

## Historic, archived document

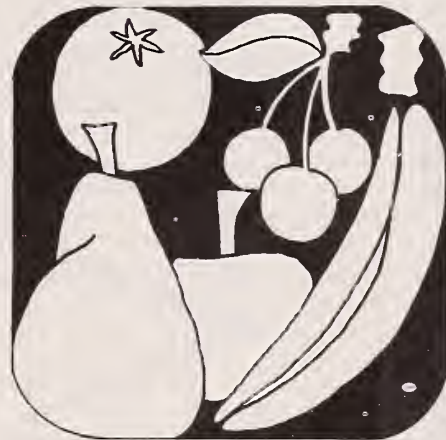
Do not assume content reflects current scientific knowledge, policies, or practices.



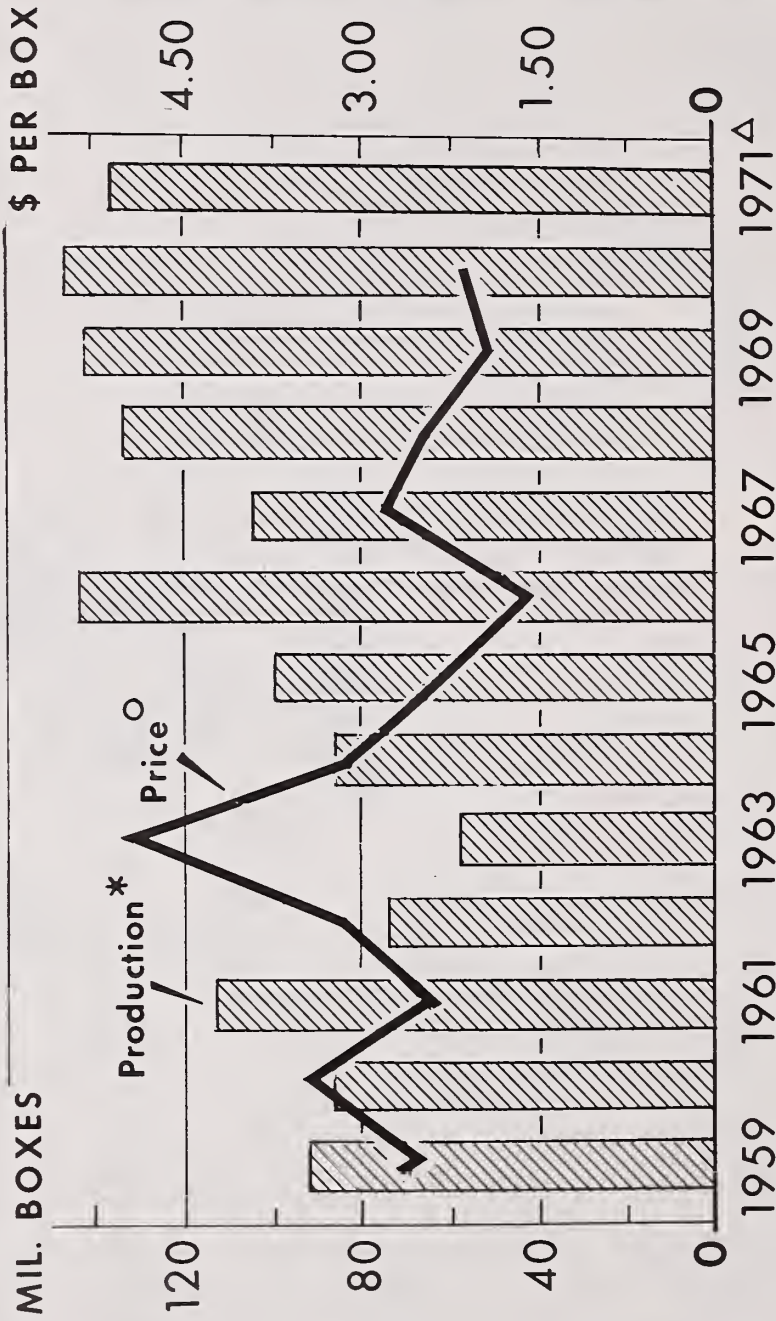
# FRUIT Situation

U. S. D. A.  
National Agricultural Library  
Received

Procurement Section \  
Current Serial Records



# FLORIDA ORANGE PRODUCTION AND PRICES



SEASON BEGINNING YEAR INDICATED

\* HAVING VALUE INCLUDING TEMPLES. ○ EQUIVALENT PACKINGHOUSE DOOR RETURNS. ▲ PRELIMINARY.

U.S. DEPARTMENT OF AGRICULTURE

NEG. ERS 5772-71 (10) ECONOMIC RESEARCH SERVICE

# THE FRUIT SITUATION

## CONTENTS

## SUMMARY

	Page
Summary .....	3
Fresh Fruit .....	4
Oranges .....	4
Grapefruit .....	4
Lemons .....	4
Other Citrus .....	5
Apples .....	5
Pears .....	5
Grapes .....	5
Prunes and Plums .....	5
Strawberries .....	6
Cranberries .....	6
Tree Nuts .....	6
Almonds .....	6
Filberts .....	6
Pecans .....	6
Walnuts .....	7
Processed Noncitrus Fruit .....	7
Canned .....	7
Frozen .....	7
Dried .....	7
Processed Citrus Fruit .....	8
Canned .....	8
Chilled .....	8
Frozen .....	8
Citrus Use in 1970/71 .....	8
List of Tables.....	31

### SPECIAL ARTICLE

The Changing U.S. Apple Industry 5030 10

Approved by  
The Outlook and Situation Board  
and Summary Released  
October 29, 1971

Principal contributors  
Ralph A. Freund, Jr.  
Ben W. Huang

Economic and Statistical Analysis Division

Economic Research Service

U.S. Department of Agriculture  
Washington, D. C. 20250

The *Fruit Situation* is published in  
February, July, September, and November.

The 1971/72 orange crop (excluding California Valencias) is forecast at 163 million boxes, 4 percent below last season's large crop. The Florida crop, at 131 million boxes, is down 8 percent; the early and midseason crop is 18 percent smaller but the Valencia crop is 6 percent larger. California's navel production is forecast at 22 million boxes, 23 percent above last season. Texas' orange output is expected to equal that of last season and Arizona's to be a tenth larger. Season average prices to producers will probably average above the levels of last season, particularly for oranges going into processing. The Florida average f.o.b. price in October was \$8.10 per box, 108 percent over a year ago on light shipments.

Grapefruit production for 1971/72 is forecast at 59 million boxes, excluding California's "other areas" which produced 2 million boxes last season. The forecast is about the same as last season's output but still about 14 percent more than in 1969/70. The Florida crop is slightly larger but the Texas crop is 4 percent smaller. Season average prices to producers will probably equal or exceed the levels of last season. The average f.o.b. price in October was \$6.41 per box, 40 percent over a year ago.

The 1971 tonnage for deciduous fruit crops is 9 percent greater than last year. Sharp increases in grapes and pears account for most of the gain. The pear crop is up 37 percent from last year's utilization but only 3 percent more than the volume of 2 years ago. West Coast Bartletts are 35 percent larger than 1970 utilization, and the crop of "other pears" is 40 percent larger. Producer prices of pears for fresh market averaged 9 percent under a year ago in September and 27 percent under in October. Grape production is forecast a fourth larger than last year with all varietal groups in California showing gains. Production of apples is forecast 1 percent smaller than last year's utilization, with output down 17 percent in the Western States but higher in Eastern and Central States. The season average producer price of all apples may exceed that of a year ago due



principally to higher fresh market prices in the West. The average fresh market producer price in October was 7.15 cents per pound, 13 percent over a year ago.

Production of most types of nuts is larger than last year. The almond crop is estimated 2 percent under 1970. But the filbert crop is 37 percent larger, the walnut crop 12 percent larger, and the pecan crop 63 percent bigger than last year's small crop. Early prices for pecans have been high but later will likely average under those of last season.

For the 1971/72 season, the supply of canned pears will be substantially larger than the previous season, while the supply

of fruit cocktail may be roughly the same and of Clingstone peaches substantially smaller. Stocks of frozen strawberries and peaches are materially smaller than a year ago, but there are more frozen cherries.

With growing demand, movement of frozen concentrated orange juice from Florida so far in the 1970/71 season has been 22 percent larger than the previous season. Movement of canned citrus from Florida during the 1970/71 season totaled nearly the same as the previous season. Grapefruit juice movement was slightly larger and orange juice movement slightly smaller.

## FRESH FRUIT

ORANGES.--The 1971/72 orange crop (excluding California Valencias) is forecast at 163 million boxes, down 4 percent from last season. The Florida crop, at 131 million boxes, is 8 percent below last season's large crop; the early and mid-season crop is expected to be 67 million boxes, down 18 percent, while the Valencia crop is estimated at 64 million boxes, 6 percent more. (See Table 2.) Florida's trees are mostly in excellent condition. Maturity and yield tests of Florida oranges suggest a yield of 1.28 gallons per box of 45° Brix frozen concentrated orange juice as compared with an average of 1.21 last season.

California's navel crop is forecast at 22 million boxes, 23 percent larger than 1970/71. The Valencia production in California will be estimated in December. Orange output in Texas is expected to be 6.2 million boxes, the same as last season and in Arizona it is 3.9 million boxes, a tenth more.

With the strong demand for processed orange juice and a smaller Florida crop, the returns for oranges going into processing will probably be higher. Despite California's larger navel output, season average prices of oranges for fresh market will probably average near last season's level.

Through October 16, Florida and Texas new crop shipments of oranges to fresh markets were 320 carlots, only a third of a year ago. The Florida average f.o.b. price in October was \$8.10 per box, 108 percent over a year ago.

GRAPEFRUIT.--Production in 1971/72 is forecast about the same as last season but still about 14 percent greater than in 1969/70. The crop in California's "other areas," which amounted to 2 million boxes in 1970/71, will be estimated in December, but excluding that, the crop is 59 million boxes.

Florida is expected to have 43 million boxes, slightly more than last season, and 15 percent more than 1969/70. Trees are generally in excellent condition and harvest started in early September.

The Texas crop is forecast at 9.7 million boxes, 4 percent less, and Arizona at 2.8 million boxes, 11 percent more. In the Desert Valleys of California, output is expected to be 3.2 million boxes, down slightly.

Through October 16, Florida and Texas new crop shipments of grapefruit to fresh market were 2,226 carlots, 31 percent under a year ago. The average f.o.b. price for October was \$6.41 per box, 40 percent over a year ago. Prices to producers will probably equal or exceed the levels of last season.

LEMONS.--Prospects for the Arizona crop--which accounted for about one-fifth of the total crop in 1970/71--are 3.1 million boxes, down slightly from last season. An estimate of California production will be made in November. From August 1 through October 16, shipments of lemons to fresh markets were 3,934 carlots, 18 percent above a year ago. The average f.o.b.

price for October was \$10.40 per box, 4 percent over a year ago.

OTHER CITRUS.--Florida tangelos are expected to total 3.3 million boxes, a new record, up 0.6 million boxes from last season and up even more from 1969/70. The indicated U.S. tangerine crop is 4.4 million boxes, 10 percent less than was utilized last season, but moderately above 1969/70 output. Most of the decrease is in Florida. The Florida crop of Temples is estimated at 6 million boxes, a new record, up 1 million from last season.

APPLES.--Production is forecast at 6.2 billion pounds for 1971, which is 1 percent less than utilized last year and 9 percent less than 1969. Prospects declined in September because the Washington crop is smaller than earlier expected. (See Table 12.) Output is indicated to be up 8 percent from last year in the Eastern States, up 5 percent in the Central States, but down 17 percent in the Western States.

Regional Apple Production

Area	1969	1970	Indicated 1971
	<i>Billion pounds</i>	<i>Billion pounds</i>	<i>Billion pounds</i>
East .....	2.82	2.89	3.12
Central .....	1.27	1.22	1.28
West .....	2.66	2.11	1.75
Total U.S.....	6.75	6.22	6.15

With Western production 17 percent smaller, fresh market prices this season could exceed those a year ago. The September 1 carryover of canned applesauce was 29 percent less than a year ago and of apples 27 percent less. With higher production in the Eastern and Central States, there will likely be a large pack of processed apples. With a smaller orange crop in Florida and good prices for processed orange juice, the demand for apple juice should also be strong.

In October, shipping point prices of apples in Eastern and Central States were above and below a year ago depending on variety, quality, and type of pack. In Yakima Valley, Washington, they were 10-20 percent higher. The average fresh market producer price in October was 7.15 cents per pound, 13 percent over a year ago.

On September 13, the USDA announced an offer to buy canned apple juice and applesauce for distribution to needy families and the child nutrition program; and on October 13, 854,700 cases (12-46 oz. cans) of apple juice were bought at an f.o.b. cost of \$2.7 million. On October 19, 1,000,800 cases (6 no. 10 cans), of canned applesauce were bought at an f.o.b. cost of \$4.1 million. Processed apple products have also been purchased by USDA in recent years.

PEARS.--The West Coast Bartlett pear crop is estimated at 520,000 tons, up 35 percent from last year's utilization. Pears other than Bartlett are expected to total 152,000 tons on the West Coast, 40 percent greater than 1970. The total U.S. pear crop is forecast at 733,000 tons, 37 percent larger than 1970 but only 3 percent larger than 1969. (See Table 1.)

Shipments of pears to fresh market through October 9 were 4,792 carlots, 22 percent over a year ago. The average producer price of pears for fresh market was near year-ago levels during July and August but in September dropped to \$120 per ton, 9 percent less than a year ago. In October it was \$106 per ton; 27 percent less than a year ago. In October, f.o.b. prices from Yakima Valley were well under a year ago for Bartletts and D'Anjous.

On September 3 and 21 the USDA bought a total of 360 carlots of fresh Bartlett pears for distribution to child nutrition programs. The cost of both purchases was \$1.4 million, f.o.b. This was the first purchase of fresh Bartletts since 1964.

GRAPES.--The crop is estimated at 3.9 million tons, a fourth over last year and nearly the same as 1969. California's output is 3.5 million tons, 26 percent over 1970 with wine varieties up 35 percent, table varieties up 34 percent and raisin varieties up 22 percent.

Shipments of grapes to fresh market through October 9 totaled 14,544 carlots, 4 percent below a year ago. In October shipping point prices of grapes for fresh market were below a year ago for Thompson Seedless, but higher for Emperor and Ribier.

PRUNES AND PLUMS.--Production in Michigan, Idaho, Washington, and Oregon is forecast at 80,000 tons, 13 percent less than



previously expected, but still 71 percent more than utilized from last year's light crop. Production is larger in all States. Harvest was nearing completion by October 1 but some fruit is being left unharvested because of poor quality and relatively low prices.

On October 1, the USDA bought 162,000 cases of canned purple plums for distribution to child nutrition programs. Cost of the purchase, f.o.b. was \$711,000.

STRAWBERRIES.--The estimated 1972 acreage for harvest is 45,970 acres, 9 percent less than in 1971. Nearly all production areas report reduced plantings.

Although 1971 acreage was less than in 1970, production was 5.2 million hundred-weight, 5 percent larger. This resulted from an average yield of 102 cwt. per acre, 10 percent larger than in 1970.

Prices of strawberries for fresh use have been above the levels of 1970. In

July and August they averaged between 25 and 26 cents per pound but in September fell to 22.2 cents, reflecting the larger supply. Imports of fresh strawberries January through August were 4 percent larger than a year ago.

CRANBERRIES.--Production is forecast at 2.02 million barrels, 1 percent less than last year but 11 percent more than in 1969. Massachusetts, New Jersey, and Oregon have a larger crop and Wisconsin and Washington a smaller one. By October 1 harvest was underway in Wisconsin and about half completed in Massachusetts.

On September 23, the USDA bought 200,000 cartons of fresh cranberries for distribution to child nutrition programs. Cost of the purchase, including transportation was \$930,000. The Department purchased some cranberries last year.

## TREE NUTS

ALMONDS.--The 1971 California crop is estimated at 122,000 tons (in-shell) 2 percent under last year and the same as 1969. (See Table 13.) On July 1 the handlers' carryin was 29.4 million pounds kernel weight, 15 percent above last year. Exports of shelled almonds in the 1970/71 season, at 27,773 tons, were larger than the previous season.

The value of almond production in the 1970 season was \$80.1 million and the average return for bulk nuts at first delivery points was \$646 per ton. This compared with a value of \$73.9 million in 1969 and a return of \$606 per ton. Production in 1970 was 2 percent larger than in 1969.

Market allocation percentages for 1971/72 of 55 percent of the crop as domestically salable and the rest to non-competitive outlets, mainly exports, were established under a Federal marketing order.

FILBERTS.--The 1971 crop is estimated at 13,060 tons, 37 percent larger than last year and 76 percent above 1969 output. On August 1 the handler carryin was 2,104 tons (unshelled), over 3-1/2 times that a year ago and the largest in recent years. Imports of shelled filberts

during January through August 1971 have been about one-third larger than last year; for all of last year, imports amounted to 5.7 million pounds.

The value of filbert production in 1970 was \$5.4 million and the return for bulk nuts at first delivery points was \$570 per ton. This compared with a 1969 value of production of \$4.1 million and a return of \$550 per ton. Production in 1970 was 28 percent larger than in 1969.

Marketing allocation percentages proposed for the 1971 crop, under a Federal marketing order, are 29 percent "free" and 71 percent "restricted." Filberts designated as "free" may be marketed through normal domestic inshell channels. "Restricted" quantities are allocated to shelled filbert or export markets.

PECANS.--The 1971 crop is forecast at 252 million pounds, 63 percent larger than last year and 12 percent over the 1969 crop. All States except Texas and New Mexico indicate output above last year. The 1971 production from improved variety trees is 74 percent over a year ago and production from native and seedling trees is 50 percent larger. The carryin of pecans is well under that of last season. On June 30, in-shell pecans in cold storage



were about one-third the amount a year ago and nutmeats were about one-fourth less. With light carry-in stocks, early prices have been relatively high, but later will likely average under those of last season.

WALNUTS.--Production in California and Oregon is estimated at a record high 125,100 tons, 12 percent more than last year and 19 percent above 1969. On August 1 handlers' inventory of inshell walnuts was 18.4 million pounds, larger than a year ago. The inventory of shelled walnuts was 19.7 million pounds, near the year-ago level.

Exports of unshelled walnuts during the 1970/71 season have been about twice the level of the previous season. Imports of shelled walnuts during 1971 have been above a year ago. Domestic shipments for the season ended July 31 were slightly less for inshell walnuts but 16 percent larger for shelled walnuts.

Marketing percentages established for the 1971/72 season allocate 78 percent in California and 89 percent in Oregon of the merchantable quality walnuts to domestic trade channels. The remainder would be exported or used in outlets not competitive with the normal domestic market.

## PROCESSED NONCITRUS FRUIT

CANNED.--The 1971/72 canned pack of some deciduous fruits will be less than the previous season, although final data are not available for the larger items.

The pack and supply of apricots and sweet cherries are smaller. The pack and supply of California Freestone peaches are the smallest in several years. The tart cherry pack and supply are larger.

Deliveries to canners of Clingstone peaches are over 630,000 tons, which is about 12 percent under a year ago. The pack and supply will be less than last season and small relative to other recent years.

The canned pear pack on the West Coast will be more than last season. The pack of fruit cocktail may be slightly less than last season.

On September 10, the USDA bought 334,850 cases of canned fruit nectars for distribution to needy families. Cost of the purchase, f.o.b. was \$1.0 million.

FROZEN.--At the end of September total frozen fruit stocks were 11 percent smaller than a year ago. (See Table 15.) Cherries and grapes are in larger supply but all other categories are smaller. The tart cherry crop was up 9 percent this year and at 118 million pounds, frozen stocks are 9 percent larger. The large grape crop has resulted in frozen stocks at 4.6 million pounds, 31 percent more.

At the end of September, frozen strawberry stocks were 190 million pounds, 13 percent less than a year ago but larger

than in September 1969. Stocks of all the bushberries are below the levels of a year ago. Frozen apples, apricots, and peaches are in shorter supply. Stocks of frozen peaches are 49 million pounds, 15 percent below a year ago and 32 percent below September 1969.

DRIED.--Total deliveries of raisins to handlers for the 1970/71 season were 192,937 tons (sweatbox weight), 23 percent less than last season. Commercial free tonnage raisin shipments for the season ended August 31 were 137,864 tons (packed weight basis), slightly less than last season. The free tonnage inventory on August 31 was 28,881 sweatbox tons, 30 percent less than a year ago. The quantity unsold was 39 percent smaller than a year ago. Wholesale prices of raisins have been above year-ago levels this year and in September were 3 percent higher.

Shipments of dried prunes for the 1970/71 season ended July 31, were 148,779 processed condition tons, 8 percent more than the previous season. The remaining salable supply was 57,510 tons, 35 percent larger. The 1971 crop estimate is 185,000 tons and includes quantities diverted green. Wholesale prices of dried prunes have been below 1970 levels and in September were 2 percent lower.

On August 26, the USDA bought 276,860 cases of Thompson Seedless raisins for distribution to child nutrition programs.

Cost of the purchase f.o.b. was \$1.1 million. On October 15, the USDA bought 7.1 million pounds of packaged dried

prunes for distribution to needy families. Cost of the purchase, f.o.b. was \$1.5 million.

## PROCESSED CITRUS FRUIT

**CANNED.**--Movement of canned citrus products from Florida during the 1970/71 season totaled nearly the same as the previous season. (See Table 8.) Canned grapefruit juice movement was 19.3 million cases (24/2's), slightly more than the 1969/70 season. Canned orange juice movement was 11.4 million cases, slightly less.

The Florida pack of canned citrus in 1970/71 totaled more than the previous season. For grapefruit juice the pack was 20.2 million cases (24/2's), 17 percent more than in 1969/70. The pack of canned orange juice was 11.6 million cases, slightly more than the previous season.

Total stocks of canned citrus on hand in Florida at the close of the 1970/71 season were greater than a year ago. The biggest difference lies in canned grapefruit juice with stocks at 1.6 million cases (24/2's) compared with 0.8 million cases a year ago. Stocks of canned orange juice were 1.3 million cases, compared with 1.1 million cases a year ago.

At the end of September, cannery prices in Florida were above a year ago for most canned citrus. The f.o.b. price of a dozen 46-ounce cans of grapefruit juice was \$4.85 compared with \$4.65 a year ago. Orange juice was \$4.10 compared with \$3.30 a year ago.

**CHILLED.**--During the 1970/71 season, movement of chilled citrus juices continued to increase. (See Table 9.) The chilled orange juice movement during the 1970/71 season was 112 million gallons, compared with 106 million the previous season. The pack increased also, leaving stocks slightly larger.

**FROZEN.**--Movement of frozen concentrated orange juice from Florida during the 1970/71 season has been heavy. (See Table 7.) Through October 2 movement was 118 million gallons, compared with 98 million gallons a year ago. The Florida pack has been nearly the same and stocks are now smaller. At the end of September the f.o.b. price of frozen concentrated

orange juice at Florida canneries was \$1.88 for a dozen 6-ounce cans, 36 percent more than the \$1.38 of a year ago.

Movement of frozen concentrated grapefruit juice in Florida also has been larger. Through October 2 movement was 5.5 million gallons compared with 4.8 million gallons a year ago. The pack was 60 percent larger and stocks were 1.8 million gallons compared with 0.9 million gallons a year ago.

**CITRUS USE IN 1970/71.**--During the 1970/71 season, 8.48 million tons of citrus were processed, a record amount and 7 percent more than the previous season. (See Table 3.) Fresh sales were 3.45 million tons, 2 percent more than the previous season. Total citrus sales were 11.9 million tons, 6 percent larger and total value of sales at packinghouse door was \$702 million, 14 percent more.

In Florida the 1970/71 orange crop was 3 percent larger than the previous season and had a value at packinghouse door of \$303 million, 14 percent more. The average packinghouse door return was \$2.13 per box compared with \$1.93 the previous season. About 90 percent of the oranges were processed, the same as the previous season. Of the total oranges processed in Florida, 78 percent was frozen, 15 percent was chilled, and 7 percent was canned. Processing took 128 million boxes of oranges in Florida, 3 percent more than the previous season.

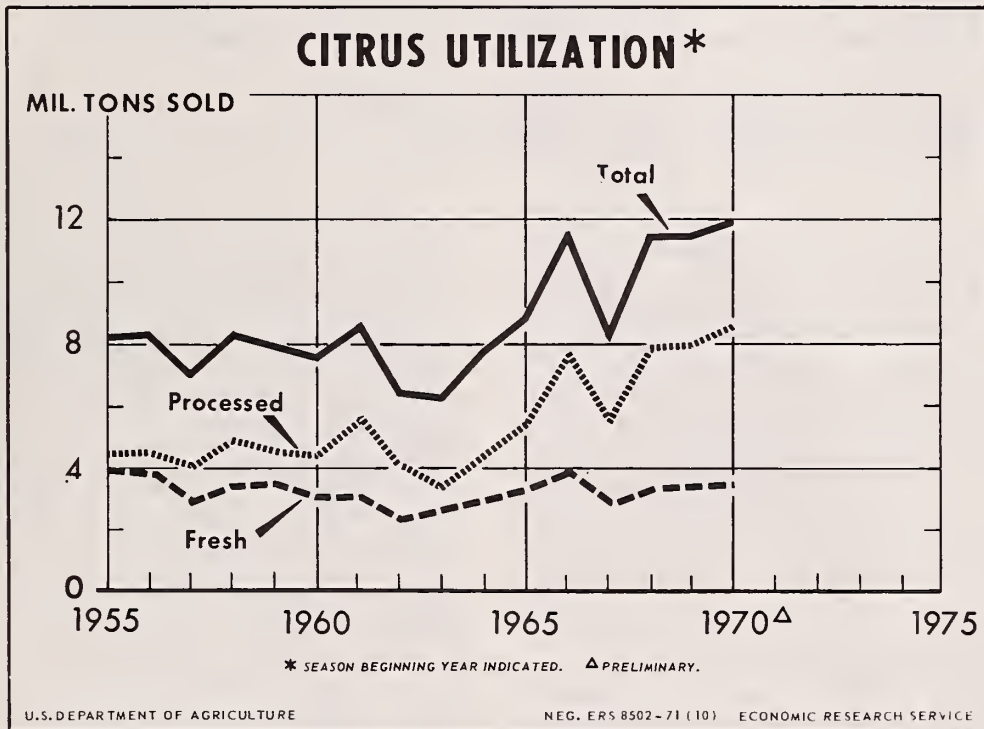
In California, the Navel and miscellaneous orange crop was 16 percent smaller in 1970/71 but had a value of \$65 million, 12 percent larger. Fresh sales were 82 percent of the total. The Valencia crop was 16 percent larger in 1970/71 and had a value of \$60 million, 24 percent more. The average return for all oranges in California was \$3.26 per box in 1970/71 compared with \$2.74 the previous season.

The Florida grapefruit crop in 1970/71 was 15 percent larger and had a value of \$101 million, 14 percent more. The



average return was \$2.35 per box, nearly the same as in 1969/70. Processing took 65 percent of all grapefruit sold in Florida in 1970/71. Of the total processed, 63 percent was canned, 24 percent was frozen, and 12 percent chilled. The total U.S. grapefruit crop was 13 percent larger in 1970/71 and had a value of \$137 million, 13 percent more.

Total production of lemons in 1970/71 was 9 percent larger than the previous season and had a value of \$85 million, 16 percent more. The average return was \$5.18 per box in 1970/71 compared with \$4.85 in 1969/70. Processing took 41 percent of the lemons sold.





By  
Ben W. Huang  
Economic Research Service  
Economic and Statistical Analysis Division

**ABSTRACT:** The total production of apples is expected to increase in the years ahead, with the largest increase in the Western region. Utilization of apples for processing will continue to increase. Per capita fresh apple consumption will likely average around recent levels the next 5 or 6 years but per capita use of processed apple products will continue to increase. Changes in production and demand will affect the marketing structure as well as the processing industry. This includes more direct purchase of apples by retailers and institutions, integration of marketing systems, and increasing importance of cooperative marketing and bargaining associations.

**KEY WORDS:** Fresh apples, processed apples, production, utilization, consumption, marketings, prices, cooperatives.

This study, an overall view of the changes in the apple industry, focuses attention on significant developments in production, utilization, consumption, prices, marketing and industry structure over the last 2 decades and prospects for the future. These developments will be of continuing interest and concern to apple growers, processors, handlers, consumers and others. The study expands upon earlier research, reported in the article "Trends and Prospects in the U.S. Fruit Industry" 1/.

#### Trends in Regional and Varietal Production

Apple production is widely dispersed. Commercial apple production is reported in 34 States 2/, but production is concentrated heavily in a relatively few. Six principal States (California, Michigan, New York, Pennsylvania, Virginia, and Washington) account for slightly more than two-thirds of total production.

Over the last 2 decades, apple production was generally in an upward trend.

1/ Published in the Fruit Situation, U.S. Dept. of Agr., ERS, TFS-176, September 1970.

2/ In orchards of 100 more bearing age trees.

In 1969 it was the largest since the late 1930's. Comparing the 1950-53 average with the 1967-70 average, U.S. apple output has increased approximately 30 percent. 3/ Although Washington is the leading apple producing State, its apple output has increased less than any other principal State except Virginia. Virginia's apple production has been relatively stable. Pennsylvania had the largest percentage increase, up 80 percent.

The general upward trend in the production of apples is shared by all three regions (Eastern, Central and Western), but the regional composition of apple production has shifted somewhat during the last 2 decades. Only the Eastern region had a slightly larger increase in apple production than the U.S. average; its share of U.S. production also increased somewhat. The Central and Western regions showed slight declines in shares. Currently the East produces 46 percent of the U.S. apple crop (table A).

Although the change in apple production by regions has been relatively small, dramatic shifts have occurred in varietal composition (table B). Old plantings are being replaced with dwarf and semi-dwarf

3/ Production data were reported in bushels prior to 1959, but were converted to pounds by multiplying by 45.1.

trees which have greater per acre yield potentials than standard types. Principal varieties mainly for fresh use, such as Red Delicious, Jonathan, and Winesap, have shown mixed production patterns. The big expansion occurred in Delicious. From 1950-53 to 1967-70, Delicious output increased 70 percent, while its share of total apple crop increased from 20 to 28 percent. All 6 principal States shared in the increase in Delicious production, ranging from 40 percent for Washington to 230 percent for California.

Jonathan dropped in rank from the fourth to the fifth most important apple variety, but its production increased approximately one-fourth and its proportion has remained relatively stable at 6.5 percent of the U.S. apple crop. Jonathan production has dominated in Michigan, and has become relatively more important there in recent years, but production from the other major producing areas has shown a mixed pattern. California and Missouri more than doubled output while Washington showed a substantial decline for this variety.

Winesap was usually the third most important apple variety in 1950's. But because of the sharp decrease in production--down approximately one-half between 1950-53 and 1967-70--it is now ranked behind Stayman as the eighth most important apple variety. Its share of U.S. apple crop has dropped from 10 to 4 percent. Washington normally produces about three-quarters of all the Winesap crop. Virginia, the second-ranking State, produces approximately 15 percent. The two leaders both have had a substantial drop, down 52 percent for Washington and 43 percent for Virginia.

The York Imperial is a principal variety used mainly for processing. It is grown mostly in the Eastern region and production has increased in both absolute and relative terms during the last 2 decades. York reached a record production of 360 million pounds in 1970 and accounted for 5.3 percent of the apple crop compared with 4.8 percent in the early 1950's. Pennsylvania, Virginia, and West Virginia account for approximately 90 percent of the York production, but each State has shown a different pattern. Pennsylvania has shown increases in both absolute and relative terms with production more than doubling. Its share of the total York crop moved up from 20 to 30 percent. York production in Virginia remained relatively stable but

its proportional share declined. West Virginia's output increased approximately one-fourth, with a slight decline in its share.

Principal varieties used for both fresh and processing include Golden Delicious, McIntosh, Stayman, and Rome Beauty. The increasing amount of apples for processing has come mostly from these varieties. Production of each of these has increased during the last 2 decades, led by Golden Delicious. From 1950-53 to 1967-70, production of Golden Delicious has increased four-fold with the proportion of U.S. apple crop up from 3 to 12 percent. It surpassed and replaced McIntosh in 1969 as second among the apple varieties. The sharp increase in Golden Delicious production has occurred largely in Washington and Pennsylvania. These States currently contribute approximately half of the Golden Delicious crop.

McIntosh is now the third ranking variety in the country. Its share of the total apple crop has been stable at approximately 11 percent, in the last 2 decades. New York has maintained about 45 percent of McIntosh production. During 1950-53 to 1967-70, U.S. and New York McIntosh production increased 22 and 21 percent respectively. Michigan, the second major McIntosh producing State, had even a larger production increase, more than 50 percent.

Stayman is produced mostly in the East with Pennsylvania and Virginia together accounting for two-fifths of this variety's total production. Pennsylvania's production had increased 50 percent from the early 1950's while Virginia's output fluctuated. North Carolina produces a relatively small quantity of Stayman (approximately 10 percent of this variety in recent years), but its production has doubled.

Rome Beauty, another Eastern apple, has shown increases in both absolute and relative terms due primarily to the introduction of the newer red strains. Rome output increased 52 percent with its share of the total apple crop up from 6.7 to 8.1 percent due mainly to sharp increases in production in New York, Pennsylvania, and North Carolina. These States accounted for 40 percent of its total production in 1967-70 compared with 27 percent in 1950-53.

As crops of these 8 principal varieties except Winesap have trended upward,



their total production has increased about 50 percent and their proportion of the U.S. apple crop has risen from 67 percent to 80 percent. In contrast, apple production from the remaining varieties has decreased in both absolute and relative terms, with production dropping by one-fifth.

### Shifts in the Market for Apples

There has been a striking shift in the apple market over the last 20 years. Although total apple sales for fresh market went up approximately 10 percent, a steadily decreasing percentage of total apples sold went to fresh market. The proportion of apple sales for fresh use declined from 70 percent in 1950-53 to 57 percent in 1967-70.

Total apple sales for processing use have trended upward. The proportion has increased from 30 to 43 percent. There have been shifts in the relative importance of canning, freezing, drying, and other types of processing (mostly crushed for vinegar, cider, and juice). These 4 classes of use have shown mixed trends. Uses for canning and freezing have increased in both absolute and relative terms. Since the early 1950's, the proportion of processed sales of all apples for canning has increased from 45 to 48 percent and for freezing from 5 to 9 percent while drying has declined from 13 to 7 percent. The share of other apple processing has remained relatively steady, 37 percent in 1950-53 compared with 36 percent in 1967-70 (table C).

Changes in apple processing may be observed from the standpoint of output of various apple products as well as from the volume of raw apples going into the several processing uses. Over the last 2 decades, the packs of canned applesauce and apple juice quadrupled; the latter had a particularly rapid growth rate. The frequent sharp changes in size of the packs was usually caused by the size of apple crop. However, the output of canned apples showed an erratic trend ending with a moderate decline. The pack of frozen apple slices grew rapidly. This output increased from 48 million pounds in 1950 to a record of 122 million pounds in 1969, then declined slightly to 120 million pounds in 1970, reflecting the smaller apple crop. The sharp increase in the pack of frozen apples is mainly caused by the increased use of

frozen apples in pies and related bakery goods. Production of dried apples has fluctuated, but overall it has remained rather steady. Comparable figures on output of other apple products are not available.

### Trends in Per Capita Consumption

Annual per capita consumption of apples, fresh and processed combined on a fresh weight equivalent basis, showed a generally erratic trend during the last 2 decades. Consumption reached a high of 31.5 pounds in 1951 and then declined to a low of 23.9 pounds in 1966. As a result of record production in 1969 and relatively high production in 1970, consumption bounced back to 29.2 pounds in 1970.

The decrease over the years has been in fresh consumption--from 22.7 pounds in 1950-53 to 16.3 pounds in 1967-70, falling from approximately 80 to 62 percent of total per capita apple consumption on a fresh equivalent basis (table D). In contrast, consumption of processed apples has increased sharply--from 6 pounds (fresh equivalent basis) in 1950-53 to 10 pounds in 1967-70.

There have been shifts among forms in which the processed products are used--canned apples and applesauce, canned juice, frozen and dried apples. Decreased consumption of canned apple slices and dried apples has been offset by sharply increased use of canned applesauce and apple juice and frozen apples and applesauce. Per capita use of canned apple juice has increased almost three-fold and frozen apple and applesauce and canned applesauce about doubled (table E).

Changes in composition of per capita apple consumption during the last 2 decades can be traced to several factors. The substitution of processed for fresh apples is closely associated with changes in consumer tastes and preferences and living habits. Consumers are constantly seeking foods that are convenient and time-saving. Processed fruits are essentially such foods. As employment of women is increasing, more families are eating away from home. This further stimulates the markets for processed apple products.

The shift to processed use for apples also reflects lower prices for



processed fruit than for fresh fruit. Retail price of fresh fruits and vegetables increased 51 percent since the early 1950's, with an increase of only 28 percent for processed products. (Retail price indexes for fruits alone are not available, but indications are that the increase in prices for fresh was much larger than for processed.) Furthermore, canned applesauce is inexpensive relative to other processed fruits.

Development of new or modified product forms as well as quality improvement in processed products have also contributed greatly to the increase in consumption of processed fruits. The use of frozen apples in pies and other bakery goods and of apple juice in mixed fruit juices are examples.

### Producer Prices

Apple prices for all sales (fresh market and processing) rose 23 percent between 1950-53 and 1967-70. Prices of apples sold for fresh market rose more than those utilized for processing--38

percent versus 29 percent. Year-to-year price movements for both fresh and processing use were more moderate in the early 1960's than in any other such period over the last 2 decades.

Apple prices can be further examined by regions. Prices have been generally erratic in all 3 regions (Eastern, Central, and Western). Average apple prices for grower sales were generally lower in the East than in either of the other regions from 1950 through 1970. This was due mainly to the East's larger percentage of apples sold for processing use. But the East also had the highest average price for fresh apple sales, while the West had the lowest. But Western apple prices for all and fresh sales have each increased about 30 percent, more than either Central or Eastern regions. A possible explanation is that the West has marketed a relatively larger percentage of Delicious and Golden Delicious apples in the fresh market in recent years. A large percentage of Western apples are stored in controlled atmosphere storage for several months.

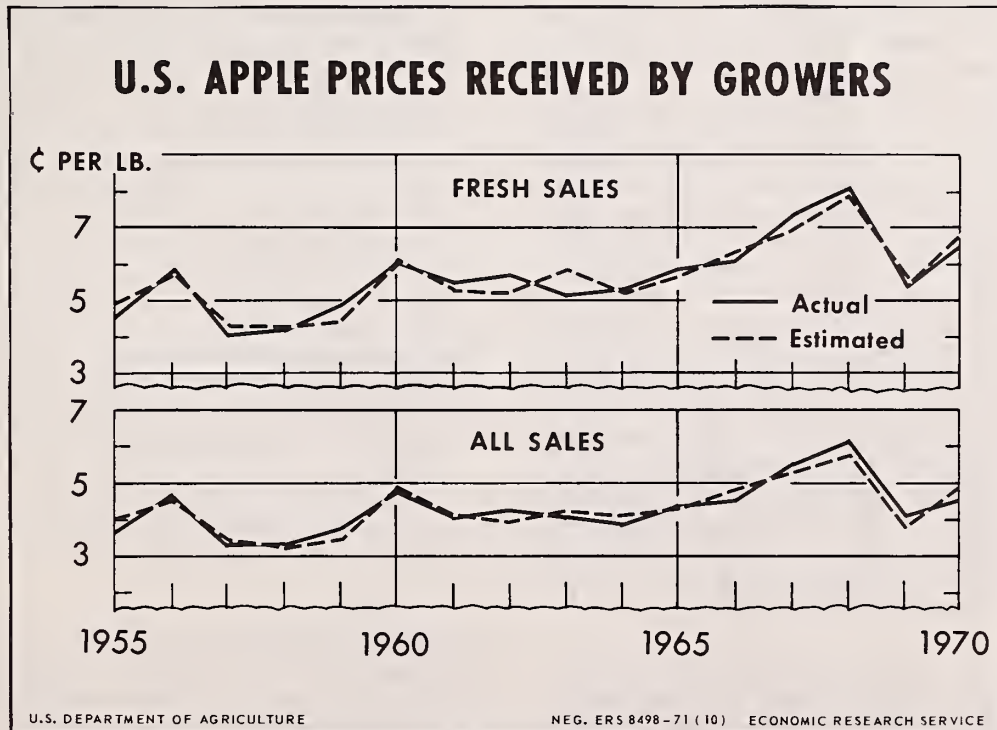


Figure 1

Economic theory suggests that apple prices are influenced by several factors such as the total apple crop, population, disposable personal income, prices or supply of competing fruits, the carryover of processed apple products, and consumer tastes and preferences. Using some of these apple price determinants, we have derived two price estimating equations for apples for fresh market and all sales fitted by ordinary least square regression for the period 1955-70.

The estimated price equation for apples for fresh market is (figure 1)

$$PA_f = 11.65591 - 0.34039 Q_a + 0.00141 I + (0.048) \quad (0.0002)$$

$$0.38670 PO_f^* (0.141)$$

$$R^2 = 0.89 \quad S_y = 0.38$$

where

$PA_f$  = U.S. apple prices received by growers for fresh market (cents per pound)

$Q_a$  = U.S. apple production (pounds), per capita

$I$  = U.S. per capita disposable personal income (dollars)

$PO_f$  = U.S. orange prices received by growers for fresh market (dollars per box)

These independent variables explain 89 percent of the variation in the price of apples received by growers for fresh market. Standard errors of each of the variables are shown in parentheses. The standard error of estimate is shown by  $S_y$ . The regression coefficients were significant at the 1 percent level for both apple production and disposable personal income and 5 percent level for prices of oranges for fresh market. The equation states that the U.S. apple price received by growers for fresh market varies inversely with apple production and directly with per capita disposable personal income and U.S. orange price received by growers for fresh market.

The interpretation of this equation can be summarized as follows:

1. An increase in estimated per capita apple production of 1 pound can be expected to result in a decrease in price of apples for fresh market of approximately 0.34 cent per pound.

2. An increase in per capita disposable personal income of \$100 can be expected to result in an increase in price of apples for fresh market of approximately 0.1 cent per pound.

3. An increase in price of oranges for fresh market of \$1 a box can be expected to result in an increase in price of apples for fresh market of approximately 0.39 cent per pound.

The estimated price equation for apples for all sales is (figure 1).

$$PA = 10.60973 - 0.29704 Q_a + 0.00091 I + (0.039) \quad (0.00015)$$

$$0.28695 PO^* (0.116)$$

$$R^2 = 0.88 \quad S_y = 0.29$$

where

$PA$  = U.S. apple prices received by growers for all sales (cents per pound)

$PO$  = U.S. orange prices received by growers for all sales (dollars per box)

$Q_a$  and  $I$ , see equation above

These independent variables explain 88 percent of the variation in the price of apples received by growers for all sales. Standard errors of each of the variables are shown in parentheses. As expected, the price of U.S. apples received by growers for all sales varies inversely with apple production and directly with per capita disposable personal income and U.S. orange prices received by growers for all sales. The regression coefficients were significant at the 1 percent level for both apple production and disposable personal income and 5 percent level for U.S. orange price received by growers for all sales.

The interpretation of this equation can also be summarized as follows:

1. An increase in estimated per capita apple production of 1 pound can be

\*The price series used for this equation were not deflated. Hence, the coefficients that were associated with income and orange prices are higher than would be expected had an allowance been made for the effect of inflation.



expected to result in a decrease in price of apples for all sales of approximately 0.30 cent per pound.

2. An increase in per capita disposal personal income of \$100 can be expected to result in an increase in price of apples for all sales of approximately 0.09 cent per pound.

3. An increase in price of oranges for all sales of \$1 a box can be expected to result in an increase in price of apples for all sales of approximately 0.27 cent per pound.

#### Changes in Marketing and Industry Structure

Apples as well as other fruits have undergone many changes in marketing and industry structure. As a result of such developments as the growth of supermarkets, the emphasis on mass merchandising of uniform quality products at low cost, the increased geographic concentration of fruit production, larger farm units and improved transportation, direct marketing of apples at shipping points has increased. The old marketing system from grower through country buyer to terminal market, wholesaler, and retailer no longer prevails. Most apple growers deliver their crop to nearby shipping points. Then apples are graded, packed, and sold by shippers to large corporate chains and some voluntary and cooperative wholesalers as well as small chain operations.

With the increased volume of sales at shipping points, each individual apple grower is often in a weak bargaining position when he deals with only a few typically large shippers in his area. So cooperative apple marketing associations play a large role in handling the growers' apples. Latest available data indicate cooperatives marketed approximately 21 percent of the apples. <sup>4/</sup> But in the Pacific Northwest, the major apple producing area, cooperatives handled 47 percent of the apple crop. <sup>5/</sup> Although the number of cooperative

apple marketing associations only increased from 48 in 1952 to 51 in 1964, average dollar volume per cooperative increased sharply, up 62 percent during this period. <sup>6/</sup>

The development of controlled atmosphere cold storage has also brought changes in the marketings of fresh apples. Apples now can be stored in good condition throughout the season and marketed for an extended period. Consequently, more apples are now shipped later in the season and the processing season for apples is also extended. Thus, the ensuing more orderly marketing increases the opportunities for apple marketers to maximize their returns from the fruits.

Because of these advantages, the capacity of controlled atmosphere cold storage has been continuously expanding. The latest CA survey made by USDA's Statistical Reporting Service in 1969 indicated that CA capacity was equivalent to 21.6 million bushels, almost double that of 1963. <sup>7/</sup>

As the marketing system changes and increasing proportions of apples are marketed for processing use, growers want to be reasonably assured of markets and prices of their products. Apple growers have found that group action is needed to adapt to changing market conditions. They have formed cooperative bargaining associations as a means for gaining bargaining power. According to a Farmer Cooperative Service survey, there were no apple bargaining cooperatives in 1954, but in 1964 there were 7. <sup>8/</sup>

Increased demand for processed apples is also bringing about many changes in the processing industry. The quantity of canned apples and applesauce processed has increased substantially in recent years. According to Census of Manufactures data, the value of production in 1967 was \$124.4 million, compared with only \$57.5 million in 1954. The total processed quantity of frozen apples, although comparatively small, has also

<sup>4/</sup> Food from Farmer to Consumer, Report of the National Commission on Food Marketing, June 1966, p. 51.

<sup>5/</sup> Charles H. Meyer, "Cooperatives in the Fruit and Vegetable Industry," Service Report 93, January 1968, Farmer Coop. Serv., U.S. Dept. Agr., p. 16.

<sup>6/</sup> Ibid, pp. 3 and 41.

<sup>7/</sup> Capacity of Refrigerated Warehouses in the United States, Oct. 1, 1969, Statistical Reporting Service, U.S. Dept. Agr., March 1970. p. 4.

<sup>8/</sup> Ibid, p. 53.



increased substantially in recent years. Many processing firms have built new plants or have modernized and enlarged existing facilities. New equipment and sufficient volume to realize economies of scale in processing operations have contributed to lower unit labor costs. With increases in volume of processing fruit and improvement in plant and equipment, the value added by manufacture has continued to increase.

Processing fruit cooperatives have maintained a large share of the manufactured apple product business. A survey by USDA's Farmer Cooperative Service in 1969 indicated that 47 cooperative fruit and vegetable processors packed approximately 38 percent of all dried apples, 19 percent of the applesauce and apple juice, and 7 percent of the frozen apples processed in the United States. 9/

#### Prospective Developments

Apple output probably will continue to trend upward, and likely at a faster rate than population growth. Better cultural practices, some new varieties, replacement of older orchards with dwarf and semi-dwarf trees, installation of more orchard heating systems, and better methods of thinning and supplemental irrigation are expected to keep yield per acre trending upward. However, increased efficiency often requires increases in use of capital and a large scale of operation which will force many small and less efficient apple growers out of business. Thus, total apple acreage is likely to fall, and apple production will be concentrated in larger commercial holdings. Relative increasing labor costs and shortages of harvest labor will accelerate the use of mechanized cultural and harvesting operations.

Apple production will continue to be concentrated in several principal producing States--probably further increasing their share of U.S. output. All three regions (Central, Eastern, and Western) will share the larger production, but the output from the West probably will increase at a relatively rapid rate, judging mainly

9/ Gilbert W. Biggs and J. Kenneth Samuels, "Cooperative Fruit and Vegetable Processors in the United States," Service Report 123, May 1971, Farmer Coop. Serv., U.S. Dept. Agr., pp. 7 and 8.

from Washington fruit tree census data and related USDA production figures for recent crops. Among varieties, Golden Delicious will continue to increase rapidly in both absolute and relative terms because plantings have been sharply increasing in all regions, with a large proportion of dwarf and semi-dwarf stocks. Red Delicious will also continue to expand as the main variety for fresh use since orchard growers have responded to the premium price for this variety by planting a larger proportion of Red Delicious in new plantings during recent years.

To increase efficiency and expand outlets for apples, the apple industry will further improve facilities, equipment, and processing methods. Some apple packing plants have adopted such improvements as pallet box handling, float-roll sorting tables, automatic box filling, and hydro-handling systems which make it possible to separate the fruit by grade and size before it goes into storage. The processing industry also has several things under development, such as dried flakes for instant apple sauce, jelled apple sauce, buffer treated fresh slices for pies, acid fume peeling, thick cake extraction of apple juice, and objective evaluation of flavor by means of gas chromatography.

Additional new methods of processing, such as dehydrofreezing and the osmo vac method of drying, are likely to stimulate further use of processed apples. Dehydrofrozen apple slices are made by dehydrating apple slices under controlled conditions to assure superior quality. These slices, reduced 50 percent in weight and volume, are then preserved by freezing. This process provides a big potential outlet for apples for use in manufacturing products such as pies and other bakery products. The osmo vac method of drying--(combination of the process of osmosis with vacuum drying) is being developed to produce crisp and porous apples. It retains the fresh apple flavor and will keep without refrigeration or chemical preservation. Osmo vac apples are easily reconstituted for use in desserts and salads.

The total demand for apples will increase in the years ahead due mainly to population growth and continued increases in disposable personal income.

Per capita fresh apple consumption will likely be stable at the recent levels at least for about 5 or 6 years, assuming no seriously short crops. But per capita consumption of processed apple products will continue to increase. A rising standard of living, increased employment of women, and the desire for more leisure time will contribute to the growing increase in consumption of processed apple products. Among processed items, prospects appear the best for canned applesauce and apple juice which have gained sharply in popularity during the last few years. Per capita use of frozen apples mainly in pies and other bakery goods, probably will increase somewhat less vigorously.

Because of the increased concentration of apple production by large growers, many growers are likely to extend their operations into packing and shipping. On the other hand, the retailers such as large supermarket chains or large institutional buyers are likely to increase their purchases directly from the grower-shipper at shipping points. However, to maintain or improve competitive or bargaining positions,

growers probably will be taking more collective action or become associated with integrated marketing systems. Thus, the role of apple cooperative marketing and bargaining associations as well as trade associations will continue to grow in importance.

Another marketing system that probably will become increasingly popular with small apple growers with plantings near large centers of population is the pick-your-own operation. This type of operation has often proved profitable for many small and medium-sized growers and might provide a practical solution to a diminishing supply of harvest labor.

In anticipation of large apple production in the years ahead, the capacity of controlled atmosphere cold storage will be further expanded. Thus, the marketing of apples will be extended further into the spring and summer months providing an opportunity for more orderly and uniform marketing throughout the season and the possibility of increasing returns to apple growers.

**Table A.—Apples: Production having value by regions, United States, 1950-70**

Year	Eastern	Central	Western	Total
	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>
1950-54 .....	2,175.4	864.3	1,679.1	4,718.8
1955-59 .....	2,399.2	1,001.3	1,768.5	5,169.0
1960-64 .....	2,615.1	1,141.1	1,882.4	5,638.6
1965 .....	2,844.4	1,207.9	1,941.0	5,993.3
1966 .....	2,120.2	1,051.9	2,474.3	5,646.4
1967 .....	2,585.9	978.3	1,830.7	5,394.9
1968 .....	2,491.3	1,052.1	1,898.5	5,441.9
1969 .....	2,818.9	1,273.0	2,659.9	6,751.8
1970 .....	2,891.5	1,220.0	2,111.0	6,222.5

**Table B.—U.S. apple production by varieties, 1950-70**

Year	Delicious	Golden Delicious	McIntosh	Rome Beauty	Jonathan	York Imperial	Stayman	Winesap	All others	Total
	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>
1950-54 ....	1,001.1	155.8	533.3	321.4	306.0	246.6	220.6	493.5	1,568.9	4,847.2
1955-59 ....	1,161.0	241.8	667.7	350.5	358.3	274.3	270.5	459.4	1,399.4	5,182.9
1960-64 ....	1,588.9	420.5	714.4	419.8	382.4	305.8	295.3	386.6	1,383.4	5,897.1
1965 .....	1,615.8	569.6	743.2	482.2	447.7	297.3	355.1	284.9	1,335.7	6,131.5
1966 .....	1,633.8	595.8	674.5	421.5	403.4	199.3	179.3	320.1	1,323.5	5,751.2
1967 .....	1,452.3	636.5	691.4	447.9	327.0	271.3	197.8	249.0	1,151.9	5,425.1
1968 .....	1,390.4	631.5	645.2	438.7	360.8	312.3	236.5	261.4	1,187.4	5,464.2
1969 .....	2,093.9	888.6	650.8	540.9	447.8	344.0	310.2	261.3	1,294.6	6,832.1
1970 .....	1,760.5	802.5	722.4	517.8	415.1	359.6	285.2	204.9	1,387.3	6,455.3

**Table C.—Apples, commercial crop: Type of use as a percentage of total sales, United States, 1950-70**

Year	Total sold	Utilization of sales					
		Fresh sales	Processed				Total processing
			Canned	Dried	Frozen	Other <sup>1</sup>	
	<i>Million pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1950-54 .....	4,549.8	68.3	14.5	4.0	1.6	11.6	31.7
1955-59 .....	5,062.7	66.1	16.3	3.6	2.7	11.3	33.9
1960-64 .....	5,591.9	60.1	19.9	3.2	3.2	13.6	39.9
1965 .....	5,954.4	56.0	22.0	3.1	3.7	15.2	44.0
1966 .....	5,610.3	56.6	18.6	4.5	3.7	16.6	43.4
1967 .....	5,361.6	58.5	20.6	3.0	4.8	13.1	41.5
1968 .....	5,407.2	58.4	21.7	3.2	4.2	12.5	41.6
1969 .....	6,715.3	55.2	20.8	4.2	3.1	16.7	44.8
1970 .....	6,187.3	55.8	19.1	2.8	2.9	19.4	44.2

<sup>1</sup> Mostly crushed for vinegar, cider and juice.



Table D.—Apples: Per capita consumption, fresh weight equivalent,  
United States, 1950-70

Year	Fresh <sup>1</sup>	Canned	Canned juice <sup>1</sup>	Frozen	Dried	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
1950-54 .....	22.2	3.6	0.9	0.5	1.0	28.2
1955-59 .....	20.3	4.4	1.1	.7	.8	27.3
1960-64 .....	17.3	5.0	1.7	.6	.8	25.4
1965 .....	16.3	5.4	2.4	.8	.7	25.6
1966 .....	16.0	4.5	1.8	.7	.9	23.9
1967 .....	16.2	5.1	2.1	.9	1.0	25.3
1968 .....	15.7	4.9	2.6	.8	.9	24.9
1969 .....	15.1	5.0	3.7	.9	1.1	25.8
1970 <sup>2</sup> .....	18.1	5.0	4.1	.8	1.2	29.2

<sup>1</sup> Crop year basis. <sup>2</sup> Preliminary.

Table E.—Apples: Per capita consumption, fresh and processed, product weight,  
United States, 1950-70

Year	Fresh <sup>1</sup>	Processed					
		Canned				Frozen apples and applesauce <sup>1</sup>	Dried apples <sup>1</sup>
		Apples	Applesauce	Total apples and applesauce	Apple juice <sup>1</sup>		
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
1950-54 .....	22.2	0.8	1.7	2.5	0.56	0.27	0.12
1955-59 .....	20.3	.8	2.3	3.1	.72	.41	.10
1960-64 .....	17.3	.7	2.9	3.6	1.12	.39	.10
1965 .....	16.3	.7	3.1	3.8	1.53	.45	.09
1966 .....	16.0	.5	2.8	3.3	1.17	.39	.15
1967 .....	16.2	.7	3.0	3.7	1.35	.55	.10
1968 .....	15.7	.6	2.9	3.5	1.69	.49	.11
1969 .....	15.1	.6	3.0	3.6	2.41	.54	.18
1970 <sup>2</sup> .....	18.1	.5	3.1	3.6	2.67	.47	.10

<sup>1</sup> Crop year basis. <sup>2</sup> Preliminary.

Table 1.—U.S. fruit and tree nuts: Production average 1964-68, 1969, 1970, and indicated 1971

Crop	Average 1964-68	1969	1970	1971
	<i>1,000 tons</i>	<i>1,000 tons</i>	<i>1,000 tons</i>	<i>1,000 tons</i>
<b>Noncitrus fruit:</b>				
Apples .....	2,872	3,376	3,111	3,076
Apricots .....	184	231	176	207
Cherries, sweet .....	103	127	122	137
Cherries, tart .....	140	152	119	130
Cranberries .....	72	91	<sup>1</sup> 102	101
Figs .....	58	58	51	<sup>2</sup> Jan. 1972
Grapes .....	3,630	3,898	3,119	3,901
Nectarines .....	65	66	66	70
Peaches .....	1,643	1,833	1,506	1,407
Pears .....	601	712	537	733
Prunes and plums .....	563	482	670	652
Strawberries <sup>3</sup> .....	244	243	247	259
Total .....	10,175	11,269	9,826	<sup>4</sup> 10,673
<b>Tree nuts:</b>				
Almonds .....	77	122	124	122
Filberts .....	9	7	10	13
Pecans .....	102	113	77	126
Walnuts .....	88	106	112	125
Total .....	276	348	323	386
<b>Citrus fruit:<sup>5</sup></b>				
Oranges .....	6,414	8,023	8,264	<sup>2</sup> Dec. 1
Grapefruit .....	1,967	2,187	2,477	<sup>2</sup> Dec. 1
Lemons .....	613	590	633	<sup>2</sup> Nov. 1
Limes .....	23	29	35	37
Tangelos .....	67	113	122	149
Tangerines .....	193	185	221	198
Templets .....	200	234	225	270
Total .....	9,477	11,361	11,977	<sup>2</sup> Dec. 1

<sup>1</sup>Includes cranberries put in set aside under the cranberry marketing orders. <sup>2</sup>Month indicates crop report containing datum. <sup>3</sup>Alabama, Connecticut, and Maine included in 1964-68

average and excluded in later years. <sup>4</sup>Excluding figs. <sup>5</sup>1969 indicates 1969/70 crop.

Table 2.—Citrus fruits: Production, 1969/70, 1970/71, and indicated 1971/72<sup>1</sup>

Crop and State	1969/70	1970/71	1971/72
	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>
<b>Oranges:</b>			
Early, Midseason and Navel varieties: <sup>3</sup>			
California .....	21,200	17,900	22,000
Florida .....	72,900	82,100	67,000
Texas .....	2,800	4,000	4,000
Arizona .....	990	760	700
Total .....	97,890	104,760	93,700
Valencias:			
California .....	17,800	20,700	<sup>4</sup> Dec. 1
Florida .....	64,800	60,200	64,000
Texas .....	1,400	2,200	2,200
Arizona .....	3,640	2,800	3,200
Total .....	87,640	85,900	<sup>4</sup> Dec. 1
All Oranges:			
California .....	39,000	38,600	<sup>4</sup> Dec. 1
Florida .....	137,700	142,300	131,000
Texas .....	4,200	6,200	6,200
Arizona .....	4,630	3,560	3,900
Total oranges .....	185,530	190,660	<sup>4</sup> Dec. 1
<b>Grapefruit:</b>			
Florida, all .....	37,400	42,900	43,000
Seedless .....	27,900	31,100	33,000
Pink .....	10,200	10,900	12,000
White .....	17,700	20,200	21,000
Other .....	9,500	11,800	10,000
Texas .....	8,100	10,100	9,700
Arizona .....	3,160	2,520	2,800
California, all .....	5,250	5,160	<sup>4</sup> Dec. 1
Desert Valleys .....	2,950	3,260	3,200
Other areas .....	2,300	1,900	<sup>4</sup> Dec. 1
Total grapefruit .....	53,910	60,680	<sup>4</sup> Dec. 1
<b>Lemons:</b>			
California .....	12,700	13,500	<sup>4</sup> Nov. 1
Arizona .....	2,820	3,150	3,100
Total lemons .....	15,520	16,650	<sup>4</sup> Nov. 1
<b>Limes:</b>			
Florida .....	725	880	925
<b>Tangelos:</b>			
Florida .....	2,500	2,700	3,300
<b>Tangerines:</b>			
Florida .....	3,000	3,700	3,300
Arizona .....	350	390	400
California .....	760	800	700
Total tangerines .....	4,110	4,890	4,400
<b>Temples:</b>			
Florida .....	5,200	5,000	6,000

<sup>1</sup> The crop year begins with the bloom of the first year and ends with completion of harvest the following year. <sup>2</sup> Net content of box varies. Approximate averages are as follows: Oranges—California and Arizona, 75 lbs.; other States, 90 lbs.; Grapefruit—California, Desert Valleys, and Arizona, 64 lbs.; other California areas, 67 lbs.; Florida, 85 lbs. and Texas, 80 lbs.;

Lemons—76 lbs.; Limes—80 lbs.; Tangelos—90 lbs.; Tangerines—California and Arizona, 75 lbs.; Florida, 95 lbs.; and Temples—90 lbs. <sup>3</sup> Navel and Miscellaneous varieties in California and Arizona. Early and Midseason varieties in Florida and Texas, including small quantities of tangerines in Texas. <sup>4</sup> Month indicates crop report containing datum.



Table 3.—Six citrus fruits: Production and use, United States, 1966/67 through 1970/71<sup>1</sup>

Fruit and season	Production <sup>2</sup>	Farm home use	Total sold	Utilization of sales			
				Fresh		Processed	
				Quantity	Percentage	Quantity	Percentage
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Percent	1,000 tons	Percent
Oranges: <sup>3</sup>							
1966/67 .....	8,150	43	8,107	2,071	25.5	6,036	74.5
1967/68 .....	5,642	43	5,599	1,456	26.0	4,143	74.0
1968/69 .....	8,104	45	8,059	1,861	23.1	6,198	76.9
1969/70 .....	8,257	42	8,215	1,875	22.8	6,340	77.2
1970/71 .....	8,489	33	8,456	1,862	22.0	6,594	78.0
Grapefruit:							
1966/67 .....	2,286	12	2,274	1,012	44.5	1,262	55.5
1967/68 .....	1,781	13	1,768	873	49.4	895	50.6
1968/69 .....	2,209	12	2,197	900	41.0	1,297	59.0
1969/70 .....	2,187	12	2,175	939	43.2	1,236	56.8
1970/71 .....	2,477	12	2,465	979	39.7	1,486	60.3
Lemons:							
1966/67 .....	681	1	680	352	51.8	328	48.2
1967/68 .....	641	1	640	357	55.8	283	44.2
1968/69 .....	602	2	600	337	56.2	263	43.8
1969/70 .....	590	1	589	355	60.3	234	39.7
1970/71 .....	633	1	632	371	58.7	261	41.3
Limes:							
1966/67 .....	17	( <sup>4</sup> )	17	11	64.7	6	35.3
1967/68 .....	29	( <sup>4</sup> )	29	14	48.3	15	51.7
1968/69 .....	28	( <sup>4</sup> )	28	15	53.6	13	46.4
1969/70 .....	29	( <sup>4</sup> )	29	15	51.7	14	48.3
1970/71 .....	35	( <sup>4</sup> )	35	16	45.7	19	54.3
Tangelos:							
1966/67 .....	77	1	76	58	76.3	18	23.7
1967/68 .....	77	1	76	63	82.9	13	17.1
1968/69 .....	81	1	80	54	67.5	26	32.5
1969/70 .....	113	1	112	62	55.4	50	44.6
1970/71 .....	122	1	121	72	59.5	49	40.5
Tangerines:							
1966/67 .....	225	4	221	162	73.3	59	26.7
1967/68 .....	160	4	156	120	76.9	36	23.1
1968/69 .....	192	4	188	128	68.1	60	31.9
1969/70 .....	185	4	181	134	74.0	47	26.0
1970/71 .....	221	4	217	150	69.1	67	30.9
Total:							
1966/67 .....	11,436	61	11,375	3,666	32.2	7,709	67.8
1967/68 .....	8,330	62	8,268	2,883	34.9	5,385	65.1
1968/69 .....	11,216	64	11,152	3,295	29.5	7,857	70.5
1970/71 .....	11,361	60	11,301	3,380	29.9	7,921	70.1
1970/71 .....	11,977	51	11,926	3,450	28.9	8,476	71.1

<sup>1</sup> 1970/71 preliminary. <sup>2</sup> Production having value. <sup>3</sup> Includes Data prepared from citrus production and utilization reports, Temples. <sup>4</sup> Negligible. SRS, USDA.

Table 4.—Selected citrus fruits: Use for processing by percentages of total sales, Florida and California, 1966/67 through 1970/71

State, variety, and season	1966/67	1967/68	1968/69	1969/70	1970/71 <sup>1</sup>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
<b>ORANGES:</b>					
Florida:					
Total <sup>2</sup> .....	86.0	81.7	89.1	89.2	89.4
Temple .....	40.4	38.2	53.9	46.2	55.9
Other early and midseason .....	86.7	82.4	89.2	90.2	90.3
Valencia .....	88.7	84.9	91.5	91.5	90.8
California:					
Total .....	27.3	38.9	40.6	32.2	32.6
Navel and miscellaneous .....	13.9	39.2	23.4	24.6	17.8
Valencia .....	38.8	38.6	53.1	41.2	45.5
<b>GRAPEFRUIT:</b>					
Florida:					
Total .....	60.6	55.6	65.0	62.1	65.4
Seedless .....	47.2	41.8	52.4	51.1	53.6
Pink .....	30.5	26.6	38.1	34.6	35.7
White .....	57.5	51.8	61.4	60.6	63.3
Other (seeded) .....	90.5	91.2	93.7	94.5	96.3

<sup>1</sup> Preliminary. <sup>2</sup> Including Temples.

Table 5.—Oranges and grapefruit processed: Use by type of product, Florida, 1966/67 through 1970/71<sup>1</sup>

Crop and season	Frozen concentrates	Chilled products		Other processed	Total processed
		Juice	Sections and salads		
	<i>1,000 boxes</i>	<i>1,000 boxes</i>	<i>1,000 boxes</i>	<i>1,000 boxes</i>	<i>1,000 boxes</i>
<b>ORANGES:<sup>2</sup></b>					
1966/67 .....	96,763	16,479	807	10,214	124,263
1967/68 .....	61,970	15,975	837	6,764	85,546
1968/69 .....	92,125	17,843	773	9,350	120,091
1969/70 .....	100,739	18,640	841	8,206	128,426
1970/71 .....	103,521	19,772	703	8,834	132,830
<b>GRAPEFRUIT:</b>					
1966/67 .....	5,371	1,167	1,566	18,215	26,319
1967/68 .....	1,792	1,288	1,612	13,506	18,198
1968/69 .....	6,550	1,631	1,676	15,976	25,833
1969/70 .....	4,579	1,824	1,158	15,577	23,138
1970/71 .....	6,819	2,348	1,091	17,682	27,940

<sup>1</sup> 1970/71 preliminary. <sup>2</sup> Includes tangelos, Temples and murcotts.

Table 6.—Citrus fruit for processing: Season average price per box delivered to processing plant, by kind, variety, State, and United States, 1966/67 through 1970/71

Kind and variety and State	1966/67	1967/68	1968/69	1969/70	1970/71 <sup>1</sup>
<i>Dollars (equivalent packinghouse door returns)</i>					
Oranges:					
Florida:					
Temple .....	.80	1.97	2.01	1.51	1.14
Other early and midseason .....	1.44	2.46	2.33	1.91	1.48
Valencia .....	1.77	2.93	2.59	1.90	2.91
California:					
Navel and miscellaneous .....	.72	.84	.56	.42	-.68
Valencia .....	1.32	1.80	.92	1.18	1.38
Grapefruit:					
Florida:					
Seedless .....	.92	1.75	1.12	2.01	2.03
Seeded .....	1.16	2.03	1.40	2.07	2.02
Texas .....	.62	1.44	.65	1.05	1.15
California .....	.73	.80	.45	.68	1.18
Arizona .....	.65	1.00	.65	1.05	.50
Lemons:					
California .....	1.66	1.88	1.78	1.86	2.08
Arizona .....	1.55	1.65	1.65	2.05	1.70
Tangerines:					
Florida .....	1.12	2.29	1.82	1.65	.77
California .....	.44	1.38	.70	.88	1.10
Arizona .....	1.10	1.35	1.35	.75	1.00
Tangelos:					
Florida .....	.90	1.64	1.60	1.30	.63
Limes:					
Florida .....	2.24	2.21	1.80	1.68	1.68

<sup>1</sup> Preliminary.

Table 7.—Frozen concentrated orange and grapefruit juice: Packs, movement, and stocks, Florida, 1966/67 through 1970/71

Item and Season	Beginning stocks	Pack	Total supply <sup>1</sup>	Season movement	Ending stocks
	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>
Orange: <sup>2</sup>					
1966/67 .....	12,828	131,755	144,983	117,758	27,225
1967/68 .....	27,225	83,697	114,566	101,681	12,885
1968/69 .....	12,885	103,750	120,928	103,528	17,400
1969/70 .....	17,400	124,947	143,802	117,236	26,566
1970/71 .....	26,566	125,187			
Grapefruit:					
1966/67 .....	1,030	5,485	6,515	3,579	2,936
1967/68 .....	2,936	1,814	4,750	3,759	991
1968/69 .....	991	5,920	6,911	5,482	1,429
1969/70 .....	1,429	4,294	5,723	5,256	467
1970/71 .....	467	6,870	7,337		

<sup>1</sup> Includes imports of frozen concentrated orange juice (1,000 gallons): 1966/67, 400; 1967/68, 3,644; 1968/69, 4,293; and 1969/70, 1,455. <sup>2</sup> 45° Brix in gallons including concentrated orange juice for manufacture.

Prepared from reports of Florida Cannery Association.



Table 8.—Canned citrus products: Packs, movement, and stocks, selected items, Florida, 1966/67 through 1970/71

Item and season <sup>1</sup>	Packers' carryin	Pack	Total supply	Season movement	Packers' carryout
<i>1,000 cases (basis equivalent cases of 24 No. 2 cans)</i>					
<b>CANNED JUICE:<sup>2</sup></b>					
Orange:					
1966/67 .....	949	14,412	15,361	13,212	2,149
1967/68 .....	2,149	9,817	11,966	10,918	1,048
1968/69 .....	1,048	11,386	12,434	10,443	1,991
1969/70 .....	1,991	11,223	13,214	12,115	1,099
1970/71 .....	1,099	11,599	12,698	11,385	1,313
Grapefruit:					
1966/67 .....	1,093	17,844	18,937	15,305	3,632
1967/68 .....	3,632	13,300	16,932	13,273	3,659
1968/69 .....	3,659	15,445	19,104	17,470	1,634
1969/70 .....	1,634	16,423	18,057	17,249	808
1970/71 .....	808	19,110	19,918	18,335	1,583
Blend:					
1966/67 .....	323	3,311	3,634	2,866	768
1967/68 .....	768	2,043	2,811	2,287	524
1968/69 .....	524	2,295	2,819	2,384	435
1969/70 .....	435	2,192	2,627	2,332	295
1970/71 .....	295	2,186	2,481	2,088	393
Tangerine:					
1966/67 .....	9	156	165	113	52
1967/68 .....	52	49	101	95	6
1968/69 .....	6	92	98	67	31
1969/70 .....	31	47	78	57	21
1970/71 .....	21	35	56	38	18
<b>CANNED FRUIT:</b>					
Grapefruit sections:					
1966/67 .....	385	4,756	5,141	4,246	895
1967/68 .....	895	3,412	4,307	3,670	637
1968/69 .....	637	3,396	4,033	3,510	523
1969/70 .....	523	3,325	3,848	3,169	679
1970/71 .....	679	3,300	3,979	3,353	626
Citrus salad and sections:					
1966/67 .....	79	431	510	347	163
1967/68 .....	163	342	505	358	147
1968/69 .....	147	299	446	338	108
1969/70 .....	108	297	405	313	92
1970/71 .....	92	234	326	244	82

<sup>1</sup> Season beginning October 1, approximately. <sup>2</sup> Single strength.

Prepared from reports of Florida Cannery Association.

Table 9.—Chilled citrus products: Packs, movement, and stocks, Florida, 1966/67 through 1970/71

Item and season <sup>1</sup>	Beginning stocks	Pack <sup>2</sup>	Total supply	Season movement	Ending stocks
	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>
Orange juice, s.s.:					
1966/67 .....	7,741	99,972	107,713	95,947	11,766
1967/68 .....	11,766	98,305	110,071	98,064	12,007
1968/69 .....	12,007	94,479	106,486	93,882	12,604
1969/70 .....	12,604	107,940	120,544	106,064	14,480
1970/71 .....	14,480	112,388	126,868	112,090	14,778
Grapefruit juice, s.s.:					
1966/67 .....	411	5,613	6,024	4,962	1,062
1967/68 .....	1,062	6,065	7,127	6,300	827
1968/69 .....	827	7,719	8,546	7,479	1,067
1969/70 .....	1,067	9,430	10,497	10,128	369
1970/71 .....	369	12,949	13,318	12,394	924
Grapefruit sections:					
1966/67 .....	456	2,179	2,635	2,233	402
1967/68 .....	402	2,294	2,696	1,982	714
1968/69 .....	714	1,988	2,702	2,005	697
1969/70 .....	697	1,992	2,689	2,157	532
1970/71 .....	532	2,038	2,570	1,976	594
Orange sections:					
1966/67 .....	247	1,215	1,462	1,119	343
1967/68 .....	343	1,290	1,633	1,246	387
1968/69 .....	387	807	1,194	996	198
1969/70 .....	198	1,611	1,809	1,132	677
1970/71 .....	677	962	1,639	968	671
Citrus salad:					
1966/67 .....	961	6,365	7,326	6,124	1,202
1967/68 .....	1,202	5,601	6,803	5,950	853
1968/69 .....	853	5,608	6,461	5,403	1,058
1969/70 .....	1,058	4,929	5,987	4,903	1,084
1970/71 .....	1,084	4,535	5,619	4,644	975

<sup>1</sup>Season beginning October 1, approximately. <sup>2</sup>Packs of chilled juices include products of fresh fruit and frozen concentrate and exclude reprocessed single strength bulk.

Prepared from reports of Florida Cannery Association.

Table 10.—Citrus fruit: United States exports of selected fresh and processed items, by areas of destination, 1965/66-1969/70

Item and season	Canada	Europe				Other	Total
		United Kingdom	Common Market	Other	Total		
	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>	<i>1,000 boxes<sup>2</sup></i>
<b>Fresh fruit:</b>							
Oranges:							
1965/66 .....	4,343	86	1,656	490	2,232	1,652	8,227
1966/67 .....	5,101	231	2,143	752	3,126	1,560	9,787
1967/68 .....	3,361	6	273	21	300	960	4,621
1968/69 .....	4,507	75	2,129	259	2,463	1,813	8,783
1969/70 .....	4,628	132	1,298	209	1,639	2,159	8,426
Grapefruit:							
1965/66 .....	1,762	18	607	114	739	46	2,547
1966/67 .....	2,486	35	661	117	813	44	3,343
1967/68 .....	1,826	8	377	71	456	53	2,335
1968/69 .....	2,498	10	380	40	430	72	3,000
1969/70 .....	2,279	7	434	62	503	96	2,878
Lemons and limes:							
1965/66 .....	441	66	1,486	359	1,911	909	3,261
1966/67 .....	443	78	1,466	369	1,913	1,022	3,378
1967/68 .....	449	46	1,413	314	1,773	1,236	3,458
1968/69 .....	500	23	999	249	1,271	1,289	3,060
1969/70 .....	436	51	1,222	341	1,614	1,687	3,737
	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>	<i>1,000 gallons</i>
<b>Canned juice, s.s.:</b>							
Orange:							
1965/66 .....	5,194	10	237	346	593	484	6,271
1966/67 .....	6,321	198	2,589	1,346	4,133	652	11,106
1967/68 .....	5,455	29	3,740	3,272	7,041	690	13,186
1968/69 .....	4,337	14	2,034	2,215	4,263	683	9,283
1969/70 .....	4,781	80	2,987	3,461	6,528	825	12,134
Grapefruit:							
1965/66 .....	2,028	29	668	149	846	235	3,109
1966/67 .....	2,233	235	1,968	742	2,945	180	5,358
1967/68 .....	2,344	6	1,476	442	1,924	204	4,472
1968/69 .....	3,066	5	1,524	410	1,939	221	5,226
1969/70 .....	3,448	50	1,303	239	1,592	1,009	6,049
<b>Orange juice concentrate:</b>							
Hot pack:							
1965/66 .....	144	---	336	110	446	252	842
1966/67 .....	139	---	363	197	560	259	958
1967/68 .....	122	---	278	137	415	187	724
1968/69 .....	115	---	315	155	470	185	770
1969/70 .....	157	81	688	336	1,105	378	1,640
Frozen:							
1965/66 .....	2,264	246	292	115	653	143	3,060
1966/67 .....	2,942	487	573	215	1,275	201	4,418
1967/68 .....	2,804	440	533	272	1,245	177	4,226
1968/69 .....	2,919	377	379	359	1,115	193	4,227
1969/70 .....	3,552	505	945	612	2,062	202	5,816

<sup>1</sup> Season beginning September 1 for fresh grapefruit; November 1 for all other items. <sup>2</sup> Box weights, pounds: Oranges, 70; grapefruit, 80; lemons, 76. Figures revised for these weights.



Table 11.—Fresh and processed citrus fruits: Average retail prices, selected cities, United States, by months, 1966-71

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
<b>FRESH</b>												
<b>Oranges (dozen):</b>												
1966 .....	72.3	72.1	71.9	72.5	75.7	79.0	78.6	85.3	87.2	95.1	92.0	77.1
1967 .....	73.9	71.3	70.3	70.2	71.9	71.8	73.7	77.5	83.5	89.4	84.1	86.2
1968 .....	89.6	71.7	93.5	90.1	92.8	90.3	94.3	103.0	109.3	111.9	106.2	86.0
1969 .....	83.0	82.7	82.9	82.5	82.4	81.9	83.5	86.6	86.2	86.1	86.4	81.6
1970 .....	78.7	80.6	81.2	79.2	80.1	83.6	87.8	90.5	91.9	99.0	94.5	89.7
1971 .....	83.9	86.8	87.7	87.5	91.2	93.8	96.5	101.5	103.7			
<b>Grapefruit (each):</b>												
1966 .....	12.0	13.2	13.4	13.3	14.3	16.1	16.5	18.0	18.0	19.8	13.1	12.3
1967 .....	12.4	12.1	11.6	11.8	12.0	12.9	14.4	16.5	17.0	15.3	13.5	13.7
1968 .....	13.8	14.0	14.2	14.9	16.6	17.2	17.5	18.5	18.7	20.4	18.1	15.0
1969 .....	14.0	13.9	13.2	13.2	13.5	14.1	15.3	19.1	20.2	18.0	14.1	13.9
1970 .....	14.1	14.9	14.7	14.9	15.7	18.6	21.1	20.9	20.4	18.6	14.6	13.9
1971 .....	13.8	14.3	14.6	15.9	16.6	20.2	22.7	23.8	23.2			
<b>Lemons (pound):</b>												
1966 .....	24.1	23.5	23.4	23.3	23.3	23.0	24.0	24.3	23.9	24.9	24.8	24.8
1967 .....	25.2	24.3	24.5	24.3	24.0	23.2	23.2	23.4	24.4	25.8	26.9	26.7
1968 .....	27.6	27.3	27.0	27.5	27.5	26.7	25.9	26.0	25.9	26.2	27.0	26.0
1969 .....	27.0	28.3	28.2	28.3	28.1	28.5	28.6	29.5	29.5	30.8	31.3	31.8
1970 .....	31.6	31.1	31.5	31.0	30.9	30.3	29.9	30.6	31.2	32.1	32.5	31.9
1971 .....	31.9	32.4	32.5	32.8	32.9	33.2	33.2	32.8	32.7			
<b>CHILLED JUICE</b>												
<b>Orange (quart):</b>												
1966 .....	42.1	41.5	41.8	42.2	42.0	42.2	42.3	42.7	43.1	43.2	42.8	40.1
1967 .....	39.6	38.1	37.3	36.3	35.8	35.7	35.9	35.2	35.5	35.9	36.8	37.5
1968 .....	38.6	39.3	39.7	40.4	41.2	41.3	41.7	42.3	43.5	42.8	42.8	43.1
1969 .....	43.0	43.3	44.4	45.1	44.9	45.2	45.0	45.2	45.3	45.3	45.2	45.0
1970 .....	44.5	44.6	44.6	44.3	44.3	44.0	44.3	44.6	44.2	44.5	44.3	43.9
1971 .....	43.6	42.8	42.8	43.7	44.6	45.2	46.2	46.7	47.1			
<b>FROZEN</b>												
<b>Conc. orange juice (6-oz. can):</b>												
1966 .....	21.1	21.1	21.8	21.9	22.3	22.9	23.0	23.2	23.1	23.1	23.2	23.2
1967 .....	22.8	19.8	19.3	18.3	18.2	17.9	17.0	17.6	17.6	17.6	18.0	19.3
1968 .....	19.4	19.9	20.1	20.6	21.0	21.2	21.4	21.4	21.7	22.1	22.3	22.2
1969 .....	22.6	23.1	24.3	24.9	25.3	24.6	24.5	24.4	24.2	23.9	23.7	23.7
1970 .....	23.5	23.5	22.8	22.5	22.5	22.5	22.3	22.4	22.3	21.9	21.8	21.6
1971 .....	21.5	21.6	21.6	22.1	22.3	23.2	23.9	24.5	25.0			
<b>Conc. lemonade (6-oz. can):</b>												
1966 .....	12.4	12.7	12.7	12.8	12.7	12.4	12.2	12.2	12.1	12.4	12.4	12.5
1967 .....	12.6	12.6	12.6	12.6	12.4	12.2	12.0	11.9	12.0	12.2	12.4	12.5
1968 .....	12.4	12.6	12.6	12.6	12.4	12.3	11.9	12.1	12.1	12.4	12.4	12.5
1969 .....	12.4	12.5	12.5	12.6	12.7	12.6	12.4	12.7	12.8	12.8	12.9	13.0
1970 .....	13.1	13.1	13.2	13.3	13.4	13.2	13.0	13.1	13.0	13.3	13.4	13.6
1971 .....	13.6	13.7	13.7	13.8	13.8	13.9	13.9	14.0	14.1			

Data from Bureau of Labor Statistics, U.S. Department of Labor.

Table 12.—Apples, commercial crops<sup>1</sup>: Production, 1969, 1970, and indicated 1971

State and area	1969	1970	1971	State and area	1969	1970	1971
	<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>		<i>Million pounds</i>	<i>Million pounds</i>	<i>Million pounds</i>
<b>Eastern States:</b>				<b>Central States cont'd.:</b>			
New England .....	289.2	315.5	341.4	Iowa .....	15.0	14.0	13.6
New York .....	855.0	945.0	1,050.0	Missouri .....	59.2	56.2	54.0
New Jersey .....	119.7	99.0	130.0	Kansas .....	14.4	11.6	15.0
Pennsylvania .....	525.0	510.0	540.0	Kentucky .....	20.9	16.4	18.0
Delaware .....	14.0	12.0	14.0	Tennessee .....	10.4	9.0	9.4
Maryland .....	72.0	69.0	73.0	Arkansas .....	9.1	7.7	8.5
Virginia .....	472.0	463.0	510.0	Total .....	1,273.0	1,220.0	1,281.5
West Virginia .....	260.0	242.0	275.0				
North Carolina .....	204.0	223.0	172.0	<b>Western States:</b>			
South Carolina .....	8.0	13.0	15.0	Idaho .....	134.0	60.0	90.0
Total .....	2,818.9	2,891.5	3,120.4	Colorado .....	77.0	63.0	68.0
				New Mexico .....	24.9	25.5	18.0
<b>Central States:</b>				Utah .....	42.0	27.5	30.0
Ohio .....	147.0	135.0	160.0	Washington .....	1,675.0	1,320.0	1,000.0
Indiana .....	90.0	83.0	90.0	Oregon .....	167.0	115.0	125.0
Illinois .....	102.9	94.1	106.0	California .....	540.0	500.0	420.0
Michigan .....	720.0	710.0	720.0	Total .....	2,659.9	2,111.0	1,751.0
Wisconsin .....	65.0	58.0	62.0				
Minnesota .....	19.1	25.0	25.0	United States .....	6,751.8	6,222.5	6,152.9

<sup>1</sup> In orchards of 100 or more bearing trees.

Table 13.—Tree nuts: Production in principal States, 1969, 1970, and indicated 1971

Crop and State	1969	1970	1971	Crop and State	1969	1970	1971
	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>		<i>Tons</i>	<i>Tons</i>	<i>Tons</i>
<b>Pecans:</b>				<b>Almonds:</b>			
North Carolina .....	1,300	550	1,900	California .....	122,000	124,000	122,000
South Carolina .....	1,500	450	3,250				
Georgia .....	44,000	27,000	43,500	<b>Filberts:</b>			
Florida .....	2,000	1,700	2,000	Oregon .....	7,100	9,000	12,500
Alabama .....	16,750	7,500	18,500	Washington .....	300	510	560
Mississippi .....	5,750	2,950	8,250	2 States .....	7,400	9,510	13,060
Arkansas .....	4,300	2,300	5,000	<b>Walnuts:</b>			
Louisiana .....	14,850	7,250	15,000	English:			
Oklahoma .....	7,250	4,000	14,000	California .....	103,000	108,000	122,000
Texas .....	11,500	19,000	12,500	Oregon .....	2,500	3,800	3,100
New Mexico .....	3,350	4,600	2,000	2 States .....	105,500	111,800	125,100
Total .....	112,550	77,300	125,900				
Improved varieties <sup>1</sup> ..	67,650	40,760	71,050	<b>Macadamia nuts:</b>			
Native and seedling ..	44,900	36,540	54,850	Hawaii .....	5,028	5,750	n.a.
				Total 5 tree nuts .....	352,478	328,360	---

<sup>1</sup> Budded, grafted, or topworked. n.a.—Data not available temporarily.

**Table 14.—Canned noncitrus fruits: Cannery carryin, pack and supplies, current season, with comparisons**

Item and season <sup>1</sup>	Carryin	Pack	Total supply	Item and season <sup>1</sup>	Carryin	Pack	Total supply
			<i>1,000 equivalent cases, 24 No. 2½'s</i>				
Total—5 items:				Cherries, sweet:			
1968/69 .....	2,137	10,162	12,299	1968/69 .....	180	531	711
1969/70 .....	2,811	12,099	14,910	1969/70 .....	112	947	1,059
1970/71 .....	3,706	7,919	11,625	1970/71 .....	330	663	993
1971/72 .....	3,247	7,302	10,549	1971/72 .....	385	536	921
Apricots: <sup>2</sup>				Peaches, Calif. Freestone:			
1968/69 .....	970	4,513	5,483	1968/69 .....	962	3,986	4,948
1969/70 .....	1,037	5,543	6,580	1969/70 .....	1,562	4,104	5,666
1970/71 .....	2,067	3,766	5,833	1970/71 .....	1,157	2,512	3,669
1971/72 .....	1,696	3,262	4,958	1971/72 .....	1,064	2,463	3,527
Cherries, RSP:							
1968/69 .....	25	1,132	1,157				
1969/70 .....	100	1,505	1,605				
1970/71 .....	152	978	1,130				
1971/72 .....	102	1,041	1,143				

<sup>1</sup>Season beginning July 1 for RSP cherries and June 1 for all other items. <sup>2</sup>California only.

Prepared from reports of National Cannery Association and Cannery League of California.

**Table 15.—Stocks of frozen fruits: End of September, 1969, 1970, and 1971**

Frozen fruit	1969	1970	1971
	<i>Thousand pounds</i>	<i>Thousand pounds</i>	<i>Thousand pounds</i>
Apples .....	51,346	58,072	40,379
Apricots .....	15,487	15,536	12,510
Blackberries .....	23,725	26,792	19,971
Blueberries .....	41,846	33,316	31,790
Boysenberries .....	8,582	8,686	6,388
Cherries .....	127,482	108,965	118,451
Grapes .....	3,724	3,532	4,622
Peaches .....	71,301	56,992	48,649
Raspberries, Red .....	28,294	24,038	20,581
Raspberries, Black .....	3,957	3,880	2,419
Strawberries .....	175,785	218,937	189,656
Other Frozen Fruits .....	69,650	105,467	97,221
Total Frozen Fruits .....	621,179	664,213	592,637



LIST OF TABLES

<i>Table</i>	<i>Title</i>	<i>Page</i>
1	U.S. fruit and tree nuts: Production average 1964-68, 1969, 1970, and indicated 1971 .....	20
2	Citrus fruits: Production, 1969/70, 1970/71, and indicated 1971/72 .....	21
3	Six citrus fruits: Production and use, United States, 1966/67 through 1970/71 .....	22
4	Selected citrus fruits: Use for processing by percentages of total sales, Florida and California, 1966/67 through 1970/71 .....	23
5	Oranges and grapefruit processed: Use by type of product, Florida, 1966/67 through 1970/71 .....	23
6	Citrus fruit for processing: Season average price per box delivered to processing plant, by kind, variety, State, and United States, 1966/67 through 1970/71 .....	24
7	Frozen concentrated orange and grapefruit juice: Packs, movement, and stocks, Florida, 1966/67 through 1970/71 .....	24
8	Canned citrus products: Packs, movement, and stocks, selected items, Florida, 1966/67 through 1970/71 .....	25
9	Chilled citrus products: Packs, movement, and stocks, Florida, 1966/67 through 1970/71 .....	26
10	Citrus fruit: United States exports of selected fresh and processed items, by areas of destination, 1965/66-1969/70 .....	27
11	Fresh and processed citrus fruits: Average retail prices, selected cities, United States, by months, 1966-71 .....	28
12	Apples, commercial crop: Production, 1969, 1970, and indicated 1971 ....	29
13	Tree nuts: Production in principal States, 1969, 1970, and indicated 1971 .....	29
14	Canned noncitrus fruits: Cannery's carryin, pack, and supplies, current season, with comparisons .....	30
15	Stocks of frozen fruits: End of September, 1969, 1970, and 1971 .....	30

SPECIAL ARTICLE

The Changing U.S. Apple Industry

<i>Table</i>	<i>Title</i>	<i>Page</i>
A	Apples: Production having value by regions, United States, 1950-70 .....	18
B	Apple production by varieties, 1950-70 .....	18
C	Apples, commercial crop: Type of use as a percentage of total sales, United States, 1950-70 .....	18
D	Apples: Per capita consumption, fresh weight equivalent, United States, 1950-70 .....	19
E	Apples: Per capita consumption, fresh and processed, product weight, United States, 1950-70 .....	19

UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C. 20250

POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF  
AGRICULTURE



OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

**NOTICE:** If you don't want future issues  
of this ERS publication, check here   
and mail this sheet to the address below.

If your address should be changed, write your  
new address on this sheet and mail it to:

Automated Mailing List Section  
Office of Plant and Operations  
U.S. Department of Agriculture  
Washington, D.C. 20250

TFS-181

NOVEMBER 1971

7888 AMAGEC104A422 18015 0001  
AMERICAN AGRICULTURAL ECONOM-  
ICS DOCUMENTATION CENTER  
ROOM 1044 SOUTH BLDG  
WASHINGTON DC 20250