphasis will be placed upon studies of the management practices best suited for different types of mixtures.

### Pasture Management

The kind of management to be given irrigated pastures; the frequency of irrigation; whether rotation or continuous

grazing should be practiced and the frequency and how close a pasture should be grazed are some of the questions which confront the owner of an irrigated pasture.

The need for supplying adequate and continuous pasture for a herd of livestock imposes certain restrictions on grazing management. However, some ranchers have combined good grass management and good livestock management programs into very efficient production.

### Data Needed

Many of the grass management problems need to be answered by studies of the physiology of pasture plants.

Knowledge of the optimum requirements for growth of the most important pasture species will require studies of temperature, moisture, plant nutrients, light requirements, area of leaf surface and other factors.

The response of pasture plants to fertilization is particularly important because many irrigated pastures are on problem soils. The effect of fertilization on the quality of grass is important. Factors which influence nutritional value of forages are numerous and complex.

Some indications of quality are provided through chemical tests but the burden of proof lies with the grazing animal. The final testing of many pasture improvement practices will need to be conducted under actual grazing conditions. This calls for close cooperation between the research workers in pastures and live-

stock management. A successful irrigated pasture is one which is effectively used with sound management going hand in hand with good pastures.

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## NEW PUBLICATIONS

*A copy of the publications listed here may be obtained without charge from the local office of the Farm Advisor or by addressing a request to Publications Office, College of Agriculture, University of California, Berkeley 4, California.*

**AGRICULTURAL PUBLICATIONS, September 1948.** *New catalog of 270 agricultural pamphlets now available for distribution. A short descriptive paragraph defines the scope of each publication.*

**THE WALNUT SITUATION AND OUTLOOK—1948,** by George B. Alcorn. *Extension Circular 386, September, 1948.*

*An up-to-date report on the current situation of the nation's walnut industry which is located entirely on the Pacific Coast. Acreage and tonnage of commercial walnuts have increased since the 1920's. The bulk of the crop is handled by local buyers or cooperative packing plants. Farm prices this year, as in any year, depend upon consumer purchasing power and sensitive wholesale prices.*

### DONATIONS FOR AGRICULTURAL RESEARCH

Gifts to the University of California for research by the College of Agriculture accepted in August, 1948

#### BERKELEY

Dr. William H. Boynton .....	Veterinary science research	\$209.91
Canners League of California .....	Investigations on insects attacking tomatoes	\$3,000.00
Colloidal Products Corporation .....	Four sacks of insecticide: 3% DDT dust with sticker—approximately 204 pounds	
	For experimental purposes on insect pests	
Dow Chemical Company .....	Two sacks, 50 pounds each of 1% Gamma Isomer dust	
	For experimental use on insect pests	
Naugatuck Chemical (Div. of U. S. Rubber Co.) .....	10 Pounds Phygon-XL-MS, Control N-3378	
	To determine new uses for this product	
Rohm and Haas Company .....	Two cartons 12/4 rothane WP 50	
	For experimental use on insect pests	
Sugar Research Foundation, Inc. ....	Study of sugars in the freezing of fruit	\$1,000.00
Sugar Research Foundation, Inc. ....	Studies on sucrose phosphorylase	\$702.00
U. S. Public Health Service .....	Utilization of carbon dioxide and synthesis of fatty acids by bacteria	\$4,050.00

#### DAVIS

California Fertilizer Association .....	Investigations of methods of fertilizer applications	\$750.00
Canners League of California .....	Investigations on tomato breeding	\$1,500.00
Julius Hyman & Company .....	Investigations of a new insecticide	\$1,250.00
U. S. Public Health Service .....	Rodent control	\$306.00

#### LOS ANGELES

Golden West Gladiolus Growers .....	30 quarts gladiolus cormlets	
	For ornamental horticulture investigational work	