
LAC TECH



AGRICULTURE AND RURAL DEVELOPMENT TECHNICAL SERVICES PROJECT
AID/LAC/DR/RD, CHEMONICS INTERNATIONAL, U.S. DEPT. OF AGRICULTURE

**THE U.S. MARKET FOR
HORTICULTURAL PRODUCTS:**

**PROFILES OF 20
FRESH FRUITS AND VEGETABLES**

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Washington, D.C. 20523, USA

November 1993

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LIST OF ACRONYMS

AID	Agency for International Development
AMS	Agricultural Marketing Service of USDA
APHIS	Animal and Plant Health Inspection Service of USDA
ATI	Andean Trade Initiative, of the U.S. Government, to facilitate economic growth in Bolivia, Colombia, Ecuador, and Peru.
CBI	Caribbean Basin Initiative, common name for the Caribbean Basin Economic Recovery Act of the U.S. Government.
ERS	Economics Research Service of USDA
FOB	Free On Board
GATT	General Agreement on Tariffs and Trade, an organization of approximately 100 countries that facilitates and regulates international trade
GSP	Generalized System of Preferences
HTS	Harmonized Tariff Schedule
LAC	Latin America and the Caribbean
MFN	Most Favored Nation, a designation for GATT members and other countries whose products are charged reduced duties by countries that are members of the GATT
NAFTA	North American Free Trade Agreement
NASS	National Agricultural Statistics Service of USDA
NTAE	Non-Traditional Agricultural Export
PPQ	Plant, Protection and Quarantine
USDA	U.S. Department of Agriculture
USITC	U.S. International Trade Commission
USDC	U.S. Department of Commerce

SECTION I

OVERVIEW

SECTION I OVERVIEW

INTRODUCTION

Exports of non-traditional agricultural products have grown significantly in recent years. This is especially true for exports from Latin America and the Caribbean (LAC) to the United States. Individuals and organizations in many countries would like to follow this growth trend by beginning to export, or increasing exports of, fresh fruits and vegetables to the United States.

Success in the nontraditional agricultural export (NTAE) industry depends in part on deciding what to produce for each target market. In agricultural diversification programs, choosing the right commodities for an export market is difficult for many reasons, including the lack of timely, accurate information on trends in consumption and supply.

Perhaps the major factor limiting the export of fresh commodities to the United States is that products are limited to those approved for entry by the U.S. Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS). Countries have the options of trying to increase exports of products now on their "enterable" lists or of trying to have additional products approved for entry to the United States.

This study reviews the consumption, production, and import trends of selected fresh fruits and vegetables in the United States. It includes information on admissibility and experts' comments about the commodities and their potential. This study does not deal with supply capabilities in LAC countries.

OBJECTIVE OF STUDY

This study is intended to be a tool for U.S. Agency for International Development missions and projects in the LAC region to use in the early stage of selecting products for the U.S. market and in developing fresh commodity admissibility lists. The purpose of the study is to identify and examine NTAE products, in particular products that have shown growth and stability. The study provides the user the following:

- Annual and seasonal information on supply and demand for selected products.
- Historical data series on prices for at least a three-year period.
- Import duties and restrictions on each product.
- Information on marketing and changes in the marketplace perceived by industry experts.

LIMITATIONS

This is not a comprehensive or all-inclusive study and should not be the sole input in any planting decision. Selecting a product to grow for export is an extremely complicated process that includes factors both general and specific to a grower and cannot be addressed by one study for an entire region of the world.

The reader should exercise judgment even when using the information provided as a general indicator of the future. In pointing out the limitations of major indicators, it is important to note that historical data are merely indicators of future market opportunities for specific deals. This is especially true of seasonal windows, of which peaks and valleys on a weekly basis vary greatly with the supply situation from different sources. The best indicators of potential windows for an upcoming year are last year's results. These influence planting decisions, which invariably lead to shifts in available supply.

COMMODITIES SELECTED FOR STUDY

After reviewing U.S. import statistics for more than 70 NTAE products, the authors chose 20 commodities to explore in greater detail. The methodology for selecting these 20 products is provided in Appendix A.

The following are the 20 fresh fruits and vegetables selected for the study:

FRUITS

Blueberries
Cantaloupes
Honeydews
Limes
Mangos
Mixed Melons
Papayas
Pineapples
Plantains
Raspberries

VEGETABLES

Asparagus
Artichokes
Chinese Cabbage
Escarole-Endive
Ginger
Green Onions
Mushrooms
Okra
Spinach
Squash

SOURCES OF INFORMATION

The data were obtained primarily from published and unpublished sources from USDA, the U.S. Department of Commerce (USDC), and the U.S. International Trade Commission (USITC). Within USDA, data were obtained from the National Agricultural Statistics Service (NASS), the Economics Research Service (ERS), the Agricultural Marketing Service (AMS), and APHIS. Additionally, qualitative information was obtained

from a variety of trade publications, such as *The Packer*, and telephone conversations with industry representatives, including importers, wholesalers, and brokers.

EXPLANATION OF COMMODITY PROFILES

The body of this report consists of profiles of each of the 20 commodities that were selected. Each profile consists of the following sections:

A. Summary

This section profiles the products in brief. Important indicators such as consumption, production, and imports are noted. Information that is unique and critical, such as explanations for major shifts in supply and demand, is also mentioned.

B. Apparent Consumption

Consumption estimates in this report are derived from the following equation:

$$\text{Consumption} = \text{Domestic production for fresh consumption} + \text{imports} - \text{exports}.$$

In this report, consumption includes consumption in fresh form, shrinkage, waste, and spoilage. Statistics for carry-over stocks of perishables, such as fresh fruits and vegetables, are minimal and not readily available, and are therefore not covered in this report.

Figures reflect consumption of fresh commodities **unless otherwise noted**. Exceptions have been made when consumption in the processed form is the larger share of total consumption. One instance is the consumption of processed raspberries, which accounts for almost 99 percent of reported raspberry consumption. Furthermore, efforts have been made to explain major fluctuations in consumption during a six-year time period.

Official agricultural production estimates used in this study were supplied by NASS and, in some instances, by cooperating state statistical agencies. Other information used was derived from a plethora of NASS information on crop value, prices, and utilization of fresh fruit and vegetables and other commodities.

NASS publications relevant to and used in this study include the following: *Agricultural Prices* (July annual), *Crop Production* (January annual), *Crop Summaries for Vegetables* (January annual), *Citrus Fruits* (September annual) and *Non-citrus Fruits* (July annual). NASS also publishes product-specific reports, such as the Mushroom Report, which comes out in August of each year.

NASS does not, however, publish production estimates for all crops. Although production statistics are gathered at the county level, the statistics may not be aggregated at the state level for several reasons, such as lack of interest in tracking the product or

budgetary constraints. At the national level, statistics for many products may not be aggregated, mostly because of budgetary constraints.

Whenever NASS production figures were not available at the national level, the relevant states were contacted. If a state was unable to provide us with information, county agricultural commissioners were contacted. Production figures, therefore, reflect the best available estimates.

Areas where production levels were insignificant were ignored because the cost to obtain the figures would exceed their value.

C. Imports

Figures for imports were obtained from USDA (Market News Branch, Fruit and Vegetable Division, AMS). AMS obtained data on imports from Mexico from APHIS records, and on imports from all other countries from the U.S. Bureau of the Census, a branch of USDC. AMS imports from Mexico include those for reexport to Canada. This inflation in import figures from Mexico for some products has been corrected by substituting import figures from the Bureau of the Census, USDC for some commodities.

Readers interested in import data from the LAC region may find another source particularly helpful. This is the series popularly known as APHIS data. These data provide information on small volume commodities or exotic fruits and vegetables inspected by APHIS. Where Harmonized Tariff Schedule (HTS) codes have not been assigned by USDC, the APHIS series may be the only source of data.

D. Monthly Supply Variability

Seasonality of supply was determined from shipment figures, both domestic and import, at monthly intervals for 1987 through 1991. The Market News Branch of USDA publishes an annual report, "Fresh Fruit and Vegetable Shipments by Commodities, States and Months," which reports the volume loaded for transit at primary shipping points in the United States, Mexico, and other major growing regions for each month of every calendar year. The Market News Branch also publishes market news summaries on a daily, weekly, and monthly basis for commodities monitored by AMS/USDA reporting offices located in major shipping areas. Additionally, terminal markets in major metropolitan areas publish annual summaries on the products with significant movements in that market. To better illustrate market activity, prices of several products have been discussed, whenever possible, from the perspective of the major terminal markets. For instance, artichoke prices are discussed using information obtained from selected markets in California, the major producing state.

Shipment figures are usually somewhat less than production in a particular area, but may serve as a general indicator of production. Shipment data are useful in that they can reveal monthly variations in quantities for most major sources of supply.

E. Prices

The data on prices for 1987 through 1992 were obtained from "Fresh Fruit and Vegetable Prices: Wholesale Chicago and New York City, f.o.b. Leading Shipping Points," annual summaries of prices published by Market News Branch, Fruit and Vegetable Division, AMS.

Prices reported in this source are monthly averages that reflect the simple highs and lows reported by AMS for each month.

For purposes of this study, we used leading shipping point prices because they reflect the prices offered to suppliers. Wholesale prices were substituted whenever prices at leading shipping points were not available (footnotes in profiles indicate when this occurred). Wholesale prices for private sales at New York City and Chicago are simple averages of representative prices for each Tuesday. In arriving at the Tuesday prices, local marketing reporters consider estimated volume of sales at different price levels, quality, condition, and other factors. These prices represent private sales in wholesale lots made by the first seller on the wholesale market for stock of generally good merchantable quality and condition.

F. Industry Comments

This section adds a qualitative aspect to the study and is representative of the "pulse" of the market as perceived by experts in the fresh fruit and vegetable industry. The section addresses three subjects:

- Marketing information (buyer behavior, aesthetic appeal) and related pitfalls in marketing the product.
- Forecasted changes in consumption.
- Existing trends.

Sources approached were importers, wholesalers, brokers, and experts from USDA (see Appendix B, Sources of Information for Study). Published sources were used to supplement the existing information. The survey questionnaire used to gather information is presented in Appendix D.

G. Import Duties

Countries exporting to the United States may be subject to duties based on their tariff status with the United States and the date of entry, according to the classification of the Harmonized Tariff Schedule, the country's status vis-à-vis the U.S. trade preferences, and the date of admission of their goods. This section covers applicable tariff rates for each commodity. Most LAC countries have been designated beneficiaries of the Generalized System of Preferences (GSP).

H. AMS Standards and Marketing Orders

U.S. grades and standards for fruits, vegetables, and certain other commodities are issued under the authority of the Agricultural Marketing Act of 1946. The authority includes the development and approval of U.S. grade standards and the defining of different levels of quality. These voluntary grade standards assist growers, shippers, processors, retailers, consumers, exporters, and importers in the efficient and orderly marketing of fresh and processed fruits, vegetables, and other related products. The standards and grades provide a common trading language for such factors as size, color, maturity, taste, sugar and acid contents, and defects. At present, there are more than 300 standards for 160 fresh, canned, frozen, or dehydrated vegetables, fruits, and other commodities.

I. Status for Entry from LAC Countries to the United States

The following list defines the areas and ports of entry in the United States for each admissible commodity mentioned in the admissibility list:

Admissible to all ports. All ports of entry where Plant, Protection and Quarantine (PPQ) officers are stationed and their area of coverage. (The definition includes Guam and the Commonwealth of the Northern Mariana Islands.)

Admissible to North Atlantic ports. Atlantic ports north of and including Baltimore; ports on the Great Lakes and St. Lawrence Seaway; Canadian border ports east of and including North Dakota; and Washington, D.C. (including Dulles Airport), for air shipments.

Admissible to North Pacific ports. Pacific ports north of California, including Alaska; and Canadian border ports west of and including Montana, excluding Hawaii.

Admissible to South Atlantic and Gulf ports. Atlantic ports south of Baltimore, U.S. Gulf of Mexico ports, and ports in Puerto Rico and the U.S. Virgin Islands.

The regulatory actions listed also apply to importations into Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands. If a fruit or vegetable is listed as being approved for entry into any part of the United States, then it is also approved for entry into these territories.

- The footnote, "Additional restrictions or safeguards are required," means that in addition to permits issued to the importer and inspection, other factors, including pre-clearance and required treatments, determine the entry status of a commodity from a given country. The restrictions are too detailed and varied to be presented in this study.
- The admissibility lists presented are a general guideline that is subject to change by the addition or deletion of commodities. It reflects the status quo at the time of

this writing. Furthermore, the commodity profiles list only the countries that have admissible status. If the country is not listed, the product is not admissible.

One of two reasons explains why a commodity is not currently listed on an admissible list:

- No one has ever applied for a permit to import that commodity from a given country.
- A permit was applied for, but permission was denied because of an unacceptable biological risk.

UNITS OF MEASURE USED

The standard unit of measure for this report is the hundredweight, or cwt, which is equal to 100 pounds. In this report, statistics are given usually in 1,000 cwt, but in some instances are given in million cwt.

Unit pricing of fresh fruits and vegetables is difficult because the unique packaging of each leads to unique quoting of prices. Additionally, shipping weights for the same commodity and carton may differ depending on the origin, domestic or foreign.

USDA's Market News Branch quotes prices according to industry practices for each commodity listed. **This report uses a standardized approach by quoting prices in dollars per pound.**

INFLUENCES ON U.S. CONSUMPTION OF FRUITS AND VEGETABLES

According to a survey by the Food Marketing Institute, 60 percent of U.S. consumers say they have begun to eat more fresh fruits and vegetables. Consumption of these products in the United States is increasing due to numerous factors, among which are the following:

- Increased availability of fresh produce throughout the year. This is a result of new early and late varieties; new foreign suppliers; and improved techniques of production, packing, shipping, and storage.
- Greater awareness of health, for example, recent research that relates the benefits of high fiber diets in the reduction of risk of certain types of cancer and in the control of cholesterol.
- Continued growth in the number of elderly people in the United States until at least the first decades of the next century. This age group has the highest consumption of fresh fruits and vegetables (average 4.1 servings per day).

- Significant growth in ethnic populations, specifically people of Latin American and Asian heritage, who traditionally consume more fresh produce than most persons of European ancestry.

Of particular interest is the Asian population in the United States, which is growing at 11 percent per year (in contrast to 1 percent for the general population as a whole) and may reach 22 million persons by the year 2020. Some products in this study that are especially popular in the Asian community are mushrooms and Chinese cabbage.

The U.S. Hispanic population is growing at 5.3 percent per year, to approximately 49 million by the year 2020. This is likely to have a positive effect on the demand for products traditionally consumed by Hispanics, such as papaya, plantains, and mangoes.

Additionally, there are specific programs that are intended to increase consumption of fresh fruits and vegetables in the United States. One of these is the USDA "Food Pyramid." Another is the "Five a Day" program. There are also promotional programs by industry councils, such as the North American Blueberry Association, and there are new guidelines on nutrition labeling.

The Food Pyramid. The USDA Food Pyramid is a result of a restructuring, by the U.S. government, of its guidelines for the daily diet in the United States. The program's goal is to alter and improve eating habits throughout the country. The pyramid, which shows the recommended consumption of each basic food group, is used in schools and by consumer groups for educational purposes. It says, basically, that people should increase their consumption of grains and fresh produce while limiting their consumption of sugars, fats, and meats. The federally funded school lunch program is focusing on increasing the number and variety of fresh fruits and vegetables to be served to U.S. school children.

The Five a Day Program. This major educational program was begun in 1988 by the California Department of Health Services. The program's goal is to increase per capita consumption of fresh produce by 50 percent by the year 2000. It is now being actively supported on a national basis by such groups and organizations as USDA, the National Cancer Institute, the Produce for Better Health Foundation, the Produce Marketing Association, and the United Fresh Fruit and Vegetable Association.

The objective of the program is to persuade U.S. consumers that they should consume fresh fruits and vegetables at least five times every day, rather than the current daily average of 3.5 servings. The program involves considerable consumer education and promotion, and many fruit and vegetable shippers, wholesalers, and retailers support it and are actively participating in it. Although the effects of this educational/promotional program are difficult to measure, the program is nationwide and long term, and will definitely have a positive effect on consumption of fresh produce. The 1993 edition of the annual "Fresh Trends" report from Vance Publishing Company states that 5 million U.S. households have increased consumption of fresh fruits and vegetables as a result of the program.

Industry Councils. Industry councils have long been active in promoting consumption of fruits and vegetables in the United States. Some products included in this report are produced in the United States and benefit from the promotional and other activities of producer associations. These include the American Dehydrated Onion and Garlic Association in California, the American Mushroom Institute in Pennsylvania, the California Artichoke Advisory Board, the Florida Gift Fruit Shippers Association, the Florida Mango Forum, the Leafy Greens Council in Minnesota, the New Jersey Asparagus Industry Council, the North American Blueberry Council, and the Rare Fruit Council International in Florida. The promotional activities of these producer associations include media advertising and consumer education through point-of-purchase displays and literature.

Nutrition Labeling. Nutrition labeling, which until now has been voluntary, is a program of the federal Food and Drug Administration (FDA). It calls for retail stores to post nutritional information for each kind of fresh produce where consumers can see it easily.

The availability of this information may encourage consumers to buy more fresh fruits and vegetables because of their high nutritional and fiber content and their low levels of fat, salt, and cholesterol.

OBSERVATIONS AND CONCLUSION

Some major observations that can be drawn from the study are:

- A vital step in developing a particular commodity for the U.S. market is admissibility. One instance is blueberries from Chile. Being the only country in the LAC region that has U.S. import authorization for blueberries, Chile has been able to profit from the increased demand for blueberries in the United States.
- Economies of scale in some products may affect the ability of LAC small-scale producers to compete in the U.S. market. In LAC countries, cost-advantages (for instance, low wage labor) have often substituted for scale economies to permit competitive prices. However, some LAC countries have gained a very strong presence in the U.S. marketplace for fresh fruit and vegetables by employing **both** scale economies and cost advantages. Mexico is an example with many fresh fruits and vegetables.
- Fresh fruit and vegetable prices in the United States do not normally follow cyclical patterns. Several factors combine to determine prices. These include the following:
 - (i) Differentiation within a commodity (better limes from Florida or blueberries from Maine),

- (ii) Relatively higher consumption in specific regions (okra in the southern United States) or in areas with high concentrations of specific ethnic groups (such as Latin Americans and Asians, concentrated mostly in large U.S. cities),
 - (iii) Targeted crop programs in states that may cause surges during specific time periods, and
 - (iv) Technology and growing practices that result in early and late market entry, increasing consistency in supply and reducing volatility in price.
- Growers must also be aware of marketing innovations in the U.S. fresh fruit and vegetable industry that have the ability to alter preferences for commodities. Two such innovations are packaging and branding of fresh fruits and vegetables. First, cut-prepared-packaged vegetables and fruits have affected consumption through their main benefit: ease in consumption. Second, the branding of products has become a strong trend in the U.S. fresh fruit and vegetable industry. This characteristic, once limited only to private sector identification (Dole pineapples, Star Produce melons), has expanded to states and regions (Washington apples, Vidalia onions). The brand loyalty generated through branding and advertising indeed affects the consumer's buying decision.
 - Growers in the LAC region may benefit greatly in situations where a certain commodity is grown in the United States in a limited growing season, and marketed aggressively in the United States by groups representing domestic growers. By entering the market during the domestic off-season, LAC growers can benefit from these promotional campaigns.

The NTAE market is dynamic and continues to offer export opportunities for LAC growers and exporters. Agri-export promotion programs must be market driven, not production led. This study should help AID projects in the LAC region to focus first on markets when developing NTAE industries.

BASIC CRITERIA FOR SELECTING COMMODITIES

Of the 70 products originally reviewed, some were not selected because they did not meet the study parameters, although they may offer excellent market opportunities. An example of this is the Oriental Vegetable category, which has shown excellent growth; however, this category contains 20 or more commodities and warrants an independent study. Basic screening criteria are shown in Tables 1 and 2.

Table 1. Basic Screening Criteria—All Products

Product	Import Volume in 1992 (000 cwt)	Change in imports, 1991-92	Average Annual Change in imports, 1987-1992	Relative Deviation
Apples	2652	0.65%	-1.47%	5.43
Apricots	29	7.41%	12.98%	22.48
Artichokes	22	10.00%	n/a	n/a
Asparagus	587	10.75%	12.36%	22.77
Avocados	513	40.93%	86.97%	68.92
Bananas	73432	4.12%	2.95%	5.66
Beans	252	-10.00%	-0.09%	12.11
Beets	18	-35.71%	126.46%	68.85
Blueberries	203	- 1.46%	9.94%	19.91
Broccoli	274	0.00%	5.67%	11.01
Brussels Sprouts	137	39.80%	-0.22%	19.00
Cabbage	429	-17.66%	21.26%	47.76
Cantaloupe	4968	-19.36%	11.27%	22.63
Carrots	1433	-1.04%	7.53%	12.34
Cauliflower	181	-4.74%	7.81%	19.82
Celery	368	-23.97%	7.65%	19.02
Cherries	50	78.57%	31.28%	28.17
Chinese Cabbage	29	-6.45%	134.38%	64.53
Corn Sweet	296	-22.92%	16.36%	30.24
Cucumbers	4283	4.64%	1.33%	2.28
Eggplant	404	-15.30%	2.02%	8.93
Escarole-Endive	157	8.28%	21.63%	29.98
Fruits Other	73	1.39%	38.01%	48.20
Garlic	410	-1.20%	2.28%	4.57
Ginger	182	10.98%	12.69%	24.12
Grapefruit	236	36.42%	39.13%	39.80
Grapes Table	7022	-0.27%	6.96%	12.59
Greens	181	10.37%	25.36%	32.93
Honeydews	1098	-36.64%	11.42%	25.53

Table 1. Basic Screening Criteria—All Products (continued)

Product	Import Volume in 1992 (000 cwt)	Change in imports, 1991-92	Average Annual Change in imports, 1987-1992	Relative Deviation
Kiwifruit	474	-25.71%	9.96%	28.95
Lemons	78	-73.91%	0.35%	36.01
Lettuce Iceberg	240	-37.50%	44.11%	36.07
Romaine Lettuce	14	---- ¹	---- ¹	88.55
Lettuce Other	54	5.88%	-6.98%	18.64
Lettuce Processed	0	---- ¹	---- ¹	223.61
Limes	2165	24.43%	18.41%	26.11
Mangoes	1652	-18.78%	11.78%	26.69
Misc Berries	0	-100.00%	---- ¹	125.83
Misc Citrus	228	54.05%	---- ¹	112.05
Misc Herbs	153	-15.47%	---- ¹	100.23
Misc Oriental Veggies	64	-13.51%	48.64%	49.88
Misc Tropical F&V	3508	38.99%	178.23%	58.49
Mixed Misc melon	1414	2.24%	13.13%	22.76
Mushrooms	45	0.00%	59.86%	56.98
Nectarines	0	---- ¹	---- ¹	223.61
Okra	958	-12.11%	8.40%	19.88
Onions Dry	2251	-27.92%	0.30%	11.11
Onions Green	2081	7.16%	8.10%	13.05
Oranges	228	-84.04%	66.09%	84.55
Papaya	262	31.00%	22.26%	33.31
Parsley	49	75.00%	18.18%	27.58
Parsnips	0	---- ¹	---- ¹	223.61
Peaches	1181	6.11%	9.28%	13.88
Pears	1259	32.53%	13.26%	20.64
Peas Green	294	-6.96%	38.46%	52.59
Peas Other	12	-76.92%	-25.82%	62.06
Peppers Bell	1816	-13.65%	-4.00%	8.38

Table 1. Basic Screening Criteria—All Products (continued)

Product	Import Volume in 1992 (000 cwt)	Change in imports, 1991-92	Average Annual Change in imports, 1987-1992	Relative Deviation
Peppers Other	1053	-6.73%	6.63%	12.77
Pineapple	2765	5.33%	4.61%	8.61
Plantains	3507	4.38%	8.67%	12
Plum-Prunes	557	6.50%	8.46%	14.51
Potatoes Table	2756	-33.69%	-7.53%	17.92
Potatoes Seed	1280	-28.53%	10.84%	28.13
Pumpkins	1	-50.00%	----- ¹	103.28
Radishes	317	0.63%	5.34%	12.03
Raspberries	151	21.77%	-8.37%	27.00
Spinach	63	14.55%	24.39%	31.44
Squash	2721	0.63%	6.22%	10.53
Strawberries	225	-29.25%	-5.58%	16.59
Tangerines	168	-38.69%	-11.38%	21.33
Tomatoes	3628	-51.68%	-13.01%	22.65
Tomatoes Cherry	772	13.70%	-2.04%	9.72
Turnips-Rutabaga	419	-4.99%	286.29%	58.51
Vegetables Other	429	-1.61%	4.24%	20.90
Watermelon	3135	-1.42%	0.29%	10.67

1/ Highly erratic movements across the five-year period. See data series of import volumes in appendix E.

2/ Relative deviation is determined by dividing the standard deviation of each commodity's import volume from 1987-1992 by the mean import volume in the same time period. This allows the reader a reference base to compare deviations among commodities.

Table 2. Selected Characteristics of the Final 20 Products

Product	Import Volume 1992 ('000 cwt)	Change in Imports 1991-92	Average Annual Change in Imports 1987-92	Relative Deviation ¹	Comments
Artichokes ²	22	10.00%	---	---	Admissible from several countries, but few LAC countries taking advantage of this.
Asparagus	587	10.75%	12.36	22.77	Imports increasing since 1987. Long market window in second half of calendar year when prices are favorable.
Blueberries	203	-1.46%	9.94	19.91	Increased consumption overall. Excellent market window for up to eight months of calendar year.
Cantaloupes	4,968	-19.36%	11.27	22.63	Steady increase in imports from 1987 to 1991. Admissible from numerous LAC countries.
Chinese Cabbage	29	-6.45%	134.38	64.53	Imports dominate the market and continue to increase market share.
Escarole-Endive	157	8.28%	21.63	29.98	Volume of imports tripled from 1987 to 1992, while U.S. production decreased. Steady consumption.
Ginger	182	10.98	12.69	24	Imports may increase as domestic crop encounters soil and pest problems. Prices have fallen recently. Consumption increasing.

Table 2. Selected Characteristics of the Final 20 Products (continued)

Product	Import Volume 1992 ('000 cwt)	Change in Imports 1991-92	Average Annual Change in Imports 1987-92	Relative Deviation ¹	Comments
Honeydews	1,098	-36.64%	11.42	25.53	Imports have dropped, Long market windows do exist, although prices are always very competitive.
Limes	2,165	24.43%	18.41	26.11	Strong, steady growth in both imports and consumption.
Mangoes	1,652	-18.78%	11.78	26.69	Demand expected to increase as consumers become familiar with the product. increasing supply from LAC countries.
Mixed melons	1,414	2.24%	13.13	22.76	Imports dominate. LAC countries are increasing market shares.
Mushrooms	45	0.00%	59.86	56.98	An Increasingly mainstream item, imports are increasing but not from LAC. Mushrooms are admissible from all LAC countries.
Okra	958	-12.11%	8.4	19.88	Imports dominate this market in which several LAC countries are interested. Admissible from most LAC countries.

Table 2. Selected Characteristics of the Final 20 Products (continued)

Product	Import Volume 1992 ('000 cwt)	Change in Imports 1991-92	Average Annual Change in Imports 1987-92	Relative Deviation ¹	Comments
Green onions	2,081	7.16%	8.1	13.05	Leading indicators show increased market potential, especially between June and October. Most LAC countries not yet taking advantage of ease of admissibility.
Papaya	262	31.00%	22.26	33.31	Imports and consumption increasing and expected to continue growth. Many CBI countries can maximize duty-free status.
Pineapples ³	2,765	5.33%	4.61	8.61	Imports to gain market share as many U.S. producers expand overseas to capture cost-advantages. Imports increasing.
Plantains	3,507	4.38%	8.67	12	Product gaining recognition as market segments grows. Demand expected to increase.
Raspberries ³	151	21.77%	-8.37	27	Imports, consumption and prices are increasing. Many LAC countries not filling market windows.
Spinach	63	14.55%	24.39	31.44	CBI and ATI countries have opportunities to increase market share.

Table 2. Selected Characteristics of the Final 20 Products (continued)

Product	Import Volume 1992 ('000 cwt)	Change in Imports 1991-92	Average Annual Change in Imports 1987-92	Relative Deviation ¹	Comments
Squash	2,721	0.63%	6.22	10.53	Consumption and imports moving steadily upwards. Prices for select soft squash are favorable.

1/ Relative deviation is determined by dividing the standard deviation of each commodity's import volume from 1987-1992 by the mean import volume in the same time period. This allows the reader to compare deviations among commodities.

2/ Most import activity started in 1990. Computations for five-year growth and volatility have thus been omitted.

3/ Imports were almost non-existent in 1987. Calculations have been made using data from 1988-1992.

SECTION II

COMMODITY PROFILES

SECTION II COMMODITY PROFILES

GLOBE ARTICHOKE¹ (*Cynara scolymus*, alcachofas)

A. Summary

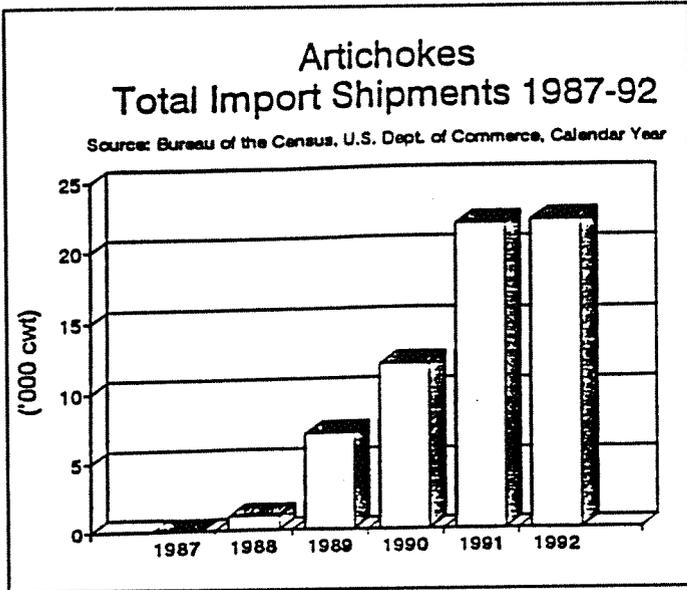
Artichoke production has decreased slightly in recent years because of acreage reduction in Monterey County, the main artichoke-producing region in California. Although prices have been firm, some growers have reduced acreage to experiment with other crops that demonstrate growth potential. Because demand for gourmet products such as artichokes is inelastic, imports have increased steadily whereas exports have dropped in recent years. Although artichokes are produced year-round in the United States there appear to be opportunities for imports to enter during winter when production is relatively slow. Artichoke prices are greatly dependent on aesthetics and size and not only on supply and demand. Prices, therefore, do not clearly follow seasonal patterns. Artichokes are duty free for most countries that are beneficiaries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act, and are admissible from most LAC countries.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	1341	1374	1429	1228	1206	1175
Imports	0	1	7	12	22	22
Exports	60	0	18	65	57	49
Apparent Consumption	1341	1375	1418	1175	1171	1148

Source: Production figures were obtained from California Agricultural Statistics Service for 1987-1991 and NASS/USDA for 1992; import figures are from AMS/USDA; export figures are from FATUS, ERS/USDA; and apparent consumption was calculated using figures obtained from California Agricultural Statistics Service and NASS/USDA.

¹ The study focuses solely on fresh or chilled Globe Artichokes. Throughout the paper, the term "artichokes" means Globe Artichokes.

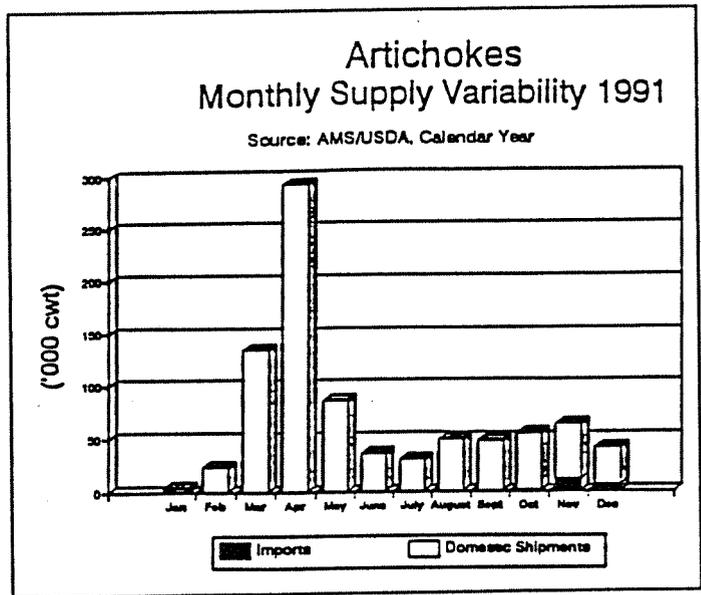


C. Imports

Artichoke imports were inconsequential before 1989 and have increased rapidly since then. In order of volume, Chile, Colombia, and Mexico are the principal suppliers and no single country dominates the market. Imports still remain only a fraction of domestic shipments, but have become significant from November through January. There appears to be potential continuing growth in imports.

D. Monthly Supply Variability

Although January and February are usually low producing months for artichokes in California, artichokes are shipped year-round with relative consistency. Peak harvest time is mid-March through mid-May for U.S. production. At this time, there are some shipments from Arizona. Artichokes are imported during the winter months.



E. Prices

Prices reported for domestic shipments have been higher during winter months (November through March). It is important to note that artichoke prices, not unlike prices of many other vegetables grown in the United States, are subject to factors such as aesthetics and size and not simply to demand and supply.

F. Industry Comments

Green Globe is the most popular variety of artichoke sold in the United States. Consumers prefer artichokes that are trimmed properly, fairly well-formed, not underdeveloped, fairly compact, and free from decay. Size preferences for artichokes have varied, according to one source. Although artichokes come packaged by size (18 jumbos/box, 24 extra-large/box, 36 large/box, 48 medium/box, and 60 to 72 small/box), the most common shipping container is 9 to 11.25 kg (20 to 25 lbs), fiberboard cartons and wooden boxes by count and loose pack.

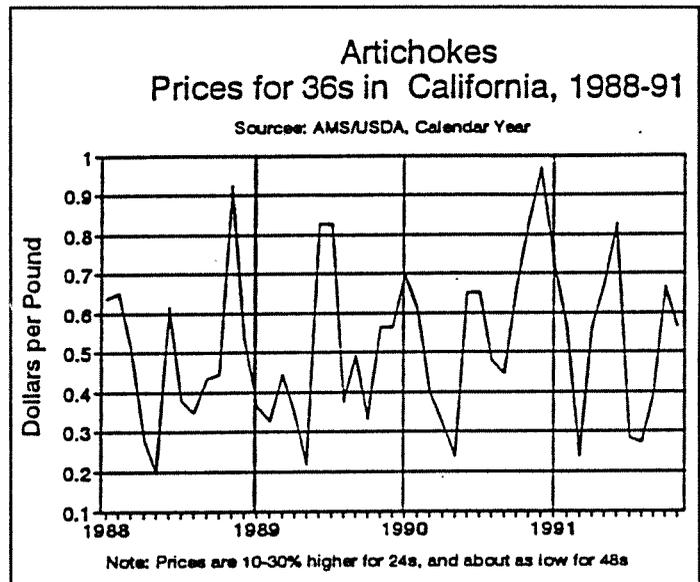
Wilting and drying are caused at temperatures above 0°C. Self-evolved heat, the heat of respiration of artichokes, is high at any temperature. Transit and postharvest life is 10 to 16 days. Shipping and temporary storage temperatures should remain at 0°C (32°F) with a relative humidity of 90 to 95 percent. Container temperature, however, should be set at 1°C to prevent freezing (and 90 to 95 percent relative humidity). Globe artichokes can freeze if the temperature is -1.2°C or lower.

Artichokes are popular among people with European roots. Consumption is also prevalent among the Asian community in the United States. One expert said that innovative product promotions by the Artichoke Commission, the industry trade association, coupled with an increase in overall fresh vegetable consumption, should increase demand in forthcoming years. On the import side, Chile is said to have stepped up production of artichokes for export.

G. Import Duties

Artichokes are classified under 0709.10 of the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries is 25 percent for artichokes admitted at any time of the year.

Artichokes are admissible duty free at any time from beneficiary countries of the Generalized System of Preferences, Caribbean Basin Economic Recovery Act, Andean Trade Preference Act, and from Israel.



H. AMS Standards and Marketing Orders

The USDA has marketing standards for artichokes. Please see Appendix H for applicable market standards.

I. Status for Entry from LAC Countries into the United States

Admissible to all ports:

Guatemala (bud)	Mexico
Chile	Nicaragua
Colombia	

Admissible to North Atlantic ports:

Dominican Republic	Ecuador
Haiti	Guyana
Jamaica	Honduras
French Guiana	Panama
Argentina	Paraguay
Belize	Peru
Brazil	Suriname
El Salvador	Uruguay
Costa Rica	Venezuela
Bahamas	Bolivia

Admissible to North Pacific ports:

French Guiana
Belize
Paraguay
Bahamas
Dominican Republic
Haiti
Jamaica

Admissible to South Atlantic and Gulf ports:

Dominican Republic	Jamaica
Haiti	Belize
Bahamas	

Source: APHIS

ASPARAGUS
(*Asparagus officinalis*, espárrago)

A. Summary

Most asparagus is grown in the western United States where production has remained virtually unchanged over the last five years. Demand continues to increase, however, as is evident from a strong growth in imports in the same period. Imports, mostly from Mexico, appear during the winter and account for about one-half of all asparagus consumed in the United States. Among other foreign suppliers, Peru continues to increase its presence by stepping up exports to the United States. Prices are markedly higher during the off-peak season (up to five times the summer prices). Duties for asparagus are a function of the date of entry into the United States, and are higher between mid-September and mid-November. Asparagus is admissible from most LAC countries.

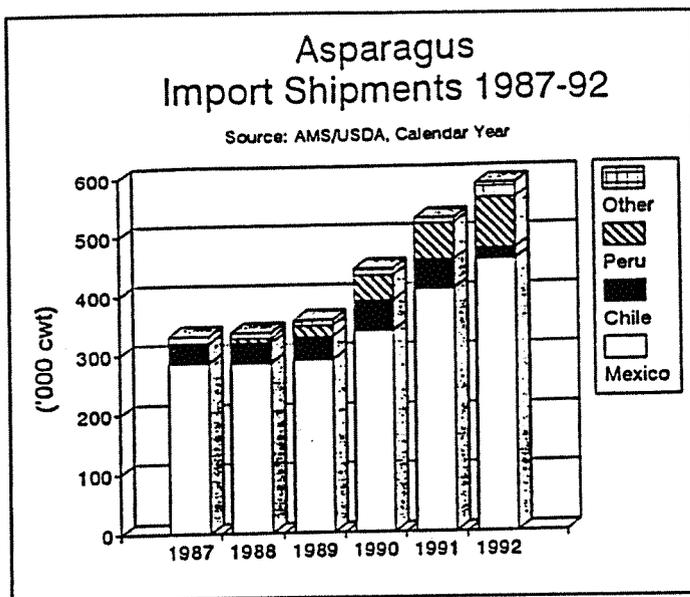
B. Apparent Consumption (Fresh)

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	1388	1481	1492	1435	1377	1435 ¹
Imports	332	337	360	444	530	587
Exports	297	378	426	394	372	397 ¹
Apparent Consumption	1423	1440	1426	1485	1535	1625

Source: "Vegetables and Specialties" NASS/USDA, July 1992

1/ Estimated by ERS/USDA

California, Washington, Arizona, and Michigan are the principal domestic suppliers of asparagus. NASS/USDA also reported asparagus production in other states, namely Illinois, New Jersey, Indiana, Maryland, Minnesota, and Oregon. These other states cumulatively accounted for less than 5 percent of total U.S. asparagus production in 1992.



C. Imports

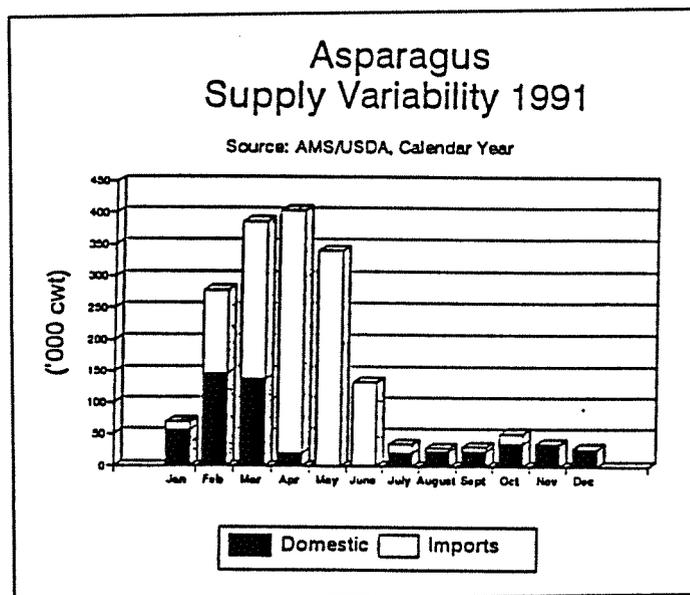
Volume of imports has risen steadily at an average annual rate of 12.36 percent between 1987 and 1992. For 1992, AMS/USDA reported total asparagus imports of 587,000 cwt. Mexico's market share has decreased only slightly, from 85 percent of imports in 1987 to 78 percent in 1992. Chile's exports have slipped greatly in recent years, from 49,000 cwt in 1991 to 19,000 cwt in 1992. Peru has taken second place, showing a remarkable increase in volume from about 2,000 cwt in 1987 to 89,000 in 1992.

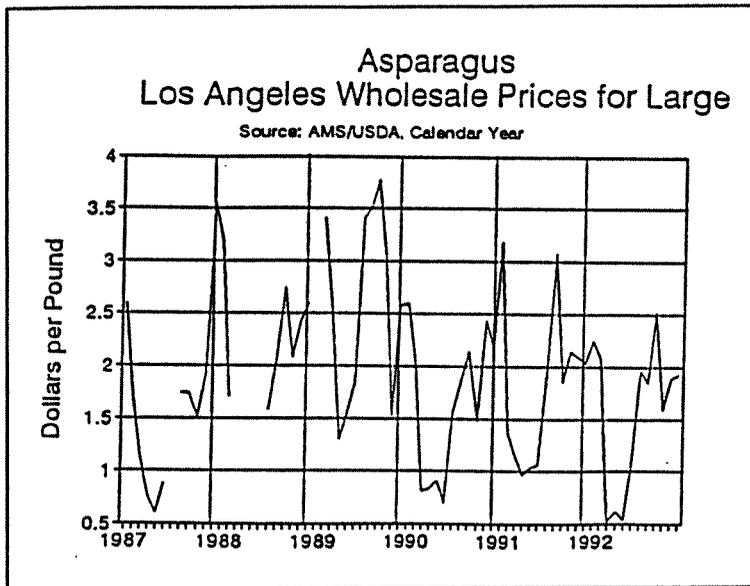
Other supplying countries are Argentina, Ecuador, Guatemala, Mauritius, and New Zealand.

D. Monthly Supply Variability

The main domestic supply season is February through June, although central California produces relatively small amounts through October and November. Arizona's presence is typically from February through April. Washington supplies usually between April and June and dominates the market in its last month.

Imports occur between October and January. Mexico, however, is a year-round supplier and competes even during the U.S. supply season. As the graph on variability indicates, there is a long market window from July through January.





E. Prices

The low supply from July through January has offered imports a substantial advantage in prices when entering during the domestic off-peak season. Imports from Mexico, and, more recently the Caribbean, have commanded prices up to five times those observed during the domestic shipping season. There has been very little price differential for asparagus of different sizes.

F. Industry Comments

The consumer ordinarily differentiates asparagus by the length of its stem, which is either 7 or 10 inches. Consumers prefer closed tips with firm bottoms, or butts, and a stem that is a rich green color and not translucent or shrivelled. A common problem in asparagus at the retail level is shrivelling or dryness due to improper temperature and handling conditions.

Once considered a specialty vegetable, asparagus is now very much a mainstream item. Retail sales are usually up during U.S. holiday occasions, especially Easter. To facilitate stocking displays, retailers often prefer their suppliers to offer asparagus packaged in one-pound bunches.

Domestic growers are experimenting with "desert quality" asparagus, grown during domestic off-season months in the desert in California and Arizona. Chile is now increasing its presence in the market, giving strong competition to foreign suppliers such as Peru. Asparagus from Guatemala is generally considered better quality than most other imports from Latin America.

Those surveyed expect a growth in consumption of asparagus as consumers become increasingly health conscious. Also, the perception of asparagus as an item served in expensive restaurants is slowly being eroded as asparagus becomes common in retail outlets.

G. Import Duties

Asparagus is classified under 0709.20 of the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries for this category is 5 percent if

entered between September 15 and November 15 and if transported by air. Rates are 25 percent if entered at any other time.

Asparagus imported from beneficiary countries under the Generalized System of Preferences is admissible duty free between September 15 and November 15. Applicable duty for any other period is 25 percent. There is no duty at any time for asparagus brought in from beneficiary countries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

The USDA has marketing standards for asparagus. Please see Appendix H for applicable standards.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Antigua and Barbuda	Argentina	Mexico
St. Lucia	Belize	Nicaragua
Bahamas	Bermuda	Panama
Barbados	Bolivia	Paraguay
Cayman Islands	Brazil	Peru
Dominica	Chile	Suriname
Dominican Republic	Colombia	St. Vincent and Grenadines
Haiti	Costa Rica	Trinidad and Tobago
Jamaica	Ecuador	Uruguay
Martinique	French Guiana	Venezuela
Montserrat	El Salvador	Curaçao
Grenada	Guatemala	
Guadeloupe	Guyana	
St. Kitts and Nevis	Honduras	

Source: APHIS

BLUEBERRIES
(*Vaccinium spp*, arándano)

A. Summary

U.S. consumption of blueberries has increased sharply in recent years, with an average annual growth rate of 8 percent between 1987 and 1992. This growth in demand has been met with increased domestic production and reduced exports of blueberries. Imports, almost all of which originate from Canada, have increased at an annual rate of about 10 percent, and continue to account for about one-half of all fresh blueberry consumption in the United States. Although blueberries are admissible duty free to the United States, admissibility requirements are stringent. Only Chile has approval to ship this product to the United States.

B. Apparent Consumption

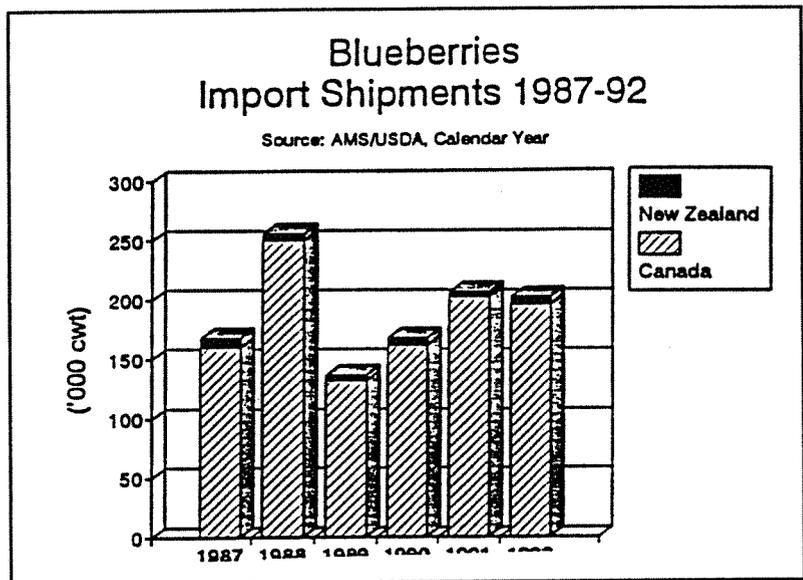
	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	1511	1611	1599	1898	1736	1982
Imports	168	256	137	168	206	203
Exports	229	104	107	413	289	145
Apparent Consumption	1450	1763	1629	1653	1653	2040

Source: Production figures were obtained from the North American Blueberry Council, New Jersey; import figures are from FATUS, ERS/USDA; export figures are from Bureau of the Census, USDC; apparent consumption is calculated using statistics obtained from the North American Blueberry Council, FATUS, and USDC.

The above apparent consumption figures reflect both fresh and processed blueberries. About one-third of blueberries are consumed fresh. Also, the production figures listed are for major producing states, which are Maine, Michigan, New Jersey, North Carolina, Oregon, and Washington. Selected states in the southern United States, which account for about 4 percent of total production, have also been included.

C. Imports

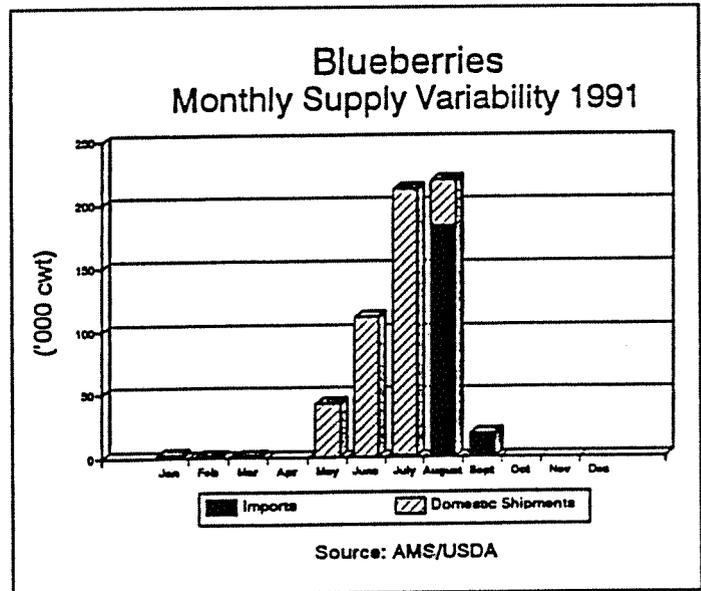
Canada averaged 96 percent of all U.S. imports of blueberries between 1987 and 1992. New Zealand is the only other notable entrant, shipping almost all of the balance. Chile's share is less than 1 percent of the U.S. blueberry import market but will reportedly increase. In 1992, Canada shipped 197,604 cwt of blueberries, New Zealand shipped 5,850 cwt, and Chile shipped approximately 133 cwt.



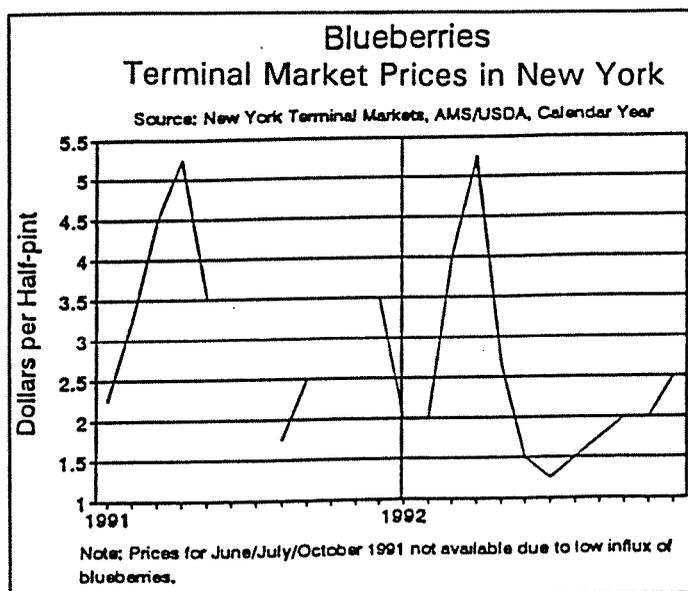
Foreign sourcing has fluctuated greatly in the past, and is probably due to production changes in Canada, the principal import supplier. There was a dramatic fall in imports in 1988 after a remarkable doubling of imports the year before. Historical trends may be a poor indicator of the future, especially in the case of blueberries.

D. Monthly Supply Variability

The U.S. growing season is from May through July, although North Carolina supplied the market during April in 1992. Florida and North Carolina lead the season in May. New Jersey dominates the market, accounting for 50 percent of annual domestic shipments during July, the peak month for production of blueberries.



Canada dominates the blueberry market during August, supplying one-half of total imports in this month alone. In 1992, shipments from Canada in August totalled 211,000 cwt. New Zealand ships between December and March, although its supply is relatively light to moderate (see graph).



E. Prices

Prices have experienced larger variations in highs and lows in more recent years, for instance, in 1990 to 1991 (see graph). However, each year has recorded new highs that may be due largely to early entrants in the market, notably Florida and North Carolina.

Note: Prices for blueberries, reported by AMS/USDA, do not indicate prices for Maine, because AMS does not maintain a reporting office in that state. Maine is nevertheless an important

producer, and has accounted for as much as one-third of domestic production of blueberries in recent years.

F. Industry Comments

The top varieties of blueberries are Bluecrop, Jersey, Rubel, Blue Ray, and Bluetta.

The Bluecrop variety is the most popular in the United States. It owes its popularity to its size (large) and color (not too dark or shiny), which are the characteristics consumers look for when purchasing blueberries. To remain desirable to consumers and buyers, blueberries must retain their bloom. Most wholesalers buy the product in flats of 12 pints. Transit and postharvest life is approximately 10 to 18 days, with a recommended transit temperature of 1.5° to 4.5°C (35 to 40 F).

According to the North American Blueberry Council, in the past nine years per capita consumption of fresh blueberries has increased from 2.5 oz to 3.4 oz, and this comprises 40 percent of total blueberry consumption. There is no domestic production from October through April. During this same period, there are virtually no blueberries on the market because Canada, which supplies 96 percent of U.S. blueberry imports, is not in season. There is a very small amount imported from January through March, mainly from New Zealand.

Production has increased because growers are increasingly using machine harvesters. This is especially true in New Jersey, where a minimum wage of \$5.05 (instead of the national minimum of \$4.25) has meant high labor costs for producers. Chile is also building up its production and exports of blueberries. Latin American exporters should check the supply situation in Chile before planting.

G. Import Duties

Blueberries are classified under 0810.40 of the U.S. Harmonized Tariff Schedule.

Blueberries are admissible duty free at any time from MFN countries and from the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, the Andean Trade Preference Act, and from Israel.

H. AMS Standards and Market Orders

The USDA has issued market standards for blueberries. Please see Appendix H for applicable standards.

I. Status for Entry from LAC Countries to the United States

Chile is currently the only LAC country approved by APHIS to ship blueberries to all ports in the United States, with cold treatment or without treatment from the fruit-fly free zone. Other countries should consider applying for admissibility of this product.

CANTALOUPE
(*Cucumis melo cantaloupensis*, cantalupa)

A. Summary

Cantaloupe production surged in 1992, recovering from the 90 percent destruction of production by the White Fly insect during 1990-1991 in California, which is a major domestic producer. Consumption, too, has resumed an upward trend. Imports fell in 1992, probably because of the large domestic production. U.S. exports remain a negligible segment of overall production. Prices of cantaloupes are higher in the first part of the year and reach their lows around the end of summer, which correlates inversely with its availability. Cantaloupes are admissible from most LAC countries. Customs duties for this product vary according to the time of entry and are higher during August.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	17426	13585	17778	14986	11955	16237
Imports	3106	3492	4629	5308	6161	4968
Exports	343	559	638	754	764	1135
Apparent Consumption	20189	16517	21770	19540	17352	20070

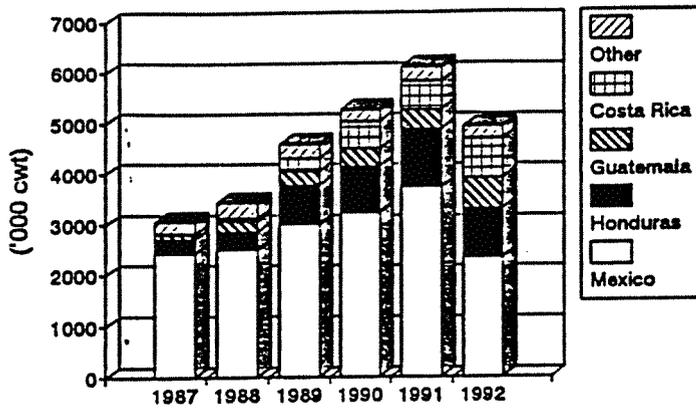
Source: Production figures were obtained from county agricultural statistical services of Arizona, California, and Texas; import figures are from AMS/USDA; export figures are from NASS/USDA; and apparent consumption was calculated using figures obtained from county agricultural statistical services of Arizona, California, and Texas.

In the United States, California, Texas, Arizona, and Florida cumulatively account for more than 90 percent of production. The 1992 Vegetables Summary published by NASS/USDA also reported other states producing cantaloupes as Colorado, Georgia, Indiana, Maryland, Michigan, Ohio, and Pennsylvania. These states cumulatively accounted for the balance of total U.S. production of cantaloupes.

In 1991, the White Fly insect was responsible for as much as 90 percent production loss in parts of southern California. The result was a major decrease in national production.

Cantaloupes Import Shipments 1987-92

Source: AMS/USDA, Calendar Year



C. Imports²

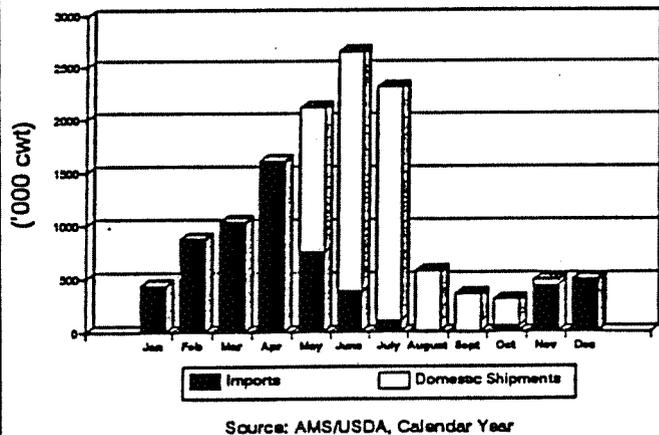
After an average annual growth in volume of approximately 16 percent between 1987 and 1991, imports of cantaloupe dropped 20 percent in 1992, most likely due to an increase in domestic production. Although Mexico has experienced a diminishing of the import market, from 80 percent in 1987 to 60 percent in 1992, it is still the dominant foreign supplier to the U.S. market. Mexico's losses (as indicated by a reduction in volume and market share) have been offset

by gains in cantaloupe exports by smaller Latin American countries, notably Costa Rica, Guatemala, and Honduras. Other suppliers are Dominican Republic, El Salvador, and Chile. Ecuador is expected to start shipping cantaloupes because it has recently received U.S. import authorization from USDA.

D. Monthly Supply Variability

Local production normally begins in Texas in May. Texas dominates the market for slightly more than a month until California's production season begins. California produces in its Central Valley in June and July, stops for August and September, and shifts to production in the Imperial Valley region during October and November. Arizona is a consistent supplier throughout the season and leads the market during August and September.

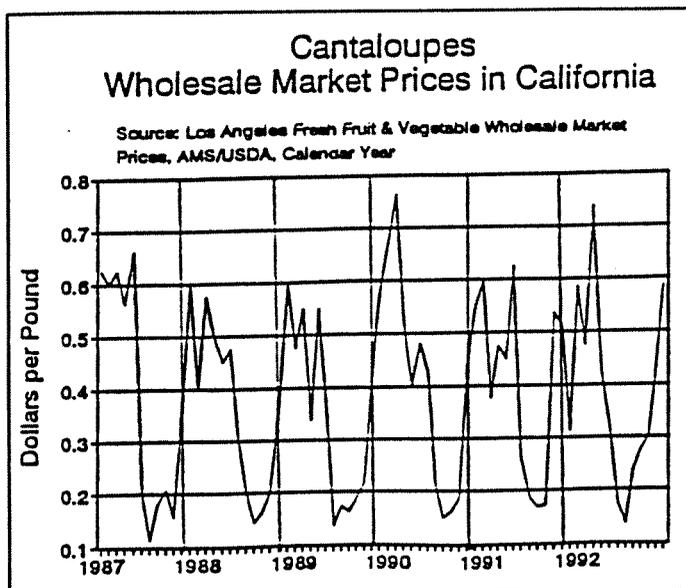
Cantaloupes Monthly Supply Variability 1991



Source: AMS/USDA, Calendar Year

Imports provide most of the supply between November and April, and remain important up into May.

² AMS reports of cantaloupe shipments from Mexico are slightly lower than those reported by Bureau of the Census/USDC. There was up to a 20 percent difference in figures for years prior to 1988. Since then, discrepancy has been less than 5 percent.



E. Prices

Prices fluctuate sharply with availability and vary considerably from one shipping point to another. In April 1991, Mexican import prices averaged \$13.88/carton FOB south Texas, while Mexican imports in Arizona averaged \$11.80/carton FOB Nogales, Arizona. In that year, FOB shipping point prices varied from 14 to 63 cents/lb (see graph).

The relation of price with the size of melons remains unclear. One importer indicated that melons with 60

percent or more gold color background bring a higher price.

F. Industry Comments

The High Hat and the Gold Cup are the most popular varieties in the United States, although one source in New York believes that most consumers cannot differentiate among the varieties. Consumers, however, prefer cantaloupes with deep sutures and a raised net coarseness, according to the same source. Although it is known that a deep golden color combined with a smaller seed cavity is preferred over greener types, there is no clear evidence of size preference. Cantaloupe is considered a mainstream fruit in the United States.

Cantaloupes have been produced domestically in sizeable amounts in Texas, where new production methods have increased supply and permitted delivery earlier in the season. This emerging trend may lead prices to stabilize as consistency and volume of supply increase. According to one industry source, the best market window now is from December through February.

G. Import Duties

Cantaloupes are classified under 0807.10.10 and 0807.10.20 of the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries is 20 percent from August 1 to September 15, and 35 percent if entered at any other time.

Cantaloupes imported from beneficiary countries of the Generalized System of Preferences are charged a rate of 20 percent from August 1 through September 15, but are duty free if entered at any other time.

There is no duty at any time for cantaloupes brought in from beneficiary countries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

The USDA has marketing standards for cantaloupes. Please see Appendix H for applicable standards.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Antigua and Barbuda	Guadeloupe	Belize
Grenada	St. Vincent and	Honduras ¹
St. Lucia	Grenadines	Nicaragua
Mexico	Guatemala	Jamaica
Panama and Canal Zone ¹	El Salvador ¹	St. Kitts
Bahamas	Dominican Republic	Chile
Costa Rica	Haiti	

Admissible to North Atlantic ports:

Barbados	Cayman Islands	Aruba
Martinique	Nevis	Montserrat
El Salvador	Ecuador	Dominica
Trinidad and Tobago		

Admissible to South Atlantic and Gulf ports:

Barbados	Cayman Islands	Aruba
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Source: APHIS

1/ Additional restrictions or safeguards required.

CHINESE CABBAGE
(*Brassica pekinensis*, repollo chino)

(Also called Napa, Nappa, Chinese Leaf, Shantung, Peking Cabbage, Petsai, and several other names.)

A. Summary

Production of Chinese cabbage is under-reported because very few state statistical agencies compile information on this product due to its low levels of production in the United States. Demand for Chinese cabbage has increased, however, as is evident from the steady increase in imports, mostly from Mexico, and is likely to increase further given consumers' growing interest in oriental vegetables. Chinese cabbage is available year-round in the United States. Currently only Mexico and Dominican Republic have admissibility status for this product. In the LAC region, Chinese cabbage is admissible free of duty from beneficiaries of the Caribbean Basin Economic Recovery Act and the Andean Trade Preference Act. For most other countries, duty at all times is 25 percent of the customs value.

B. Apparent Consumption

Figures for consumption could not be calculated because of the unavailability of production figures, which are used in the derivation of consumption in this report.

There are no national aggregates for production available for Chinese cabbage. It is known, however, that Arizona, Florida, California, and New Jersey are the main domestic producers, although none of these states list Chinese cabbage as a priority crop in their agriculture programs and therefore do not compile statistics for this crop.

Domestic shipments may be used as a proxy for production although they do not represent complete movements and serve merely as a general indicator. Following are the domestic shipments from 1987 through 1992:

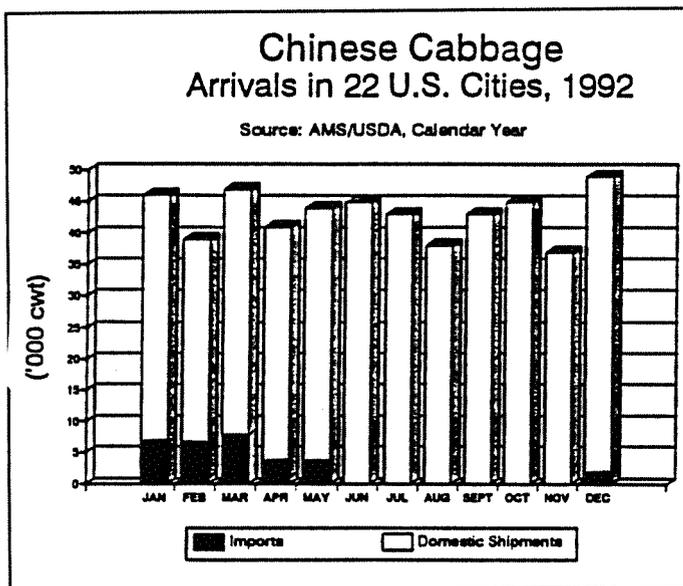
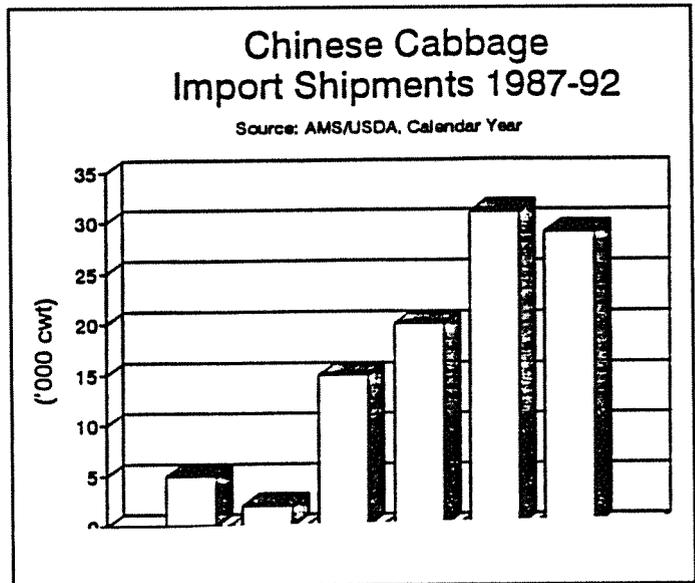
(In 1,000 cwt)

1987	1988	1989	1990	1991	1992
146	125	106	120	110	104

Source: "Fresh Fruit and Vegetable Shipments" Annual Summaries, AMS/USDA, Calendar Year.

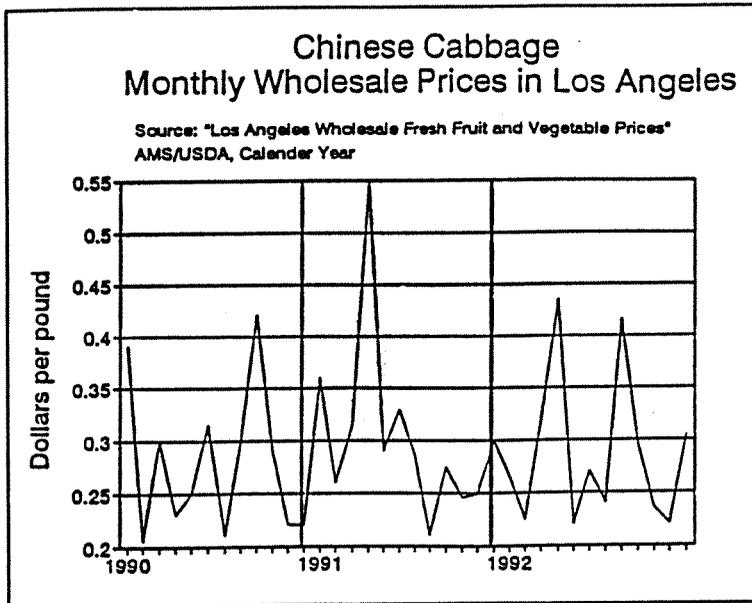
C. Imports

Imports grew strongly between 1987 and 1991, doubling in volume in that period. Although volume of imports declined slightly to 29,000 cwt in 1992 from 31,000 cwt in the year before, imports have steadily accounted for a larger share of the total supply of Chinese cabbage. In 1992, imports were 28 percent of total shipments, compared to 3 percent in 1987. Mexico is the only reported foreign supplier, although it is believed that Dominican Republic also supplies Chinese cabbage, but in quantities too small to be tabulated by AMS/USDA.



D. Monthly Supply Variability

Chinese cabbage is available year-round in the United States, although the volume consumed is relatively small compared to that of other vegetables. Production in Arizona, Florida, California, and parts of New Jersey makes it possible for Chinese cabbage to be available year-round. Imports arrive mainly during the spring season.



E. Prices

Prices have moved steadily upward, recording new highs every year. Prices are not very erratic on average, although Florida widens the margin with higher prices when it enters the market during early spring and commands prices often 25 percent higher than Chinese cabbage from other regions. The graph on prices reflects the increased volatility during this time period. At other times, prices may vary by about 10 to 15 percent from the seasonal average.

F. Industry Comments

The United Fresh Fruit and Vegetable Association advises consumers to look for crisp outer leaves, medium to large sized with a solid feel and small inner heart formation. The association advises consumers to look for stems that are cut close to the head with large outer leaves intact.

G. Import Duties

Chinese Cabbage is classified under the subheading 0704.90.40 of the U.S. Harmonized Tariff Schedule. The applicable duty rate is 25 percent of customs value for Chinese cabbage admitted from beneficiary countries under the MFN, GATT, and Generalized System of Preferences.

Chinese cabbage is admissible duty free at any time from countries under the Caribbean Basin Economic Recovery Act, Andean Trade Preference Act, and from Israel.

H. AMS Standards and Market Orders

There are no market standards or market orders issued by USDA for Chinese cabbage.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Dominican Republic Mexico

Source: APHIS

ESCAROLE-ENDIVE
(*Cichorium endiva*, endibia, escarola)

A. Summary

The gradual slowdown in U.S. production has been replaced by an increase in imports of this product. Availability, and apparent consumption, have fluctuated in recent years. Imports increasingly constitute a larger share of supply and have been increasing steadily since 1989. Imports are mostly of European origin and enter the market in uniform volume throughout the year, despite the increased opportunity between May and October, the domestic off-peak season. This product is currently admissible from 11 LAC countries. In the LAC region, there is no duty at any time for escarole-endive brought in from beneficiary countries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act. Prices reach their peak during late spring and early summer months, and are at their lowest during winter months.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	927	1065	878	758	834	766
Imports	67	71	129	131	145	157
Exports	0	0	13	40	56	34
Apparent Consumption	994	1136	994	849	923	889

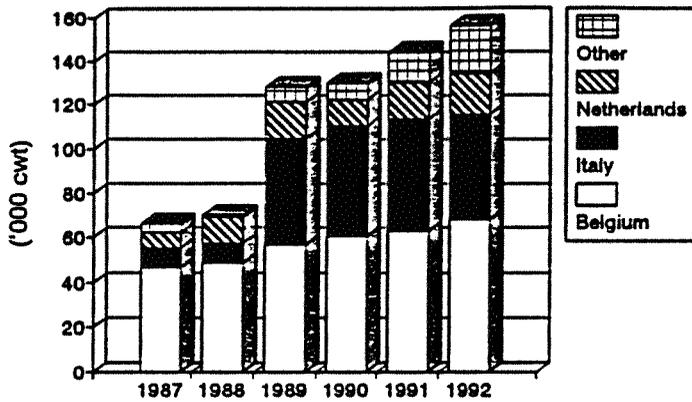
Source: Production figures were obtained from county and state statistical agencies of Arizona, California, Florida, and New Jersey; import figures are from AMS/USDA; export figures are from FATUS, ERS/USDA; and apparent consumption was calculated from statistics obtained from county and state statistical agencies of Arizona, California, Florida, and New Jersey.

Ohio is the other notable producer that has been excluded in the production estimates above for lack of adequate data. This exclusion results in about a 10 percent under-reporting of domestic production.

Production figures for 1992 in this report are higher than those reported by NASS/USDA. This is because NASS did not include in its estimates a major producer, California. California accounts for as much as 50 percent of the domestic production of escarole-endive.

Escarole-Endive Import Shipments 1987-92

Source: AMS/USDA, Calendar Year



C. Imports

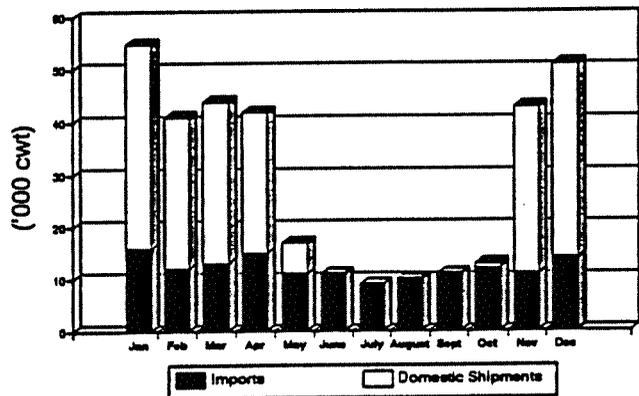
Imports have increased favorably in recent years. Between 1987 and 1992, average annual growth in volume was about 22 percent. Belgium, Italy, and the Netherlands account for 85 to 90 percent of all import shipments. Belgium's share of the U.S. import market has decreased slightly. Italy, meanwhile, has gained a strong presence in the same time period, from 9,000 cwt in 1987

to 48,000 cwt in 1992. Other suppliers of escarole-endive are Mexico, Guatemala, Chile, Canada, and France. Imports are relatively consistent throughout the year and dominate the market by default during the domestic-off peak season.

D. Monthly Supply Variability

The consistency in domestic supply between November and April sharply contrasts with the period from May through October, at which time there is virtually no domestic supply. It is interesting to note that the monthly import volume remains unchanged even during the domestic off-peak season (see supply variability graph).

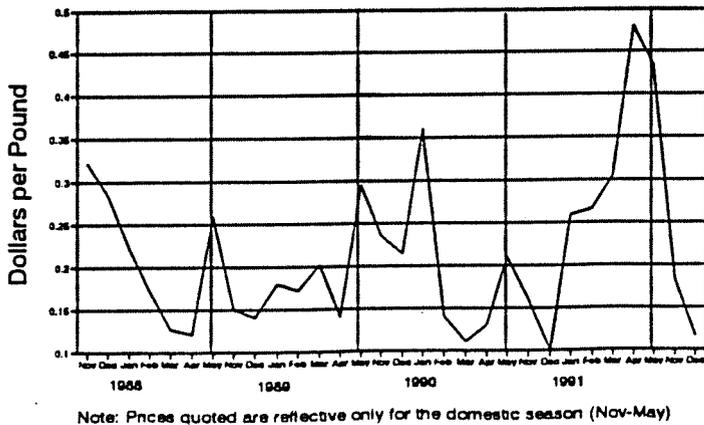
Escarole-Endive Monthly Supply Variability 1991



Source: AMS/USDA, Calendar Year

Escarole-Endive Shipping Point Prices in Florida

Source: AMS/USDA, Calendar Year



E. Prices³

Since 1988, prices have posted record highs during each succeeding year. In 1991, prices for escarole-endive reached 48 cents/lb, rising one-third from the year before.

F. Industry Comments

Endive is frequently used in Euro-salads to add a bitter taste. The Italian population consumes a large

portion of the supply. For this reason the market for escarole-endive is greater in large, ethnically diverse cities. Batavian endive, frequently marketed as *escarole*, has broad leaves that do not curl at the ends. They are sold in boxes of two dozen. Experts believe that consumption is likely to increase because of the increased production of pre-packaged salads, salad bars, and increased health-consciousness.

G. Import Duties

Escarole-endive is classified under the subheading 0705.29.00 as "Chicory, Other" in the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries for this category is 33 cents/kg for entry at any time of the year.

There is no duty at any time for escarole-endive brought in from beneficiary countries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Marketing Orders

The USDA has marketing standards for escarole-endive. Please see Appendix H for applicable standards.

³ This section limits its discussion to prices out of Florida only, for lack of availability of import prices from AMS/USDA. Prices for the off-peak season, May through October, have hence been omitted.

I. Status for Entry from LAC Countries to the United States
(those listed as *Cichorium spp.*)

Admissible from all ports:

Dominican Republic
Haiti
Belize
Chile
Argentina

Colombia
Costa Rica
Guatemala
Mexico
Bolivia

Admissible from North Atlantic ports:

Bermuda

GINGER⁴
(*Zingiber, Z. officinalis, gengibre*)

A. Summary

Imports of ginger have increased substantially in recent years, mostly from Asia. Asian countries have also commanded the highest prices, although the increased presence of ginger in the marketplace has depressed prices since 1991. Domestic production, almost all of which is in Hawaii, decreased in 1992 because of crop damage by insects and bacterial disease in the soil. Hawaiian varieties are considered the standard for ginger quality. Ginger is admissible without customs duty from most countries in the LAC region.

B. Apparent Consumption (Fresh)

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	101	82	90	95	120	116
Imports	102	101	109	128	164	182
Exports	0	0	10	22	28	37
Apparent Consumption	203	183	189	200	256	270

Source: Hawaiian Agricultural Statistics. Apparent consumption was calculated using statistics obtained from USDA and the Hawaiian Agricultural Statistics.

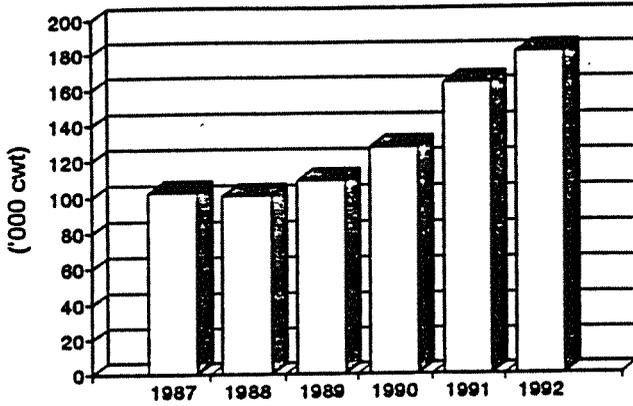
Hawaii is the only U.S. state that produces ginger. The ginger from Hawaii is said to be of a higher quality than its imported counterparts because of its plumpness and larger fingers. Prices commanded by Hawaiian ginger are usually higher than prices of imported ginger.

Hawaii's 1992 ginger crop was down 37 percent from the year before, "reflecting dry weather and significant losses from insects and bacterial wilt disease," according to FAS/USDA analysts writing for the April 1993 issue of *Horticultural and Tropical Products*.

⁴ The type of ginger discussed is of the fresh, unground variety. Much of the information reflects "Chinese variety" (not Chinese origin), since it is the dominant ginger variety imported and consumed in the United States.

Ginger Root, Unground Import Shipments 1987-92

Source: Bureau of the Census, U.S. Dept. of Commerce, Calendar Year



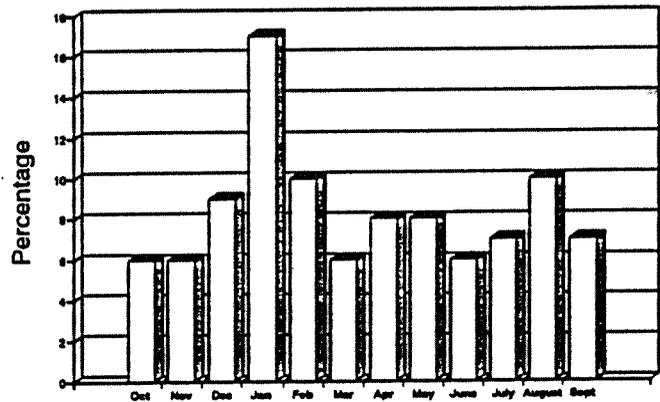
C. Imports

Imports of ginger increased from 128,000 cwt in 1987 to 182,000 cwt in 1992. In 1992, the Asia region (China, Fiji, India, Indonesia, Thailand, and Singapore) supplied about 60 percent of the ginger imported into the United States. In the LAC region, Brazil accounted for about 14 percent during the same time period and Costa Rica about 8 percent. Some other LAC suppliers, providing a much smaller share, were Jamaica, Honduras, Dominican Republic, and Guatemala.

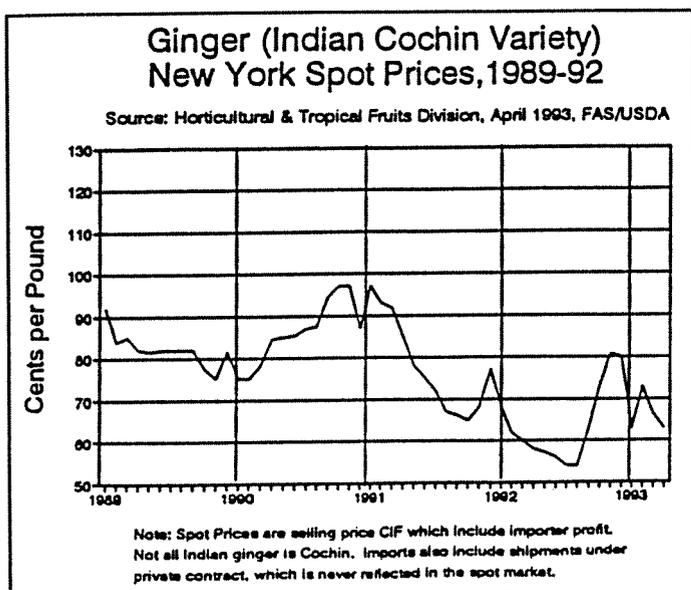
D. Monthly Supply Variability

The peak harvest season in Hawaii is from January to July, although harvesting as much as a month earlier has been reported by some growers. The lengthening of the supply season can be measured by the growth in supply during the off-peak season (see graph).

Hawaiian Ginger Shipment Variability (Percentage) 91-92



Source: Hawaiian Agricultural Statistics Service



E. Prices⁵

Prices have spiralled downward as the supply of unground ginger has risen. India is a dominant source of ginger, and its prices act both as a bellwether indicator and as a unit for comparison. Brazil reported notably higher ginger prices in 1992—65 cents/lb FOB (country of origin) versus 47 cents/lb FOB (country of origin) for ginger from India. Costa Rica was much lower, however. Average unit import value for Costa Rican ginger was 33 cents/lb.

The graph illustrates prices for Indian Cochin Ginger in the New York spot market. While the New York average spot market price for Indian Cochin was 63.9 cents/lb in 1992, the unit import value (FOB country of origin, determined by a simple division of value by quantity) was 47 cents/lb. The difference of 16.9 cents/lb includes importer profit, transportation, insurance, and other fees and costs.

F. Industry Comments

There are two main varieties of ginger imported into the United States—the Chinese and the Japanese. Of the two, the Chinese variety accounts for more than 95 percent of U.S. ginger imports, according to a source in Hawaii. Chinese-variety ginger has larger fingers and is more plump and more pungent than Japanese-variety ginger (mostly grown in Indonesia). Ginger grown in the southern hemisphere is counter-seasonal, whereas ginger grown in northern hemisphere countries, for example, Costa Rica and Dominican Republic, competes directly with U.S. production.

A common postharvest problem is molding or shrivelling if exposed to moisture for extended periods. Ordinarily, shelf life is three to four weeks. Fresh ginger is still largely an ethnic item used extensively by the Asian American community, which is a rapidly growing minority group. Large volumes are thus sold during festivals such as the Chinese new year.

G. Import Duties

Ginger is classified under 910.10.20 of the U.S. Harmonized Tariff Schedule. There is no duty charged at any time of the year for imports of ginger.

⁵ The discussion of prices is limited to average monthly spot prices in New York for unground ginger from India. Both New York and India represent major market forces in the ginger trade—New York as principal U.S. spice clearinghouse, and India Cochin ginger as the major import.

H. AMS Standards and Market Orders

There are no market standards or market orders issued by the USDA for ginger.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Antigua and Barbuda	Argentina	Honduras
Bahamas	Belize	Mexico
Cayman Island	Bermuda	Nicaragua
Dominica	Bolivia	Panama
Dominican Republic ¹	Brazil	Paraguay
Haiti	Chile	Peru
Jamaica ¹	Colombia	Suriname
Martinique	French Guiana	St. Vincent and Grenadines
Montserrat	El Salvador	Trinidad and Tobago
Grenada Guadeloupe	Guatemala	Uruguay
St. Kitts and Nevis	Guyana	Venezuela
St. Lucia		Curaçao

Source: APHIS

1/ Additional safeguards or restrictions apply.

GREEN ONIONS
(*Allium cepa*, scallion, shallot, chalote, ascalonia)

A. Summary

Although consumption has increased steadily, production, mostly in California, has fluctuated because of crop rotation practices of domestic producers. Most imported green onions are from Mexico, which has capitalized on the rising demand by increasing exports to the United States. As for many fresh specialty vegetables, price is sensitive to appearance and size. Green onion prices fluctuate significantly despite their availability throughout the year. There is no duty at any time for green onions from beneficiaries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act. Most LAC countries, with the exception of a few island states, are approved sources of this product.

B. Apparent Consumption

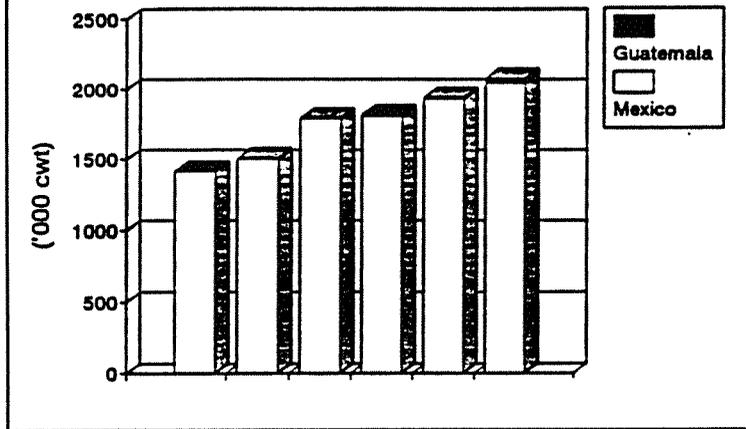
	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	870	1037	963	908	574	804
Imports	1420	1513	1797	1814	1942	2081
Exports	401	421	384	436	237	269
Apparent Consumption	1889	2129	2376	2285	2279	2616

Source: Production figures were obtained from California and Arizona state agricultural statistics service agencies; import figures are from AMS/USDA; export figures are from FATUS, ERS/USDA; and apparent consumption was calculated using figures obtained from California and Arizona state agricultural statistics service agencies. Note: the above listed production figures are for Arizona and California only.

California, Arizona, Texas, and Florida are the only known suppliers of green onions in the United States. California accounts for approximately 90 percent of total domestic production. Using AMS shipment figures for the last six years, it is estimated that Florida accounts for less than 1 percent of total U.S. production. Production figures for Texas were not available.

Green Onions Import Shipments 1987-92

Source: AMS/USDA, Calendar Year



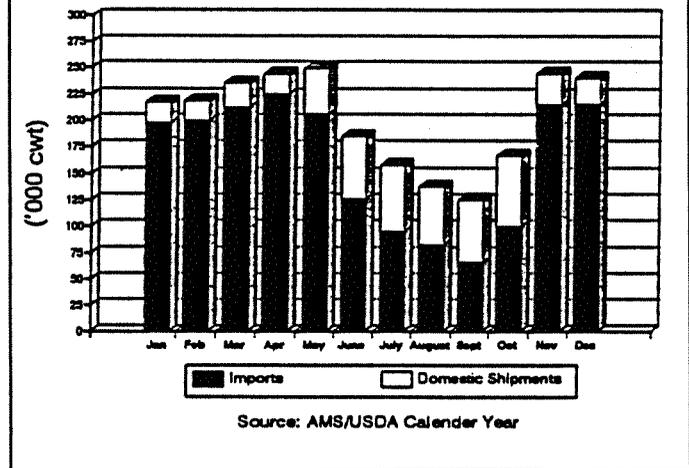
C. Imports

Imports grew at an average annual rate of 8.1 percent between 1987 and 1992. For 1992, AMS reported total green onion imports of 2,081,000 cwt. Mexican shipments accounted for approximately 98 percent of all U.S. green onion imports between 1987 and 1992. Guatemala is a distant second, although its shipments have risen from 3,000 cwt in 1987 to 37,000 in 1992.

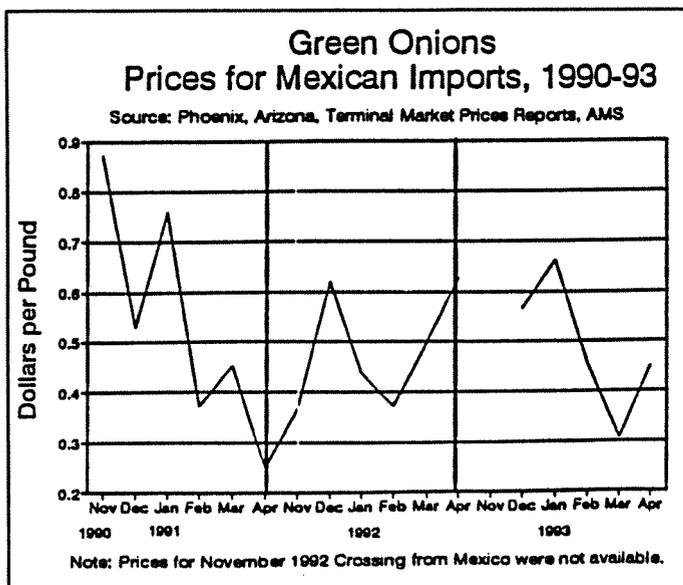
D. Monthly Supply Variability

Domestic shipments of green onions are consistent throughout the year, although there is typically an increase during summer months (June through October). This consistency of supply is largely due to California, which produces all year. With the exception of peak summer months (June and July), Arizona also ships year-round. Texas and Florida enter the market during the winter, when prices are higher on average (see graph on prices) and supply the market from January to April.

Green Onions Monthly Supply Variability 1991



Imports, mainly from Mexico, dominate the market from October to June. During this time, Mexico often supplies as much as 90 percent of the green onion market.



E. Prices

California and Arizona wholesale terminal markets account for the vast proportion of green onions in the United States. Prices at these markets, therefore, best reflect the pulse of the market. Green onion prices peak during the holiday season in mid-winter, notably from November through the first week of January. Prices have not experienced the peaks recorded a few years ago.

F. Industry Comments

White Lisbon and Tokyo varieties are the most commonly grown and purchased in the United States, White Lisbon because it is a sweeter, milder onion, and Tokyo because it is resistant to harsh weather. The Omo variety is becoming more popular with growers because it has Tokyo characteristics and is resistant to mildew diseases.

Consumers look for a shank (white stem) that is two to three inches long and one-fourth to one-half inch in diameter. They prefer deep green leaves approximately 12 to 14 inches long. The Asian population is traditionally the largest consumer of green onions, although the product is increasingly becoming a mainstream vegetable.

One distributor mentioned that prices tend to be higher during the holidays due to the higher consumption of non-prepared foods at that time. Prices are, however, consistent most of the year. Consumption is expected to increase as people consume more fresh vegetables and become more health conscious.

China and Spain are said to be increasing their supplies of green onions; however, they are not yet exporting to the United States. One industry expert expects the North American Free Trade Agreement (NAFTA) to encourage imports from Mexico. The same source mentioned that the United States had already lost much of its production to Mexico.

G. Import Duties

Green onions are classified under 0703.10.20 of the U.S. Harmonized Tariff Schedule. The applicable duty rate is 1.3 cents/kg for MFN and GATT member countries. There is no duty for green onions brought in from beneficiary countries of the Generalized System of Preferences, the Caribbean Basin Recovery Act, or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

The USDA has market standards for green onions. Please see Appendix H for applicable standards.

I. Status for Entry from LAC Countries to the United States

Onions normally fall under the broader category of Allium (family name) and are admissible from all LAC countries except the following: Anguilla, St. Eustatius, St. Martin, Turks and Caicos Islands, British Virgin Islands, French Guiana, and Netherlands Antilles. It is likely that these countries have never requested import authorization for onions.

HONEYDEWS
(*Cucumis melo L.*, honeydew, melon, dulce)

A. Summary

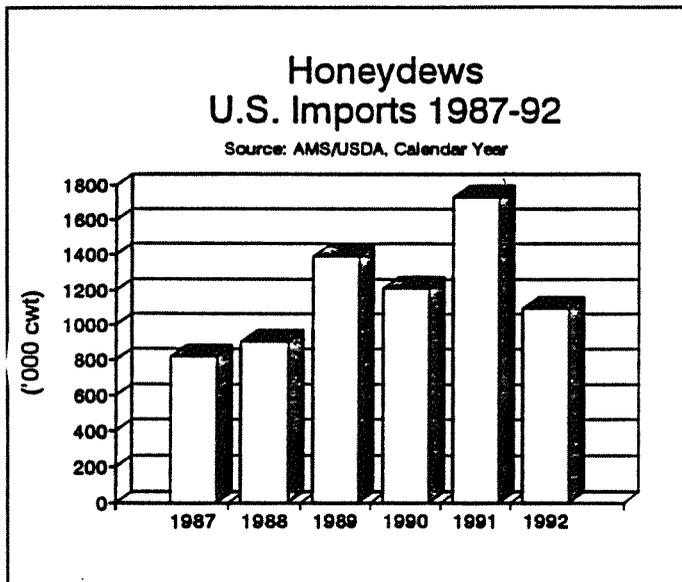
Although production rose from 1991 to 1992, imports continued to take advantage of the off-season window from November through April. Average prices are higher between January and March and lower from June through September. The surplus produced during the peak season has led to an increase in U.S. exports. Mexico is the only notable foreign supplier of honeydews, although several Central American countries are shipping in small amounts. Duty rates for honeydews are subject to date of entry as well as status of trade preferences with the exporting country. Most LAC countries are now approved to ship to the United States.

B. Apparent Consumption

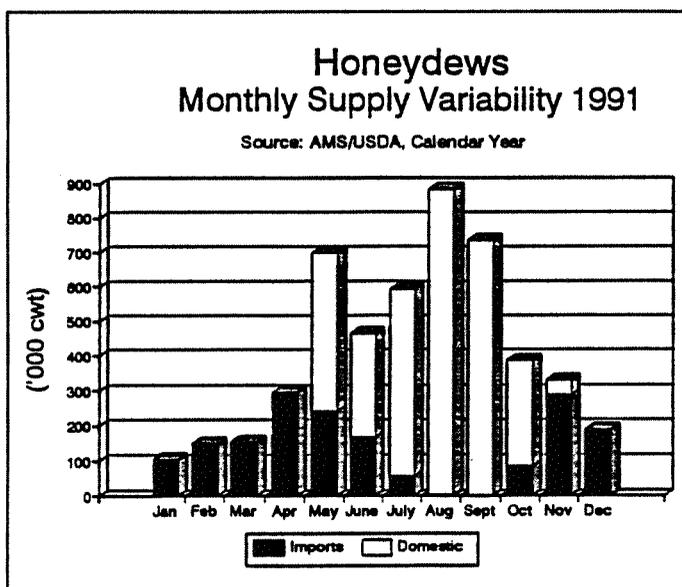
	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	4811	5241	5131	4520	3737	4148
Imports	823	910	1395	1212	1733	1098
Exports	324	401	358	475	665	222
Apparent Consumption	5610	5750	6168	5158	4805	5024

Source: Production figures were obtained from California, Arizona, and Texas state statistical service agencies; import figures are from AMS/USDA; export figures are from FATUS, ERS/USDA; and apparent consumption was calculated using figures obtained from California, Arizona, and Texas state statistical services; AMS/USDA; and ERS/USDA.

Principal domestic suppliers are California, Texas, and Arizona. California dominates the market, accounting for three-fourths of domestic production on average between 1987 and 1992. Texas accounted for an average of 18 percent in the same period, and Arizona for approximately 8 percent.



1992, with a slight increase of 2.24 percent between 1991 and 1992. Principal foreign suppliers to the "Miscellaneous Mixed Melons" category are Brazil, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, and Mexico. Numerous other countries are authorized to ship to the United States.



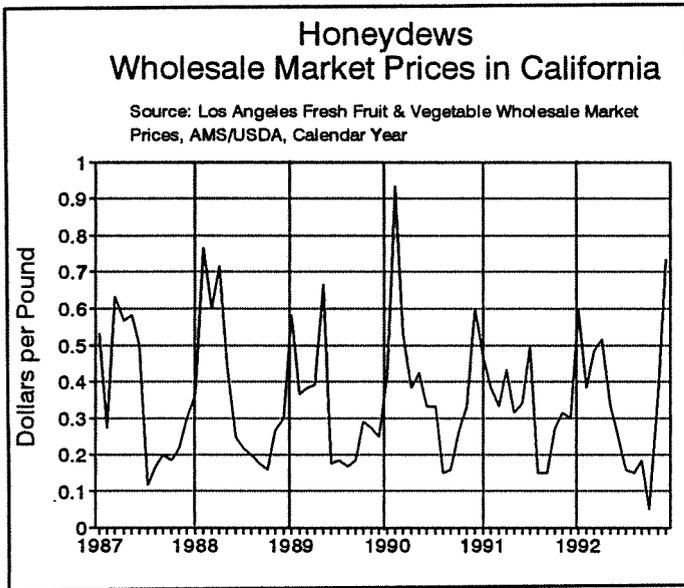
C. Imports

Honeydew imports grew rapidly in the 1980s but have slowed in recent years. From 1991 to 1992, imports dropped by 35 percent from 17.3 million pounds to 10.98 million pounds.

Although AMS/USDA statistics list Mexico as the only supplier in its Honeydew category between 1987 and 1992, it is likely that honeydews comprise the bulk of another category listed by AMS/USDA (Miscellaneous Mixed Melons). This category experienced an average annual growth of 13.13 percent between 1987 and

D. Monthly Supply Variability

According to Richard Brown, USDA economist, supplies develop rapidly in the southwestern states, notably Texas and Arizona, in May and June. California captures the market in July and dominates it through November. Supplies are limited from November through April, at which time imports basically fill the market window. The volume of imports at its peak, however, is at best one-third of domestic production at its peak, which typically occurs in August.



E. Prices

Prices are on average higher between January and March and lower from June through September. Changes in supply have caused considerable price fluctuation.

The prices illustrated in the graph are FOB price monthly averages at important shipping points, such as the Los Angeles wholesale market. Caribbean imports entering through Florida ports, such as Miami, often receive higher prices in the domestic off-season.

F. Industry Comments

One wholesaler said that most U.S. consumers cannot tell the difference in the varieties of honeydew. Consumers look for smoothness and symmetry in the fruit and are particularly averse to scarring and discoloration, choosing instead a honeydew that is of a uniform whitish-yellowish color. Appearance is also a large factor in the wholesale buyer's purchasing decision. USDA standards require at least a 10 percent sugar content in the fruit, and most honeydews in the market have between 13 to 14 percent sugar content. Honeydews are a mainstream item, consumed largely in the summer.

Growers in Texas, one of the emerging melon suppliers, are collectively working on adapting the use of plastic mulch to grow melons to enhance quality and lengthen their selling season. Plastic mulch retains soil warmth to allow more vigorous growth, in addition to reducing scarring and ground spots. Yields per acre have been higher with plastic mulch.

G. Import Duties

Honeydews are classified under 0807.10.70 in the Other Melons category in the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries for this category is 8.5 percent between December 1 and May 31 of the following year. Rates are 35 percent if entered at any other time.

Honeydews imported from beneficiary countries of the Generalized System of Preferences are admissible duty free from December 1 until the following May 31. Applicable duty for any other period is 35 percent.

There is no duty at any time for honeydews brought in from beneficiary countries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

The USDA has market standards for honeydews. Please see Appendix H following this report for applicable standards.

I. Status for Entry for LAC Countries to the United States

Admissible to all ports:

Antigua and Barbuda	Guadeloupe	Belize
Grenada	St. Vincent	Honduras
St. Lucia	Guatemala	Nicaragua
Mexico	El Salvador	Jamaica
Panama and Canal Zone ¹	Dominican Republic	St. Kitts
Bahamas	Haiti	Chile

Admissible to North Atlantic ports:

Barbados	Nevis	Aruba
Martinique	Ecuador	Brazil ¹
Trinidad and Tobago	Montserrat	
Cayman Islands	Dominica	

Admissible to South Atlantic and Gulf ports:

Barbados	Cayman Islands	Aruba
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Source: APHIS

^{1/} Additional restrictions and safeguards are required. See APHIS.

LIMES
(*Citrus aurantiifolia*, lima agria o verde)

A. Summary

U.S. production paralleled the steady growth in consumption of limes until hurricane Andrew reduced acreage by nearly 70 percent in Florida, the main producing state. Consumption of fresh limes is mostly inelastic because most buyers are from commercial operations such as restaurants and food service enterprises. Imports, which have grown at an annual rate of about 18 percent and which are mostly Mexican, have fared well as a result and are expected to fill in the gaps until production resumes normal levels, which is not expected until late 1994. After 1994, imports are still expected to grow. Prices are generally higher in the winter because of lower availability of limes during this time. Limes are admissible to most U.S. ports from LAC countries, and are duty free when brought in from countries that are beneficiaries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	1040	1000	1440	1280	1400	880 ¹
Imports	947	1257	1295	1530	1740	2165
Exports	101	65	51	106	107	---
Apparent Consumption	1691	1922	2260	2355	2851	---

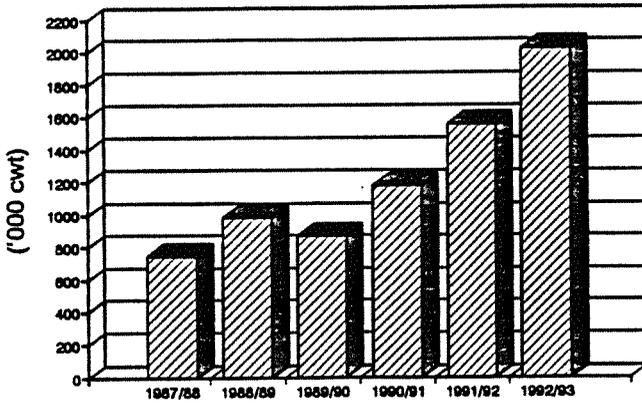
Source: Production figures were obtained from the Florida state statistical service agency; import figures are from AMS/USDA; export figures are from FATUS, ERS/USDA; and apparent consumption figures are from NASS/USDA. Note: the above figures represent only production from Florida.

1/ Decreased due to hurricane Andrew. See industry comments.

A vast majority of limes are consumed in the institutional and commercial food sector, that is, food service, restaurants, bars, and so on. According to one expert, personal consumption of limes increases during the U.S. summer due to their popularity as an ingredient in making cool beverages. Florida accounts for nearly all domestic production of limes. Southern California is also a supplier.

Limes Import Shipments 1987-92

Source: Bureau of the Census, U.S. Dept. of Commerce, Calendar Year



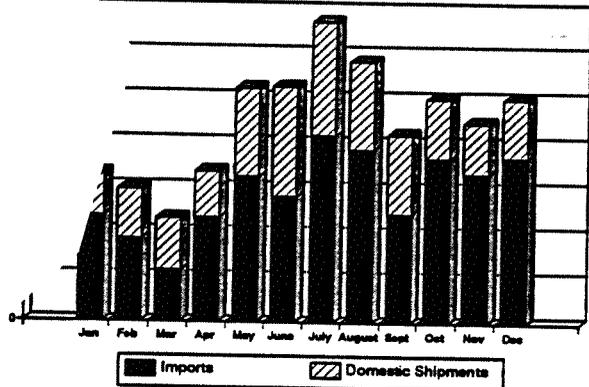
C. Imports

The volume of imports rose steadily at an average annual rate of 18.4 percent between 1987 and 1992. For 1992, AMS/USDA reported total lime shipments of 2.16 million cwt. Mexico supplied on the average 96 percent of lime imports over the five-year period. Other LAC suppliers providing less than 4 percent of import shipments are Bahamas, Costa Rica, Honduras, Ecuador, Guatemala, Haiti, El Salvador, Nicaragua, and Venezuela.

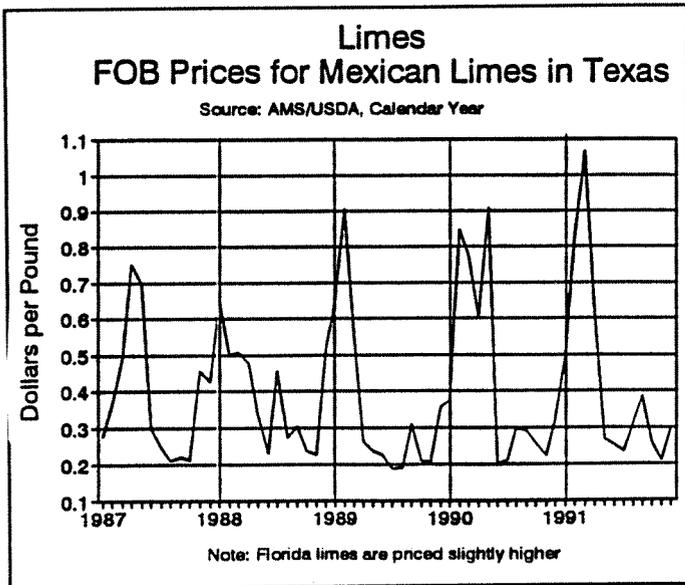
D. Monthly Supply Variability

Domestic supply is year-round from Florida, although production nearly doubles in the summer months. Imports maintain a presence throughout the year and supply from 50 to 75 percent of the market, the latter occurring in winter months.

Limes Monthly Supply Variability 1991



Source: AMS/USDA, Calendar Year



E. Prices

Persian seedless limes from Florida have commanded a better price than imports in past years, about 30 percent more on average. Both domestic and import suppliers have received better prices during winter months, notably at the beginning of the year. Prices show vast fluctuations in high and lows during a given year, the highest recorded monthly average prices being six times those of the lowest (see graph).

F. Industry Comments

Persian and Tahiti limes are the most popular varieties consumed in the United States. Evenness in color and firmness of the lime are considered major factors in the consumer buying decision. Wholesale buyers strongly prefer 10-lb boxes. Others, especially bars and restaurant chains, are choosing 5-lb boxes to ease handling and reduce waste.

Hurricane Andrew is primarily responsible for the drop in lime acreage in Florida as reported by the Florida Agricultural Statistics Service on April 23, 1993. Lime acreage was down by 66 percent, to 2,235 acres, from the 6,647 acres reported in 1990. Production was not expected to resume normal levels until the 1993-1994 season year.

G. Import Duties

Limes are classified under 0805.30.40 of the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries for this category is 2.2 cents/kg brought in at any time of the year.

Limes are admissible duty free at any time from beneficiary countries of the Generalized System of Preferences, the Caribbean Economic Basin Recovery Act, the Andean Trade Preference Act, and from Israel.

H. AMS Standards and Market

Orders

The USDA has marketing standards for Persian/Tahiti Limes. Please see Appendix H attached to this report for applicable standards.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Antigua and Barbuda	Haiti
Bahamas	Jamaica
Barbados	Montserrat
Cayman Islands	St. Kitts and Nevis
Dominica	St. Lucia
Dominican Republic	St. Vincent and Grenadines
Grenada	Panama

Admissible to North Atlantic ports:

Guadeloupe	French Guiana
Martinique	Guatemala
Belize	Guyana
Bermuda	Honduras
Colombia	Mexico
Costa Rica	Nicaragua
Ecuador	Trinidad and Tobago
El Salvador	Venezuela

Admissible to North Pacific ports

Martinique

Source: APHIS

MANGOES
(*Mangifera indica*, mango)

A. Summary

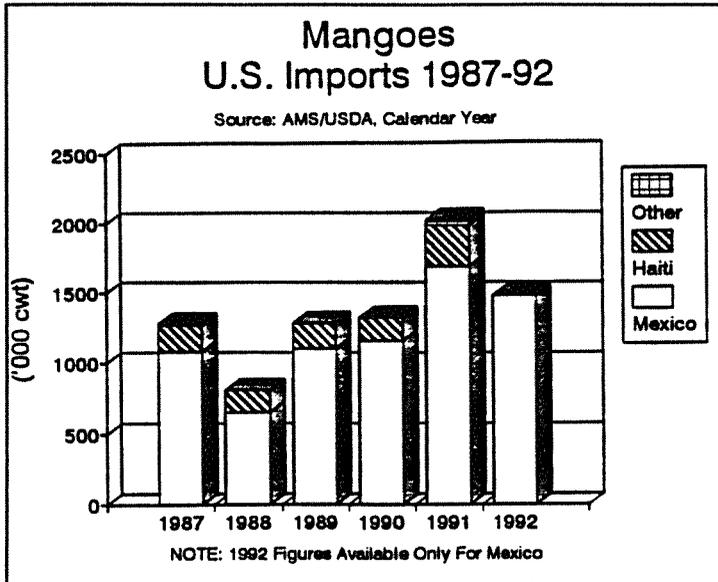
Imports continue to dominate the market year-round as growth in consumption outpaces the small domestic production. U.S. producers' share was reduced even further in 1992 due to hurricane Andrew's destruction of most of the mango acreage in Florida, a leading domestic producer. Mexico controls nearly all of the market and fluctuations in its supply affect prices markedly. Nevertheless, Mexico supplies mainly between April and September, leaving a market window for other LAC exporters. Prices usually peak at the beginning of the season (March through April) and are at their lowest at the end (August through September). Mangos are admissible from all LAC countries with an APHIS-approved hot water dip treatment except for those countries known to be infested with the mango seed weevil. Currently these are the islands of Barbados, Dominica, St Lucia, Guadeloupe, and Martinique. Mangoes are admissible duty free from countries that are beneficiaries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	303	193	220	193	275	220
Imports	1288	813	1269	1333	2034	1652
Exports	0	0	0	0	0	0
Apparent Consumption	1590	1006	1509	1526	2309	1872

Source: Production figures were obtained from Florida state statistical service agency; import figures are from U.S. Bureau of the Census, USDC; export figures are from FATUS, ERS/USDA; and apparent consumption figures are from NASS/USDA. Note: the above figures represent only Florida production.

In most years, nearly all domestic production originates from Florida. Occasionally, Puerto Rico ships in amounts greater than 1,000 cwt, the minimum amount recorded for a given year by AMS/USDA.

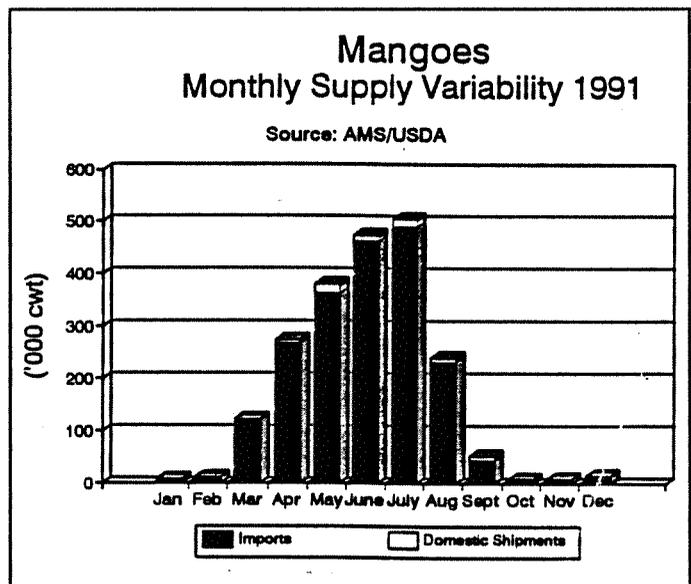


C. Imports⁶

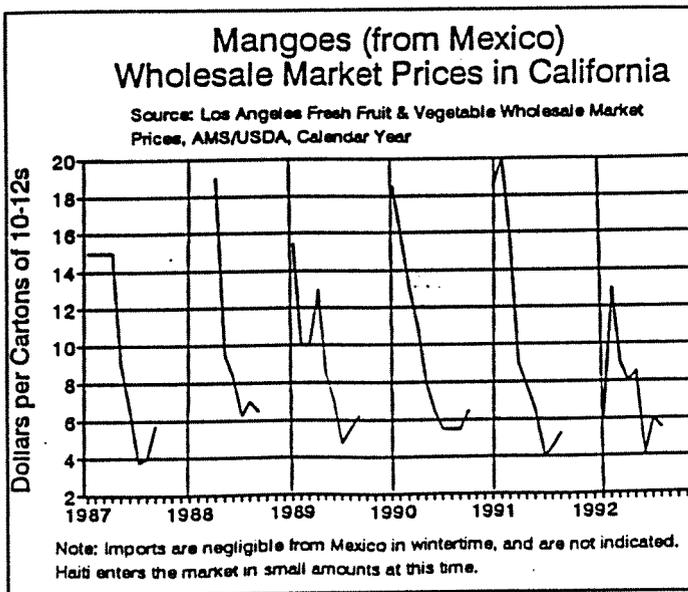
The volume of imports grew at an average annual rate of approximately 12 percent between 1987 and 1992. For 1992, AMS reported total mango imports of 1,652,000 cwt. Mexican shipments accounted for approximately 83 percent of all U.S. mango imports between 1987 and 1991. Haiti averaged about 15 percent in the same period. Recent entrants are Brazil, Belize, Venezuela, Peru, Ecuador, Dominican Republic, and Jamaica.

D. Monthly Supply Variability

Imports constitute the bulk of total supply all year-round. U.S. production, originating from southern Florida and occasionally Puerto Rico, is mainly between May and July and provides only a fraction of total shipments even at this time. For instance, in 1991, import shipments for May through July inclusive were 1,316,000 cwt whereas domestic shipments in the same period were 47,000 cwt. June and July accounted for 45 percent of annual shipments, on average, from 1987 through 1991.



⁶ Imports reported by AMS for Mexican shipments are between 5 and 10 percent higher than those reported by Bureau of the Census/USDC. This report uses AMS figures for Mexico.



E. Prices

Sharp changes in availability cause prices to fluctuate severely. Domestic produce commands a slightly higher price than imports during the Florida growing season. Prices are also quite different from one shipping point to another.

F. Industry Comments

As much as 60 percent of the East Coast market is said to be dominated by the Tommy Atkins variety, whereas the Haden variety is the most popular on the West Coast. Some consumers prefer the fibrous fruit of the Tommy Atkins variety, whereas others prefer the smoother-textured Haden variety. The Kent variety usually ranks third in both preference and sales.

A major factor in mango varieties is their ability to remain unchanged in taste and appearance after the hot-water treatment for U.S. admissibility. Tommy Atkins and Haden varieties withstand this treatment relatively well. The Oro and Keitt varieties do not do so well in the hot-water treatment.

Americans are said to prefer the larger varieties of mangoes, which helps to explain why several mangoes popular in Mexico (a major supplier) do not sell well in the United States. Also, aesthetics is an important part of the consumer buying decision.

G. Import Duties

Fresh mangoes are classified under the subheading 0804.50.40 as "Guavas, mangoes, and mangosteens" in the U.S. Harmonized Tariff Schedule. For MFN and GATT member countries, the duty rate is 8.27 cents/kg for mangoes entered at any time.

There is no duty at any time for mangoes brought in from beneficiary countries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

There are no USDA-issued market standards or market orders for mangoes.

I. Status for Entry from LAC Countries to the United States

Mangos are admissible from all LAC countries with an APHIS-approved hot water dip treatment **except for those areas know to be infested with the mango seed weevil.** APHIS currently identifies the islands of Barbados, Dominica, St Lucia, Guadeloupe, and Martinique as being infested. Several islands in the Caribbean can ship mangos without treatment because they retain a fruit fly-free status. These islands are Grenada, Bermuda, and St. Vincent and Grenadines. Chile can export mangos without treatment from its fruit fly-free zone. Mangos are admissible from countries that have made arrangements for APHIS pre-clearance.

MIXED MELONS
(*Cucumis melo*)

AMS/USDA classifies the following in the Mixed Melons category: mixed loads of cantaloupe-type melons, straight loads, and loads containing as much as 70 percent of casabas, crenshaws, honeyballs, Persian, and Spanish melons.

A. Summary

Mixed melons have experienced positive growth in consumption, production, and imports in recent years. Several countries in the LAC region have increased competition to supply the U.S. market. U.S. production takes place during the summer months. Import shipments are counter-seasonal, and have traditionally outpaced domestic shipments.

B. Apparent Consumption (Fresh)

There are no available figures for consumption in the Mixed Melons category. It may be assumed that all that is domestically produced as well as imported is consumed, save for spoilage and disposal. Production is estimated as the following⁷:

(in 1000 cwt)					
1987	1988	1989	1990	1991	1992
667	647	684	413	488	478 ¹

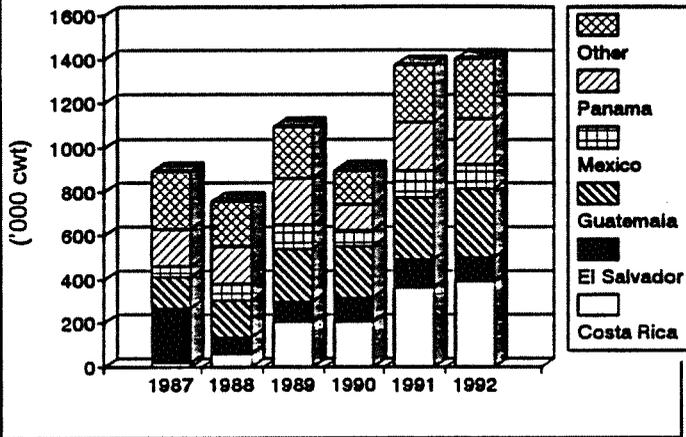
Source: AMS/USDA

1/ Estimated because AMS discontinued reporting central California, the largest producer.

⁷ Figures on domestic shipments have been used to replace production because of an unavailability of information on production in the category. Shipments, which include rail, piggyback, truck, and air, are the closest approximation available.

Mixed Melons Import Shipments 1987-92

Source: AMS/USDA, Calendar Year

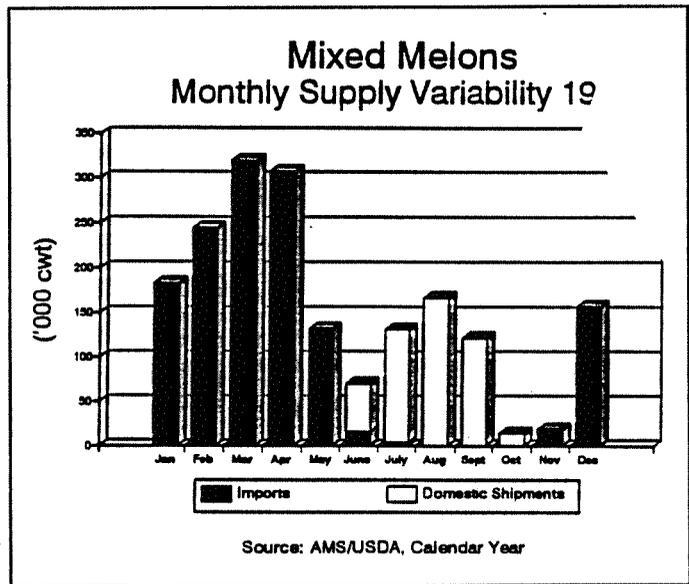


C. Imports

Several countries in the LAC region have begun to supply the U.S. market. The most notable suppliers in recent years are Costa Rica, El Salvador, Mexico, Panama, and Guatemala. Those supplying in smaller quantities are Brazil, Dominican Republic, Ecuador, Haiti, Honduras, and Nicaragua.

D. Monthly Supply Variability

The U.S. season for mixed melons is during the summer, between June and September, with peaks typically observed in July. At this time, California accounts for more than 90 percent of domestic shipments. Texas and Arizona compete directly with California but have smaller volumes. For instance, in 1991, California supplied 554,000 cwt and Arizona supplied 34,000 cwt. Texas shipped in amounts less than 1,000 cwt and hence was omitted by AMS reporters.



Imports are contra-seasonal, appearing during the winter months at which time there are no reported domestic shipments. As the graph on supply variability indicates, imports peak in larger numbers than their domestic counterparts. Total import shipments into the United States have usually outpaced domestic shipments.

E. Prices

There are no available statistics for this category. Interested readers are advised to contact wholesalers of melons at terminal markets in California or Arizona (particularly Phoenix) to obtain wholesale market prices. Appendix B provides names and addresses of individuals and agencies who can be contacted in regard to this category.

F. Industry Comments

Consumers are suspicious of atypical appearances, although this does not affect the quality of the fruit. Melons under the Mixed Melons category, like other popular melons (honeydews, cantaloupes), are normally consumed during summer months. Retailers actively promote this category during August to offer change from conventional summer tree fruit. One industry source expected consumption to increase given the increased awareness by consumers of the health benefits of melons. Also, U.S. producers also are looking overseas to complement their production.

G. Import Duties

Mixed melons are classified under 0807.10.70 and 0807.10.80 of the U.S. Harmonized Tariff Schedule. The applicable duty for MFN and GATT member countries for this category is 3.5 percent if entered between December 21 and the following May 31. Duty is 14 percent if entered at any other time.

For countries under the Generalized System of Preferences, there is no duty for this category if entered between December 21 and the following May 31. For mixed melons entered at any other time, duty is 24.5 percent.

There is no duty at any time for mixed melons brought in from beneficiary countries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

The USDA has issued no marketing standards or orders for mixed melons.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Antigua and Barbuda	Guatemala	Belize
Grenada	El Salvador ¹	Honduras ¹
St. Lucia	Dominican Republic	Nicaragua
Mexico	Haiti	Jamaica
Panama and Canal Zone ¹	St. Vincent and Grenadines	Chile
Bahamas		Costa Rica
Guadeloupe		

Admissible to North Atlantic ports:

Barbados
Martinique
Costa Rica
Trinidad and Tobago
Cayman Islands
Nevis
Ecuador
Aruba
Montserrat
Dominica

Admissible to South Atlantic and Gulf ports:

Barbados
Cayman Islands
Aruba

Source: APHIS

1/ Additional restrictions and safeguards are required.

MUSHROOMS⁸
(*Basidiomycetes*, champiñones)

Brown	(<i>Agaricus brunnescens</i> * commercial)
Oyster	(<i>Pleurotus ostreatus</i>)
White button	(<i>Agaricus bisporus</i>)
Angel trumpet	(<i>Pleurotus ostreatus hybrid</i>)
Pompon blanc	(<i>Hericium erinaceus</i>)
Butter	(<i>Pholiota aurivella</i>)
Enoki	(<i>Flammulina velutipes</i>)
Shiitake	(<i>Lentinus edodes</i>)
Wood-ear	(<i>Auricularia polytricha</i>)

A. Summary

Apparent consumption is expected to resume growth after a small drop in 1992, when U.S. production fell due to a reduction in acreage and labor problems in a major producing state. The shortage in supplies has prompted higher price expectations by domestic growers, who have experienced unchanged prices since 1989. Imports, which have slowed growth in 1992 after rising steadily for the four years prior, should increase due to the production shortage. Mushrooms are admissible from all countries in the LAC region and are duty free from countries that are beneficiaries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act.

B. Apparent Consumption (Fresh)

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	4570	4690	4850	5120	5120	4930
Imports	6	15	21	22	45	45
Exports	26	29	34	34	175	154
Apparent Consumption	4550	4676	4837	5108	4990	4821

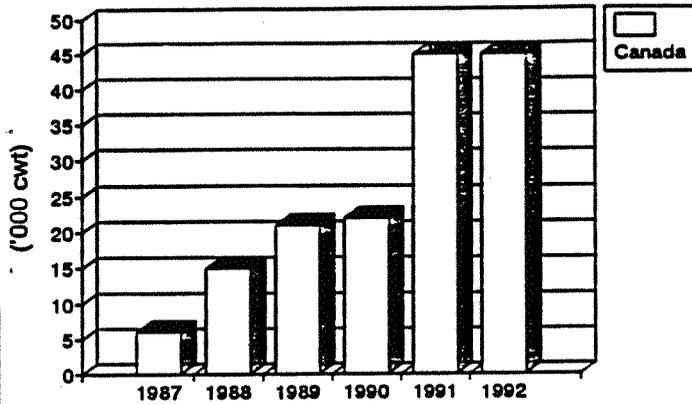
Source: Calculated using figures obtained from NASS/USDA.

Pennsylvania accounts for almost 45 percent on average of all mushroom production in the United States. Other suppliers, in order of volume, are California, Florida, Michigan, Indiana, Ohio, Delaware, Georgia, and New York. States such as Washington, Illinois, and Connecticut also produce mushrooms, although in negligible quantities.

⁸ This report is limited to the discussion of *Agaricus* mushrooms, the leading commercial variety, which accounts for almost all mushroom sales in the United States.

Mushrooms Total Import Shipments 1987-92

Source: AMS/USDA, Calendar Year



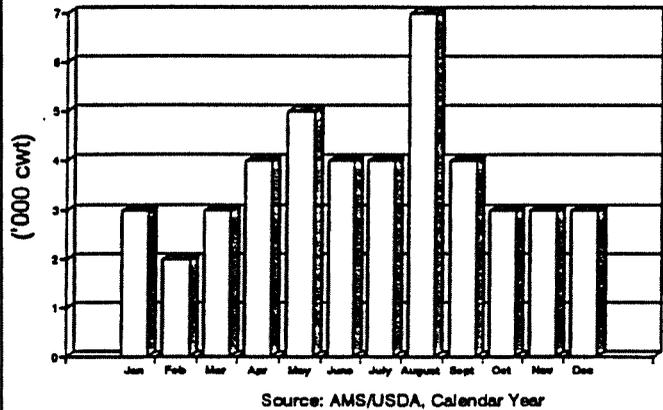
C. Imports

Growth in imports slowed in 1992 after rising steadily for the prior four years. For 1992, AMS/USDA reported total mushroom imports of 45,000 cwt. In the Americas, Canada was the only reported supplier, accounting for more than 95 percent of worldwide imports of fresh chilled mushrooms into the United States.

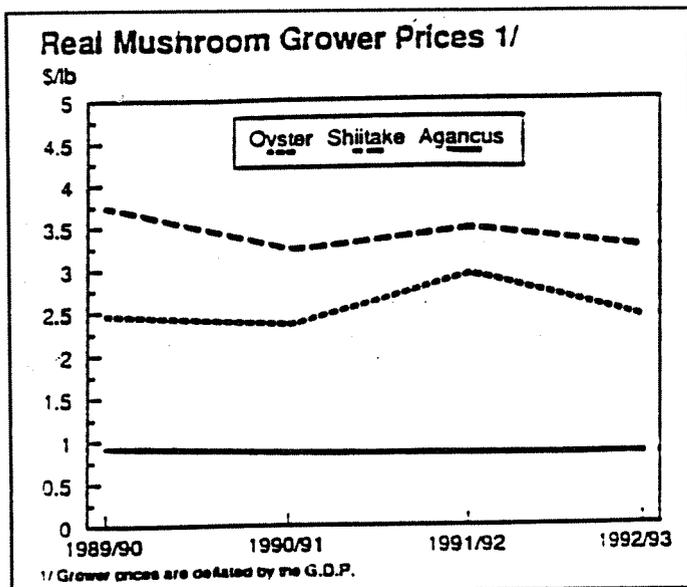
D. Monthly Supply Variability

With the exception of Washington state, which produces only in the first one-half of the calendar year, mushrooms are produced throughout the year in the United States. Imports, mainly from Canada, also come in throughout the year with relative consistency.

Mushrooms Imports From Canada Monthly Supply Variability 1991



Source: AMS/USDA, Calendar Year



E. Prices

According to analysts at USDA, tighter supplies of mushrooms for both fresh consumption and processing in 1992-1993 will likely contribute to higher grower prices. The grower price for mushrooms is expected, by one industry expert, to increase 1 percent to \$0.91/lb.

Prices for fresh market mushrooms and specialties have tended to fall over the past several years as supplies have grown. Spring 1993 was an unusual period due to the supply

shortage. At this time, domestic growers were expecting near or above \$1.00, a price not obtained since 1989.

F. Industry Comments

Labor problems on Pennsylvania mushroom farms, which account for one-half of U.S. production, coupled with a reduction in acreage, will lead to an overall 1 percent drop to 718 million pounds. Growth in sales of fresh mushrooms is expected to continue with the recent passage of the National Mushroom Research and Promotion Act. The act legislates that the Mushroom Council will assess fresh mushroom producers and importers with sales of 500,000 lbs or more one-fourth to 1 cent/lb for use in generic promotion and research.

The Agricultural Statistics Board at NASS/USDA releases an annual report on mushrooms during August of each year. Interested parties may call U.S. (202) 447-3843.

G. Import Duties

Mushrooms are classified under the 0709.51.00 subheading of the U.S. Harmonized Tariff Schedule. The applicable rate for member countries of the MFN, GATT, and Generalized System of Preferences for this category is 11 cents/kg plus 25 percent of the customs value (approximately equal to FAS Vessel) for mushrooms imported into the United States at any time of the year.

There is no duty at any time for mushrooms entered from beneficiary countries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act, or from Israel.

For Canada, the applicable rate is 7.7 cents/kg plus 17.5 percent of the customs value for mushrooms entered at any time of the year.

H. AMS Standards and Market Orders

The USDA has marketing standards for mushrooms. Please see Appendix H for the applicable standards.

I. Status for Entry from LAC Countries to the United States

Mushrooms are admissible from all LAC countries. Although no permit is required for imports, some safeguards and restrictions apply in the case of corn smut galls. Interested parties may contact APHIS for details.

OKRA
(*Abelmoschus esculentus*, quingombo, ocra)

A. Summary

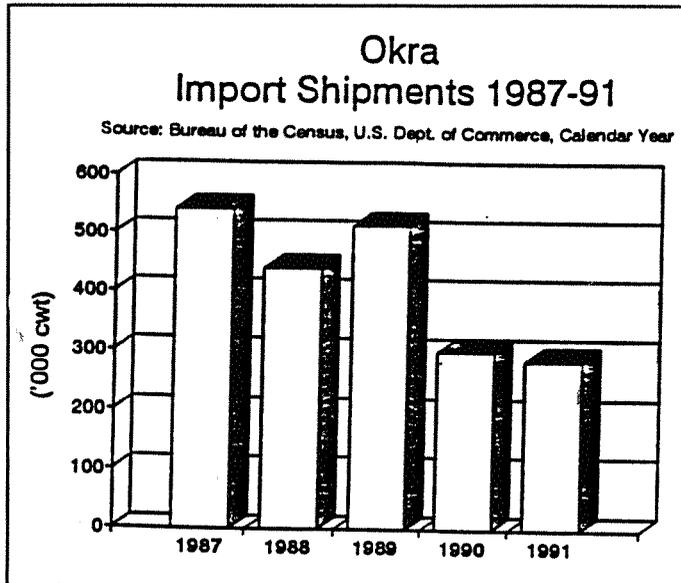
Production, already on the decline, was further depressed by hurricane Andrew which destroyed vast acreage in Florida, the main producing state. Imports slipped slightly in 1992 after a consecutive five-year growth in volume and unit prices edged slightly higher compared to the year before. Mexico is the primary supplier of okra and dominates the market from May through September. A long market window appears during the off-season (October through April), at which times prices are the highest. Okra is considered a specialty vegetable, consumed mainly in the southern United States and among the Asian population. The product is admissible from most LAC countries, although treatment is often required, and is duty free from countries that are beneficiaries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	136	181	186	153	115	50
Imports	541	441	514	301	288	268
Exports	0	0	0	0	0	0
Apparent Consumption	678	622	700	454	403	318

Source: Production is estimated using figures from AMS/USDA (domestic shipments); imports figures are from Bureau of the Census, USDC; and apparent consumption is estimated by adding production and imports.

Production is estimated at 25 percent more than shipment figures. Texas and Florida are the only reporting producers of okra in the United States. Okra production in Florida has dropped dramatically in 1991-1992 and is expected to remain low for the 1992-1993 season, according to an expert, because of damage caused by Hurricane Andrew.



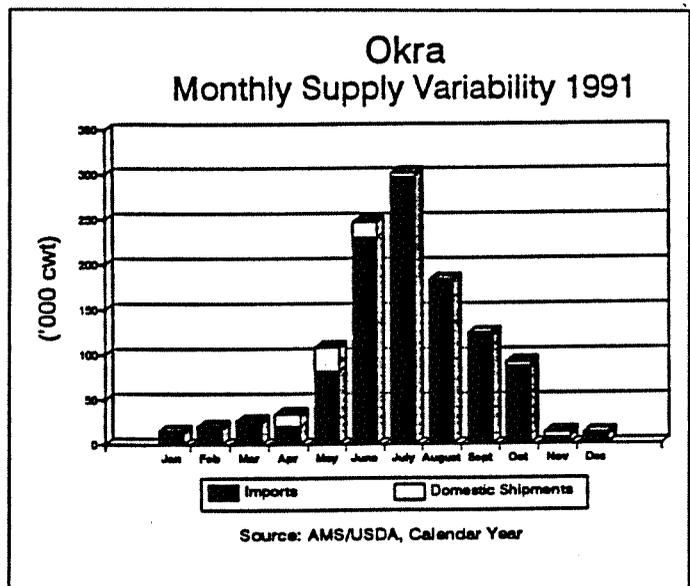
C. Imports

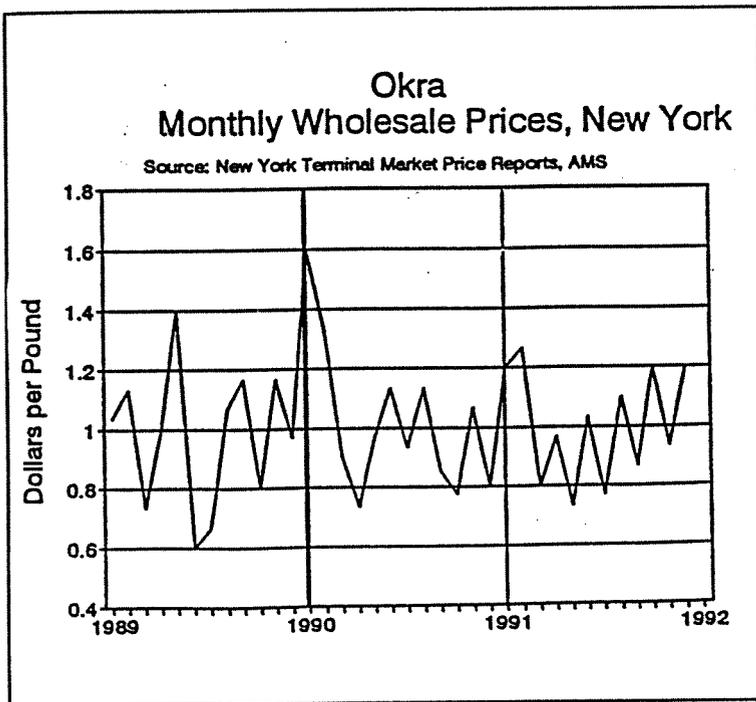
In 1991, okra imports into the United States were at their lowest since 1986, although the unit value was up from the year before. However, neither volume nor unit value has reached the peaks achieved in 1989. Mexico has been the dominant supplier recently of okra imported into the United States. Past suppliers have been Dominican Republic, Guatemala, El Salvador, and Belize.

D. Monthly Supply Variability

Domestic shipments of okra are year-round, although there is a surge in domestic production from April to July. In 1991, for instance, Florida peaked in May at 21,000 cwt, up from 2,000 cwt in January of the same year. Florida, which has accounted for about 80 percent of all domestic shipments of okra in recent years, ships year-round. Texas ships at varying intervals, mostly in summer months.

Imports, mainly from Mexico, dominate the market year-round, peaking at almost 98 percent during summer months.





E. Prices

Volatility of prices has decreased somewhat in recent years. Prices tend to reach seasonal highs early in the year (typically February to March) and seasonal lows during late spring, the start of the U.S. producing season. There have been exceptions to this during times of actual or perceived shortages (rumors, diseases, and so on). Prices during the summer season are lower in the south than they are in the north because okra is produced in several southern states.

F. Industry Comments

When selecting okra, consumers and buyers look for a deep green color, without a yellowish or brown tinge. Another desirable trait is for pieces to be smaller than two inches long. Wholesalers usually prefer buying okra in 16-lb one-half bushels. Sale of okra is most prevalent in Asian communities and in parts of southern United States. The market is expected to expand as a result of the growth of minority populations and because people are increasingly consuming fresh vegetables.

G. Import Duties

Okra is classified under 0709.90.13 and 0709.90.16 of the U.S. Harmonized Tariff Schedule. The applicable duty rate is 25 percent for MFN and GATT member countries.

Okra is admissible duty free at any time from beneficiary countries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, Andean Trade Preference Act, and from Israel.

H. AMS Standards and Market Orders

The USDA has market standards for okra. Please see Appendix H for applicable standards.

I. Status for Entry from LAC Countries to the United States

Admissible from all ports:

Belize	Honduras
Costa Rica	Mexico (t)
El Salvador	Nicaragua (capsule)
Guatemala	

Admissible from North Atlantic ports:

Antigua and Barbuda	St. Eustatius (Netherlands)
Bahamas	St. Kitts and Nevis
Barbados	St. Lucia
Cayman Islands	St. Vincent and Grenadines
Dominica	Virgin Islands [British]
Dominican Republic(t)	Brazil ¹
Grenada	Colombia
Guadeloupe	Ecuador
Haiti	Guyana
Jamaica	Peru
Martinique	Trinidad and Tobago
Montserrat	Venezuela

Admissible from South Atlantic and Gulf ports:

Antigua and Barbuda (t)	St. Kitts and Nevis (t)
Bahamas (t, except Andros Island)	St. Lucia (t)
Barbados (t)	St. Martin [France and Netherlands] (t)
Cayman Islands (t)	St. Vincent and Grenadines (t)
Dominica (t)	Virgin Islands [British] (t)
Dominican Republic(t)	Brazil (t)
Grenada (t)	Colombia (t)
Guadeloupe (t)	Ecuador (t)
Haiti	Peru (t)
Jamaica (t)	Trinidad and Tobago (t)
Martinique (t)	Venezuela (t)
Montserrat	

Source: APHIS

(t) Indicates treatment required.

1/ Additional safeguards and restrictions apply.

PAPAYA
(*Carica papaya*, papaya, papaw)

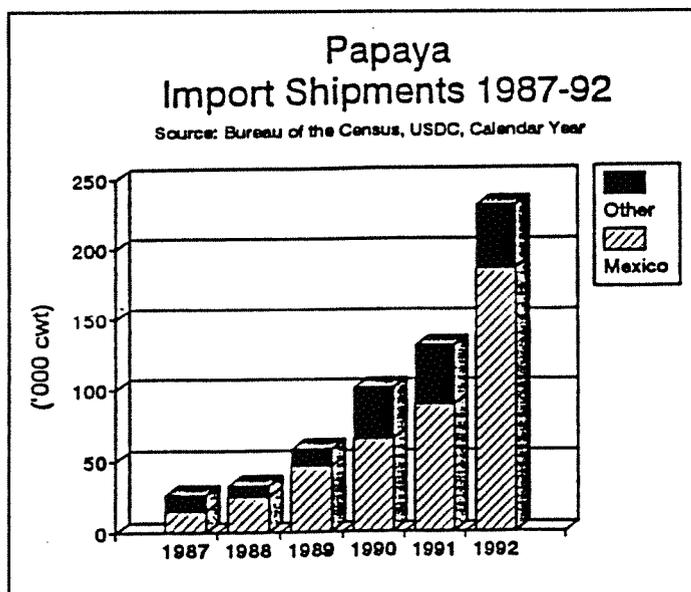
A. Summary

U.S. consumption of papaya increased more than 40 percent in 1992 from the previous year. U.S. production has not increased in proportion to the growth in consumption, which has instead created an opportunity for imports. Mexico, already a large supplier, has capitalized on this demand and has increased its supply by almost 75 percent in 1992 from the year before. Americans consume about five-sixth of all available papaya in fresh form. The United States exports papayas and was a net exporter until 1991. Papayas are admissible from most countries in Central America and are duty free from countries that are beneficiaries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act and from most beneficiaries of the Generalized System of Preferences.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	670	690	740	685	554	665
Imports	26	33	58	101	131	231
Exports	132	221	319	254	186	179
Apparent Consumption	564	502	479	532	499	717

Source: Production figures were obtained from NASS/USDA; import figures are from AMS/USDA; export figures are from FATUS, ERS/USDA; and apparent consumption figures were calculated using figures from NASS/USDA, AMS/USDA and ERS/USDA.

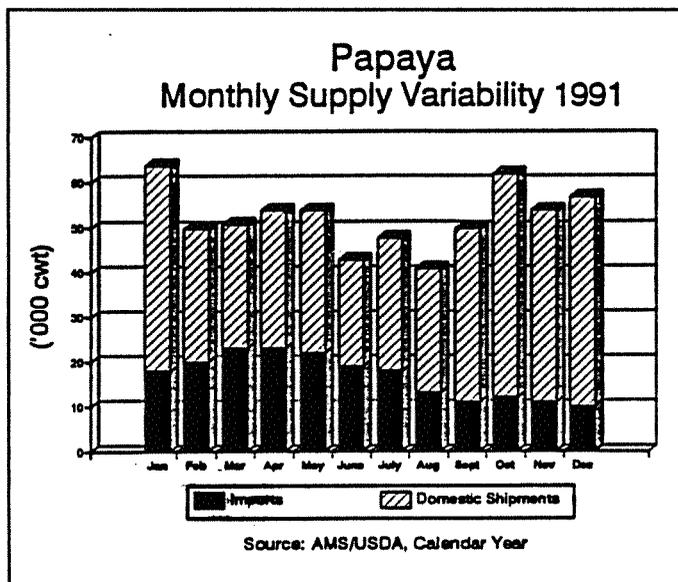


C. Imports

Imports grew at an average annual rate of approximately 55 percent between 1987 and 1992. A particularly good year was 1992, when imports jumped to 231,000 cwt — a 75 percent increase from the year before. Mexico has been the dominant supplier recently of papaya imported into the United States. Other notable entrants, in order of volume of imports in recent years, are the Bahamas, Jamaica, Dominican Republic, Belize, Honduras, and Costa Rica.

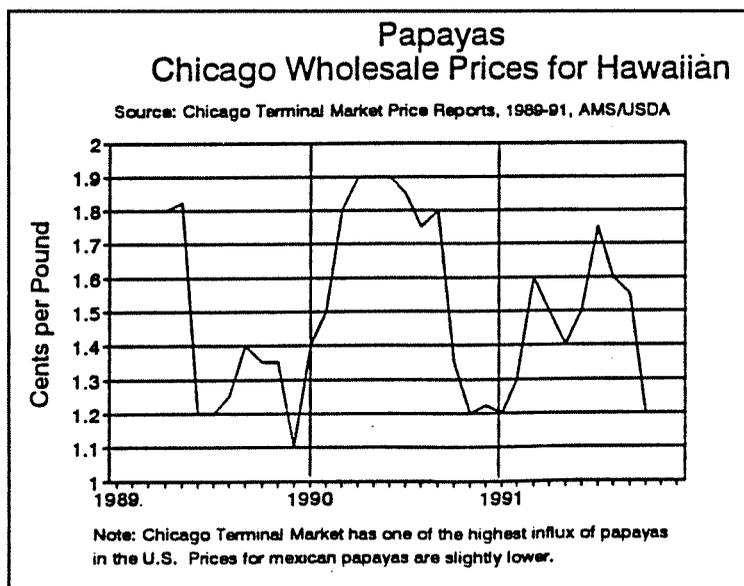
D. Monthly Supply Variability

There are two peak harvest seasons in the United States: May 15 to July 15 and September 15 to December 15. Nevertheless, papayas are marketed throughout the year. Hawaii, the only domestic producer, controls the market year-round, with imports usually capturing one-half of the market in the first six months of the year and about one-fourth in the next six months (see graph).



E. Prices

Prices reach their seasonal highs during the first one-half of the calendar year and have peaked in the middle of the year. Most recently, prices have reached new highs (not shown in the graphs). Chicago average wholesale prices during June 1993, typically the high point of the year, were about \$2.20/lb.



Meanwhile, NASS reported that season-average prices offered to papaya growers in Hawaii have moved up steadily since 1987 from 19.3 cents/lb to 33.3 cents/lb pound in 1992.

F. Industry Comments

Solo (yellow) and Sunrise (red or strawberry) are the most common varieties of papaya in the United States, principally because they grow in Hawaii where producers have been promoting papaya over the years. Consumers generally look for papayas that weigh approximately one pound and are uniform in color. Wholesale buyers purchase papayas that are one-half to three-fourths ripe. They are easily bruised and should be transported in sturdy 10-lb cartons.

In Hawaii, the principal domestic producer, papayas are given a vapor water treatment for fruit fly larvae as a condition for entry into the mainland. Brown (chocolate) and white spots commonly appear on the surface of when it begins to spoil. The stem is where problems usually start.

Although traditionally the market has been ethnic, concentrated in the Hispanic population, industry experts believe that it is becoming more mainstream. Particularly, they believe the market has expanded in the health-conscious population, which is interested in the benefits of the papaya enzymes. Consumption is expected to continue to increase because of the growth of these two groups in the United States.

Because of the steady, dependable supply, papaya prices do not fluctuate as much as the prices of some other fresh produce items. Generally, however, the highest prices appear when there are "skips" in supply from Hawaii due to unpredictable weather changes.

One source believes that the North American Free Trade Agreement (NAFTA) poses a threat to Hawaiian producers because it will eventually eliminate the 8.5 percent duty on imports from Mexico, which already accounts for the bulk of U.S. import shipments of papaya.

G. Import Duties

Papaya is classified under 0807.20 of the U.S. Harmonized Tariff Schedule. The applicable duty rate is 8.5 percent for MFN and GATT member countries.

Papaya is admissible duty free at any time from beneficiary countries of the Caribbean Basin Economic Recovery Act and the Andean Trade Preference Act, from Israel, and from most beneficiary countries of the Generalized System of Preferences.

H. AMS Standards and Market Orders

The USDA has issued no market standards or market orders for papaya.

I. Status for Entry from LAC Countries to the United States

Admissible from all ports:

Antigua and Barbuda
Bahamas
Barbados
Cayman Islands
Dominica
Dominican Republic
Grenada
Guadeloupe
Haiti

Jamaica
Martinique
Montserrat
St. Kitts and Nevis
St. Lucia
St. Vincent and Grenadines
St. Martin
Belize (solo type)
Chile¹
Mexico
Trinidad and Tobago

Source: APHIS

1/ Additional safeguards and restrictions apply.

PINEAPPLES
(*Ananas comosum*, piña, ananas)

A. Summary

Production in the United States has declined somewhat, in spite of the steady market. Prices are fairly stable and tend to increase slightly during late winter and early spring. Apparent consumption has remained constant from 1989-1992, although imports have increased at a rate of about 4 percent. The market for pineapples is characterized by shifting leadership in foreign sources, with Costa Rica and Honduras currently considered among the fastest growing pineapple producers. Pineapples are admissible from most LAC countries and are duty free from countries that are beneficiaries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act.

B. Apparent Consumption

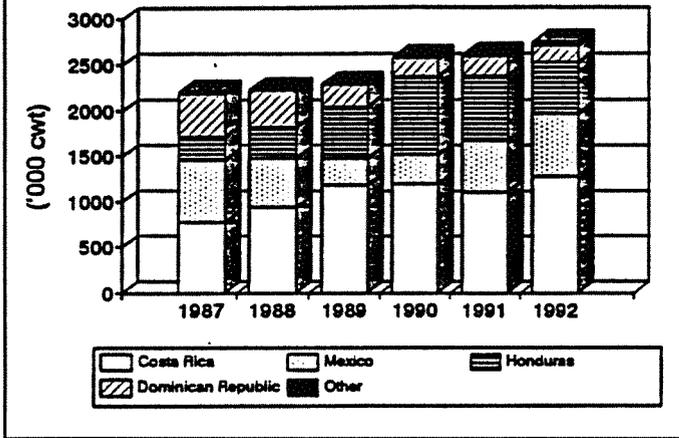
	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	6920	6590	5800	5750	5550	5500
Imports	2215	2237	2316	2595	2625	2765
Exports	0	0	27	187	178	190
Apparent Consumption	9135	8827	8089	8158	7997	8074

Source: Production figures were obtained from NASS/USDA; import figures are from AMS/USDA; export figures are from Bureau of the Census, USDC; and apparent consumption figures were calculated using figures from NASS/USDA, AMS/USDA, and Bureau of the Census.

At least two-thirds of pineapple consumed by Americans is in processed form. The figures above include U.S. grown pineapples in all forms and imported pineapples, fresh and frozen. They do not include imported pineapple juice (3.3 million hectoliters in 1992) or canned pineapple (345,436 metric tons in 1992). Hawaii produces almost 98 percent of all pineapples grown in the United States. The balance of domestic production is from Puerto Rico.

Pineapples Import Shipments 1987-92

Source: AMS/USDA, Calendar Year



C. Imports

Imports have grown at an average annual rate of 4.6 percent between 1987 and 1992, although from 1989 to 1990 pineapple imports grew 12 percent. For 1992, AMS reported total pineapple imports of 2.75 million cwt. With the exception of Honduras, whose share of the import market continues to increase, most suppliers have remained consistent in their market share proportions. Costa Rica takes the lead, followed by Dominican Republic, Honduras, and Mexico, in that order. Other recent suppliers have

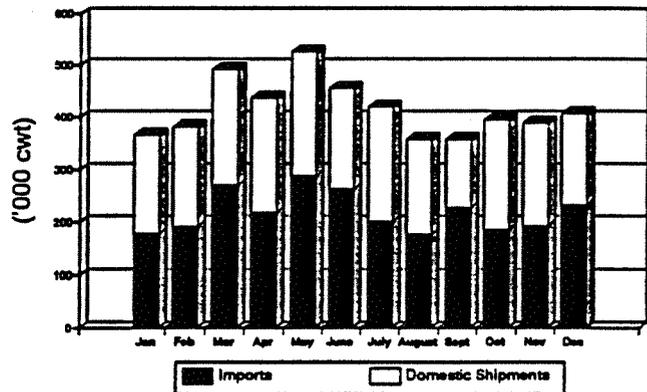
been Guatemala, Colombia, Panama, and Ecuador, although their shares have been relatively small.

D. Monthly Supply Variability

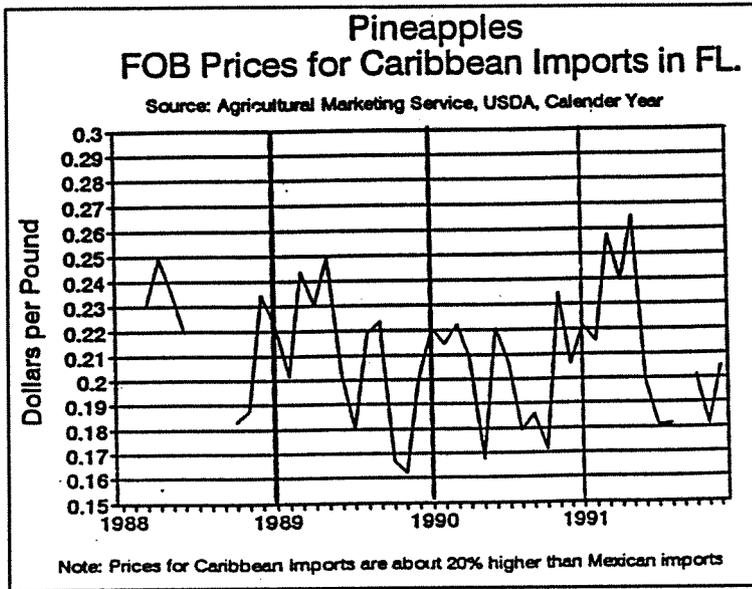
Hawaiian pineapples are produced and shipped year-round, although peak harvest is from March 1 to July 31. Puerto Rico's shipments, which are generally less than 2 percent of domestic shipments, are slightly higher between March and June.

Imports also arrive on a year-round basis, competing directly with domestic suppliers. The 1991 supply variability graph illustrates that, on average, imports account for one-half of all shipments.

Pineapples Monthly Supply Variability 1991



Source: AMS/USDA, Calendar Year



E. Prices

Because supply is quite consistent, prices are largely a function of the volume arriving to a particular region. For instance, average monthly FOB prices have been at least 20 percent higher at South Florida ports than at ports in South Texas, even during the same months.

Nevertheless, prices are less volatile year-round than they are for most other fruits and vegetables.

F. Industry Comments

Pineapples are one of the few fresh products that have considerable brand loyalty. Large growers/marketers such as Dole and Del Monte dominate the market. This is due in part to "standardization" of the pineapple in taste, consistency, and appearance, a result of the sophisticated approach to variety, production, and harvesting, which makes retail chains cautious about experimenting with non-branded pineapples or with new brands.

There are no apparent unusual factors that may radically alter trends in pineapple consumption and production, although one wholesaler seemed rather optimistic about consumption in the next two or three years.

G. Import Duties

Fresh pineapples are classified under 0804.3 of the U.S. Harmonized Tariff Schedule. For MFN and GATT member countries and/or beneficiary countries of the Generalized System of Preferences, the applicable rate for this category **when not reduced in size** is 0.64 cents/kg if brought in bulk, and 1.31 cents/kg if brought in crates or other packages. **When reduced in size**, the duty rate is 0.55 cents/kg.

There is no duty at any time for pineapples brought in from beneficiary countries of the Caribbean Basin Recovery Act or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

The USDA has marketing standards for pineapples. See Appendix H for applicable standards.

I. Status for Entry from LAC Countries to the United States

The countries listed below are eligible to export pineapples into the United States, except into the state of Hawaii.

Admissible to all ports:

Antigua and Barbuda	Argentina	Nicaragua
Bahamas	Belize	Panama
Barbados	Bolivia	Paraguay
Cayman Islands	Brazil	Peru
Dominica	Chile	St. Vincent and Grenadines
Dominican Republic	Colombia	Trinidad and Tobago
Haiti	Costa Rica	Uruguay
Jamaica	Ecuador	Venezuela
Martinique	French Guiana	Curacao
Montserrat	El Salvador	
Grenada	Guatemala	
Guadeloupe	Guyana	
St. Kitts and Nevis	Honduras	
St. Lucia	Mexico	

Source: APHIS

PLANTAINS

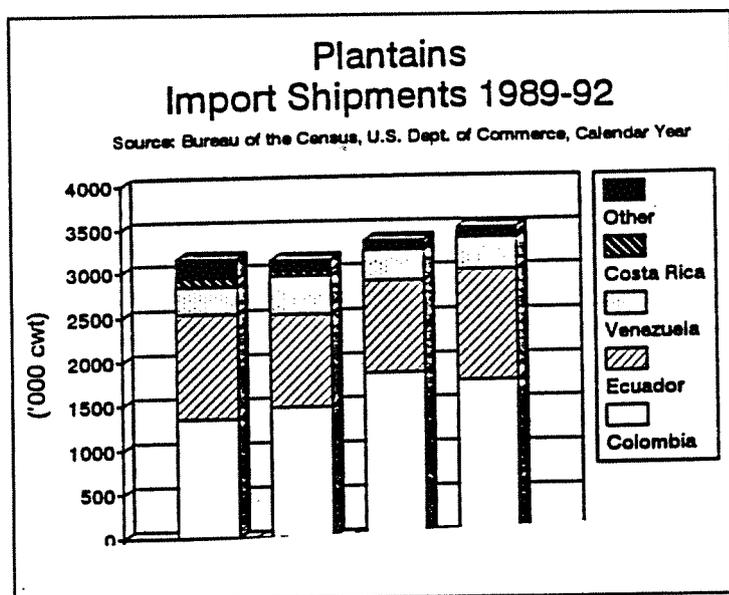
(*Musa spp.*, plátanos)

A. Summary

All known sources of supply for plantains are imports, mainly from Colombia and Ecuador. Imports have risen steadily over the six years observed (1987-1992). Prices have become more stable as plantains have become available in the United States on a year-round basis, although prices still vary depending on the wholesale area, the source of imports, and size and color of the product. Plantains are consumed mainly by some ethnic groups. This product is admissible into the United States from LAC countries. Plantains, fresh or dried, are duty free from countries that are beneficiaries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act.

B. Apparent Consumption (Fresh)

No known agency in the United States compiles consumption figures for plantains. Because plantains are primarily an import item, their imports can be used as a proxy for consumption. There is spoilage with plantains, so that actual consumption is somewhat less than imports. There is no reported plantain production in the United States, although California has been known to grow them experimentally in small quantities.

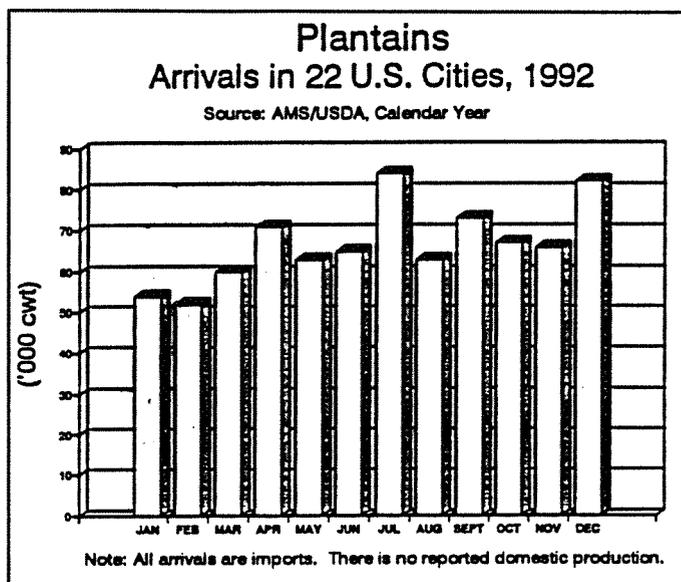


C. Imports

Virtually all plantains consumed in the United States are imported. Colombia accounts for about one-half of all plantains imported into the United States. In 1992, 157 million kgs of plantains were imported, of which 79 million were from Colombia. Fifty-seven million kgs were imported from Ecuador and the remainder (in order of volume in 1992) from Venezuela, Honduras, Costa Rica, Dominican Republic, Panama, Mexico, and El Salvador.

D. Monthly Supply Variability

Plantains are imported throughout the year into the United States. Looking at the arrival figures into 20 major U.S. cities for the years 1990 through 1992, supplies have been fairly consistent.

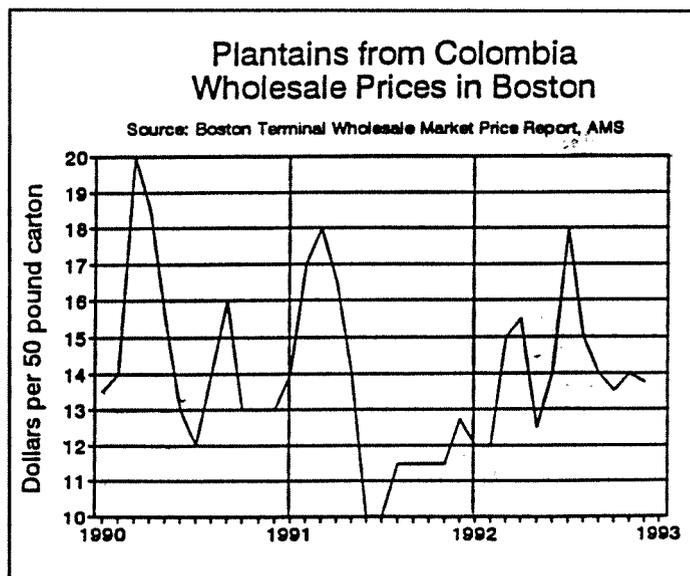


E. Prices

Prices for plantain imports were obtained from the **Boston Wholesale Market Price Report for imports from Colombia** for the years 1987 through 1992. Three factors observed that contribute to changes in price are the following:

(1) **Location of market:** High and low prices in the Boston Terminal market were greater than in the New York terminal market. This is probably because there is a greater influx of plantains to New York.

(Note, however, that we have used **Boston** figures, since New York data was not as comprehensive.)



(2) **Colombian versus Non-Colombian:** Boston Terminal Market wholesale prices for plantains from Colombia, the largest supplier to the United States, were on average always higher than prices recorded from two other areas—Ecuador and Costa Rica. In December 1992, for instance, Colombian plantains averaged \$13.50 to \$14.00/50-lb carton, whereas plantains from Ecuador averaged \$11.00 to \$12.00. This difference was observed also in the New York terminal market.

(3) **Green versus Yellow:** Unlike the Boston market, the New York market reports on both green and yellow plantain. Prices for green plantains were sometimes slightly lower than for yellow ones.

The graph of plantain prices for the years 1990 through 1992 shows considerable fluctuation, but this has diminished in recent years. Recent years have experienced decreased volatility in prices, as the graph indicates.

F. Industry Comments

In the United States, plantains are considered an exotic fruit, consumed mostly by Latin American and Asian communities in the United States. Latin American, Caribbean, and Asian restaurants in the United States have contributed greatly to the awareness of this fruit which many Americans have passed off as a banana that is too large, too black, too green, or too bruised. Ecuadoran, Colombian, and Venezuelan plantains are the most popular in the United States. Ecuadoran plantains are smaller (packaged 50/box) than Colombian plantains (packaged 30/box).

Consumers look for consistency in color when selecting either yellow or green plantains. Green plantains are not favored if the color turns black (suggesting an overripened plantain). In the *maduro* where the plantain is ripened to an optimal level, growers must check both the temperature of the room as well as the arrangement of plantains to ensure optimal and consistent ripening.

G. Import Duties

Plantain is classified under subheading 08.03.00 of the U.S. Harmonized Tariff Schedule. Plantain, fresh or dried, is duty free for countries that are beneficiaries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, the Andean Trade Preference Act, and from Israel. For MFN and GATT countries, duty is 3 percent of customs value for fresh plantains and zero for dried plantains.

H. AMS Standards and Market Orders

The USDA has issued no market standards or market orders for plantains.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Argentina ¹	Guatemala ¹
Belize ¹	Guyana ¹
Bermuda ¹	Honduras ³
Bolivia ¹	Mexico ³
Brazil ²	Nicaragua ¹
Chile ¹	Panama ¹
Colombia ¹	Paraguay ¹
Costa Rica ¹	Peru ¹
Ecuador ¹	Trinidad and Tobago ¹
French Guiana ¹	Uruguay ¹
El Salvador ¹	Venezuela ¹

1/ Fruit and leaf admissible only.

2/ Fruit, leaf, and stem admissible only.

3/ Flower, fruit, and leaf admissible only.

Source: APHIS

All countries of the West Indies have banana fruit and leaflets admissible, and from Dominican Republic flower pods are also admissible.

RASPBERRIES⁹
(*Rubus spp*, frambuesa)

American red	<i>Rubus strigosus Michaux</i>
Black	<i>Rubus occidentalis L.</i>
European red	<i>Rubus idaeus L. var. idaeus</i>
Hill	<i>Rubus niveus Thunb.</i>
Mauritius	<i>Rubus rosifolius Smith</i>
Mysore	<i>Rubus niveus Thunb</i>
Purple	<i>Rubus occidentalis x R. idaeus</i>
Red	<i>Rubus idaeus L. var. idaeus</i>

A. Summary

U.S. production resumed its upward movement in 1992, following a two-year slide. Imports, almost all of which are from Canada, experienced an even greater drop in 1988-1991, but increased in 1992. Grown mostly in Canada and the northern United States, raspberries have a short growing season (June to October), with Canada's season lasting from July to August. Although the market window is long, it has yet to be effectively filled by other foreign suppliers as a result of stringent admissibility requirements. Chile is the only LAC country currently known to be supplying raspberries, albeit in small quantities. There is no duty from countries that are beneficiaries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act.

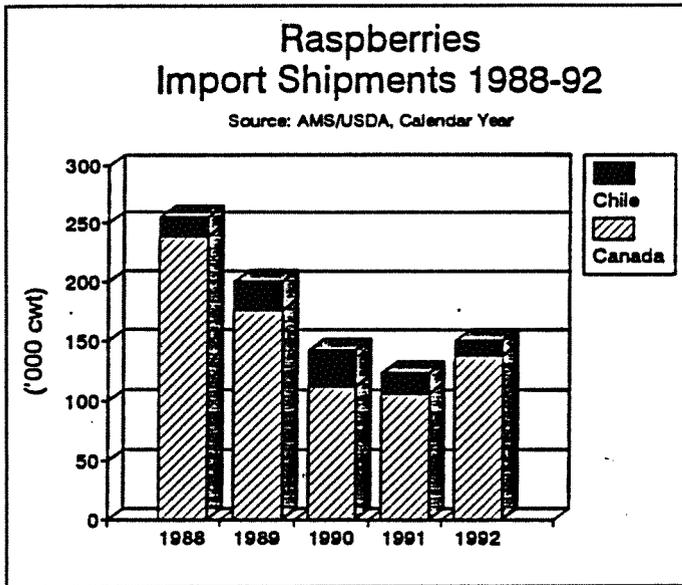
B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	445	442	540	445	440	633
Imports	----	256	201	143	124	151
Exports	0	3	0	0	0	0
Apparent Consumption	----	698	741	588	564	784

Source: Production and consumption figures were obtained from NASS/USDA, import figures are from AMS/USDA, and export figures are from FATUS, ERS/USDA.

⁹ Unless otherwise noted, this report offers information only for red raspberries. However, in parts of this report, we have had to use AMS/USDA information on shipments that aggregates both red and black raspberries under the Raspberries category. Black raspberries make up about 10 percent of this category. Graphs on Imports and Monthly Supply Variability reflect this aggregation.

Raspberries are consumed largely in processed form. NASS figures for 1992 indicate that of the 633,400 cwt raspberries produced in the United States, 615,000 cwt were consumed in processed form. Principal domestic suppliers of this product are Washington and Oregon. Washington state has rapidly surpassed Oregon in production in recent years. For 1992, Washington state produced two-thirds of total domestic raspberries in the United States.



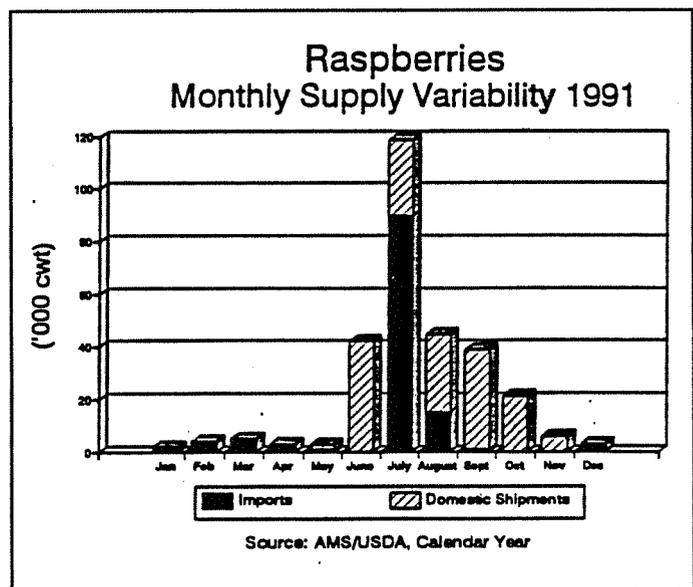
C. Imports

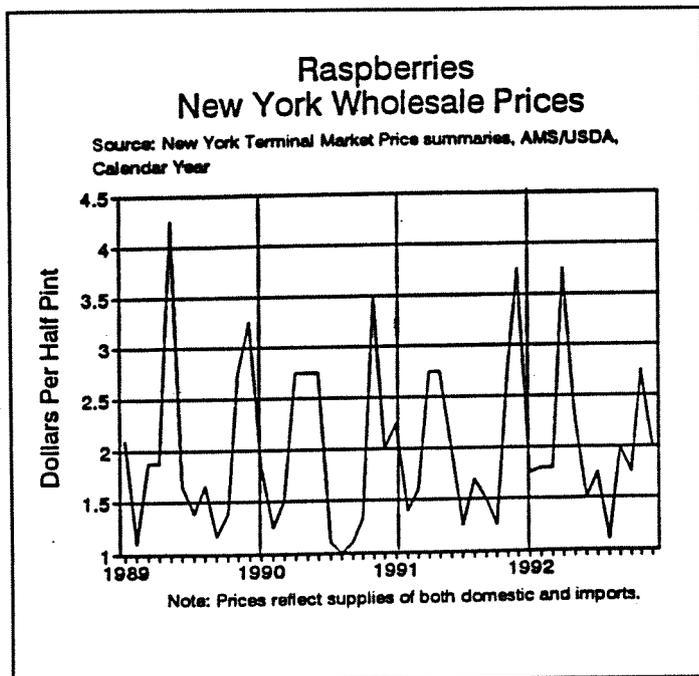
Imports increased in 1992 from the previous year, after diminishing shipments in 1990 and 1991. Canada continues to dominate the United States import market for raspberries, accounting for about 90 percent of total imports on average between 1987 and 1991. Chile is the second largest supplier, although its market share of imports has decreased because of diminishing shipments to the United States market. Imports make up about 70 percent of total commercial supply.

D. Monthly Supply Variability

The domestic supply season is between June and October and peaks in September. Supply tapers off somewhat rapidly by November, at which time shipments may be only about one-fourth of those in prior months.

Imports enter in a highly inconsistent manner. One month, usually July, accounts for almost 80 percent of annual imports. Canada's short growing season is responsible for the inconsistency, because it accounts for approximately 90 percent of total imports.





E. Prices¹⁰

Raspberry prices reflect general supply conditions, and do not vary directly with supply. As the graph on prices indicates, the lowest prices for 1991 were recorded in September, immediately following the July peak in shipments. This is illustrated in the supply variability graph at the end of this product summary.

Prices are still highest during the off-peak season, between December and April, at which time both production and imports are relatively low.

F. Industry Comments

Consumers look for large, bright red raspberries. In addition to these qualities, wholesalers also look for cell walls thick enough to inhibit leakage of juice. Raspberries are sold in flats of 12, 6-oz baskets. Meeker, Heritage, Amity, and Willamette are very popular varieties. Raspberries are more perishable than other berries because they lack a center core and are more fragile. If not frozen, transit and postharvest life is only two to three days.

Consumption is expected to increase because California, the principal domestic supplier, has been doing radio, television, and billboard promotion of raspberries.

G. Import Duties

Raspberries are classified under 0810.20.10 of the U.S. Harmonized Tariff Schedule. The applicable rate is 0.7 cents/kg between September 1 and June 30 of the following year for MFN and GATT member countries and beneficiary countries of the Generalized System of Preferences.

¹⁰ Wholesale prices at major terminal locations, New York and Chicago, have been used instead of the conventional leading shipping point figures used throughout the study. This is due to the unavailability of shipping point price reports. Wholesale prices shown are for sales in the aforementioned locations and are a simple average of representative prices for each Tuesday. These prices represent private sales in wholesale lots made by the first seller on the wholesale market.

There is no duty at any time for raspberries brought in from beneficiary countries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act, or from Israel.

H. AMS Standard and Market Orders

The USDA has market standards for raspberries. Please see Appendix H for applicable standards.

I. Status for Entry from LAC Countries into the United States

Admissible from all ports:

Belize	Guatemala
Chile	Honduras
Costa Rica	Mexico
El Salvador	Nicaragua
Panama	

Source: APHIS

SPINACH
(*Spinacia oleracea*, espinaca)

A. Summary

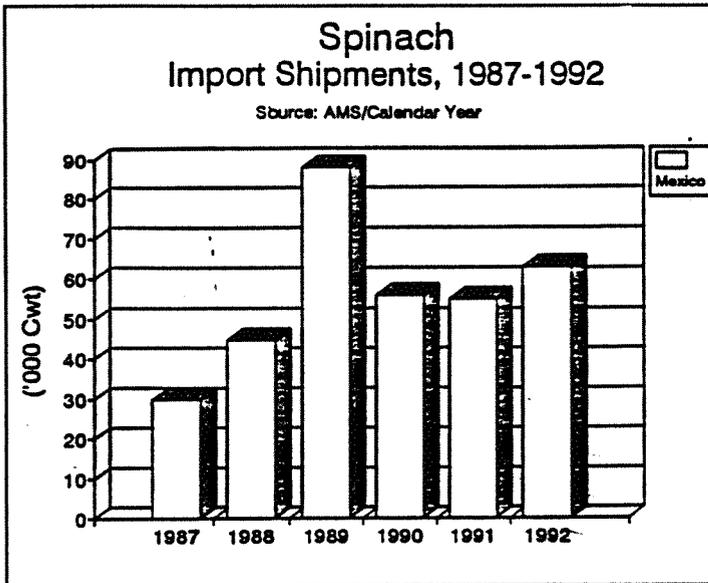
U.S. production of spinach has been increasing rapidly since 1989, and exports have also increased. Production and exports are, however, limited to a brief growing season. Imports, mostly from Mexico, enter the market during months of lesser availability. The abundant and consistent supply of spinach insulates against major price fluctuations. Currently, few LAC countries have either applied for or met the admissibility requirements. Spinach is duty free from countries that are beneficiaries of the Caribbean Basin Economic Recovery Act or the Andean Trade Preference Act.

B. Apparent Consumption

	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	1967	1797	1738	1942	2045	2125
Imports	30	45	88	56	55	63
Exports	0	0	19	267	270	274
Apparent Consumption	1997	1842	1807	1731	1830	1914

Source: Production figures were obtained from county and state agricultural commissioners in California, Colorado, Maryland, and New Jersey; import figures are from AMS/USDA; export figures are from Bureau of the Census, USDC; and apparent consumption figures were calculated using figures from AMS/USDA, Bureau of the Census and statistical agencies of California, Colorado, and Maryland.

Virginia and Texas are also reported to have grown spinach in recent years. They have, however, been excluded for lack of data on production. Production may therefore be under-reported by about 10 percent.



C. Imports¹¹

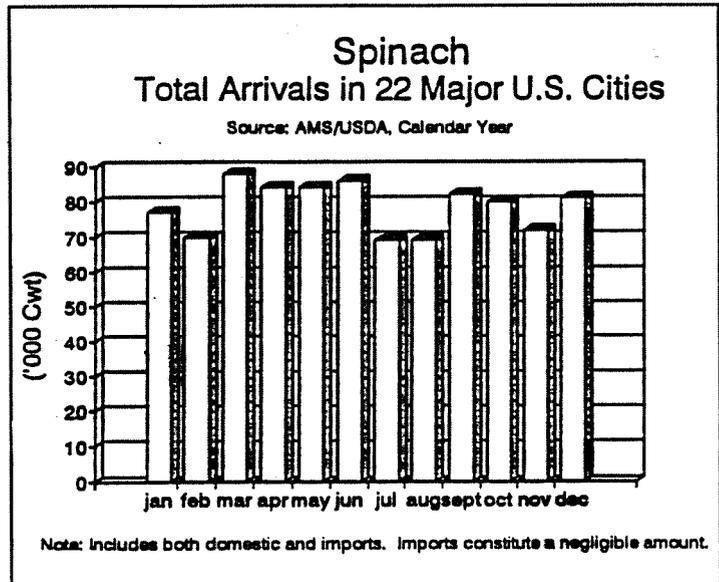
Between 1987 and 1992, imports grew at an average annual rate of 24.39 percent. It is, however, important to note that the fluctuation was relatively high in these years—an increase of 95 percent in 1988 followed by a 36 percent drop in the following year. Mexico is the principal foreign supplier of spinach, accounting for nearly 100 percent of spinach imports. Jamaica supplied about one MT (2,204 lbs) in 1992.

Imports are still a small percentage of total supply in the United States. For the last five years (1987 to 1992), imports have accounted for between 5 and 10 percent of total shipments (domestic and import) of spinach.

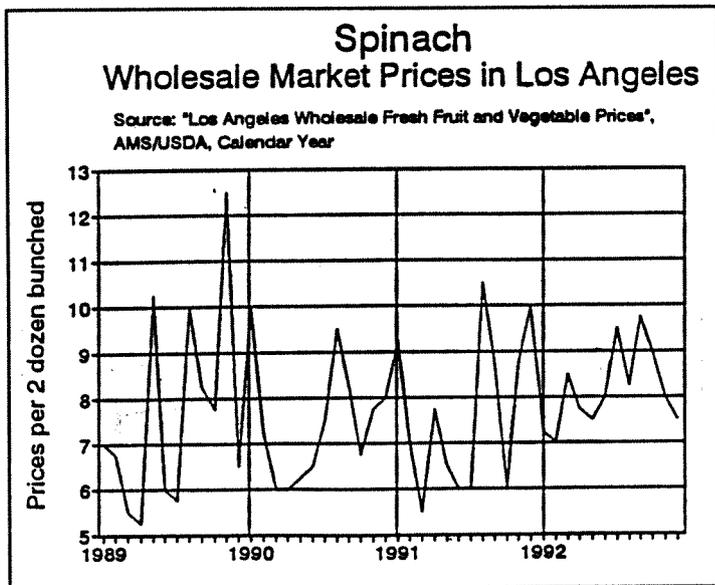
D. Monthly Supply Variability

California is the only state that maintains a year-round presence in the market, accounting for about one-half of all annual domestic shipments. Texas and Arizona appear during the late winter to early spring and benefit from the lower production in California at this time.

Imports complement the domestic supply by filling in during the off-peak season. Imports, mostly Mexican, are recorded from November to April. The combined supply of domestic and import shipments is consistent from late spring to early winter.



¹¹ Import statistics tabulated by AMS were higher than those tabulated by Bureau of the Census/USDC. In 1991, AMS reported 55,000 cwt while the Bureau of the Census reported 22,500 cwt. This discrepancy may be due mostly to AMS' inclusion of imports that were passing through to Canada. Because imports constitute a very small portion of total supply, the figures do not substantially alter consumption estimates.



E. Prices¹²

As the graph on prices illustrates, the abundant and consistent supply of spinach insulates against major price fluctuations. Prices recorded in Texas, a leading shipping point, indicate that price fluctuations occur during the late winter to early spring months. This may be in part a result of increased supplies from states other than California, notably Maryland, as well as the entrance of imports at this time.

F. Industry Comments

According to producers, consumers cannot distinguish between different varieties of spinach. Commonly sold varieties are the Fall Green, Shookum, and Koho. These varieties are savoy (curly leaf) or semi-savoy. Polka, Nordic, Jade, and Shasta are flat-leaf spinach and are becoming more popular. This is especially true in the western United States where people consume raw spinach in salads.

The savoy spinach is harder to clean than most other leafy vegetables. Consumers, therefore, look for a product that is well-cleaned, has a consistent shape, and is a deep green color. Retail buyers and wholesalers buy spinach in bunches or in value-added packages in which the spinach is cleaned and trimmed. The packages are becoming increasingly popular. Although they are more expensive, they contain less waste. California, the leading domestic producer, harvests throughout the year. Higher prices can usually be found in late April and early May.

Industry experts predict that, as the population becomes more health conscious, spinach consumption will increase. They envision the increase to occur in food service. Supermarkets will supply more salad bars, schools will focus on improving their menus, and restaurants will serve more main dish salads.

¹² The graph for Spinach prices reflects changes in Texas alone. This is due to the unavailability of price information for other regions. Since 1987, AMS/USDA has logged information for Texas only, with one exception in 1988 when it included prices for New Jersey. For reasons of consistency, New Jersey prices were excluded in this study.

G. Import Duties

Spinach is classified under 0709.70.00 as "Spinach, New Zealand spinach and orache spinach (garden spinach)" in the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries for this category is 25 percent for spinach admitted at any time of the year.

Spinach is admissible duty free at any time from beneficiary countries of the Caribbean Basin Economic Recovery Act and the Andean Trade Preference Act, and from Israel.

H. AMS Standards and Marketing Orders

The USDA has marketing standards for spinach. Please see Appendix H.

I. Status for Entry from LAC Countries to the United States

Admissible from all ports:

Belize	Honduras
Costa Rica	Mexico
El Salvador	Nicaragua
Guatemala	Panama

Admissible from North Atlantic ports:

Bermuda

Source: APHIS

Spinach is admissible in all APHIS-staffed U.S. ports from all countries in the West Indies.

SQUASH

(*Cucurbitaceae*, cucurbits, calabaza)

A. Summary

U.S. production of squash, most of which is in California, dropped somewhat in 1992. Apparent consumption has grown steadily in recent years as imports, mostly Mexican, have grown in volume at an average of about 6 percent and now account for up to two-thirds of the supply. States such as Florida and North Carolina are shipping both early and late into the season, which lasts from November through May. Squash is admissible from most LAC countries and is duty free from countries that are beneficiaries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act.

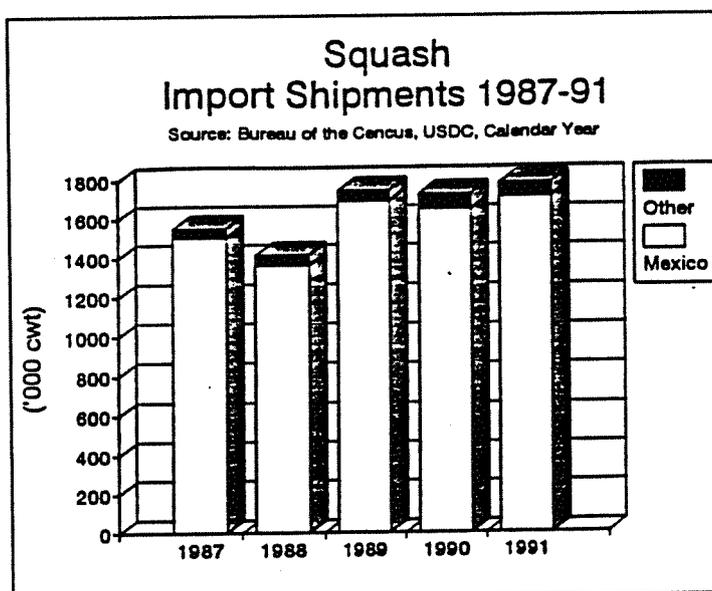
B. Apparent Consumption

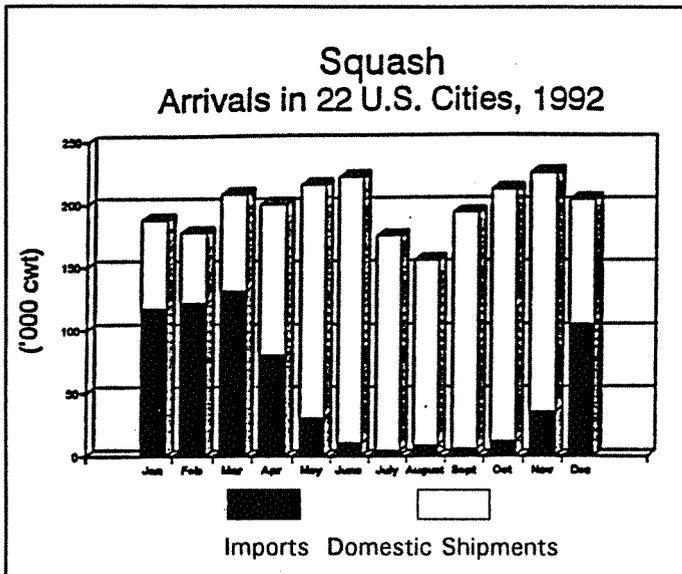
	1987	1988	1989	1990	1991	1992
	--- 1000 cwt ---					
Production	832	1106	1240	1039	1377	1183
Imports	1552	1413	1746	1728	1781	1887
Exports	0	0	0	0	0	0
Apparent Consumption	2384	2519	2986	2767	3158	3070

Source: Production figures were obtained from county and state agricultural commissioners in Arizona, California and Florida; import figures are from FAS/USDA (for 1990-92) and AMS/USDA (for 1987-89); export figures are from Bureau of the Census, USDC; and apparent consumption figures were calculated using figures from AMS/USDA, Bureau of the Census, and statistical agencies of Arizona, California, and Florida.

C. Imports

Over two-third of the squash consumed in the United States is imported. Imports have risen in volume at an average annual rate of about 6 percent. Several LAC countries export squash to the United States, although Mexico accounts for about 95 percent of all U.S. squash imports. The other suppliers are Costa Rica, Dominican Republic, Honduras, Jamaica, Panama, and Trinidad-Tobago.



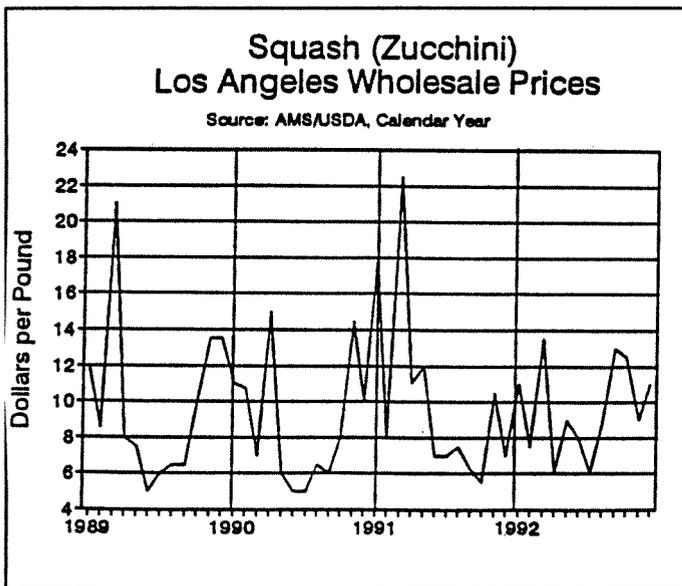


D. Monthly Supply Variability

The main domestic supply season is from late winter to early summer (November to May). Florida is the early entrant in the season, although California is by far the leading producer accounting for more than 95 percent of domestic production. States such as North Carolina have been able to dominate the market after the traditional domestic season.

Imports come in year-round and compete directly with domestic growers. Although their presence is

strong year-round, it is particularly visible during the domestic off-peak season.



E. Prices¹³

Prices for zucchini squash are highest during the winter months, because zucchini is a summer squash. The volatility of prices has been markedly high, and annual highs and lows have been recorded within an eight-week period. The highest prices have typically been observed in southern United States (Arizona and Florida). Prices for zucchini are also subject to its location. In the same time period, prices have been twice as high in different areas.

Note: The supply variability graph (as indicated by arrivals in 22 major U.S. cities) reflects several varieties of squash whereas the graph on prices is for zucchini squash only. These graphs should be interpreted separately.

F. Industry Comments

Zucchini and Yellow Straightneck, both summer squash, are the two most popular varieties in the United States. Consumers and wholesalers look for fancy (4 to 6 in) or

¹³ The discussion on prices encompasses a variety of squash. However, the graph on prices illustrates only zucchini squash. This is because prices for imports were available only for the zucchini category.

medium (6 to 8 in) zucchini squash that are straight and have a sheen green color. Consumers look for a pale yellow when purchasing Yellow Straightnecks. As squash bruise and scar very easily, buyers are exceptionally conscious of their condition. Despite this problem, many growers transport the product in cardboard boxes, although wooden crates provide better protection.

The market for squash is considered mainstream. Industry experts forecast that consumption and production of squash, like other vegetables, will increase in the next few years because people are improving their diets.

G. Import Duties

Squash is classified under subheading 0709.90.20 of the U.S. Harmonized Tariff Schedule. The applicable rate for MFN and GATT member countries for this category is 2.4 cents/kg for squash entered at any time of the year.

There is no duty at any time of the year for squash entered from beneficiary countries of the Generalized System of Preferences, the Caribbean Basin Economic Recovery Act, or the Andean Trade Preference Act, or from Israel.

H. AMS Standards and Market Orders

The USDA has marketing standards for squash. Please see Appendix H for applicable standards.

I. Status for Entry from LAC Countries to the United States

Admissible to all ports:

Antigua and Barbuda	Guadeloupe	Belize
Grenada	St. Vincent	Honduras ¹
St. Lucia	Guatemala	Nicaragua
Mexico	El Salvador ¹	Jamaica ¹
Panama and Canal Zone ¹	Dominican Republic ¹	St. Kitts
Bahamas	Haiti	Costa Rica

Admissible to North Atlantic ports:

Barbados	Nevis
Martinique	Montserrat
Trinidad and Tobago	Dominica
Cayman Islands	Brazil ¹

Admissible to South Atlantic and Gulf ports:

Cayman Islands

Source: APHIS

1/ Additional restrictions and safeguards required. See APHIS.

APPENDIX A

METHODOLOGY FOR PRODUCT SELECTION

APPENDIX A

METHODOLOGY OF PRODUCT SELECTION

The study was started with a comprehensive list of all U.S fresh fruit and vegetable imports between 1987 and 1992, as reported by the annual publication "Fresh Fruits and Vegetables Shipments" at the Fruit & Vegetable Division of the Agricultural Marketing Services, United States Department Of Agriculture (AMS/USDA). This list included all items that appeared at least once on the USDA reports. It did not include products imported in very small quantities.

Below is the initial list:

TABLE I

Apples	Grapes Table	Parsley
Apricots	Greens	Parsnips
Artichokes	Honeydews	Peaches
Asparagus	Kiwifruit	Pears
Avocados	Lemons	Peas Green
Bananas	Lettuce Iceberg	Peas Other
Beans	Romaine Lettuce	Peppers Bell
Beets	Lettuce Other	Peppers Other
Blueberries	Lettuce Processed	Pineapple
Broccoli	Limes	Plantains
Brussels Sprouts	Mangoes	Plum-Prunes
Cabbage	Watermelon	Potatoes Table
Cantaloupe	Misc Berries	Potatoes Seed
Carrots	Misc Citrus	Pumpkins
Cauliflower	Misc Herbs	Radishes
Celery	Misc Oriental Veggies	Raspberries
Cherries	Misc Tropical F&V	Spinach
Chinese Cabbage	Mixed Misc melon	Squash
Corn Sweet	Mushrooms	Strawberries
Cucumbers	Nectarines	Tangerines
Eggplant	Okra	Tomatoes
Escarole-Endive	Onions Dry	Tomatoes Cherry
Fruits Other	Onions Green	Turnips-Rutabaga
Garlic	Oranges	Vegetables Other
Grapefruit	Papaya	

Our initial criteria for choosing the products were the following:

1. Average annual increase in volume of U.S. imports, 1987-1992

We looked for products with an approximate 10% increase in its average annual rate of growth in volume of U.S. imports between 1987 and 1992. Imports figures were obtained from the calendar year annual publication "Fresh Fruits and Vegetables Shipments," issued by AMS/USDA.

2. Trend in the volume of imports, 1990-1992

The above mentioned information source was also used to examine the volume of imports in recent years (1990-1992) to determine whether import growth was continuing.

3. Volatility in volume of imports, 1987-1992

The volatility in volume of imports between 1987-1992 was measured statistically. We preferred products with low volatility because of the likelihood that they would be less risky.

4. Volume of imports

At least 1000 cwt of the product had to be imported on an annual basis for it to be selected. This criterion was used to filter out products that serve niche markets. All the products on the initial list met this criterion. There were, however, some products which did not meet this criterion but were nevertheless included due to requests from AID field missions.

5. Personal knowledge and experience of LAC TECH staff and industry field experts

The initial list was reviewed by Ken Weiss, Robert Bailey, Mihir Desai and Susan Corning who applied their knowledge of market conditions and admissibility to narrow the list to 20 products.

The list was sent to advisors in three AID projects in Latin America and the Caribbean and to five produce wholesalers and brokers in the United States. The list sent to these experts was as follows:

TABLE II

FRUITS	VEGETABLES
Papaya	Escarole-Endive
Limes	Oriental Vegetables
Mixed Melons	Okra
Blueberries	Chinese Cabbage
Raspberries	Mushrooms
Mangos	Artichokes
Cantaloupe	Spinach
Honeydews	Onions green
Pineapple	Asparagus
Plantain	

These experts were also asked to suggest additions and/or deletions and to comment on the inclusion or exclusion of specific crops in categories such as Mixed Melons¹, Miscellaneous Oriental Vegetables², Miscellaneous Herbs³, Miscellaneous Tropical Fruits & Vegetables⁴, Other Vegetables⁵ and Greens⁶. Please see footnotes for the crops considered in each category.

¹casabas, crenshaws, honeyballs, persian/spanish melons

²bean sprouts, bok choy, dikon, gobo, lobah, etc.

³anise, basil, chives, cilantro, cipolinos, dill, dry eschallot, horseradish, mint, parsley root, thyme, watercrest.

⁴arum, batatas (boniatos), breadfruit, calabaza, chayote, gandules, ginger root, honeyberry, malanga, quenapas, tamarind, taro (dasheen), yams, yautia, yucca.

⁵alfalfa sprouts, cardoon, celeriac (celery root), chicory root, jerusalem artichoke, jicama, oyster plant (salsify), radicchio, tomatillos.

⁶beet tops, arrugula, borage, broccoli, collards, mustard greens, swiss chard, kohlrabi

After reviewing suggestions from experts, the list was modified by including two products, Ginger and Squash. The growth of ginger imports in recent years compensated for its volume, considered low by our selection criterion. Squash was added to the list after receiving strong recommendations from an expert on Latin American produce exports.

Although the Oriental Vegetables category looked very promising, it was excluded because of the complexity of addressing the various products within the category. A complete review of this category was considered to be beyond the scope of the study. The Miscellaneous Herbs category was dropped because the volume of imports of these products is quite small. The Miscellaneous Tropical Fruits and Vegetables category was excluded in light of the attention it has received in recent years and, as a result, the number of studies that have addressed this category. Finally, while Radicchio was mentioned as the strongest candidate in the "Other Vegetables" category, it was excluded because of its relatively small import volume. We feel that later studies that focus on niche markets should consider Radicchio.

Industry experts suggested several products which ultimately were not included in the list. The small import volume of many products mentioned, coupled with the difficulty of obtaining information resulted in their exclusion from the current study. Those excluded for the above mentioned reasons are Watermelon, Radicchio, Blackberries, Durian, Rambutan, Pitahaya, Litchi, Dry Onions, Cole Crops, Chicories, Fennel root, Baby Vegetables, Organic Vegetables, Tropical Tubers, Chayote, Specialty Mushrooms and Ornamental Flowers. Some of these may be excellent products and should be studied by interested countries or exporters.

Some strong candidates which require additional explanation for exclusion are the following:

PRODUCTS	REASONS FOR EXCLUSION
Snow Peas	The U.S. market has increased rapidly, but seems to be well-supplied at present.
Cut Flowers/Foliage	Existing study focuses on food products only. Flowers may be subject of a later study.
Strawberries	Declining imports in recent years and difficulty of shipping in fresh form.

We included three crops, Pineapples, Cantaloupes and Honeydews, despite some objections because of the attention these products continue to receive in Latin American and Caribbean Countries. For example, A major program for increasing production of pineapples is currently being implemented in Ecuador. We decided to supplement information available to such growers with information on market conditions in the United States.

The final product list for this study is as follows:

FRUITS

Limes
Mangos
Papaya
Plantain
Honeydews
Pineapple
Mixed Melons
Blueberries
Raspberries
Cantaloupe

VEGETABLES

Okra
Ginger
Artichokes
Spinach
Green Onions
Asparagus
Escarole-Endive
Chinese Cabbage
Mushrooms
Squash

APPENDIX B

SOURCES OF INFORMATION FOR STUDY

Contacts

U.S.Importers/Wholesalers/Brokers

Joey's Brokerage
2100 Park Street
Syracuse, New York 13208
(315) 471-5354 Phone
(315) 478-2726 Fax

Specialty: Cantaloupes

Sandstone Marketing
220 West Main Street
Brawley, CA 92227

Specialty: Cantaloupes,
Honeydews, Mixed Melons

B & B Produce
935 11th Street
Hammonton, NJ 08037
(609) 561-8835 Phone
(609) 561-7399 Fax

Specialty: Blueberries

Hurst's Berry Farm, Inc.
23301 S.W. McKibben Rd.
Sheridan, OR 97378-9626
(503) 843-3185 Phone
(503) 843-4120 Fax

Specialty: Blueberries

Plantain World Corporation
2260 N.W. 13th Ave.
Miami, FL 33142
(305) 638-3949 Phone
(305) 638-5932 Fax

Specialty: Papaya

South Florida Growers
P.O. Box 375
Goulds, FL 33170
(305) 258-1631 Phone
(305) 258-3393 Fax
Specialty: Papaya

Orrin H. Cope Produce Inc.
P.O. Box 2162
Naranja, FL 33032
(305) 247-1656 Phone
(305) 248-8136 Fax

Specialty: Okra

Oregon Onions
P.O. Box 9187
Brooks, OR 97305-9187
(503) 393-6033 Phone
(503) 393-6085 Fax

Specialty: Raspberries

Mauna Kea Agronomics, Inc.
P.O. Box 1210
Hilo, HI 96721
(808) 961-2831 Phone
(808) 969-6973 Fax

Specialty: Papaya

Papaya Administrative Committee
- Hawaii
(808) 533-3841 Phone

Specialty: Papaya

Valdes Farms, Inc.
P.O. Box 650592
Miami, FL 33265
(305) 233-8224 Phone
(305) 233-0813 Fax

Specialty: Okra

J.R. Brooks & Sons, Inc.
P.O. Drawer 9
18400 S.W. 256th St.
Homestead, FL 33090
(305) 247-3544 Phone
(305) 246-5827 Fax
Specialty: Papaya

Contacts

U.S.Importers/Wholesalers/Brokers

American Growers
3019 State Road 15
Belle Glade, FL 33430
(407) 996-6900 Phone
(407) 996-3502 Fax

Specialty: Squash

Dole Fresh Vegetables
P.O. Box 1759
639 Sanborn Rd.
Salinas, CA 93902
(408) 754-5244 Phone
(408) 757-0973 Fax

Specialty: Green Onions

Fresh Choice Produce, Inc.
P.O. Box 5999
126 Sun St.
Salinas, CA 93915
(408) 758-7598 Phone
(408) 758-7867 Fax

Specialty: Spinach

Boggiatto Produce
P.O. Box 2266
1120 Growers St.
Salinas, CA 93902
(408) 424-8952 Phone
(408) 424-8955 Fax

Specialty: Spinach

Merrill Farms
P.O. Box 659
1067 Merrill St.
Salinas, CA 93902
(408) 424-1100 Phone
(408) 424-0172 Fax

Specialty: Escarole-Endive

Skip's Consolidation
P.O. Box 3947
634 S. Sanborn Rd.
Salinas, CA 93912
(408) 757-1097 Phone
(408) 757-1090 Fax

Specialty: Squash

North American Blueberry Council
P.O. Box 166
Marmora, NJ 08223
(609) 399-1559 Phone
(609) 399-1590 Fax

Specialty: Blueberries

Leafy Greens Council
Box 76067
St Paul, MN 55175
(612) 222-3232 Phone

Specialty: Escarole/Endive, Spinach

Fratelli Farms of Florida, Inc.
11400 State Road 7
Boynton Beach, FL 33437-4714
(407) 736-8800 Phone
(407) 736-8911 Fax

Specialty: Squash

Havana Potatoes Corporation
1 River Road
Edgewater, NJ 07020
(201) 943 3483 Phone

Lindemann Produce Inc
747 Mercey Springs Rd
Los Banos, CA 93635
(209) 826-6756 Phone

Contacts

U.S.Importers/Wholesalers/Brokers

Star Produce
2520 Airline Drive
Houston, TX 77009
(713) 868-6112 Phone

Frutech International Inc
1500 W Atlantic Blvd
Pompano Beach, FL 33069
305-782-9000 Phone

Market Stores, Inc
Lone Star Produce
7301 Burnett Road
Austin, TX 78757
512-477-1881 Phone

Alpine Marketing Corp.
7227 NW 54TH ST
Miami, FL 33166
(305) 594-9117 Phone

Pandol Brotners Inc.
2201 Avenida Way
Wenatchee, WA 98801
509-662-3763 Phone

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FAX (410) 841-5755

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APPENDIX C

LAC COUNTRIES AND MULTILATERAL AGREEMENTS

APPENDIX C

LIST OF LAC COUNTRIES

CENTRAL AMERICA

Belize
Guatemala
Panama

Costa Rica
Honduras

El Salvador
Nicaragua

SOUTH AMERICA

Argentina
Chile
French Guiana
Peru
Venezuela

Bolivia
Colombia
Guyana
Surinam

Brazil
Ecuador
Paraguay
Uruguay

MEXICO

CARIBBEAN

Aruba
Bahamas
Dominica
Guadeloupe
Netherlands Antilles
(Bonaire - Curacao)
St. Christopher
(St Kitts - Nevis)
St. Vincent & Grenadines
Turks & Caicos Islands

Anguilla
Barbados
Dominican Republic
Haiti
St. Lucia
Martinique
Trinidad & Tobago
Virgin Islands

Antigua - Barbuda
Cayman Islands
Grenada
Jamaica
St. Martin
Montserrat
St. Eustatius

GENERAL NOTES

1. **Tariff Treatment of Imported Goods.** All goods provided for in this schedule and imported into the customs territory of the United States from outside thereof are subject to duty or exempt therefrom as prescribed in general notes 3 and 4.
2. **Customs Territory of the United States.** The term "customs territory of the United States", as used in the tariff schedule, includes only the States, the District of Columbia and Puerto Rico.
3. **Rates of Duty.** The rates of duty in the "Rates of Duty" columns designated 1 ("General" and "Special") and 2 of the tariff schedule apply to goods imported into the customs territory of the United States as hereinafter provided in this note:
 - (a) **Rate of Duty Column 1.**
 - (i) Except as provided in subparagraph (iv) of this paragraph, the rates of duty in column 1 are rates which are applicable to all products other than those of countries enumerated in paragraph (b) of this note. Column 1 is divided into two subcolumns, "General" and "Special", which are applicable as provided below.
 - (ii) The "General" subcolumn sets forth the general most-favored-nation (MFN) rates which are applicable to products of those countries described in subparagraph (i) above which are not entitled to special tariff treatment as set forth below.
 - (iii) The "Special" subcolumn reflects rates of duty under one or more special tariff treatment programs described in paragraph (c) of this note and identified in parentheses immediately following the duty rate specified in such subcolumn. These rates apply to those products which are properly classified under a provision for which a special rate is indicated and for which all of the legal requirements for eligibility for such program or programs have been met. Where a product is eligible for special treatment under more than one program, the lowest rate of duty provided for any applicable program shall be imposed. Where no special rate of duty is provided for a provision, or where the country from which a product otherwise eligible for special treatment was imported is not designated as a beneficiary country under a program appearing with the appropriate provision, the rates of duty in the "General" subcolumn of column 1 shall apply.
 - (iv) **Products of Insular Possessions.**
 - (A) Except as provided in additional U.S. note 5 of chapter 91 and except as provided in additional U.S. note 2 of chapter 96, and except as provided in section 423 of the Tax Reform Act of 1986, goods imported from insular possessions of the United States which are outside the customs territory of the United States are subject to the rates of duty set forth in column 1 of the tariff schedule, except that all such goods the growth or product of any such possession, or manufactured or produced in any such possession from materials the growth, product or manufacture of any such possession or of the customs territory of the United States, or of both, which do not contain foreign materials to the value of more than 70 percent of their total value (or more than 50 percent of their total value with respect to goods described in section 213(b) of the Caribbean Basin Economic Recovery Act), coming to the customs territory of the United States directly from any such possession, and all goods previously imported into the customs territory of the United States with payment of all applicable duties and taxes imposed upon or by reason of importation which were shipped from the United States, without remission, refund or drawback of such duties or taxes, directly to the possession from which they are being returned by direct shipment, are exempt from duty.
 - (B) In determining whether goods produced or manufactured in any such insular possession contain foreign materials to the value of more than 70 percent, no material shall be considered foreign which either--
 - (1) at the time such goods are entered, or
 - (2) at the time such material is imported into the insular possession,may be imported into the customs territory from a foreign country, and entered free of duty, except that no goods containing material to which (2) of this subparagraph applies shall be exempt from duty under subparagraph (A) unless adequate documentation is supplied to show that the material has been incorporated into such goods during the 18-month period after the date on which such material is imported into the insular possession.

General Note 3(a)(iv) (con.):

- (C) Subject to the limitations imposed under sections 503(b) and 504(c) of the Trade Act of 1974, goods designated as eligible under section 503 of such Act which are imported from an insular possession of the United States shall receive duty treatment no less favorable than the treatment afforded such goods imported from a beneficiary developing country under title V of such Act.
- (D) Subject to the provisions in section 213 of the Caribbean Basin Economic Recovery Act, goods which are imported from insular possessions of the United States shall receive duty treatment no less favorable than the treatment afforded such goods when they are imported from a beneficiary country under such Act.

(b) Rate of Duty Column 2. Notwithstanding any of the foregoing provisions of this note, the rates of duty shown in column 2 shall apply to products, whether imported directly or indirectly, of the following countries and areas pursuant to section 401 of the Tariff Classification Act of 1962, to section 231 or 257(e)(2) of the Trade Expansion Act of 1962, to section 404(a) of the Trade Act of 1974 or to any other applicable section of law, or to action taken by the President thereunder:

Afghanistan	Kampuchea	North Korea
Albania	Laos	Romania
Bulgaria	Latvia	Union of Soviet Socialist Republics
Cuba	Lithuania	Vietnam
Estonia	Mongolia	
German Democratic Republic		

(c) Products Eligible for Special Tariff Treatment.

(i) (A) Programs under which special tariff treatment may be provided, and the corresponding symbols for such programs as they are indicated in the "Special" subcolumn, are as follows:

Generalized System of Preferences	.....	A or A*
Automotive Products Trade Act	.....	B
Agreement on Trade in Civil Aircraft	.....	C
United States-Canada Free-Trade Agreement	.....	CA
Caribbean Basin Economic Recovery Act	.....	E or E*
United States-Israel Free Trade Area	.....	IL

(B) Articles which are eligible for the special tariff treatment provided for in subdivision (c) of this note and which are subject to temporary modification under any provision of subchapters I and II of chapter 99 shall be subject, for the period indicated in the "Effective Period" column in chapter 99, to rates of duty as follows:

- (1) if a rate of duty for which the article may be eligible is set forth in the "Special" subcolumn in chapter 99 followed by one or more symbols described above, such rate shall apply in lieu of the rate followed by the corresponding symbol(s) set forth for such article in the "Special" subcolumn in chapters 1 to 98; or
- (2) if "No change" appears in the "Special" subcolumn in chapter 99 and subdivision (B)(1) above does not apply, the rate of duty in the "General" subcolumn in chapter 99 or the applicable rate(s) of duty set forth in the "Special" subcolumn in chapters 1 to 98, whichever is lower, shall apply.

(C) Unless the context requires otherwise, articles which are eligible for the special tariff treatment provided for in subdivision (c) of this note and which are subject to temporary modification under any provision of subchapters III or IV of chapter 99 shall be subject, for the period indicated in chapter 99, to the rates of duty in the "General" subcolumn in such chapter.

(D) Whenever any rate of duty set forth in the "Special" subcolumn in chapters 1 to 98 is equal to or higher than, the corresponding rate of duty provided in the "General" subcolumn in such chapters, such rate of duty in the "Special" subcolumn shall be deleted; except that, if the rate of duty in the "Special" subcolumn is an intermediate stage in a series of staged rate reductions for that provision, such rate shall be treated as a suspended rate and shall be set forth in the "Special" subcolumn, followed by one or more symbols described above, and followed by an "s" in parentheses. If no rate of duty for which the article may be eligible is provided in the "Special" subcolumn for a particular provision in chapters 1 to 98, the rate of duty provided in the "General" subcolumn shall apply.

HARMONIZED TARIFF SCHEDULE of the United States (1991) — Supplement 1

Annotated for Statistical Reporting Purposes

Page 3

General Note 3(c) (con.):

(ii) Products of Countries Designated Beneficiary Developing Countries for Purposes of the Generalized System of Preferences (GSP).

(A) The following countries, territories and associations of countries eligible for treatment as one country (pursuant to section 502(a)(3) of the Trade Act of 1974 (19 U.S.C. 2462(a)(3)) are designated beneficiary developing countries for the purposes of the Generalized System of Preferences, provided for in Title V of the Trade Act of 1974, as amended (19 U.S.C. 2461 *et seq.*):

Independent Countries

Angola	Grenada	Philippines
Antigua and Barbuda	Guatemala	Poland
Argentina	Guinea	Rwanda
Bahamas, The	Guinea Bissau	St. Kitts and Nevis
Bahrain	Guyana	Saint Lucia
Bangladesh	Haiti	Saint Vincent and the Grenadines
Barbados	Honduras	Sao Tome and Principe
Belize	Hungary	Senegal
Benin	India	Seychelles
Bhutan	Indonesia	Sierra Leone
Bolivia	Israel	Solomon Islands
Botswana	Jamaica	Somalia
Brazil	Jordan	Sri Lanka
Burkina Faso	Kenya	Suriname
Burundi	Kiribati	Swaziland
Cameroon	Lebanon	Syria
Cape Verde	Lesotho	Tanzania
Central African Republic	Madagascar	Thailand
Chad	Malawi	Togo
Chile	Malaysia	Tonga
Colombia	Maldives	Trinidad and Tobago
Comoros	Mali	Tunisia
Congo	Malta	Turkey
Costa Rica	Mauritania	Tuvalu
Cote d'Ivoire	Mauritius	Uganda
Cyprus	Mexico	Uruguay
Czechoslovakia	Morocco	Vanuatu
Djibouti	Mozambique	Venezuela
Dominica	Namibia	Western Samoa
Dominican Republic	Nepal	Yemen Arab Republic (Sanaa)
Ecuador	Niger	Yugoslavia
Egypt	Oman	Zaire
El Salvador	Pakistan	Zambia
Equatorial Guinea	Panama	Zimbabwe
Fiji	Papua New Guinea	
Gambia, The	Paraguay	
Ghana	Peru	

Non-Independent Countries and Territories

Anguilla	French Polynesia	Pitcairn Islands
Aruba	Gibraltar	Saint Helena
British Indian Ocean Territory	Greenland	Tokelau
Cayman Islands	Heard Island and McDonald Islands	Trust Territory of the Pacific Islands (Palau)
Christmas Island (Australia)	Macau	Turks and Caicos Islands
Cocos (Keeling) Islands	Montserrat	Virgin Islands, British
Cook Islands	Netherlands Antilles	Wallis and Futuna
Falkland Islands (Islas Malvinas)	New Caledonia	Western Sahara
	Niue	
	Norfolk Island	

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Annotated for Statistical Reporting Purposes

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General Note 3(c)(ii)(A) (con.):

Associations of Countries (treated as one country)

Member Countries
of the
Cartagena Agreement
(Andean Group)

Consisting of:

Bolivia
Colombia
Ecuador
Peru
Venezuela

Members of the
Association of
South East Asian
Nations (ASEAN)
Eligible for GSP
except Brunei Darussalam
and Singapore

Consisting of:

Indonesia
Malaysia
Philippines
Thailand

Member Countries
of the
Caribbean Common
Market (CARICOM)

Consisting of:

Antigua and Barbuda
Bahamas, The
Barbados
Belize
Dominica
Grenada
Guyana
Jamaica
Montserrat
St. Kitts and Nevis
Saint Lucia
Saint Vincent and
the Grenadines
Trinidad and Tobago

(B) The following beneficiary countries are designated as least-developed beneficiary developing countries pursuant to section 504(c)(6) of the Trade Act of 1974, as amended:

Bangladesh
Benin
Bhutan
Botswana
Burkina Faso
Burundi
Cape Verde
Central African Republic
Chad
Comoros
Djibouti
Equatorial Guinea
Gambia, The

Guinea
Guinea-Bissau
Haiti
Kiribati
Lesotho
Malawi
Maldives
Mali
Mauritania
Mozambique
Nepal
Niger
Rwanda

Sao Tome and
Principe
Sierra Leone
Somalia
Tanzania
Togo
Tuvalu
Uganda
Vanuatu
Western Samoa
Yemen Arab Republic
(Sanaa)

Whenever an eligible article which is the growth, product or manufacture of one of the countries designated as a least-developed beneficiary developing country is imported into the customs territory of the United States directly from such country, such article shall be entitled to receive the duty-free treatment provided for in subdivision (c)(ii)(C) of this note without regard to the limitations on preferential treatment of eligible articles in section 504(c) of the Trade Act, as amended (19 U.S.C. 2464(c)).

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General Note 3(c)(ii) (con.):

- (C) Articles provided for in a provision for which a rate of duty of "Free" appears in the "Special" subcolumn followed by the symbols "A" or "A*" in parentheses are those designated by the President to be eligible articles for purposes of the GSP pursuant to section 503 of the Trade Act of 1974. The symbol "A" indicates that all beneficiary developing countries are eligible for preferential treatment with respect to all articles provided for in the designated provision. The symbol "A*" indicates that certain beneficiary developing countries, specifically enumerated in subdivision (c)(ii)(D) of this note, are not eligible for such preferential treatment with regard to any article provided for in the designated provision. Whenever an eligible article which is the growth, product, or manufacture of a designated beneficiary developing country listed in subdivision (c)(ii)(A) of this note is imported into the customs territory of the United States directly from such country or territory, such article shall be eligible for duty-free treatment as set forth in the "Special" subcolumn, unless excluded from such treatment by subdivision (c)(ii)(D) of this note; provided that, in accordance with regulations promulgated by the Secretary of the Treasury the sum of (1) the cost or value of the materials produced in the beneficiary developing country or any 2 or more countries which are members of the same association of countries which is treated as one country under section 502(a)(3) of the Trade Act of 1974, plus (2) the direct costs of processing operations performed in such beneficiary developing country or such member countries is not less than 35 percent of the appraised value of such article at the time of its entry into the customs territory of the United States. No article or material of a beneficiary developing country shall be eligible for such treatment by virtue of having merely undergone simple combining or packing operations, or mere dilution with water or mere dilution with another substance that does not materially alter the characteristics of the article.
- (D) Articles provided for in a provision for which a rate of duty of "Free" appears in the "Special" subcolumn of rate of duty column 1 followed by the symbol "A*" in parentheses, if imported from a beneficiary developing country set out opposite the provisions enumerated below, are not eligible for the duty-free treatment provided in subdivision (c)(v)(C) of this note:

0603.10.70	Colombia	1605.10.20	Malaysia; Thailand
0702.00.60	Mexico		
0704.10.40	Mexico		
0704.10.60	Mexico	1701.11.01	Brazil; Dominican Republic
0704.20.00	Mexico		
0705.11.40	Mexico		
0705.19.40	Mexico	1701.11.02	Brazil
0707.00.20	Mexico	1701.12.01	Brazil
0707.00.40	Mexico	1701.91.21	Brazil
0708.10.40	Mexico	1701.99.01	Brazil
0709.30.20	Mexico	1806.10.41	Brazil
0709.30.40	Mexico	1901.90.90	Mexico
0709.60.00	Mexico	2001.90.39	Mexico
0709.90.20	Mexico	2005.90.55	Mexico
0710.80.70	Guatemala	2007.99.50	Brazil
0713.31.40	Thailand	2202.10.00	Mexico
0802.90.15	Mexico	2203.00.00	Mexico
0804.50.40	Mexico	2402.10.80	Dominican Republic
0804.50.60	Mexico	2603.00.00	Mexico
0807.10.20	Mexico	2804.69.10	Brazil
0807.10.70	Mexico	2825.90.15	Brazil
0807.20.00	Mexico	2827.59.05	Israel
0810.10.40	Mexico	2836.92.00	Mexico
0810.90.40	Mexico	2903.40.00	Israel
0811.10.00	Mexico	2903.59.40	Israel
0813.10.00	Turkey	2906.11.00	Brazil
0813.30.00	Argentina	2915.31.00	Brazil
1005.90.20	Argentina	2916.39.15	India
1005.90.40	Argentina	2918.22.10	Turkey
1102.30.00	Thailand	2918.90.30	Bahamas
1103.14.00	Thailand		

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General Note 3(c)(ii)(D) (con.):

2929.90.50	Bahamas	4412.29.40	Brazil; Indonesia
2933.39.25	Brazil		
2933.40.10	Israel	4421.90.50	Brazil
2933.90.47	Mexico	4421.90.60	Brazil
2937.92.10	Mexico	4818.50.00	Mexico
3203.00.50	Mexico	4823.20.10	Brazil
3207.40.10	Mexico	6210.10.20	Mexico
3301.12.00	Brazil	6307.90.60	Mexico
3402.90.10	Mexico		
3823.90.40	Brazil	6406.10.65	Brazil; Dominican Republic
3904.21.00	Brazil		
3909.10.00	Israel	6406.99.60	Argentina
3917.33.00	Mexico	6702.90.60	Thailand
3926.90.87	Mexico	6810.11.00	Mexico
4011.10.00	Brazil	6905.10.00	Mexico
4011.20.00	Brazil	6908.10.20	Thailand
4011.91.50	Israel		
4015.11.00	Malaysia	6910.10.00	Brazil; Mexico
4104.10.40	India		
4104.21.00	Argentina	6910.90.00	Brazil
4104.22.00	Argentina	6911.90.00	Brazil
4104.29.50	Argentina	6912.00.44	Brazil
4104.29.90	Argentina	7113.11.20	Thailand
4104.31.20	Thailand	7113.11.50	Thailand
4104.31.50	Argentina	7113.19.10	Peru
4104.31.60	Argentina		
4104.31.80	Argentina	7113.19.50	Israel; Thailand
4104.39.50	Argentina		
4104.39.60	Argentina	7113.20.50	Thailand
4104.39.80	Argentina	7116.10.10	Thailand
4105.20.60	Argentina	7116.20.10	Thailand
4106.12.00	India	7202.11.10	Mexico
4106.19.00	India	7202.19.50	Mexico
4106.20.30	India	7202.21.10	Brazil
4106.20.60	India	7202.21.50	Brazil
4107.21.00	Argentina	7202.30.00	Brazil
4107.29.30	Argentina	7307.21.50	Brazil
4107.29.60	Argentina	7307.91.50	Brazil
4107.90.60	Argentina	7314.19.00	Mexico
4109.00.70	Argentina	7323.94.00	Mexico
4409.10.40	Mexico	7401.10.00	Mexico
4411.11.00	Brazil		
4411.19.20	Brazil	7402.00.00	Chile; Mexico
4411.19.40	Brazil		
4411.21.00	Brazil	7403.11.00	Chile
4411.29.60	Brazil	7403.12.00	Chile
4411.29.90	Brazil	7403.13.00	Chile
4412.11.20	Indonesia	7403.19.00	Chile
4412.11.50	Indonesia	7403.21.00	Chile
		7403.22.00	Chile
4412.17.20	Brazil; Indonesia	7403.23.00	Chile
		7403.29.00	Chile
4412.12.50	Brazil; Indonesia	7413.00.10	Peru
4412.29.30	Brazil; Indonesia		

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General Note 3(c)(ii)(D) (con.):

7604.10.30	Venezuela	8527.21.10	Brazil; Mexico
7604.29.30	Venezuela		
7605.11.00	Venezuela	8535.40.00	Mexico
7605.21.00	Venezuela	8536.50.00	Mexico
7901.11.00	Mexico	8536.69.00	Mexico
8407.34.20	Brazil	8536.90.00	Mexico
8408.20.20	Brazil	8539.90.00	Mexico
		8543.80.90	Mexico
8409.91.91	Brazil; Mexico		
		8544.30.00	Mexico; Philippines
8409.99.99	Brazil		
8414.59.80	Mexico	8708.21.00	Mexico
8415.82.00	Mexico	8708.99.50	Mexico
8415.90.00	Mexico	8802.30.00	Brazil
8418.10.00	Mexico	9022.29.40	Mexico
8419.19.00	Israel; Mexico	9025.11.20	Brazil; India
8419.90.10	Israel	9401.20.00	Mexico
8424.20.10	Mexico	9401.30.40	Yugoslavia
8428.90.00	Mexico	9401.40.00	Thailand
8429.11.00	Brazil	9401.61.40	Yugoslavia
8429.20.00	Brazil	9401.61.60	Thailand
8429.30.00	Brazil	9401.69.60	Yugoslavia
8431.49.90	Brazil	9401.69.80	Thailand
8471.99.30	Mexico	9401.90.40	Yugoslavia
8501.40.40	Mexico	9403.30.80	Thailand
8501.40.60	Mexico	9403.40.90	Thailand
8504.10.00	Mexico	9403.50.90	Thailand
8504.32.00	Mexico	9403.60.80	Thailand
8504.40.00	Mexico	9405.30.00	Thailand
8512.40.40	Mexico	9405.91.30	Mexico
8521.10.00	Thailand	9504.20.60	Brazil
8522.10.00	Mexico		
8523.11.00	Mexico		

General Note 3(c) (con.):

- (iii) Automotive Products and Motor Vehicles Eligible for Special Tariff Treatment. Articles entered under the Automotive Products Trade Act are subject to the following provisions:
- (A) Motor vehicles and original motor-vehicle equipment which are Canadian articles and which fall in provisions for which the rate of duty "Free (B)" appears in the "Special" subcolumn may be entered free of duty. As used in this note—
- (1) The term "Canadian article" means an article which originates in Canada, as defined in subdivision (c)(vii) of this note.
 - (2) The term "original motor-vehicle equipment", as used with reference to a Canadian article (as defined above), means such a Canadian article which has been obtained from a supplier in Canada under or pursuant to a written order, contract or letter of intent of a bona fide motor vehicle manufacturer in the United States, and which is a fabricated component originating in Canada, as defined in subdivision (c)(vii) of this note, and intended for use as original equipment in the manufacture in the United States of a motor vehicle, but the term does not include trailers or articles to be used in their manufacture.
 - (3) The term "motor vehicle", as used in this note, means a motor vehicle of a kind described in headings 8702, 8703 and 8704 of chapter 87 (excluding an electric trolley bus and a three-wheeled vehicle) or an automobile truck tractor principally designed for the transport of persons or goods.
 - (4) The term "bona fide motor-vehicle manufacturer" means a person who, upon application to the Secretary of Commerce, is determined by the Secretary to have produced no fewer than 15 complete motor vehicles in the United States during the previous 12 months, and to have installed capacity in the United States to produce 10 or more complete motor vehicles per 40-hour week. The Secretary of Commerce shall maintain, and publish from time to time in the *Federal Register*, a list of the names and addresses of bona fide motor-vehicle manufacturers.
- (B) If any Canadian article accorded the status of original motor-vehicle equipment is not so used in the manufacture in the United States of motor vehicles, such Canadian article or its value (to be recovered from the importer or other person who diverted the article from its intended use as original motor-vehicle equipment) shall be subject to forfeiture, unless at the time of the diversion of the Canadian article the United States Customs Service is notified in writing, and, pursuant to arrangements made with the Service—
- (1) the Canadian article is, under customs supervision, destroyed or exported, or
 - (2) duty is paid to the United States Government in an amount equal to the duty which would have been payable at the time of entry if the Canadian article had not been entered as original motor-vehicle equipment.
- (iv) Articles Eligible for Duty-Free Treatment Pursuant to the Agreement on Trade in Civil Aircraft. Whenever a product is entered under a provision for which the rate of duty "Free (C)" appears in the "Special" subcolumn, the importer shall file a written statement, accompanied by such supporting documentation as the Secretary of the Treasury may require, with the appropriate customs officer stating that the imported article has been imported for use in civil aircraft, that it will be so used and that the article has been approved for such use by the Administrator of the Federal Aviation Authority (FAA) or by the airworthiness authority in the country of exportation, if such approval is recognized by the FAA as an acceptable substitute for FAA certification, or that an application for approval for such use has been submitted to, and accepted by, the Administrator of the FAA. For purposes of the tariff schedule, the term "civil aircraft" means all aircraft other than aircraft purchased for use by the Department of Defense or the United States Coast Guard.

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General Note 3(c) (con.):

(v) Products of Countries Designated as Beneficiary Countries for Purposes of the Caribbean Basin Economic Recovery Act (CBERA).

(A) The following countries and territories or successor political entities are designated beneficiary countries for the purposes of the CBERA, pursuant to section 212 of that Act (19 U.S.C. 2702):

Antigua and Barbuda	Grenada	Nicaragua
Aruba	Guatemala	Panama
Bahamas	Guyana	Saint Christopher and Nevis
Barbados	Haiti	Saint Lucia
Belize	Honduras	Saint Vincent and the Grenadines
Costa Rica	Jamaica	Trinidad and Tobago
Dominica	Montserrat	Virgin Islands, British
Dominican Republic	Netherlands Antilles	
El Salvador		

(B) (1) Unless otherwise excluded from eligibility by the provisions of subdivisions (c)(v)(D) or (c)(v)(E) of this note, any article which is the growth, product, or manufacture of a beneficiary country shall be eligible for duty-free treatment if that article is provided for in a subheading for which a rate of duty of "Free" appears in the "Special" subcolumn followed by the symbol "E" or "E*" in parentheses, and if—

(I) that article is imported directly from a beneficiary country into the customs territory of the United States; and

(II) the sum of (A) the cost or value of the materials produced in a beneficiary country or two or more beneficiary countries, plus (B) the direct costs of processing operations performed in a beneficiary country or countries is not less than 35 per centum of the appraised value of such article at the time it is entered. For purposes of determining the percentage referred to in (II)(B) above, the term "beneficiary country" includes the Commonwealth of Puerto Rico and the United States Virgin Islands. If the cost or value of materials produced in the customs territory of the United States (other than the Commonwealth of Puerto Rico) is included with respect to an article to which subdivision (c)(v) of this note applies, an amount not to exceed 15 per centum of the appraised value of the article at the time it is entered that is attributed to such United States cost or value may be applied toward determining the percentage referred to in (II)(B) above.

(2) Pursuant to subsection 213(a)(2) of the CBERA, the Secretary of the Treasury shall prescribe such regulation as may be necessary to carry out subdivision (c)(v) of this note including, but not limited to, regulations providing that, in order to be eligible for duty-free treatment under CBERA, an article must be wholly the growth, product, or manufacture of a beneficiary country, or must be a new or different article of commerce which has been grown, produced, or manufactured in the beneficiary country, and must be stated as such in a declaration by the appropriate party; but no article or material of a beneficiary country shall be eligible for such treatment by virtue of having merely undergone—

(I) simple combining or packaging operations, or

(II) mere dilution with water or mere dilution with another substance that does not materially alter the characteristics of the article.

APPENDIX D

SURVEY QUESTIONNAIRE

APPENDIX D

SURVEY QUESTIONNAIRE

(For specific products)

Marketing:

1. What are the most popular varieties in the U.S. for (fruit/vegetable) ? Why are they so popular?
2. What do consumers look for when buying (fruit/vegetable) ?
3. Apart from a competitive price, what are some things that buyers are looking for in (fruit/vegetable) ?
4. What are some of the problems unique to (fruit/vegetable) ?
5. Is the market for (fruit/vegetable) more mainstream/ethnic/health conscious, etc.?
6. When does one see the highest prices in the domestic market (season/month/event) for (fruit/vegetable)?

Demand:

7. What is your two/three year forecast for the consumption of (fruit/vegetable)?
8. Statistics show that the market for (fruit/vegetable) is (going down/up/levelling off). Is your experience with (fruit/vegetable) consistent with this? If not, why?

Current trends:

9. Are U.S. producers reacting to changes in the marketplace (increasing production, downsizing, joint ventures, etc.)?
10. Which countries are building up as suppliers recently?

APPENDIX E

VOLUME OF IMPORTS FROM 1987 TO 1992

VOLUME OF U.S. IMPORTS OF NTAE PRODUCTS, 1987-1992

	1987	1988	1989	1990	1991	1992	('000 cwt)
<i>Apples</i>	2916	2650	2552	2939	2635	2652	
<i>Apricots</i>	23	27	13	22	27	29	
<i>Artichokes</i>	0	1	0	1	20	22	
<i>Asparagus</i>	332	337	360	444	530	587	
<i>Avocados</i>	41	124	104	296	364	513	
<i>Bananas</i>	63565	63157	64688	68282	70528	73432	
<i>Beans</i>	282	344	267	342	280	252	
<i>Beets</i>	5	36	41	82	28	18	
<i>Blueberries</i>	168	256	137	168	206	203	
<i>Broccoll</i>	214	242	246	303	274	274	
<i>Brussels Sprouts</i>	177	126	172	140	98	137	
<i>Cabbage</i>	299	312	633	1061	521	429	
<i>Cantaloupe</i>	3106	3492	4629	5308	6161	4968	
<i>Carrots</i>	1013	1197	1150	1306	1448	1433	
<i>Cauliflower</i>	138	170	212	261	190	181	
<i>Celery</i>	277	332	441	467	484	368	
<i>Cherries</i>	19	39	44	37	28	50	
<i>Chinese Cabbage</i>	5	2	15	20	31	29	
<i>Corn Sweet</i>	177	150	276	319	384	296	
<i>Cucumbers</i>	4021	4278	4176	4130	4093	4283	
<i>Eggplant</i>	385	420	363	387	477	404	
<i>Escarole-Endive</i>	67	71	129	131	145	157	
<i>Fruits Other</i>	38	18	28	84	72	73	
<i>Garlic</i>	367	372	386	387	415	410	
<i>Grapefruit</i>	77	133	73	166	173	236	
<i>Grapes Table</i>	5420	6873	6246	8243	7041	7022	
<i>Greens</i>	67	86	155	184	164	181	
<i>Honeydews</i>	823	910	1395	1212	1733	1098	
<i>Kiwifruit</i>	379	322	435	732	638	474	
<i>Lemons</i>	161	167	188	187	299	78	
<i>Lettuce Iceberg</i>	98	333	429	387	384	240	
<i>Romaine Lettuce</i>	22	28	53	3	0	14	
<i>Lettuce Other</i>	85	66	81	67	51	54	
<i>Lettuce Processe</i>	0	0	0	2	0	0	
<i>Limes</i>	947	1257	1295	1530	1740	2165	
<i>Mangoes</i>	1288	813	1289	1333	2034	1652	
<i>Misc Berries</i>	7	0	3	0	2	0	
<i>Misc Citrus</i>	0	876	87	198	148	228	
<i>Misc Herbs</i>	0	2	20	76	181	153	
<i>Misc Oriental Veg</i>	13	18	49	63	74	64	
<i>Misc Tropical F&V</i>	156	1361	1601	1497	2524	3508	
<i>Mixed Misc melon</i>	904	767	1105	908	1383	1414	
<i>Mushrooms</i>	6	15	21	22	45	45	
<i>Nectarines</i>	445	0	0	0	0	0	

Okra	673	647	734	970	1090	958
Onions Dry	2434	2815	2433	2540	3123	2251
Onions Green	1420	1513	1797	1814	1942	2081
Oranges	627	380	167	257	1429	228
Papaya	100	122	129	190	200	262
Parsley	25	26	31	25	28	49
Parsnips	0	3	0	0	0	0
Peaches	770	938	981	1143	1113	1181
Pears	692	738	864	855	950	1259
Peas Green	127	127	92	99	316	294
Peas Other	239	291	347	313	52	12
Peppers Bell	2254	2316	2309	2333	2103	1816
Peppers Other	778	881	883	1050	1129	1053
Pineapple	2215	2237	2316	2595	2625	2765
Plantains	0	2395	3218	3131	3360	3507
Plum-Prunes	373	397	447	516	523	557
Potatoes Table	4549	4019	5099	4846	4156	2756
Potatoes Seed	960	949	1620	2010	1791	1280
Pumpkins	11	14	0	3	2	1
Radishes	250	246	239	300	315	317
Raspberries	0	256	201	143	124	151
Spinach	30	45	88	56	55	63
Squash	2031	2228	2618	2620	2704	2721
Strawberries	326	403	360	317	318	225
Tangerines	339	356	277	282	274	168
Tomatoes	8625	7917	7559	7710	7508	3628
Tomatoes Cherry	894	835	691	780	679	772
Turnips-Rutabaga	486	442	89	26	441	419
Vegetables Other	407	427	550	695	436	429
Watermelon	3387	3043	4017	2969	3180	3135
TOTAL IMPORTS	123555	129186	135743	144315	150019	144164

Source: "Fresh Fruit and Vegetable Shipments", Market News Branch
Fruit and Vegetable Division, AMS, USDA

APPENDIX F

APHIS NEW COMMODITY AUTHORIZATION PROCESS

APPENDIX F

USDA APHIS NEW COMMODITY AUTHORIZATION PROTOCOL

Every country that exports fresh fruit and vegetables to the U.S. has a list of admissible commodities. This admissible list is available on request from the U.S. Department of Agriculture Animal Plant Health Inspection Service (APHIS) in Hyattsville Maryland. Adding to the admissible list is time consuming and requires either a request from a U.S. importer or a solicitation from the Agricultural Ministry. Authorization to import or admit a new commodity requires amending the existing quarantine law, in this case the Code of Federal Regulation (CFR) 319.56.

When requesting approval of a new commodity the following information must be supplied: (1) Botanical name of the commodity, (2) Part of the plant to be imported (root, tuber, fruit, seed, leaves, stems), (3) Growing area in the country of origin and expected shipping dates, (4) Anticipated number of shipments per season, quantity per shipment, and method of shipment (sea, air, land), (5) The U.S. port of entry and intended distribution area.

The port operations unit in Hyattsville, upon receiving a new commodity request, will determine whether a commodity risk assessment for the proposed commodity from the requesting country has been conducted within the past 10 years. If not, the request is forwarded to the Biological Assessment and Taxonomic Support (BATS) staff for biological risk assessment. The BATS staff will determine which organisms are associated with the proposed commodity and, of those, which are quarantine significant (by pest/host relationship and pest distribution). Finally, the risk of importing the new commodity is determined by the probability of the pest being associated with the commodity, the probability of the pest escaping detection at the port of entry, the probability of establishment and potential effect on U.S. agriculture, and the availability of a quarantine treatment.

A staff specialist will then recommend an entry status for the commodity. The new commodity may be recommended for entry with inspection or for entry under specific conditions, such as treatment or certification, or it may be denied entry because of its pest status. Reasons for denial are usually caused by the presence of an exotic quarantine pest, difficult to detect during inspection, such as internal feeder, - e.g. fruit flies, with no established quarantine treatment available.

Once the biological assessment is concluded, if the results are favorable, the intent to amend the admissible list must be published in the Federal Register. To do this the new commodity request is drafted into a proposal and submitted for publication in the Federal Register. During the process of drafting the proposal a series of legislative orders, which evaluate the effect of amending the CFR, are applied. Publication of the draft proposal is followed by a public comment period. When the comment period closes all comments must be taken into consideration by APHIS before the drafting of the final rule. The final rule, which addresses all comments, is then drafted and submitted for publication in the register.

A thirty day waiting period ensues after the final rules is published to permit the finalized amendment to the enterable commodities list and to advise field personnel of the new status. status. Port Operations will then issue an import permit for the new commodity.

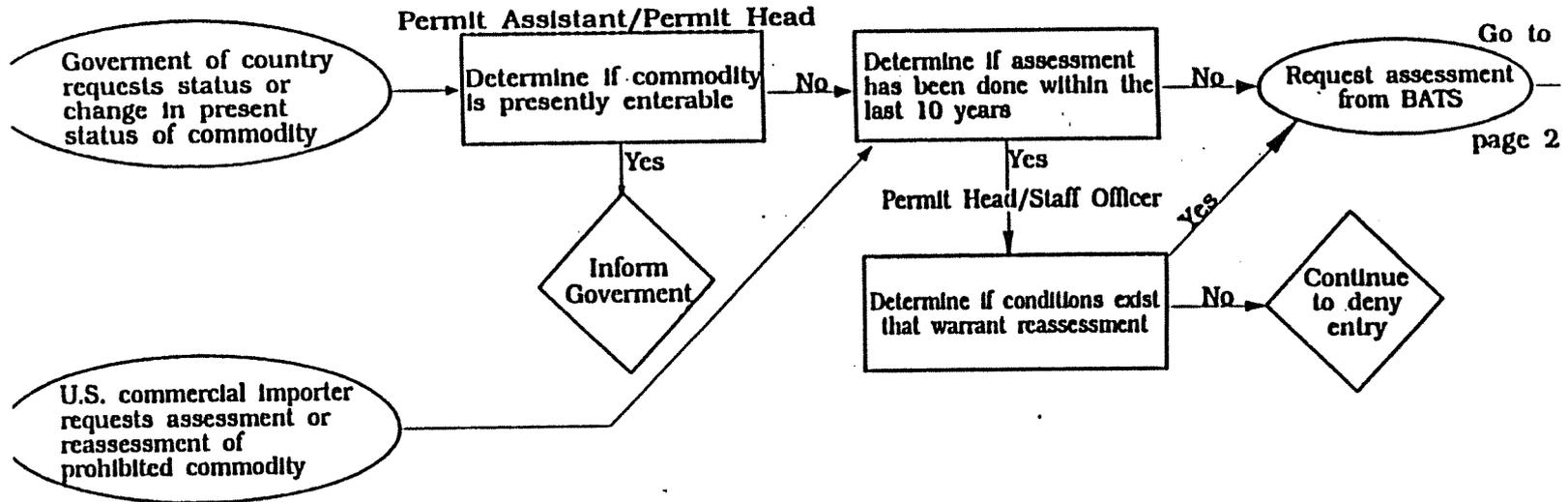
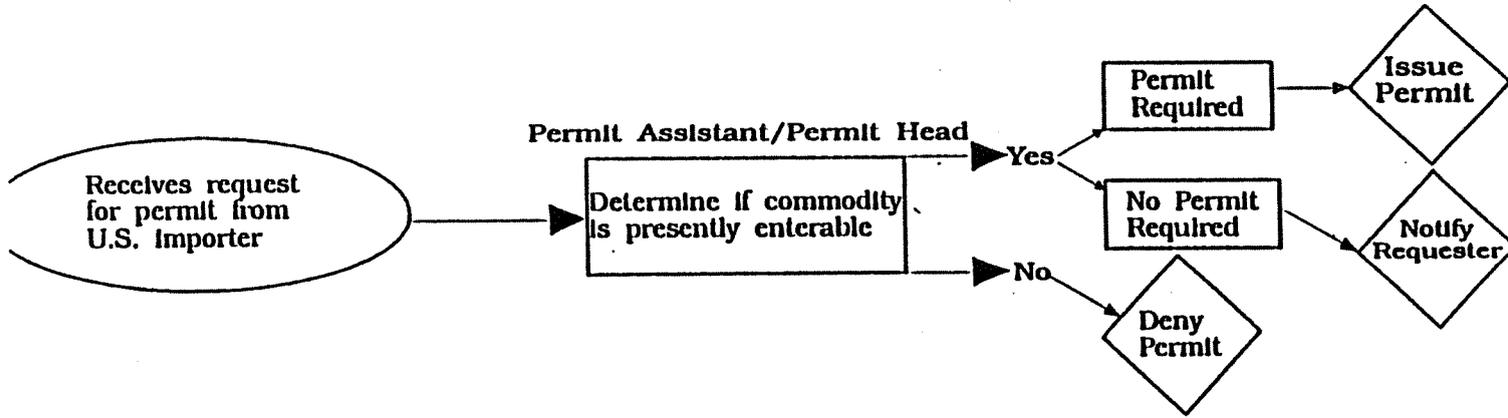
A common complaint is the amount of time it takes to obtain import authorization for a new commodity. This arduous process is required by law and is lengthy due to the complexity of each commodity's host/pest relationship, the limited staffing and workload of APHIS staff, and the publication process in the Federal Register.

One way to expedite the authorization process is to include pest data on the proposed commodity. A thorough literature search can be conducted to determine which organisms exist in the country of origin that are known to attack the proposed commodity. Although this information is not mandatory it will facilitate the biological assessment process. A Foreign Agricultural Request Form (FAR) is provided in this report to be used by Agricultural Ministries in requesting admissibility of new commodities. Also included with this report is a set of flow charts which illustrates the complete import authorization process. The flow charts clearly define the actions taken by APHIS, given the different possibilities, and explain the responsibilities of the different regulatory groups within the USDA that are involved in new commodity approval.

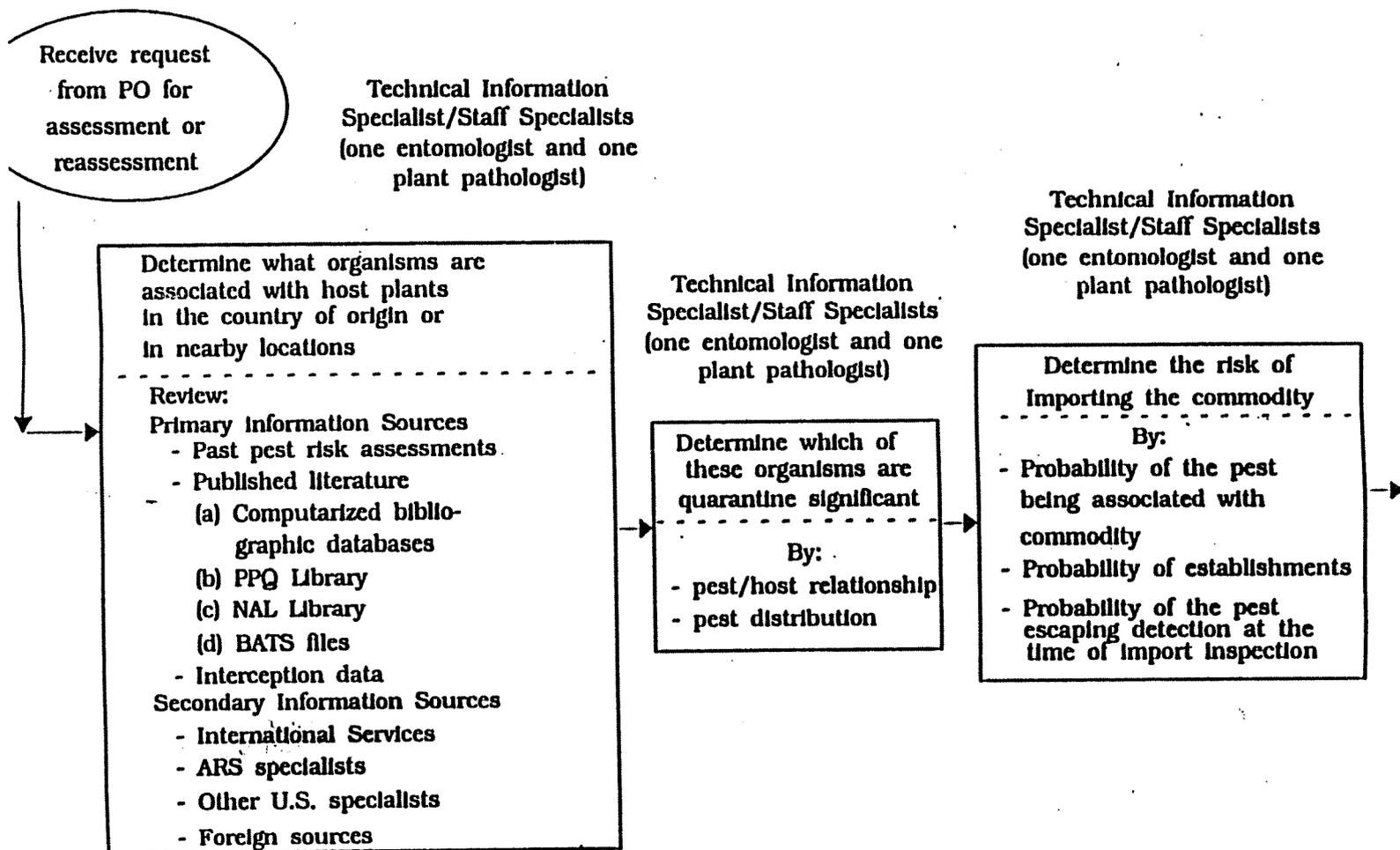
Adding commodities to a country's admissible list is a long term endeavor, but one that is vital to a country's exporting community. The more extensive the admissible list, the greater the opportunity to increase non-traditional agricultural exports.

IMPORT AUTHORIZATION PROCESS

PERMIT UNIT - PORT OPERATIONS (PO)



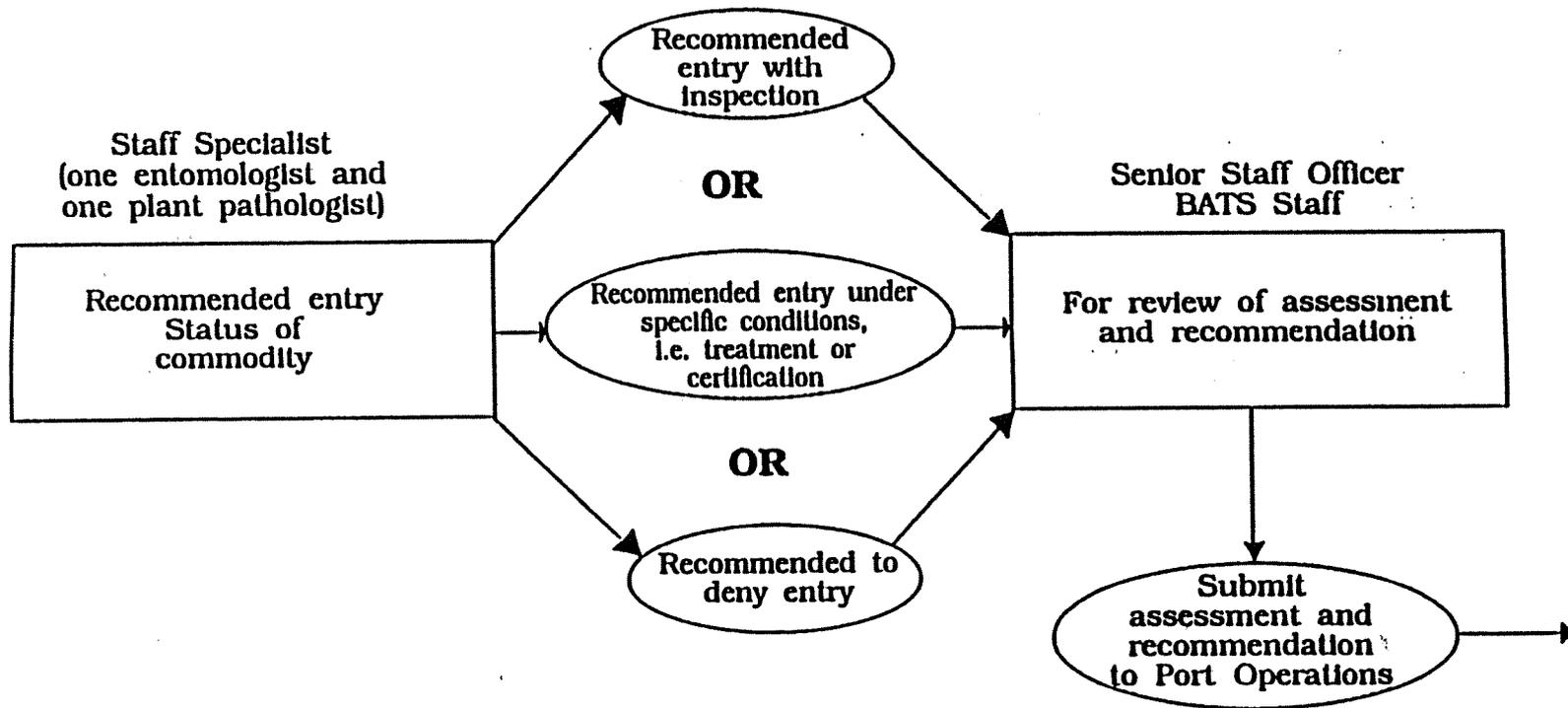
Biological Assessment and Taxonomic Support Staff (BATS)



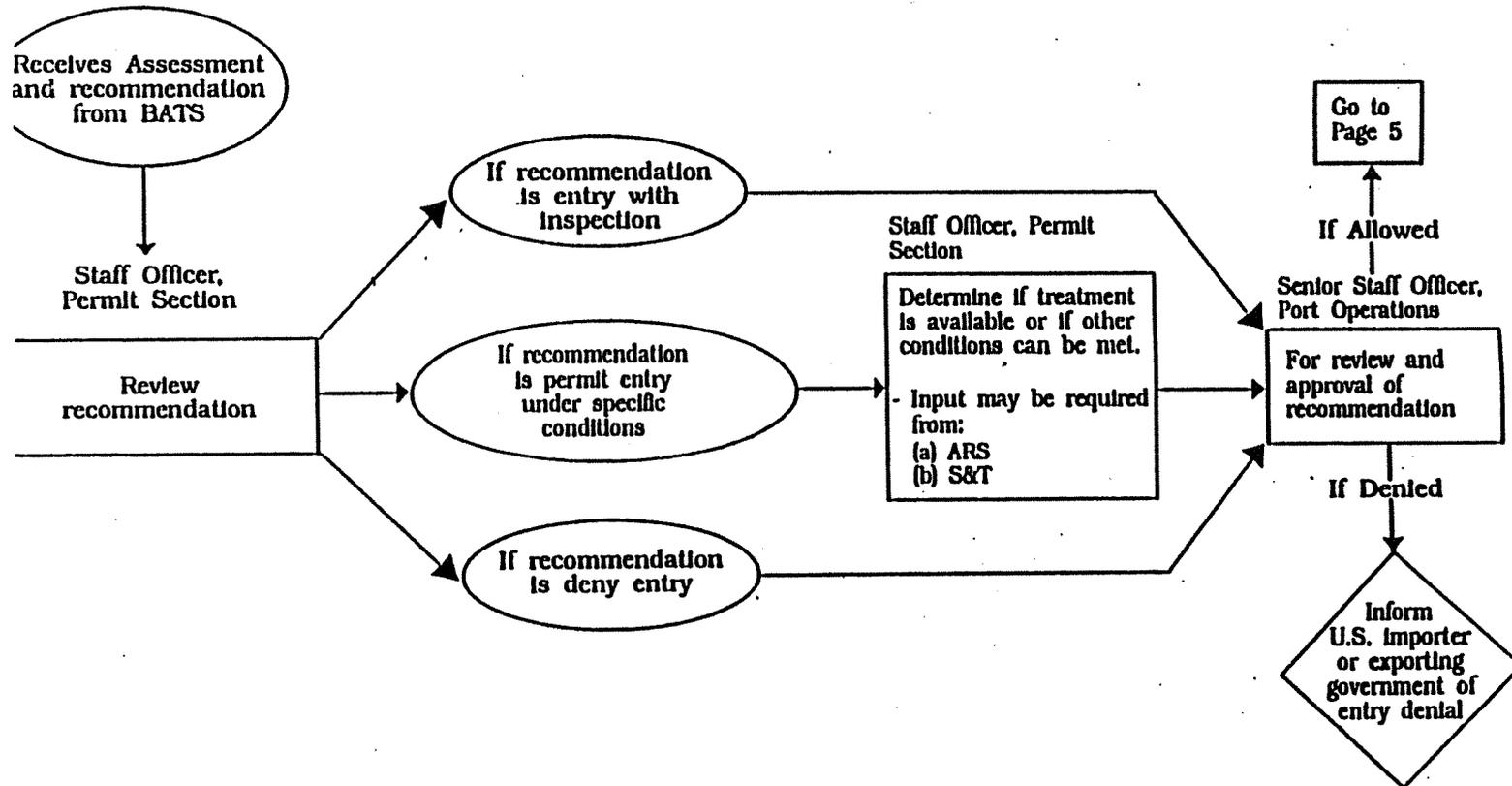
F-4

Biological Assessment and Taxonomic Support (BATS)

FIG 15

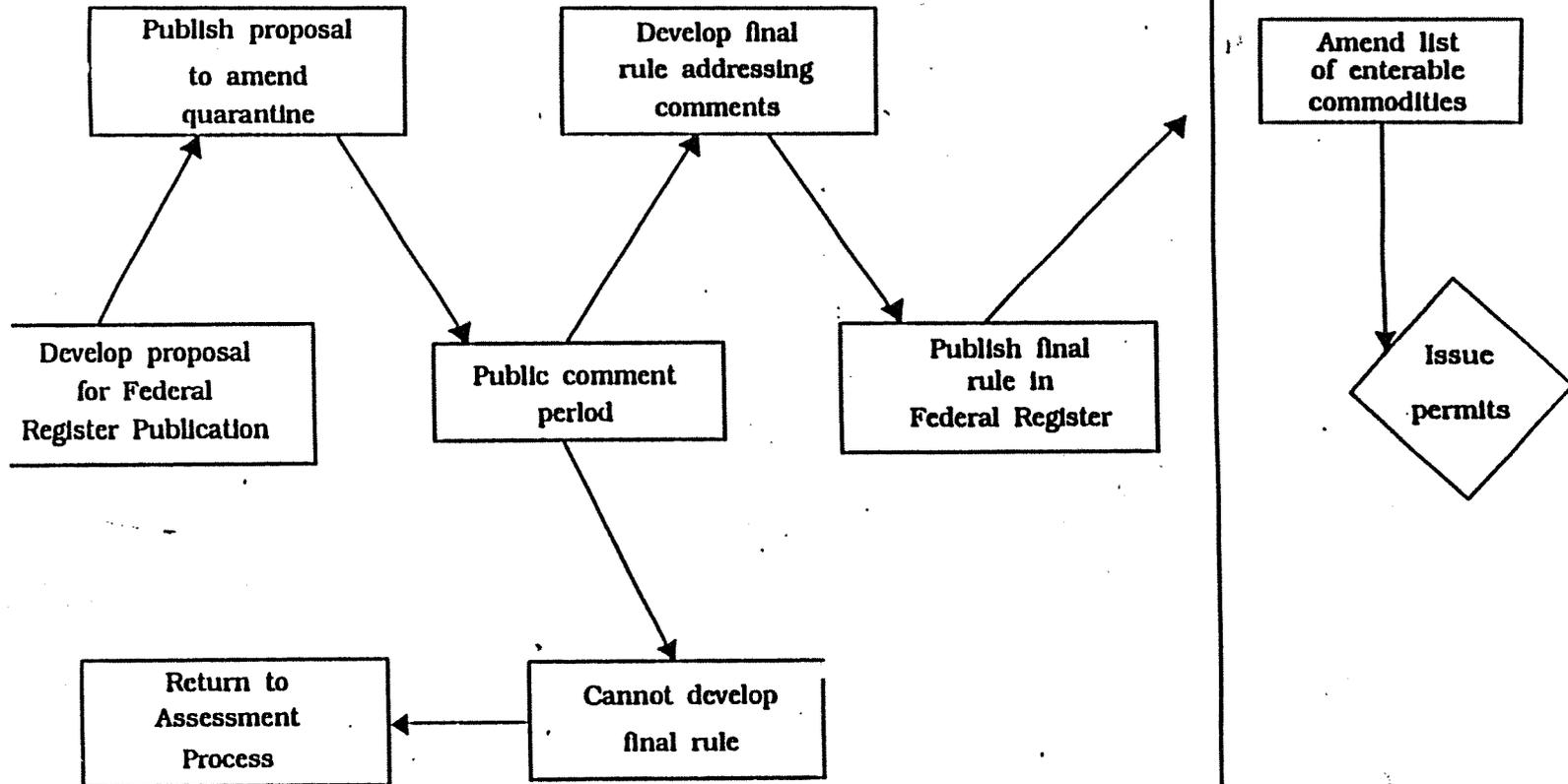


Permit Unit - Port Operations (PO)



Regulatory Analysis and Development Staff (RADS)

Port Operations



FOREIGN AGRICULTURAL REQUEST FORM

Application for Authorization to Import Plants or Plant Products into the U.S.

1. Date of Application: _____

Plants Or Plant Products To Be Imported into U.S. (See Reverse for Pest and Disease Status Information Request by Commodity)

Country of Origin (If Canada, give city and province; if Mexico, give State)	Quantity and Name of plants or Plant Products Scientific (Botanical) must be included; common or colloquial names are not acceptable List whether seeds, bulbs, plants, cuttings, cut flowers, fruits, etc. Indicate whether for planting, consumption, or other purposes.	U.S. Port or Ports of Arrival If Shipped Other Than By Mail
a.		
b.		
c.		
d.		
e.		
f.		

3. Check Means of Importation

Air Mail or Air Parcel Post
 Air Freight

Surface Mail or Parcel Post
 Truck, Rail or Water Freight
 Baggage or Car

4. Approximate Departure Date from Country: _____

5. Port of Exit: _____

6. Arrival Date: _____

7. Are Other Importations Contemplated within the Next 2 Years: Yes No

8. Print the Name and Address of the Ministry of Agriculture

11. FORWARD THIS APPLICATION TO:

U.S. DEPARTMENT OF AGRICULTURE, APHIS
PLANT PROTECTION AND QUARANTINE
PERMIT UNIT
FEDERAL BUILDING
6505 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

9. Signature of Minister of Agriculture

10. Ministry of Agriculture: Telephone # _____

Fax # _____

APPENDIX G

STANDARD CRATE WEIGHTS

APPENDIX

STANDARD CRATE WEIGHTS

	<u>Commodity</u>	<u>Weight (lbs)</u>
Artichokes	Carton	23
Asparagus	1/2 pyramid carton or crate	15
Blueberries	12 1-pt tray	11
Cantaloupes	1/2 carton or crate	40
Chinese Cabbage	Celery Carton	50
Limes	Carton	10, 38 or 40
Escarole-Endive	1-1/9 bushel carton or crate	25
	Carton, 24's	34
Mangoes	1-layer flat	10 and 14
Honeydews	Carton	30
Misc. Melons	Carton	30
Okra	1/2 bushel basket or carton	15
Onions, Green	Carton, 48 bunches	13
Papaya	Carton (Hawaiian)	10
Pineapple	2 layer carton	40
Raspberries	12 1/2 pint flat	6
Spinach	Bushel basket, carton or crate	25
Squash	1/2 bushel basket, carton or crate	21
	Carton or Lug	26
	Hard Shell, 1-1/9 bushel crate	50
Strawberries	12 1-pint flat	12

APPENDIX H

U.S. MARKET STANDARDS FOR COMMODITIES

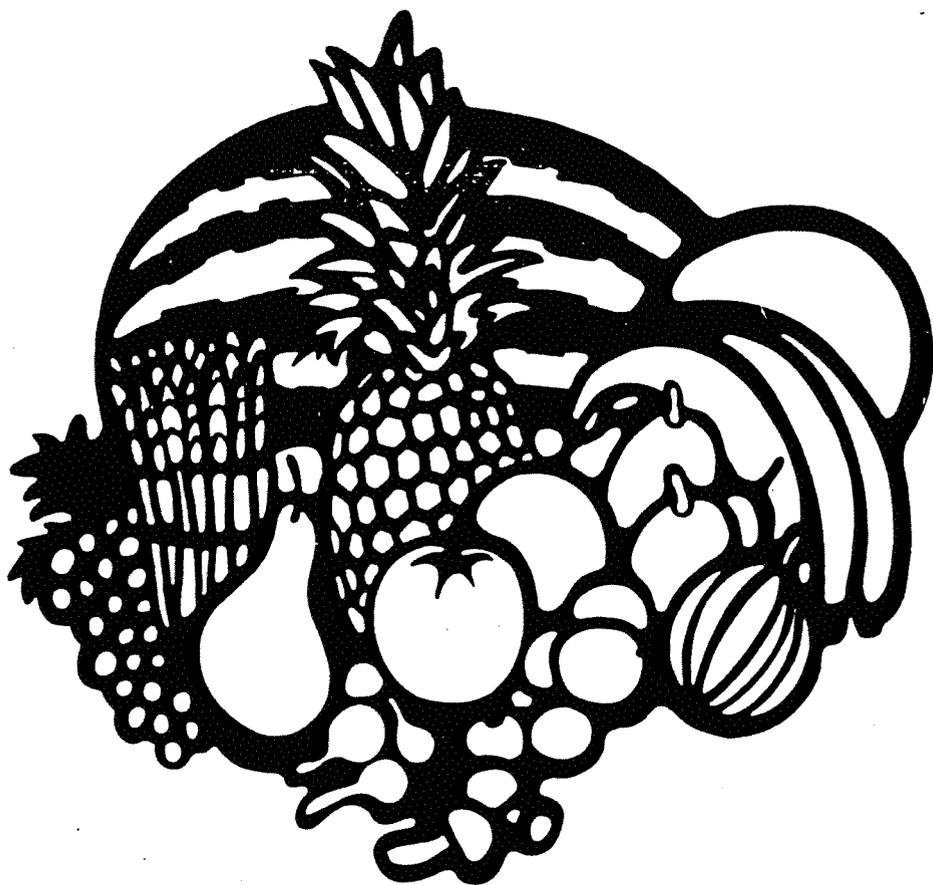


United States
Department of
Agriculture

Agricultural
Marketing
Service

United States Standards for Grades of Globe Artichokes

Effective
May 15, 1969



**UNITED STATES STANDARDS FOR GRADES OF
GLOBE ARTICHOKE¹**

SOURCE: 34 FR 6180, May 5, 1969, unless
otherwise noted. Redesignated at 42 FR
32514, June 27, 1977 and at 46 FR 63203,
Dec. 31, 1981.

Effective May 15, 1969

Sec.	GRADES
51.3785	U.S. No. 1.
51.3786	U.S. No. 2.

51.3787	TOLERANCES
	Tolerances.

51.3788	APPLICATION OF TOLERANCES
	Application of tolerances.

51.3789	DEFINITIONS
	Properly trimmed.
51.3790	Fairly well formed.
51.3791	Fairly compact.
51.3792	Overdeveloped.
51.3793	Damage.
51.3794	Fairly uniform in size.
51.3795	Serious damage.

51.3796	METRIC CONVERSION TABLE
	Metric conversion table.

AUTHORITY: The provisions of this subpart issued under secs. 203, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GRADES

§ 51.3785 U.S. No. 1.

"U.S. No. 1" consists of artichokes which meet the following requirements:

- (a) Basic requirements:
 - (1) Properly trimmed;
 - (2) Fairly well formed;
 - (3) Not overdeveloped; and,
 - (4) Fairly compact.
- (b) Free from decay.
- (c) Not damaged by any other cause.
- (d) Fairly uniform in size.
- (e) For tolerances see § 51.3787.

§ 51.3786 U.S. No. 2.

"U.S. No. 2" consists of artichokes which meet the following requirements:

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

- (a) Basic requirements:
 - (1) Not overdeveloped; and,
 - (2) Not badly spread.
- (b) Free from decay.
- (c) Not seriously damaged by any other cause.
- (d) Fairly uniform in size.
- (e) For tolerances see § 51.3787.

TOLERANCES

§ 51.3787 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by count, are provided as specified:

- (a) 10 percent for artichokes in any lot which fail to meet the requirements for the grade, including not more than 2 percent for artichokes affected by decay.

APPLICATION OF TOLERANCES

§ 51.3788 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:

- (a) For a tolerance of 10 percent or more, individual packages shall have not more than 1½ times the tolerance specified, and for a tolerance of less than 10 percent individual packages shall have not more than double the tolerance specified: *Provided*, That at least one defective specimen may be allowed in any package: *And provided further*, That the averages for the entire lot are within the tolerances specified for the grade.

DEFINITIONS

§ 51.3789 Properly trimmed.

"Properly trimmed" means that the stem is smoothly cut and not excessively long.

§ 51.3790 Fairly well formed.

"Fairly well formed" means that the artichoke is not excessively long and pointed.

§ 51.3791 Fairly compact.

"Fairly compact" means that the artichoke is reasonably firm and not more than slightly spread.

§ 51.3792 Overdeveloped.

"Overdeveloped" means that the artichoke has a brownish color; that the scales are tough, leathery, and stringy; and, that the flower in the center of the bud has turned dark pink or purple and become fuzzy.

§ 51.3793 Damage.

"Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the artichoke.

§ 51.3794 Fairly uniform in size.

"Fairly uniform in size" means that not more than 10 percent, by count, of the artichokes in any container may vary more than one-half inch in diameter.

(a) "Diameter" means the greatest dimension measured at right angles to a line from the stem to the opposite end of the artichoke.

§ 51.3795 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the artichoke.

METRIC CONVERSION TABLE

§ 51.3796 Metric conversion table.

	Inches	Millimeters (mm)
¼ equals.....		3.2
½ equals.....		6.4
¾ equals.....		12.7
1 equals.....		19.1
1 ¼ equals.....		25.4
1 ½ equals.....		38.1
2 equals.....		50.8
3 equals.....		76.2
4 equals.....		101.6
5 equals.....		127.0
6 equals.....		152.4
7 equals.....		177.8
8 equals.....		203.2
9 equals.....		228.6

[P.R. Doc. 69-4048; Filed, Apr. 4, 1969
8:50 a.m.]



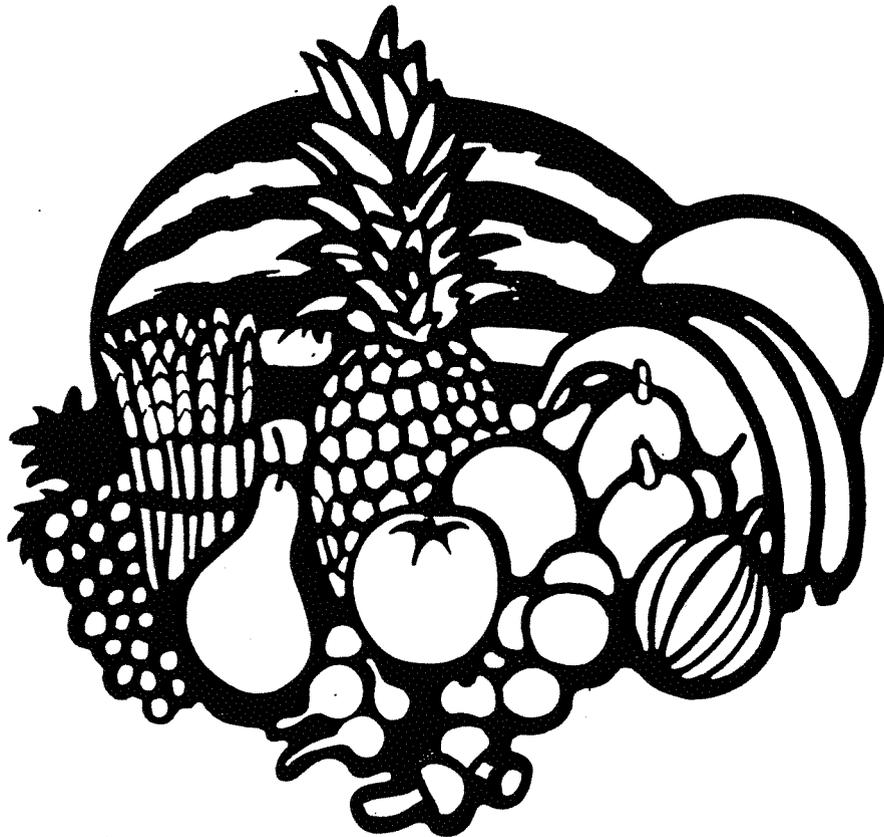
United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, D.C.

United States Standards for Grades of Fresh Asparagus

Effective April 1, 1966



UNITED STATES STANDARDS FOR GRADES OF FRESH ASPARAGUS¹

SOURCE: 31 FR 3185, Feb. 26, 1966, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective April 1, 1966

Table with columns: Sec., GRADES, UNCLASSIFIED, APPLICATION OF TOLERANCES, DIAMETER CLASSIFICATION, AMOUNT OF GREEN COLOR, STALK LENGTH, DEFINITIONS. Rows include U.S. No. 1, U.S. No. 2, and various tolerance and classification details.

METRIC CONVERSION TABLE
51.3734 Metric conversion table.

AUTHORITY: Secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624, unless otherwise noted.

GRADES
51.3720 U.S. No. 1.
"U.S. No. 1" consists of stalks of asparagus which are fresh, well trimmed, and fairly straight; which are free from decay and free from damage caused by spreading or broken tips, dirt, disease, insects, or other means.
(a) Size. Unless otherwise specified, the diameter of each stalk is not less than one-half inch.

1 Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act or with applicable State and local laws or regulations.

(d) Color. Unless otherwise specified, not less than two-thirds of the stalk length is of a green color.

(c) Tolerances. In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) For defects. 10 percent for stalks in any lot which fail to meet the requirements of this grade other than for trimming, including therein not more than 5 percent for defects causing serious damage: Provided, That not more than one-fifth of this latter amount, or 1 percent, shall be allowed for stalks affected by decay. In addition, not more than 10 percent of the stalks in any lot may fail to meet the trimming requirement.

(2) For off-size. 10 percent for stalks in any lot which fail to meet the specified diameter or length requirements.

51.3721 U.S. No. 2.
"U.S. No. 2" consists of stalks of asparagus which are fresh, fairly well trimmed, and not badly misshapen; which are free from decay and free from serious damage caused by spreading or broken tips, dirt, disease, insects or other means.

(a) Size. Unless otherwise specified, the diameter of each stalk is not less than five-sixteenths inch.

(b) Color. Unless otherwise specified, not less than one-half of the stalk length is of a green color.

(c) Tolerances. In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) For defects. 10 percent for stalks in any lot which fail to meet the requirements of this grade other than for trimming, including therein not more than one-tenth of this tolerance, or 1 percent, shall be allowed for stalks affected by decay. In addition,

in any lot may fail to meet the trimming requirement.
in the grade it may be described as 1/4 stalk length green, 3/4 stalk length green, etc., in accordance with the facts.

(2) For off-size. 10 percent for stalks in any lot which fail to meet the specified diameter or length requirements.

UNCLASSIFIED.

51.3722 Unclassified.

"Unclassified" consists of stalks of asparagus which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

51.3723 Application of tolerances.

The contents of individual packages in the lot are subject to the following limitations:

(a) Packages which contain more than 50 stalks shall have not more than 1 1/2 times a specified tolerance of 10 percent or more, or not more than double a specified tolerance of less than 10 percent: Provided, That the averages for the entire lot are within the tolerances specified for the grade.

(b) Packages which contain 50 stalks or less shall have not more than 4 times the tolerance specified, except that at least 2 defective and 2 off-size stalks may be permitted in any package: Provided, That not more than 1 stalk which is affected by decay may be permitted in any package: And provided further, That the averages for the entire lot are within the tolerances specified for the grade.

DIAMETER CLASSIFICATION

51.3724 Diameter classification.

The following terms are provided for describing the diameters of any lot:

Table with columns: Diameter Category, Description. Rows include Very Small, Small, Medium, Large, Very Large with their respective inch measurements.

AMOUNT OF GREEN COLOR

51.3725 Amount of green color.

When the asparagus in a lot has less than 10 percent of the stalks which are green, the lot is classified as "unclassified".

STALK LENGTH

51.3726 Stalk length.

There is no minimum stalk length specified in the grades but the minimum stalk length may be stated in terms of whole inches or whole and half inches in connection with the grade designation as "U.S. No. 1, 8 1/2-inch minimum", "U.S. No. 1 Large, 7-inch minimum", "U.S. No. 1 Large, 10 1/2-inch minimum", etc., in accordance with the facts.

DEFINITIONS

51.3727 Fresh.

"Fresh" means that the stalk is not limp or flabby.

51.3728 Well trimmed.

"Well trimmed" means that at least two-thirds of the butt of the stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not stringy or frayed.

51.3729 Damage.

"Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the stalk.

51.3730 Diameter.

"Diameter" means the greatest thickness of the stalk measured at a point approximately 1 inch from the butt.

51.3731 Fairly well trimmed.

"Fairly well trimmed" means that at least one-third of the butt of the stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not badly stringy or frayed.

51.3732 Badly misshapen.

"Badly misshapen" means that the stalk is so badly flattened, crooked or otherwise so badly deformed that its appearance is seriously affected.

H-4

§ 51.3733 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the stalk.

METRIC CONVERSION TABLE

§ 51.3734 Metric conversion table.

Inches	Millimeters (mm)
1/8 equals	3.2
1/4 equals	6.4
3/8 equals	7.9
1/2 equals	9.5
5/8 equals	12.7
3/4 equals	15.9
7/8 equals	17.5
1 equals	19.1
1 1/8 equals	22.2
1 1/4 equals	25.4
1 3/8 equals	31.8
1 1/2 equals	38.1
1 5/8 equals	44.5
2 equals	50.8
2 1/8 equals	56.2
2 1/4 equals	61.6
2 3/8 equals	67.0
2 1/2 equals	72.4
2 5/8 equals	77.8
3 equals	83.2
3 1/8 equals	88.7
3 1/4 equals	94.1

The U.S. Standards for Grades of Fresh Asparagus contained in this subpart shall become effective April 1, 1966, and will thereupon supersede the U.S. Standards for Asparagus (Fresh) which have been in effect since February 15, 1941.

Dated: February 21, 1966.

G. R. GRANGE,
Deputy Administrator, Market-
ing Services, Consumer and
Marketing Service.

[F.R. Doc. 66-2024: Filed, Feb. 25, 1966;
8:45 a.m.]



United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, DC

United States Standards for Grades of Blueberries

Effective
June 1, 1966



**UNITED STATES STANDARDS FOR GRADES OF
BLUEBERRIES ^{1/}**

SOURCE: 31 FR 6189, Apr. 22, 1966, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977, and at 46 FR 63203, Dec. 31, 1981.

Effective June 1, 1966

	GENERAL		GRADE
Sec.			
51.3475	General.		§ 51.3476 U.S. No. 1.
	GRADE		
51.3476	U.S. No. 1.		"U.S. No. 1" consists of blueberries of similar varietal characteristics which are clean, well colored, not overripe, wet, or affected by decay: <i>Provided</i> , That defective berries are within the allowances specified in § 51.3479. Count shall not exceed 250 berries per 2 gill cup. (See § 51.3478.)
	UNCLASSIFIED		
51.3477	Unclassified.		§ 51.3477 Unclassified.
	SIZE CLASSIFICATIONS		
51.3478	Size classifications.		"Unclassified" consists of blueberries which have not been classified in accordance with the foregoing grade. The term "Unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no grade has been applied to the lot.
	TOLERANCES		
51.3479	Tolerances.		§ 51.3478 Size classifications.
	DEFINITIONS		
51.3480	Similar varietal characteristics.		The following size classifications may be used in specifying size of blueberries in connection with the grade:
51.3481	Clean.		(a) <i>Extra large</i> . Less than 90 berries per standard 2 gill cup;
51.3482	Well colored.		(b) <i>Large</i> . 90 to 129 berries per standard 2 gill cup;
51.3483	Overripe.		(c) <i>Medium</i> . 130 to 189 berries per standard 2 gill cup; and,
51.3484	Wet.		(d) <i>Small</i> . 190 to 250 berries per standard 2 gill cup.
51.3485	Injury.		
51.3486	Damage.		
51.3487	Serious damage.		

AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GENERAL

§ 51.3475 General.

These standards apply only to selected and hybrid varieties of the highbush blueberry (*Vaccinium australe* Small and *Vaccinium corymbosum* L.) produced under cultivation, but not to other species of the genus *Vaccinium* nor to the true huckleberries of the genus *Gaylussacia*.

TOLERANCES

§ 51.3479 Tolerances.

(a) *For defects*. In order to allow for variations incident to proper grading and handling, based on sample inspection, the number of defective specimens in the individual sample, and the number of defective specimens in the lot, shall be within the limitations specified in Tables I and II.

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

TABLE I—SHIPPING POINT¹

No. of samples ²	Total berries	Total defects (including serious damage, damage and injury)	Damage (including serious damage)	Serious damage (including decay)
6.....	600	86	25	3
8.....	800	73	32	4
10.....	1,000	90	39	6
12.....	1,200	106	46	7
15.....	1,500	130	56	8
18.....	1,800	154	66	
Total defective berries permitted in individual 100 berry sample.....		13	7	1

TABLE II—EN ROUTE OR AT DESTINATION

No. of samples ²	Total berries	Total defects (including decay, serious damage, damage and injury)	Damage (including serious damage and decay)	Serious damage (not including decay)	Decay
6.....	600	89	28	3	3
8.....	800	76	35	4	3
10.....	1,000	94	43	5	4
12.....	1,200	110	50	6	4
15.....	1,500	135	61	7	5
18.....	1,800	160	72	8	6
Total defective berries permitted in individual 100 berry sample.....		13	7	1	2

¹ Shipping point, as used in these standards, means the point of origin of the shipment in the producing area or at port of loading for ship stores or overseas shipment, or, in the case of shipments from outside the continental United States, the port of entry into the United States.

² The number of 100 berry samples examined will depend upon the number of containers in the lot but it must be one of the sample numbers indicated in the table.

(b) *Off-size*.—In order to allow for variations incident to proper sizing not more than 10 percent of the samples in any lot or one sample, whichever is the greater number, may fail to meet the range in count specified for one of the size classifications in § 51.3478 or the maximum count specified in § 51.3476.

DEFINITIONS

§ 51.3480 Similar varietal characteristics.

"Similar varietal characteristics" means that the berries are similar in color and shape.

§ 51.3481 Clean.

"Clean" means that the individual berry is practically free from dirt, frass, or other foreign material.

§ 51.3482 Well colored.

"Well colored" means that more than one-half of the surface of the individual berry is blue, bluish-purple, purple, or bluish-black.

§ 51.3483 Overripe.

"Overripe" means that the individual berry is overmature, soft, and past commercial utility.

§ 51.3484 Wet.

"Wet" means that the individual berry is wet from juice from crushed, leaking, or decayed berries.

§ 51.3485 Injury.

"Injury" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects which more than slightly affects the appearance, or the edible or marketing quality of the blueberries. The following specific defects shall be considered as injury:

- Berries which are not clean;
- Clusters when there are three or more joined capstems with at least one berry attached;
- Berries with stems attached;
- Russeting when readily noticeable;
- Scales when readily noticeable;
- Scars when readily noticeable; and,
- Berries which are not well colored.

§ 51.3486 Damage.

"Damage" means any specific defect defined in this section, or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially affects the appearance, or the edible or marketing quality of the blueberries. The following specific defects shall be considered as damage:

- Broke: skins when caused by stem cracks, bird tears, water splits, punctures, or mechanical means;
- Green berries when one-half or more of the berry is green;
- Wet berries;
- Shriveled when the skin is wrinkled and the shape of the berry is distorted; and,
- Overripe berries.

§ 51.3187 Serious damage.

"Serious damage" means any specific defect defined in this section, or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously affects the appearance, or the edible or marketing quality of the blueberries. The following specific defects shall be considered as serious damage:

- (a) Decay;
- (b) Moldy berries;
- (c) Mushy berries;
- (d) Mummified berries; and,
- (e) Insects when any insect larva is present or there is other visible evidence of the presence of insects.

Dated: April 18, 1966.

G. R. GRANGE,
Deputy Administrator,
Marketing Services.

[F.R. Doc. 66-4411; Filed, Apr. 21, 1966;
8:48 a.m.]



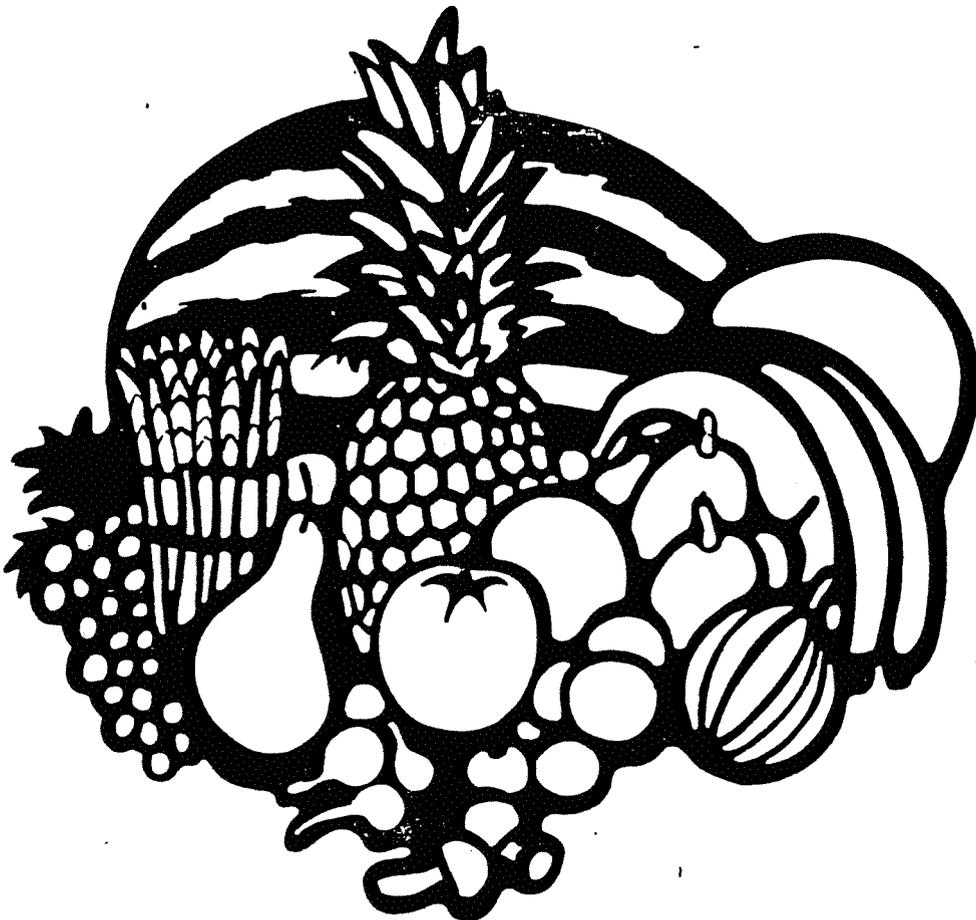
United States
Department of
Agriculture

Agricultural
Marketing Service

Washington, D.C.

Revised Effective
June 30, 1968

United States Standards for Grades of Cantaloups



UNITED STATES STANDARDS FOR GRADES OF
CANTALOUPS¹

SOURCE: 26 FR 2217, Mar. 16, 1961, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective April 15, 1961
As Amended June 30, 1968 (33 F.R. 7619)

Sec.	GRADES
51.475	U.S. Fancy.
51.476	U.S. No. 1.
51.477	U.S. Commercial.
51.478	U.S. No. 2.
	UNCLASSIFIED
51.479	Unclassified.
	APPLICATION OF TOLERANCES
51.480	Application of tolerances.
	DEFINITIONS
51.481	Very good internal quality.
51.482	Uniform appearance.
51.483	One type.
51.484	Mature.
51.485	Good internal quality.
51.486	Soft.
51.487	Wilted.
51.488	Well formed.
51.489	Well netted.
51.490	Decay.
51.491	Wet slip.
51.492	Sunscald.
51.493	Damage.
51.494	Serious damage.
51.494a	Permanent defects.
51.494b	Fairly well netted.
51.494c	Condition defects.

AUTHORITY: §§ 51.475 to 51.494c issued under secs. 202-208, 60 Stat. 1087, as amended; 7 U.S.C. 1621-1627.

GRADES

§ 51.475 U.S. Fancy.

"U.S. Fancy" consists of cantaloups which meet the requirements of U.S. No. 1 grade except that the cantaloups have very good internal quality and have uniform appearance.

(a) *Tolerances.* In order to allow for variations incident to proper grading

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

and handling the following tolerances, by count, shall be permitted, except that these tolerances shall not apply to the requirements relating to internal quality and uniformity of appearance:

(1) *At shipping point.*² 8 percent for cantaloups in any lot which fail to meet the requirements of this grade: *Provided*, That included in this amount not more than 4 percent shall be allowed for defects causing serious damage, including in this latter amount not more than one-half of 1 percent for cantaloups which are affected by decay or mold.

(2) *En route or at destination.* 12 percent for cantaloups in any lot which fail to meet the requirements of this grade: *Provided*, That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) 8 percent for cantaloups which fail to meet the requirements of this grade because of permanent defects; or,

(ii) 6 percent for cantaloups which are seriously damaged, including therein not more than 4 percent for cantaloups which are seriously damaged by permanent defects and not more than 2 percent for cantaloups which are affected by decay. (See § 51.480.)

§ 51.476 U.S. No. 1.

"U.S. No. 1" consists of cantaloups of one type which are mature and have good internal quality but are not overripe or soft or wilted, which are well formed, well netted, and free from decay, wet slip and sunscald, and free from

² Shipping point, as used in these standards, means the point of origin of the shipment in the producing area or at port of loading for ship stores or overseas shipment, or, in the case of shipments from outside the continental United States, the port of entry into the United States.

damage caused by liquid in the seed cavity, sunburn, hail, dirt, surface mold or other disease, aphids or other insects, scars, cracks, sunken areas, ground spot, bruises, or mechanical or other means.

(a) *Tolerances.* In order to allow for variations incident to proper grading and handling the following tolerances, by count, shall be permitted, except that these tolerances shall not apply to the requirement relating to internal quality.

(1) *At shipping point.*³ 8 percent for cantaloups in any lot which fail to meet the requirements of this grade: *Provided*, That included in this amount not more than 4 percent shall be allowed for defects causing serious damage, including in this latter amount not more than one-half of 1 percent for cantaloups which are affected by decay or mold.

(2) *En route or at destination.* 12 percent for cantaloups in any lot which fail to meet the requirements of this grade: *Provided*, That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) 8 percent for cantaloups which fail to meet the requirements of this grade because of permanent defects; or,

(ii) 6 percent for cantaloups which are seriously damaged, including therein not more than 4 percent for cantaloups which are seriously damaged by permanent defects and not more than 2 percent for cantaloups which are affected by decay. (See § 51.480.)

§ 51.477 U.S. Commercial.

"U.S. Commercial" consists of cantaloups of one type which are mature but not overripe or soft or wilted, which are well formed and fairly well netted, and free from decay, wet slip and sunscald, and free from damage caused by liquid in the seed cavity, sunburn, hail, dirt, surface mold or other disease, aphids or other insects, scars, cracks, sunken areas, ground spot, bruises, or mechanical or other means.

(a) *Tolerances.* In order to allow for variations incident to proper grading and handling the following tolerances, by count, shall be permitted:

(1) *At shipping point.*³ 16 percent for cantaloups in any lot which fail to meet the requirements of this grade: *Provided*,

That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) 12 percent for cantaloups which fail to meet the requirements of this grade because of condition defects;

(ii) 4 percent for cantaloups which are seriously damaged, including therein not more than one-half of 1 percent for cantaloups affected by decay or mold.

(2) *En route or at destination.* 24 percent for cantaloups in any lot which fail to meet the requirements of this grade: *Provided*, That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) 16 percent for cantaloups which fail to meet the requirements of this grade because of permanent defects;

(ii) 12 percent for cantaloups which fail to meet the requirements of this grade because of condition defects; or,

(iii) 8 percent for cantaloups which are seriously damaged, including therein not more than 4 percent for cantaloups which are seriously damaged by permanent defects and not more than 2 percent for cantaloups which are affected by decay. (See § 51.480.)

§ 51.478 U.S. No. 2.

"U.S. No. 2" consists of cantaloups of one type which are mature but not overripe or soft or wilted, which are fairly well formed and fairly well netted, which are free from decay, wet slip and sunscald, and free from serious damage caused by liquid in the seed cavity, sunburn, hail, dirt, surface mold or other disease, aphids or other insects, scars, cracks, sunken areas, bruises, or mechanical or other means.

(a) *Tolerances.* In order to allow for variations incident to proper grading and handling the following tolerances, by count, shall be permitted:

(1) *At shipping point.*³ 8 percent for cantaloups in any lot which fail to meet the requirements of this grade including therein not more than one-half of 1 percent for cantaloups which are affected by decay or mold.

(2) *En route or at destination.* 12 percent for cantaloups in any lot which fail to meet the requirements of this grade:

Provided, That included in this amount not more than the following percentages shall be allowed for the defects listed:

(1) 8 percent for cantaloups which fail to meet the requirements of this grade because of defects of a permanent nature; or,

(11) 2 percent for cantaloups which are affected by decay. (See § 51.480.)

UNCLASSIFIED

§ 51.479 Unclassified.

"Unclassified" consists of cantaloups which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

§ 51.480 Application of tolerances.

The contents of individual packages are subject to the following limitation: *Provided*, That the averages for the entire lot are within the tolerances specified for the grade:

(a) A package may contain not more than double any specified tolerance except that at least two defective specimens may be permitted in any package.

DEFINITIONS

§ 51.481 Very good internal quality.

"Very good internal quality" means that the combined juice from the edible portion of a sample of cantaloups selected at random contains not less than 11 percent soluble solids as determined by an approved hand refractometer.

§ 51.482 Uniform in appearance.

"Uniform in appearance" means that not more than one-tenth of the packages in any lot contain cantaloups which show sufficient variation in shape, size, ground color or netting to materially detract from the appearance of the contents of the individual packages, or which are not packed according to the approved and recognized methods for the package.

§ 51.483 One type.

"One type" means that the cantaloups in any container are similar in color of

flesh and are not decidedly different in shape, character of netting and prominence of ribbing.

§ 51.484 Mature.

"Mature" means that the cantaloup has reached the stage of maturity which will insure the proper completion of the normal ripening process.

§ 51.485 Good internal quality.

"Good internal quality" means that the combined juice from the edible portion of a sample of cantaloups selected at random contains not less than 9 percent soluble solids as determined by an approved hand refractometer.

§ 51.486 Soft.

"Soft" means that the cantaloup yields readily to slight pressure.

§ 51.487 Wilted.

"Wilted" means that the cantaloup lacks turgidity and is somewhat flabby, spongy and pliable under moderate pressure.

§ 51.488 Well formed.

"Well formed" means that the cantaloup has the normal shape characteristic of the variety.

§ 51.489 Well netted.

"Well netted" means that to an extent characteristic of the variety the cantaloup is well covered with fully developed, well raised netting, some portion of which is well rounded with practically no crease.

§ 51.490 Decay.

"Decay" means breakdown, disintegration or fermentation of the flesh or rind of the cantaloup caused by bacteria or fungi.

§ 51.491 Wet slip.

"Wet slip" means a condition present at time of packing in which the stem scar is abnormally large, excessively wet and slippery, yields to slight pressure, and is frequently accompanied by fresh radial growth cracks at the edge of the stem scar.

§ 51.492 Sunscald.

"Sunscald" means discolored or bleached, sunken areas of the surface

having tough epidermis with underlying flesh leathery and usually off-color.

§ 51.493 Damage.

"Damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance, or the edible or shipping quality of the cantaloup. The following specific defects shall be considered as damage:

(a) Liquid in the seed cavity under the following circumstances:

(1) At shipping point when more than a slight amount of liquid is present in the seed cavity; or,

(2) En route or at destination when an objectionably large amount of liquid is present in the seed cavity, or when the flesh of the cavity wall is mushy or noticeably discolored;

(b) Sunburn when the color of the flesh is materially changed; when the rind is hard, tough, thin, or definitely flattened; when distinct flattening of the netting or dark yellow surface discoloration affects an aggregate area exceeding 20 percent of the surface of the cantaloup; or when brown, gray, purple or dark green surface discoloration detracts from the appearance of the cantaloup to a greater extent than the area of dark yellow discoloration permitted;

(c) Hail when the injury is unhealed or deep;

(d) Surface mold under the following circumstances:

(1) At shipping point when any surface mold is visible; or,

(2) En route or at destination when the color, character, or location of the mold materially detracts from the appearance or marketing quality of the cantaloup;

(e) Aphs when aphs honeydew is more than slightly sticky, or when resulting discoloration more than slightly detracts from the appearance of the cantaloup;

(f) Scars when healed, shallow, smooth and light colored and the aggregate area affected exceeds 5 percent of the surface of the cantaloup; or when deep, rough or dark colored and detracting from the appearance to a greater extent than the area of healed, shallow, smooth and light colored scars permitted. Smooth scarring at the blossom

end and coalesced netting should not be considered in determining damage caused by scarring unless materially detracting from the appearance of the cantaloup;

(g) Cracks when deep or not dry. Slight, dry cracks at the ends or in the sutures of the cantaloup shall not be considered damage;

(h) Ground spot when the rind of the affected area is thin or weak, or when the size or color of the affected area or the character of netting on the area in relation to the remainder of the surface of the cantaloup materially detracts from the appearance of the cantaloup;

(i) Bruises when the surface of the cantaloup is definitely flattened or indented, or when the underlying flesh is noticeably discolored; and,

(j) Mechanical means when cuts or gouges are deep or when any skin break is unhealed.

§ 51.494 Serious damage.

"Serious damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously detracts from the appearance, or the edible or shipping quality of the cantaloup. The following specific defects shall be considered as serious damage:

(a) Liquid in the seed cavity under the following circumstances:

(1) At shipping point when a large amount of liquid is present in the seed cavity or the flesh of the cavity wall is noticeably soft or discolored or when any fermentation is present; or,

(2) En route or at destination when there is any fermentation of the liquid in the seed cavity, or when the flesh of the cavity wall shows fermentation or is badly discolored;

(b) Sunburn when the flesh is seriously discolored, when causing cracking of the rind, or when causing flattening of the rind which seriously detracts from the appearance of the cantaloup;

(c) Hail when the injury is unhealed;

(d) Surface mold under the following circumstances:

(1) At shipping point when any surface mold is visible; or,

(2) En route or at destination when the color, character, or location of the

mold seriously detracts from the appearance or marketing quality of the cantaloup;

(e) Cracks when fresh and deep;

(f) Bruises when the surface of the cantaloup is seriously flattened or indented or when a material portion of the underlying flesh is broken down; and,

(g) Mechanical means when fresh cuts or gouges extend into the edible portion of the cantaloup.

§ 51.494a Permanent defects.

"Permanent defects" means defects which are not subject to change during shipping or storage; including, but not limited to factors of shape, netting, scarring, sunscald, sunburn and injury caused by hail or insects, and mechanical injury which is so located as to indicate that it occurred prior to shipment.

§ 51.494b Fairly well netted.

"Fairly well netted" means that to an extent characteristic of the variety the cantaloup is fairly well covered with fairly good netting.

§ 51.494c Condition defects.

"Condition defects" means defects which may develop or change during shipment or storage; including, but not limited to decayed or soft cantaloups and such factors as liquid in the seed cavity, surface mold, sunken areas, fresh cracks, and bruising which is so located as to indicate that it occurred after packing.

Dated: March 10, 1961.

ROY W. LENNARTSON,
Deputy Administrator,
Marketing Services.

[F.R. Doc. 61-2272; Filed, Mar. 15, 1961;
8:46 a.m.]



United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, D.C.

UNITED STATES STANDARDS

FOR GRADES OF

ENDIVE, ESCAROLE OR CHICORY

EFFECTIVE OCTOBER 1, 1964



UNITED STATES STANDARDS FOR GRADES OF
ENDIVE, ESCAROLE OR CHICORY¹

SOURCE: 29 FR 11743, Aug. 18, 1964, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977, and at 46 FR 63203, Dec. 31, 1981.

Effective October 1, 1964

GENERAL	
Sec.	
51.3535	General.
GRADE	
51.3536	U.S. No. 1.
UNCLASSIFIED	
51.3537	Unclassified.
TOLERANCES	
51.3538	Tolerances.
APPLICATION OF TOLERANCES	
51.3539	Application of Tolerances.
DEFINITIONS	
51.3540	Similar varietal characteristics.
51.3541	Fresh.
51.3542	Well trimmed.
51.3543	Fairly well blanched.
51.3544	Damage.
51.3545	Serious damage.

AUTHORITY: The provisions in this subpart issued under secs. 203, 205, 60 Stat. 1087 as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GENERAL

§ 51.3535 General.

These standards do not apply to French Endive or Chicory marketed for its roots.

GRADE

§ 51.3536 U.S. No. 1.

"U.S. No. 1" consists of plants of endive, escarole or chicory of similar varietal characteristics which are fresh, well trimmed and fairly well blanched, and which are free from decay and free from damage caused by seedstems, broken, bruised, spotted, or discolored leaves, wilting, dirt, disease, insects or other means.

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

DEFINITIONS

§ 51.3540 Similar varietal characteristics.

"Similar varietal characteristics" means that the plants in any package are of the same type such as curly-leaved endive or broad-leaved escarole.

§ 51.3541 Fresh.

"Fresh" means that the plant as a whole has normal succulence and the outermost leaves are not more than slightly wilted.

§ 51.3542 Well trimmed.

"Well trimmed" means that the roots are neatly cut near the point of attachment of the outer leaf stems.

§ 51.3543 Fairly well blanched.

"Fairly well blanched" means that the plant has a yellowish-white to white heart formation with a spread averaging not less than four inches in diameter when the head is opened as far as possible without breaking the leaves or leaf stems.

§ 51.3544 Damage.

"Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or shipping quality of the individual plant or the lot as a whole.

§ 51.3545 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance or the edible or shipping quality of the individual plant or the lot as a whole.

Dated: August 13, 1964.

G. R. GRANGE,
Deputy Administrator,
Marketing Services.

[F.R. Doc. 64-8319; Filed, Aug. 17, 1964;
8:48 a.m.]

UNCLASSIFIED

§ 51.3537 Unclassified.

"Unclassified" consists of plants of endive, escarole or chicory which have not been classified in accordance with the foregoing grade. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

TOLERANCES

§ 51.3538 Tolerances.

In order to allow for variations incident to proper grading and handling, the following tolerances, by count, shall be permitted in any lot:

(a) 10 percent for plants of endive, escarole or chicory which fail to meet the requirements of the grade: *Provided*, That included in this amount not more than 5 percent shall be allowed for defects causing serious damage, including in this latter amount not more than 2 percent for plants affected by decay.

APPLICATION OF TOLERANCES

§ 51.3539 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations: *Provided*, That the averages for the entire lot are within the tolerances specified for the grade:

(a) For a tolerance of 10 percent individual packages may contain not more than one and one-half times the specified tolerance, and for a tolerance of less than 10 percent individual packages may contain not more than double the specified tolerance, except that at least one defective plant may be permitted in any package.



United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, D.C.

United States Standards for Grades of Common Green Onions

Effective June 20, 1947



UNITED STATES STANDARDS FOR GRADES OF
COMMON GREEN ONIONS ^{1/2}

SOURCE: 18 FR 7109, Nov. 11, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective June 20, 1947

Sec.	GRADES
51.1055	U. S. No. 1.
51.1056	U. S. No. 2.
	UNCLASSIFIED
51.1057	Unclassified.
	SIZE
51.1058	Size.
	APPLICATION OF TOLERANCES
51.1059	Application of tolerances.
	DEFINITIONS
51.1060	Fairly well formed.
51.1061	Fairly clean.
51.1062	Damage.
51.1063	Well trimmed.
51.1064	Fresh.
51.1065	Good green color.
51.1066	Diameter.
51.1067	Not badly misshapen.
51.1068	Fairly young and tender.
51.1069	Serious damage.
51.1070	Fairly well trimmed.
51.1071	Fairly good green color.

AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GRADES

§ 51.1055 *U. S. No. 1.* U. S. No. 1 shall consist of green onions which are fairly well-formed, firm, young and tender, fairly clean, free from decay, and from damage caused by seedstems, roots, foreign material, disease, insects, mechanical or other means. The bulbs shall be well trimmed. The tops shall be fresh,

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

² These standards apply only to commonly cultivated green onions (*Allium cepa*) and not to leeks (*Allium porrum*), Welch or Japanese multiplier onions (*Allium fistulosum*), and shallots (*Allium ascalonicum*).

of good green color, free from damage caused by broken or bruised leaves, or by clipping. When all the tops of the onions have been evenly clipped back in accordance with good commercial practice, they shall be specified as "Clipped Tops" in connection with the grade.

(a) *Over-all length.* Unless otherwise specified, the over-all length (roots excepted) of the onions shall be not more than 24 inches nor less than 8 inches and the onions shall be not less than one-fourth of an inch or more than one inch in diameter.

(b) *Tolerance for defects.* In order to allow for variations, other than size, incident to proper grading and handling, not more than a total of 10 percent, by count, of the onions in any lot may fail to meet the requirements of this grade, but not more than 5 percent shall be allowed for defects causing serious damage, including not more than 2 percent for onions affected by decay.

(c) *Tolerance for size.* Not more than a total of 10 percent, by count, of the onions in any lot may fail to meet the requirements as to the specified length, minimum diameter or maximum diameter, but not more than 5 percent shall be allowed for any one of the requirements for size.

§ 51.1056 *U. S. No. 2.* U. S. No. 2 shall consist of green onions which are not badly misshapen, and which are fairly firm, fairly young and tender, fairly clean, free from decay and from serious damage caused by seedstems, roots, foreign material, disease, insects, mechanical or other means. The bulbs shall be fairly well trimmed. The tops shall be fresh, of fairly good green color, and free from serious damage caused by broken or bruised leaves, or by clipping. When all the tops of the onions have been evenly clipped back in accordance

with good commercial practice, they shall be specified as "Clipped Tops" in connection with the grade.

(a) *Over-all length.* Unless otherwise specified, the over-all length (roots excepted) of the onions shall be not less than 8 inches and the onions shall be not less than one-fourth of an inch or more than one and one-half inches in diameter.

(b) *Tolerance for defects.* In order to allow for variations, other than size, incident to proper grading and handling, not more than a total of 10 percent, by count, of the onions in any lot may fail to meet the requirements of this grade, including not more than 2 percent for onions affected by decay.

(c) *Tolerance for size.* Not more than a total of 10 percent, by count, of the onions in any lot may fail to meet the requirements of the specified length, minimum or maximum diameter, but not more than 5 percent shall be allowed for any one of the requirements for size.

UNCLASSIFIED

§ 51.1057 *Unclassified.* Unclassified shall consist of onions which are not graded in conformity with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

SIZE

§ 51.1058 *Size.* The following terms and definitions are provided for describing the diameters of any lot:

"Small" means less than 1/2 inch.

"Medium" means 1/2 to 1 inch, inclusive.

"Large" means over 1 inch.

APPLICATION OF TOLERANCES

§ 51.1059 *Application of tolerances.* (a) The contents of individual containers in the lot, based on sample inspection, are subject to the following limitations, provided the averages for the entire lot are within the tolerances specified:

(1) When a tolerance is 10 percent or more, individual containers in any lot shall have not more than one and one-half times the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any container.

(2) When a tolerance is less than 1 percent, individual containers in any lot shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any container.

DEFINITIONS

§ 51.1060 *Fairly well formed.* "Fairly well formed" means that the onion is not more than slightly curved, angular, crooked, lopsided or otherwise slightly misshapen.

§ 51.1061 *Fairly clean.* "Fairly clean" means that the appearance of the onion is not materially injured by dirt.

§ 51.1062 *Damage.* "Damage" means any injury or defect which materially affects the appearance, or the edible or shipping quality.

(a) *Seedstems.* An onion with a seedstem shall be considered as damaged if the seedstem has been broken at a point other than at the top, or is coarse, fibrous, hollow or soft, or has separated naturally from the sheath or skin. Onions often show flower buds while the seedstem is still tender. Such onions are not objectionable if the flower buds have been removed, or if present, are not noticeably protruding; however, an onion with a seedstem which, after the flower bud has been removed, exceeds the length of the longest leaves of the plant, shall be considered as damaged.

(b) *Clipping.* The tops of onions are sometimes clipped or pinched back to remove discolored or otherwise injured leaves. An individual plant shall not be considered as damaged when not more than the tips of all the leaves have been clipped or pinched back; or when not more than half the leaves have been clipped or pinched back to a greater extent but not to the extent that the appearance is materially injured; or when the tops of all the onions have been evenly clipped back in accordance with good commercial practice and the designation "Clipped Tops" is specified in connection with the grade.

§ 51.1063 *Well trimmed.* "Well trimmed" means that the bulb is not broken above the point of root attachment and is practically free from dead, discolored or slick outer skins. Fresh, clean, loose skins which do not materially affect the appearance of the individual onion or the bunch are permitted.

§ 51.1064 *Fresh*. "Fresh" means that the tops are not withered or badly wilted.

§ 51.1065 *Good green color*. "Good green color" means that the tops have a normal green color characteristic of healthy plants. A slight discoloration of the extreme tips and slight scarring caused by thrips are not objectionable.

§ 51.1066 *Diameter*. "Diameter" means the greatest dimension of the onion taken at right angles to the longitudinal axis.

§ 51.1067 *Not badly misshapen*. "Not badly misshapen" means that the onion is not badly curved or crooked.

§ 51.1068 *Fairly young and tender*. "Fairly young and tender" means that the onion is not tough, stringy, or advanced to the stage where the neck is flabby.

§ 51.1069 *Serious damage*. "Serious damage" means any injury or defect which seriously affects the appearance, or the edible or shipping quality.

(a) Seedstems which are excessively coarse or fibrous shall be considered as serious damage.

(b) Badly broken or badly bruised tops shall be considered as serious damage.

(c) Clipping. The tops of onions are sometimes clipped or pinched back to remove discolored or otherwise injured leaves. An individual plant shall not be considered as seriously damaged when not more than the tips of all the leaves have been clipped or pinched back; or

when not more than half the leaves have been clipped or pinched back to a greater extent but not to the extent that the appearance is seriously injured; or when the tops of all the onions have been evenly clipped back in accordance with good commercial practice and the designation "Clipped Tops" is specified in connection with the grade.

§ 51.1070 *Fairly well trimmed*. "Fairly well trimmed" means that the bulb is not broken above the point of root attachment and is reasonably free from dead, discolored or slick outer skins. Fresh, fairly clean, loose skins which do not seriously affect the appearance of the individual onion or the bunch are permitted.

§ 51.1071 *Fairly good green color*. "Fairly good green color" means that the tops are pale or yellowish green or otherwise slightly discolored.



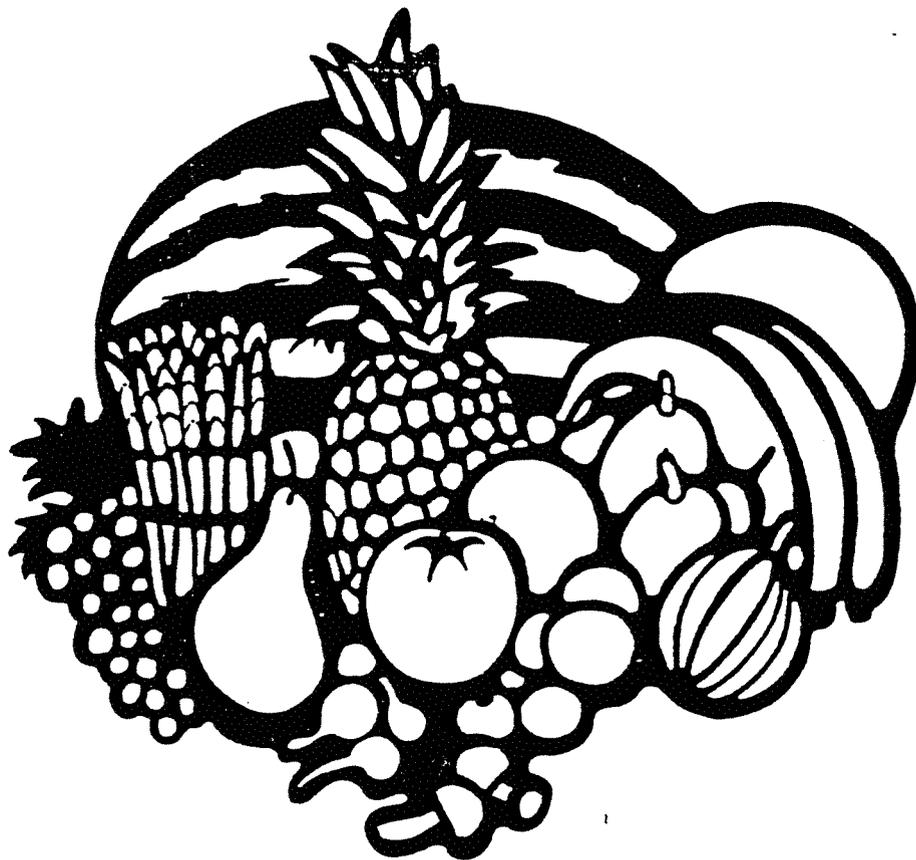
**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

Washington, D.C.

**Effective
April 1, 1967**

United States Standards for Grades of Honey Dew and Honey Ball Type Melons



**UNITED STATES STANDARDS FOR GRADES OF
HONEY DEW AND HONEY BALL TYPE MELONS 1/**

SOURCE: 32 FR 3213, Feb. 24, 1967, unless
otherwise noted. Redesignated at 42 FR
32514, June 27, 1977 and at 46 FR 63203,
Dec. 31, 1981.

Effective April 1, 1967

	GRADES
Sec.	
51.3740	U.S. No. 1.
51.3741	U.S. Commercial.
51.3742	U.S. No. 2.
	UNCLASSIFIED
51.3743	Unclassified.
	TOLERANCES
51.3744	Tolerances.
	APPLICATION OF TOLERANCES
51.3745	Application of tolerances.
	DEFINITIONS
51.3746	Mature.
51.3747	Well formed.
51.3748	Damage.
51.3749	Serious damage.

1-1-82
AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GRADES

§ 51.3740 U.S. No. 1.

"U.S. No. 1" consists of honey dew or honey ball type melons which are mature, firm, well formed, which are free from decay, and free from damage caused by dirt, aphid stain, rust spots, bruises, cracks, broken skin, sunscald, sunburn, hail, moisture, insects, disease, or other means. (See § 51.3744.)

§ 51.3741 U.S. Commercial.

"U.S. Commercial" consists of honey dew or honey ball type melons which meet the requirements of U.S. No. 1 grade except for the increased tolerances for defects. (See § 51.3744.)

§ 51.3742 U.S. No. 2.

"U.S. No. 2" consists of honey dew or honey ball type melons which are mature, firm, fairly well formed, free from decay and free from serious damage by any cause. (See § 51.3744.)

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

UNCLASSIFIED

§ 51.3743 Unclassified.

"Unclassified" consists of melons which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

TOLERANCES

§ 51.3744 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by count, are provided as specified:

(a) *U.S. No. 1.* 10 percent for melons in any lot which fail to meet the requirements of the grade: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for defects causing serious damage, including in this latter amount not more than 1 percent for melons affected by decay.

(b) *U.S. Commercial.* 20 percent for melons in any lot which fail to meet the requirements of this grade: *Provided*, That not more than one-fourth of this amount, or 5 percent, shall be allowed for defects causing serious damage, including in this latter amount not more than 1 percent for melons affected by decay.

(c) *U.S. No. 2.* 10 percent for melons in any lot which fail to meet the requirements of this grade including not more than 1 percent for melons affected by decay.

APPLICATION OF TOLERANCES

§ 51.3745 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:

(a) For a tolerance of 10 percent or more, individual packages shall have not

more than 1½ times the tolerance specified: *Provided*, That when the package contains 15 specimens or less, any individual package shall have not more than double the tolerance specified, except that at least one defective specimen may be permitted in any package: *And provided further*, That the averages for the entire lot are within the tolerances specified for the grade.

(b) For a tolerance of less than 10 percent, individual packages in any lot shall have not more than double the tolerance specified, except that at least one defective specimen may be permitted in any package: *Provided*, That the averages for the entire lot are within the tolerances specified for the grade.

DEFINITIONS

§ 51.3746 Mature.

"Mature" means that the melon has reached the stage of maturity which will insure the proper completion of the normal ripening process.

§ 51.3747 Well formed.

"Well formed" means that the melon has the normal shape characteristic of the variety.

§ 51.3748 Damage.

"Damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the melon.

(a) The following specific defects shall be considered as damage:

(1) Sunburn which causes the rind to become brownish in color, hard, tough, or thin; and,

(2) Bruising when the size or color of the affected area materially detracts from the appearance.

(b) The following blemishes shall not be considered as damage:

(1) Slight bruising caused by light pressure of the weight of other melons or from lidding of the crate;

(2) Yellow spots;

(3) Superficial hail spots;

(4) Slight surface scratches caused by picking or packing; or,

(5) Netting, either raised or occurring as very shallow cracks in the skin.

§ 51.3749 Serious damage.

"Serious damage" means any defect or any combination of defects which seriously detracts from the appearance, or the edible or marketing quality of the melon.

Dated: February 20, 1967.

G. R. GRANGE,
Deputy Administrator,
Marketing Services.

[F.R. Doc. 67-2104; Filed, Feb. 23, 1967;
8:49 a.m.]



United States
Department of
Agriculture
Agricultural
Marketing
Service
Washington, DC

United States Standards for Grades of Persian (Tahiti) Limes

Effective June 20, 1958



UNITED STATES STANDARDS FOR GRADES OF
PERSIAN (TAHITI) LIMES ^{1/}

SOURCE: 23 FR 4446, June 20, 1958, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective June 20, 1958

GRADES	
Sec.	
51.1000	U. S. No. 1.
51.1001	U. S. Combination.
51.1002	U. S. No. 2.
UNCLASSIFIED	
51.1003	Unclassified.
APPLICATION OF TOLERANCES	
51.1004	Application of tolerances.
STANDARD PACK	
51.1005	Standard pack.
DEFINITIONS	
51.1006	Firm.
51.1007	Fairly well formed.
51.1008	Fairly smooth texture.
51.1009	Stylar end breakdown.
51.1010	Damage.
51.1011	Good green color.
51.1012	Fairly firm.
51.1013	Badly deformed.
51.1014	Excessively rough texture.
51.1015	Serious damage.
51.1016	Diameter.

AUTHORITY: §§ 51.1000 to 51.1016 issued under sec. 205, 60 Stat. 1090, as amended; 7 U. S. C. 1624.

GRADES

§ 51.1000 U. S. No. 1. "U. S. No. 1" consists of Persian limes which are firm, fairly well formed, of fairly smooth texture, which are free from decay, stylar end breakdown or other internal discoloration, broken skins which are not healed, bruises (except those incident to proper handling and packing), hard or dry skins, and free from damage caused by freezing, dryness or mushy condition, sprayburn, exanthema (ammoniation), scars, thorn scratches, scale, sunburn, scab, blanching, yellow color, discoloration, buckskin, dirt or other foreign material, disease, insects or mechanical or other means.

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

(a) Each fruit in this grade shall have not less than an aggregate area of three-fourths of the surface of the fruit which shows good green color characteristic of the Persian lime: *Provided*, That lots of limes which fail to meet the U. S. No. 1 grade requirements only because of blanching shall be designated as "U. S. No. 1, Mixed Color": *And provided further*, That lots of limes which fail to meet the U. S. No. 1 or U. S. No. 1 Mixed Color grade requirements only because of turning yellow or yellow color, caused by the ripening process, shall be designated as "U. S. No. 1, Turning".

(b) The fruit shall have a juice content of not less than 42 percent, by volume.

(c) In order to allow for variations incident to proper grading and handling, not more than 10 percent, by count, of the fruit in any lot may fail to meet the color requirements. In addition, not more than 10 percent, by count, of the fruit in any lot may be below the remaining requirements of this grade, but not more than one-half of this amount, or 5 percent, shall be allowed for decay, stylar end breakdown, broken skins which are not healed, or defects causing serious damage including not more than one-half of 1 percent for decay at shipping point: *Provided*, That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination.

§ 51.1001 U. S. Combination. "U. S. Combination" consists of a combination of U. S. No. 1 and U. S. No. 2 limes: *Provided*, That at least 60 percent, by count, of the limes in the lot meet the requirements of U. S. No. 1 grade.

(a) In this grade the U. S. No. 1 limes shall meet the color requirements of the U. S. No. 1 grade and the U. S. No. 2 limes shall meet the color requirements of the U. S. No. 2 grade: *Provided*, That lots of limes which fail to meet the U. S.

Combination grade requirements only because of blanching shall be designated as "U. S. Combination, Mixed Color": *And provided further*, That lots of limes which fail to meet the U. S. Combination or U. S. Combination Mixed Color grade requirements only because of turning yellow or yellow color, caused by the ripening process, shall be designated as "U. S. Combination, Turning".

(b) In order to allow for variations incident to proper grading and handling, not more than 10 percent, by count, of the fruit in any lot may fail to meet the color requirements. In addition, not more than 10 percent, by count, of the fruit in any lot may be below the remaining requirements of the lower grade in the combination, but not more than one-half of this amount, or 5 percent, shall be allowed for limes affected by decay, stylar end breakdown and broken skins which are not healed, including not more than one-half of 1 percent for decay at shipping point: *Provided*, That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination.

(c) No part of the above tolerances shall be allowed to reduce for the lot as a whole, the 60 percent of U. S. No. 1 limes required in the U. S. Combination grade, but individual containers may have not less than 50 percent of the higher grade.

§ 51.1002 U. S. No. 2. "U. S. No. 2" consists of Persian limes which are fairly firm, which are not badly deformed, and not of excessively rough texture, which are free from decay, stylar end breakdown or other internal discoloration, broken skins which are not healed, bruises (except those incident to proper handling and packing), and hard or dry skins, and free from serious damage caused by freezing, dryness or mushy condition, sprayburn, exanthema (ammoniation), scars, thorn scratches, scale, sunburn, scab, blanching, yellow color, discoloration, buckskin, dirt or other foreign material, disease, insects or mechanical or other means.

(a) Each fruit in this grade shall have not less than an aggregate area of one-half of the surface of the fruit which shows good green color characteristic of the Persian lime: *Provided*, That lots of limes which fail to meet the U. S. No. 2 grade requirements only because of blanching shall be designated as "U. S. No. 2, Mixed Color": *And provided*

further, That lots of limes which fail to meet the U. S. No. 2 or U. S. No. 2 Mixed Color grade requirements only because of turning yellow or yellow color, caused by the ripening process, shall be designated as "U. S. No. 2, Turning".

(b) The fruit shall have a juice content of not less than 42 percent, by volume.

(c) In order to allow for variations incident to proper grading and handling, not more than 10 percent, by count, of the fruit in any lot may fail to meet the color requirements. In addition, not more than 10 percent, by count, of the fruit in any lot may be below the remaining requirements of this grade, but not more than one-half of this amount, or 5 percent, shall be allowed for decay, stylar end breakdown, and broken skins which are not healed, including not more than one-half of 1 percent for decay at shipping point: *Provided*, That an additional tolerance of 2½ percent, or a total of not more than 3 percent, shall be allowed for decay en route or at destination.

UNCLASSIFIED

§ 51.1003 *Unclassified*. "Unclassified" consists of Persian limes which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

§ 51.1004 *Application of tolerances*. (a) The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations: *Provided*, That the averages for the entire lot are within the tolerances specified for the grade:

(1) For packages which contain more than 3 pounds and a tolerance of 10 percent or more is provided, individual packages in any lot shall have not more than one and one-half times the tolerance specified. For packages which contain more than 3 pounds and a tolerance of less than 10 percent is provided, individual packages in any lot shall have not more than double the tolerance specified, except that at least one decayed fruit may be permitted in any package; and,

(2) For packages which contain 3 pounds or less, individual packages in any lot are not restricted as to the percentage of defects: *Provided*, That not

more than 10 percent of the packages may have more than one decayed fruit.

STANDARD PACK

§ 51.1005 *Standard pack.* (a) Fruit shall be fairly uniform in size, and when placed packed in crates or cartons, the fruit shall be arranged according to the approved and recognized methods.

(b) All packages shall be well filled but the contents shall not show excessive or unnecessary bruising because of over-filled packages.

(c) "Fairly uniform in size" means that not more than 10 percent, by count, of the fruit in any container may vary more than four-sixteenths of an inch in diameter.

(d) In order to allow for variations, other than sizing, incident to proper packing, not more than 5 percent of the packages in any lot may fail to meet the requirements of standard pack.

DEFINITIONS

§ 51.1006 *Firm.* "Firm" means that the fruit is not soft or flabby.

§ 51.1007 *Fairly well formed.* "Fairly well formed" means that the fruit shows normal characteristic shape for the Persian variety and is not materially flattened on one side.

§ 51.1008 *Fairly smooth texture.* "Fairly smooth texture" means that the fruit is comparatively free from lumpiness and that pebbling is not abnormally coarse. Coarse pebbling is not objectionable as it is indicative of good keeping quality and is characteristic of the fruit, especially that from young trees.

§ 51.1009 *Stylar end breakdown.* "Stylar end breakdown" is a physiological breakdown starting at the base of the nipple as a grayish tan water-soaked spot. A brownish discoloration develops in the rind. As it progresses the color of the affected area becomes darker and usually sinks below the healthy surface, but the area remains firm unless infected with secondary organisms that cause soft decay.

§ 51.1010 *Damage.* "Damage" means any defect which materially affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Dryness or mushy condition which extends into all segments more than one-eighth of an inch at the stem end, or more than the equivalent of this amount, by volume, when occurring in other portions of the fruit;

(b) Sprayburn which changes the color to such an extent that the appearance of the fruit is materially affected, or which causes scarring that in the aggregate exceeds the area of a circle one-fourth inch in diameter;

(c) Exanthema (ammoniation) which materially detracts from the appearance of the fruit, or which occurs as small, thinly scattered spots over more than 10 percent of the fruit surface, or as solid scarring (not cracked) or depressions which in the aggregate exceed the area of a circle one-half inch in diameter;

(d) Scars which are dark, rough, or deep and in the aggregate exceed the area of a circle one-fourth inch in diameter, or scars which are fairly light in color, slightly rough, or of slight depth and in the aggregate exceed the area of a circle one-half inch in diameter, or scars which are light colored, fairly smooth, with no depth and aggregate more than 10 percent of the fruit surface;

(e) Thorn scratches when the injury is not well healed, or when dark colored, rough or deep and in the aggregate exceeds the area of a circle one-fourth inch in diameter, or when light colored, fairly smooth and concentrated and in the aggregate exceeds the area of a circle one-half inch in diameter, or light colored and scattered thorn injury which detracts from the appearance of the fruit to a greater extent than the aggregate area of one-half inch permitted for light colored concentrated injury;

(f) Scale when the appearance of the fruit is affected to a greater extent than that of a lime which has 10 medium to large California red or purple scale attached;

(g) Sunburn which causes appreciable flattening of the fruit, drying of the skin, appreciable drying of the flesh underneath the affected area, or which affects more than 5 percent of the fruit surface;

(h) Scab which materially affects the shape or texture;

(i) Blanching when more than 25 percent, in the aggregate, of the fruit surface shows a whitish to yellowish green area or areas because of shading, resting on the surface of the ground, or contact with other fruit on the tree. Such areas are not to be confused with limes which are turning yellow due to the ripening process;

(j) Yellow color when plainly visible and caused by the ripening process;

(k) Discoloration caused by rust mite, melanose or other means, when fairly smooth and more than 10 percent of the fruit surface is affected, or when slightly rough and in the aggregate exceeds the area of a circle one-half inch in diameter; and,

(l) Buckskin when more unsightly than the maximum discoloration allowed, or the fruit texture is materially affected.

§ 51.1011 *Good green color.* "Good green color" means that the skin of the lime is of a good green color characteristic of the Persian variety.

§ 51.1012 *Fairly firm.* "Fairly firm" means that the fruit is not soft or excessively flabby.

§ 51.1013 *Badly deformed.* "Badly deformed" means that the fruit is seriously misshapen from any cause.

§ 51.1014 *Excessively rough texture.* "Excessively rough texture" means that the skin is badly ridged or very decidedly lumpy.

§ 51.1015 *Serious damage.* "Serious damage" means any defect which seriously affects the appearance, or the edible or shipping quality of the fruit. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:

(a) Dryness or mushy condition which extends into all segments more than one-fourth of an inch at the stem end, or more than the equivalent of this amount, by volume, when occurring in other portions of the fruit;

(b) Sprayburn which changes the color to such an extent that the appearance of the fruit is seriously injured or which causes scarring that in the aggregate exceeds the area of a circle one-half inch in diameter;

(c) Exanthema (ammoniation) which occurs as small spots over more than 25

percent of the fruit surface, or as solid scarring (not cracked) or depressions which aggregate more than 10 percent of the fruit surface;

(d) Scars which are dark, rough, or deep and aggregate more than 5 percent of the fruit surface, or scars which are fairly light in color, slightly rough, or of slight depth and aggregate more than 10 percent of the fruit surface, or scars which are light colored, fairly smooth, with no depth and aggregate more than 25 percent of the fruit surface;

(e) Thorn scratches when the injury is not well healed, or when dark colored, rough or deep and aggregates more than 5 percent of the fruit surface, or when light colored, fairly smooth and concentrated and, aggregates more than 10 percent of the fruit surface, or light colored and scattered thorn injury which detracts from the appearance of the fruit to a greater extent than the 10 percent light colored concentrated injury;

(f) Scale when the appearance of the fruit is affected to a greater extent than that of a lime which has a blotch the area of a circle one-half inch in diameter;

(g) Sunburn which causes decided flattening of the fruit, marked drying or dark discoloration of the skin, material drying of the flesh underneath the affected area, or which affects more than 10 percent of the fruit surface;

(h) Scab which seriously affects shape or texture;

(i) Blanching when more than 50 percent, in the aggregate, of the fruit surface shows a whitish to yellowish green area or areas because of shading, resting on the surface of the ground, or contact with other fruit on the tree. Such areas are not to be confused with limes which are turning yellow due to the ripening process;

(j) Yellow color when plainly visible and caused by the ripening process;

(k) Discoloration caused by rust mite, melanose or other means, when fairly smooth and more than 50 percent of the fruit surface is affected, or when slightly rough and more than 25 percent of the fruit surface is affected; and,

(l) Buckskin when more unsightly than the maximum discoloration allowed, or the fruit texture is seriously affected.

§ 51.1016 *Diameter.*
"Diameter" means the greatest dimension measured at right angles to a line from stem to blossom end of the fruit.

Dated: June 17, 1958.

[SEAL] ROY W. LENNARTSON,
Deputy Administrator,
Marketing Services.

[F. R. Doc. 58-4693; Filed, June 19, 1958;
8:51 a. m.]



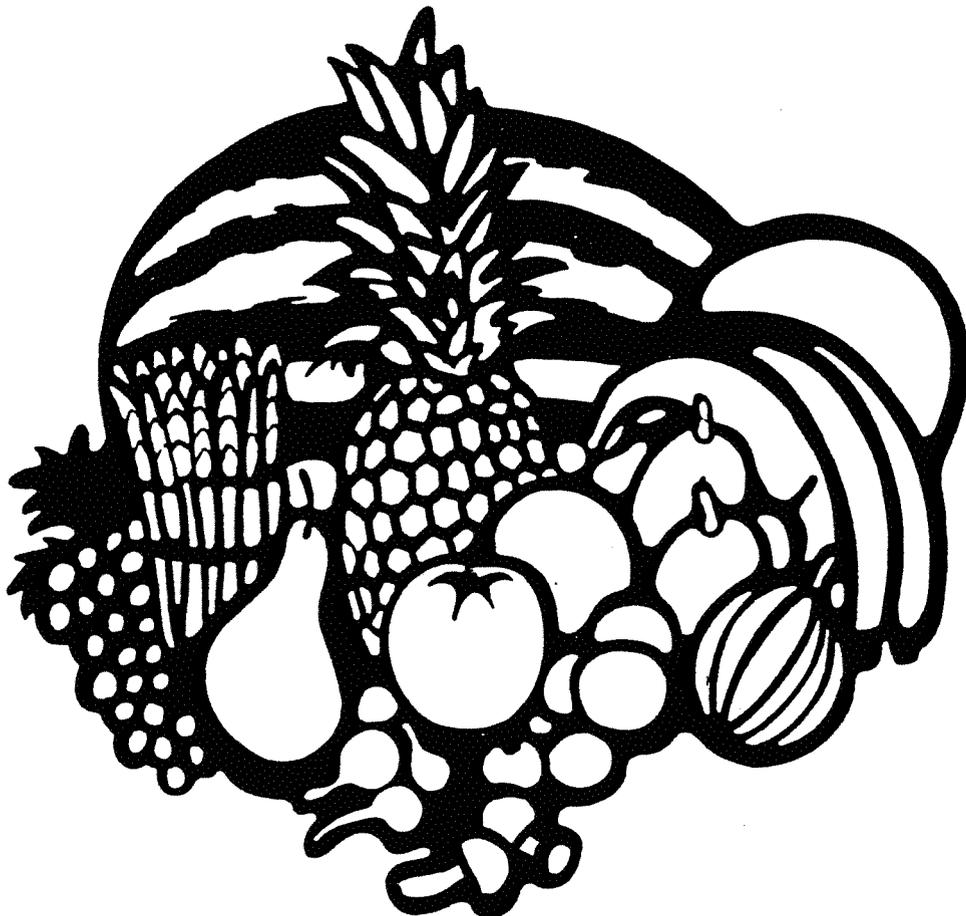
**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

Washington, D.C.

United States Standards for Grades of Mushrooms

Effective July 15, 1966



UNITED STATES STANDARDS FOR GRADES OF MUSHROOMS ^{1/}

SOURCE: 31 FR 8535, June 18, 1966, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec 31 1981
Effective July 15, 1966

GRADES	
Sec.	
51.3385	U.S. No. 1.
51.3386	U.S. No. 2.
UNCLASSIFIED	
51.3387	Unclassified.
APPLICATION OF TOLERANCES	
51.3388	Application of tolerances.
DEFINITIONS	
51.3389	Similar varietal characteristics.
51.3390	Mature.
51.3391	Fairly well shaped.
51.3392	Well trimmed.
51.3393	Open veils.
51.3394	Spots.
51.3395	Damage.
51.3396	Length of stem.
51.3397	Diameter.
METRIC CONVERSION TABLE	
51.3398	Metric conversion table.

AUTHORITY: The provisions of this subpart issued under sections 203, 205, 80 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GRADES

§ 51.3385 U.S. No. 1.

"U.S. No. 1" consists of fresh mushrooms of similar varietal characteristics which are mature, at least fairly well shaped, well trimmed, free from open veils, disease, spots, insect injury, and decay, and from damage by any cause.

(a) *Size.* Size is specified in terms of diameter and unless otherwise specified meets the requirements of one of the following size classifications:

- (1) Small to medium—up to 1½ inches in diameter;
- (2) Large—over 1½ inches in diameter.

(b) *Tolerances.* In order to allow for variations incident to proper grading and handling the following tolerances, by weight, are provided as specified:

(1) *At shipping point.*¹ 5 percent for mushrooms in any lot which fail to meet the requirements of this grade, but not more than one-fifth of this amount or 1 percent shall be allowed for mushrooms affected by disease, spots, or decay.

(2) *En route or at destination.* 10 percent for mushrooms in any lot which have open veils. 5 percent for mushrooms in any lot which fail to meet the remaining requirements of this grade, but not more than one-fifth of this latter amount or 1 percent shall be allowed for mushrooms affected by disease, spots, or decay.

(3) *For off-size.* Ten percent for mushrooms in any lot which fail to meet the specified size requirements.

§ 51.3386 U.S. No. 2.

"U.S. No. 2". The requirements for this grade are the same as for U.S. No. 1 except for a greater tolerance for open veils and a larger tolerance for defects.

(a) *Size.* Size is specified in terms of diameter and unless otherwise specified meets the requirements of one of the following size classifications:

- (1) Small to medium—up to 1½ inches in diameter;
- (2) Large—over 1½ inches in diameter.

(b) *Tolerances.* In order to allow for variations incident to proper grading and handling the following tolerances, by weight, are provided as specified:

(1) *At shipping point.*¹ Ten percent for mushrooms in any lot which have open veils. Ten percent for mushrooms in any lot which fail to meet the remaining requirements of this grade, but not more than one-tenth of this latter amount or 1 percent shall be allowed for mushrooms affected by disease, spots, or decay.

(2) *En route or at destination.* 25 percent for mushrooms in any lot which

¹ Shipping point, as used in these standards, means the point of origin of the shipment in the producing area or at port of loading for ship stores or overseas shipment or, in the case of shipments from outside the continental United States, the port of entry into the United States.

have open veils. 10 percent for mushrooms in any lot which fail to meet the remaining requirements of this grade, but not more than one-tenth of this latter amount or 1 percent shall be allowed for mushrooms affected by disease, spots, or decay.

(3) *For off-size.* 10 percent for mushrooms in any lot which fail to meet the specified size requirements.

UNCLASSIFIED

§ 51.3387 Unclassified.

"Unclassified" consists of mushrooms which have not been classified in accordance with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

§ 51.3388 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:

(a) For a tolerance of 10 percent or more, individual packages in any lot shall have not more than one and one-half times the tolerance specified: *Provided*, That the average for the entire lot is within the tolerance specified for the grade.

(b) For a tolerance of less than 10 percent, individual packages in any lot shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package: *Provided*, That the average for the entire lot is within the tolerance specified for the grade.

DEFINITIONS

§ 51.3389 Similar varietal characteristics.

"Similar varietal characteristics" means that the mushrooms are of the same general color. For example, white and brown mushrooms shall not be mixed in the same container.

§ 51.3390 Mature.

"Mature" means that the mushroom is firm and well developed; the veil area may be stretched but not broken.

§ 51.3391 Fairly well shaped.

"Fairly well shaped" means that the mushroom cap is not flattened, scalloped, indented or otherwise deformed to an extent which materially detracts from the appearance or marketing quality.

§ 51.3392 Well trimmed.

"Well trimmed" means that the stems are smoothly cut, free from rough fleshy butts, the flared portion of the butt is removed and the remaining portion of the stem does not exceed the depth of the cap.

§ 51.3393 Open veils.

"Open veils" means that the cap has expanded to the extent that the protective covering or "veils" joining the margin of the cap to the stem have broken and exposed the gills or underside of the cap.

§ 51.3394 Spots.

"Spots" means pitted or discolored areas.

§ 51.3395 Damage.

"Damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects which materially detracts from the appearance, or the edible or marketing quality of the individual mushroom or of the mushrooms in the lot. The following specific defects shall be considered as damage:

(a) Discoloration when the color of the cap or stem materially affects the appearance or marketing quality of the mushrooms.

(b) Dirt when any amount is embedded in the cap or stem.

§ 51.3396 Length of stem.

"Length of stem" means the greatest distance as measured from the point of attachment of the "veils" on the stem to the butt.

§ 51.3397 Diameter.

"Diameter" means the greatest dimension of the cap measured at right angles to the stem.

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

METRIC CONVERSION TABLE

§ 51.3398 Metric conversion table.

<i>Inches</i>	<i>Mili- meters (mm)</i>
$\frac{1}{8}$ equals.....	3.2
$\frac{1}{4}$ equals.....	6.4
$\frac{3}{8}$ equals.....	9.5
$\frac{1}{2}$ equals.....	12.7
$\frac{5}{8}$ equals.....	15.9
$\frac{3}{4}$ equals.....	19.1
$\frac{7}{8}$ equals.....	22.2
1 equals.....	25.4
$1\frac{1}{4}$ equals.....	31.8
$1\frac{1}{2}$ equals.....	38.1
$1\frac{3}{4}$ equals.....	44.5
2 equals.....	50.8
3 equals.....	76.2
4 equals.....	101.6

Dated: June 15, 1966.

ROY W. LENNARTSON,
Acting Deputy Administrator,
Marketing Services.

[F.R. Doc. 66-6699; Filed June 17, 1966;
8:46 a.m.]



United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, D.C.

United States Standards for Grades of Okra

Effective December 18, 1928



**UNITED STATES STANDARDS FOR GRADES OF
OKRA¹**

SOURCE: 32 FR 8864, June 22, 1967, unless
otherwise noted. Redesignated at 42 FR
32514, June 27, 1977 and at 46 FR 63203,
Dec. 31, 1981.

Effective December 18, 1928

Sec.	GRADE	UNCLASSIFIED
51.3945	U.S. No. 1.	§ 51.3946 Unclassified.
	UNCLASSIFIED	
51.3946	Unclassified.	"Unclassified" consists of pods of okra which have not been classified in accord- ance with the foregoing grade. The term "unclassified" is not a grade within the meaning of these standards but is pro- vided as a designation to show that no grade has been applied to the lot.
	DEFINITIONS	
51.3947	Damage.	
51.3948	Serious damage.	
	AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.	
	GRADE	DEFINITIONS
§ 51.3945	U.S. No. 1.	§ 51.3947 Damage.
	"U.S. No. 1" consists of pods of okra of similar varietal characteristics which are fresh, tender, not badly misshapen, free from decay, and from damage caused by dirt or other foreign matter, disease, insects, mechanical or other means.	"Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the in- dividual pod or of the lot as a whole.
	(a) In order to allow for variations incident to proper grading and handling, the following tolerances, by weight, are provided as specified:	§ 51.3948 Serious damage.
	(1) Ten percent for pods in any lot which fail to meet the requirements of this grade, including therein not more than 5 percent for defects causing seri- ous damage, and including in this latter amount not more than 1 percent for pods affected by decay.	"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the individual pod or of the lot as a whole.

This is a reissue of U.S. Standards for
Okra which were effective December 18,
1928. No substantive change is made in
the text of the standards.

¹ Packing of the product in conformity with
the requirements of these standards shall not
excuse failure to comply with the provisions
of the Federal Food, Drug, and Cosmetic Act
or with applicable State laws and regulations.



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

United States Standards for Grades of Pineapples

**Effective February 23, 1953
As amended July 5, 1990**



United States Standards for Grades of Pineapples

Source: 18 FR 7127, Nov. 11, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective February 23, 1953
As amended July 5, 1990

GENERAL

- Sec.
51.1485 General.
- GRADES**
- 51.1486 U.S. Fancy.
51.1487 U.S. No. 1.
51.1488 U.S. No. 2.
- TOLERANCES**
- 51.1489 Tolerances.
- SIZE AND MARKING REQUIREMENTS**
- 51.1490 Size and marking requirements.
- DEFINITIONS**
- 51.1491 Similar varietal characteristics.
51.1492 Mature.
51.1493 Overripe.
51.1494 Stems removed.
51.1495 Well formed.
51.1496 Fairly well formed.
51.1497 Fairly uniform in size.
51.1498 Freezing injury or Frozen (fruit).
51.1499 Freezing injury or Frozen (tops).
51.1500 Single top.
51.1501 Crown slips.
51.1502 Shell.
51.1503 Flesh.
51.1504 Similar varietal characteristic color for tops.
51.1505 Decay.
51.1506 Internal breakdown.
51.1507 Injury.
51.1508 Damage.
51.1509 Serious damage.

CLASSIFICATION OF DEFECTS

- 51.1510 Classification of defects.
- AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624, unless otherwise noted.

GENERAL

- § 51.1485 General.
(a) Compliance with the provisions of these standards shall not excuse failure to comply with provisions of applicable Federal or State Laws.
(b) These standards are applicable to fresh pineapples with or without tops provided that pineapples with tops attached or with tops removed may not be commingled in the same container.

GRADES

- § 51.1486 U.S. Fancy.
"U.S. Fancy" consists of pineapples which meet the following requirements:

- (1) Basic requirements for fruit:
 - (i) Similar varietal characteristics;
 - (ii) Mature;
 - (iii) Well formed; and,
 - (iv) Stems removed.
- (2) Basic requirements for tops:
 - (i) Similar varietal characteristic color;
 - (ii) Single stem;
 - (iii) Moderately straight;
 - (iv) Well attached to fruit; and,
 - (v) Not more than 1½ times the length of the fruit.
- (3) Fruit free from:
 - (i) Fresh cracks;
 - (ii) Evidence of rodent feeding;
 - (iii) Freezing injury or frozen;
 - (iv) Overripe; and,
 - (v) Decay.
- (4) Tops free from:
 - (i) Crown slips;
 - (ii) Freezing injury or frozen; and,
 - (iii) Decay.
- (5) Fruit free from injury by:
 - (i) Bruising;
 - (ii) Sunburn;
 - (iii) Gummosis;
 - (iv) Internal breakdown;
 - (v) Insects;
 - (vi) Healed cracks; and,

- (vii) Mechanical or other means.
- (6) Tops free from injury by:
 - (i) Discoloration; and,
 - (ii) Insects.
- (7) Tolerances. (See § 51.1489)

§ 51.1487 U.S. No. 1.
"U.S. No. 1" consists of pineapples which meet the following requirements:

- (1) Basic requirements for fruit:
 - (i) Similar varietal characteristics;
 - (ii) Mature;
 - (iii) Well formed; and,
 - (iv) Stems removed.
- (2) Basic requirements for tops:
 - (i) Similar varietal characteristic color;
 - (ii) Single stem;
 - (iii) Not more than moderately curved;
 - (iv) Well attached to fruit; and,
 - (v) Not more than twice the length of the fruit.
- (3) Fruit free from:
 - (i) Fresh cracks;
 - (ii) Evidence of rodent feeding;
 - (iii) Freezing injury or frozen;
 - (iv) Overripe; and,
 - (v) Decay.
- (4) Tops free from:
 - (i) Freezing injury or frozen; and,
 - (ii) Decay.
- (5) Fruit free from damage by:
 - (i) Bruising;
 - (ii) Sunburn;
 - (iii) Gummosis;
 - (iv) Internal breakdown;
 - (v) Insects;
 - (vi) Healed cracks; and,
 - (vii) Mechanical or other means.
- (6) Tops free from damage by:
 - (i) Discoloration;
 - (ii) Crown slips; and,
 - (iii) Insects.
- (7) Tolerances. (See § 51.1489)

§ 51.1488 U.S. No. 2.
"U.S. No. 2" consists of pineapples which meet the following requirements:

- (1) Basic requirements for fruit:
 - (i) Similar varietal characteristics;
 - (ii) Mature; and,

- (iii) Fairly well formed.
- (2) Basic requirements for tops:
 - (i) Similar varietal characteristic color;
 - (ii) Well attached to fruit;
 - (iii) Not completely curved over; and,
 - (iv) Not more than two fairly well developed stems.
- (3) Fruit free from:
 - (i) Fresh cracks;
 - (ii) Evidence of rodent feeding;
 - (iii) Freezing injury or frozen;
 - (iv) Overripe; and,
 - (v) Decay.
- (4) Tops free from:
 - (i) Freezing injury or frozen; and,
 - (ii) Decay.
- (5) Fruit free from serious damage by:
 - (i) Bruising;
 - (ii) Sunburn;
 - (iii) Gummosis;
 - (iv) Internal breakdown;
 - (v) Insects;
 - (vi) Healed cracks; and,
 - (vii) Mechanical or other means.
- (6) Tops free from serious damage by:
 - (i) Discoloration; and,
 - (ii) Insects.
- (7) Tolerances. (See § 51.1489)

TOLERANCES

§ 51.1489 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, based on sample inspection, the number of defective specimens in the individual sample, and the number of defective specimens in the lot shall be within the limitations specified in Tables I and II.

Table I
Shipping Point¹
Number of 25- Count Samples³

Factor	Grades	AL ²	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Decay	ALL	1	0	0 ⁴	1	1	1 ⁴	2	2	2 ⁴	3	3	3	3	3	3 ⁴	4	4	4	4	4	4 ⁴	5	5	5	5	5
Damage serious damage (including decay)	U.S. Fancy U.S. No. 1	4	3	4	5	7	8	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Total defects including injury, damage, serious damage and decay	ALL	6	4	7	10	13	15	18	20	22	25	27	29	32	34	36	39	41	43	45	48	50	52	54	57	59	61

		26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
Decay	ALL	1	5 ⁴	6	6	6	6	6	6 ⁴	7	7	7	7	7	7	7 ⁴	8	8	8	8	8	8	8	8 ⁴	9	9	9 ⁴
Damage serious damage (including decay)	U.S. Fancy U.S. No. 1	4	30	31	32	34	35	36	37	38	39	40	41	42	43	44	45	46	46	47	48	49	50	51	52	53	54
Total defects including injury, damage, serious damage, and decay	ALL	6	63	65	68	70	72	74	76	79	81	83	85	87	90	92	94	96	98	100	103	105	107	109	111	113	116

¹ Shipping point as used in these standards, means the point of origin of the shipment in the production area or at port of loading for ship stores or overseas shipments, or in the case of shipments from outside the continental United States, the port of entry into the United States.
² AL - Absolute limit permitted in individual 25-count sample.
³ Sample size - 25 count.
⁴ Preferred number of samples for this acceptance number.

Table II
En Route or at Destination*

The number of samples examined shall correspond to the number of containers in the lot shown in chart (a). The total number of defects may not exceed that shown for the total number of fruit examined in chart (b).

Chart (a)

Number of containers in the lot	1 to 150	151 to 300	301 to 750	751 to 1200	1201 or more
Number of 25 count samples examined	2	4	6	8	10

Chart (b)

Factor	Grades	Absolute limit	Number of 25 count samples				
			2	4	6	8	10
Decay	All	2	1	3	4	4	5
Damage (U.S. Fancy) or serious damage (U.S. No. 1) by permanent defects, excluding decay	U.S. Fancy U.S. No. 1	4	4	7	9	11	14
Total damage (U.S. Fancy) or serious damage (U.S. No. 1) including decay	U.S. Fancy U.S. No. 1	4	4	7	10	13	15
Total permanent defects	All	6	7	13	18	22	27
Total defects	All	7	8	14	19	25	30
Total number fruit examined			50	100	150	200	250

* En route or at destination means any point other than shipping point as described on page 4, Table I. Footnote 1. Shipping point.

SIZE AND MARKING REQUIREMENTS

§ 51.1490 Size and marking requirements.

(a) The pineapples in each container shall be fairly uniform in size and the count shall be plainly stamped, stenciled, or otherwise marked on the container.

(b) In order to allow for variations incident to proper packing, not more than 5 percent of the packages in any lot may fail to meet the requirements pertaining to size and marking.

DEFINITIONS

§ 51.1491 Similar varietal characteristics.

"Similar varietal characteristics" means the pineapples in any lot are similar in type and character of growth.

§ 51.1492 Mature.

"Mature" means the pineapple has reached the stage of development where ripening has progressed to a degree where the fruit is usable and edible.

§ 51.1493 Overripe.

"Overripe" means the fruit is soft and past commercial utility.

§ 51.1494 Stems removed.

"Stems removed" means the stem at the base of the fruit has been removed so that it does not extend more than one inch beyond the outermost bottom portion of the butt of the fruit.

§ 51.1495 Well formed.

"Well formed" means the fruit shows good shoulder development and is not lopsided or distinctly pointed, and that the sides are not noticeably flattened.

§ 51.1496 Fairly well formed.

"Fairly well formed" means the fruit is not excessively lopsided, or excessively flattened at the shoulders or sides.

§ 51.1497 Fairly uniform in size.

"Fairly uniform in size" means the weight of the fruit within individual containers does not vary more than 1-1/2 pounds from smallest to largest.

§ 51.1498 Freezing injury or frozen (fruit).

"Freezing injury (fruit)" means the edible flesh is glassy, water-soaked, and/or discolored characteristic of having been frozen.

"Frozen (fruit)" means the fruit is affected by freezing so that some portion is in a hardened state with ice crystals present.

§ 51.1499 Freezing injury or frozen (tops).

"Freezing injury (tops)" means the leaf tissue is glassy, water-soaked, and/or discolored as is characteristic of having been frozen.

"Frozen (tops)" means the tops are to some degree, hardened by freezing with ice crystals present.

§ 51.1500 Single top.

"Single top" means the fruit has only one prominent main stem at the crown of the fruit.

§ 51.1501 Crown slips.

"Crown slips" means the small secondary top growths at the crown of the fruit.

§ 51.1502 Shell.

"Shell" means the external surface or rind of the fruit.

§ 51.1503 Flesh.

"Flesh" means the internal edible portion of the fruit.

§ 51.1504 Similar varietal characteristic color for tops.

"Similar varietal characteristic color for tops" means the tops in a lot may vary from a characteristic green to reddish-green color.

§ 51.1505 Decay.

"Decay" means breakdown or disintegration of the tops or breakdown, disintegration or fermentation of the pineapple caused by bacteria or fungi.

§ 51.1506 Internal breakdown.

"Internal breakdown" means a physiological deterioration which results in a water-soaked or brown or blackish discoloration.

§ 51.1507 Injury.

"Injury" means any defect listed in the Classification of Defects section or any other defect or combination of defects which more than slightly detracts from the appearance, edible, or shipping quality of the fruit.

§ 51.1508 Damage.

"Damage" means any defect listed in the Classification of Defects section or any other defect or combination of defects which materially detracts from the appearance, edible, or shipping quality of the fruit.

§ 51.1509 Serious damage.

"Serious damage" means any defect listed in the Classification of Defects section or any other defect or combination of defects which seriously detracts from the appearance, edible, or shipping quality of the fruit.

§ 51.1510 Classification of defects.

Defects	Injury	Damage	Serious damage
Tops: Discoloration	When more than 10 percent of the crown leaves are discolored.	When more than 25 percent of the crown leaves are discolored.	When more than 50 percent of the crown leaves are discolored.
Crown slips	Free from.	When more than 5 crown slips or when more than 2 are over 2 3/4 inches in length.	
Mechanical or other means	When physical injury (cleanliness, mechanical damage) more than slightly affects the appearance of the pineapple.	When physical injury (cleanliness, mechanical damage) materially affects the appearance of the pineapple.	When physical injury (cleanliness, mechanical damage) seriously affects the appearance of the pineapple.
Fruit: Bruising	When any bruise extends into flesh more than 1/2 inch and when a bruise or combination of bruises affects an aggregate area of a circle more than 1 1/2 inches in diameter.	When any bruise extends into flesh more than 1/2 inch and when a bruise or combination of bruises affects an aggregate area of a circle more than 2 1/4 inches in diameter.	When any bruise extends into flesh more than 3/4 inch and when a bruise or combination of bruises affects an aggregate area of a circle more than 3 inches in diameter.
Sunburn	When there is bleaching and a slight softening of the shell affecting an aggregate area more than 1 1/2 inches in diameter.	When there is bleaching and a moderate softening of the shell affecting an aggregate area more than 2 1/4 inches in diameter.	When there is bleaching and severe softening of the shell affecting an aggregate area more than 3 inches in diameter.
Gummosis	When gum deposits penetrate into the flesh or causes discoloration of the shell affecting an aggregate area more than 1/4 inch in diameter.	When gum deposits slightly penetrate into the flesh or causes discoloration of the shell affecting an aggregate area more than 1/2 inch in diameter.	When gum deposits readily penetrate into the flesh or causes discoloration of the shell affecting an aggregate area more than 1 inch in diameter.
Internal breakdown	When more than 5 percent of the edible flesh has a distinct light brown to medium brown discoloration which more than slightly detracts from the appearance or edible quality of the fruit.	When more than 10 percent of the edible flesh has a light to medium brown discoloration which materially detracts from the appearance or edible quality of the fruit.	When more than 20 percent of the edible flesh has a distinct medium to dark brown or brown-black discoloration which seriously detracts from the appearance or edible quality of the fruit.
Insects and insect feeding	When an aggregate area more than 1/2 inch in diameter has any insects attached to the surface (e.g. scale) or any injury from insect feeding, which more than slightly detracts from the appearance, edible, or shipping quality of the fruit.	When an aggregate area more than 3/4 inch in diameter has any insects attached to the surface (e.g. scale) or any injury from insect feeding, which materially detracts from the appearance, edible, or shipping quality of the fruit.	When an aggregate area more than 1 inch in diameter has any insects attached to the surface (e.g. scale) or any injury from insect feeding which seriously detracts from the appearance, edible, or shipping quality of the fruit.

Defects	Injury	Damage	Serious damage
Healed cracks	When healed cracks more than slightly detract from the appearance, edible, or shipping quality of the fruit.	When healed cracks on the eyes are more than 1/2 inch in width and not more than 1/2 inch in depth or which materially detract from the appearance, edible, or shipping quality of the fruit. When healed cracks between the eyes materially affect the appearance of the fruit shell.	When healed cracks on the eyes are more than 3/4 inch in width and not more than 3/4 inch in depth or which seriously detract from the appearance, edible, or shipping quality of the fruit. When healed cracks between the eyes seriously affect appearance of the fruit shell.
Mechanical or other means	When physical injury (cleanliness, mechanical damage) more than slightly affects the appearance or edible quality of the pineapple.	When physical injury (cleanliness, mechanical damage) materially affects the appearance or edible quality of the pineapple.	When physical injury (cleanliness, mechanical damage) seriously affects the appearance or edible quality of the pineapple.

¹ Classification of defects is based on a 10 size fruit (ten, 4-pound average fruit per 40 pound box). Accordingly larger or smaller fruit are permitted to have defects relative to their size.

Dated: May 30, 1990.

Daniel Haley,
Administrator.

[FR Doc. 90-12879 Filed 6-1-90; 8:45 am]



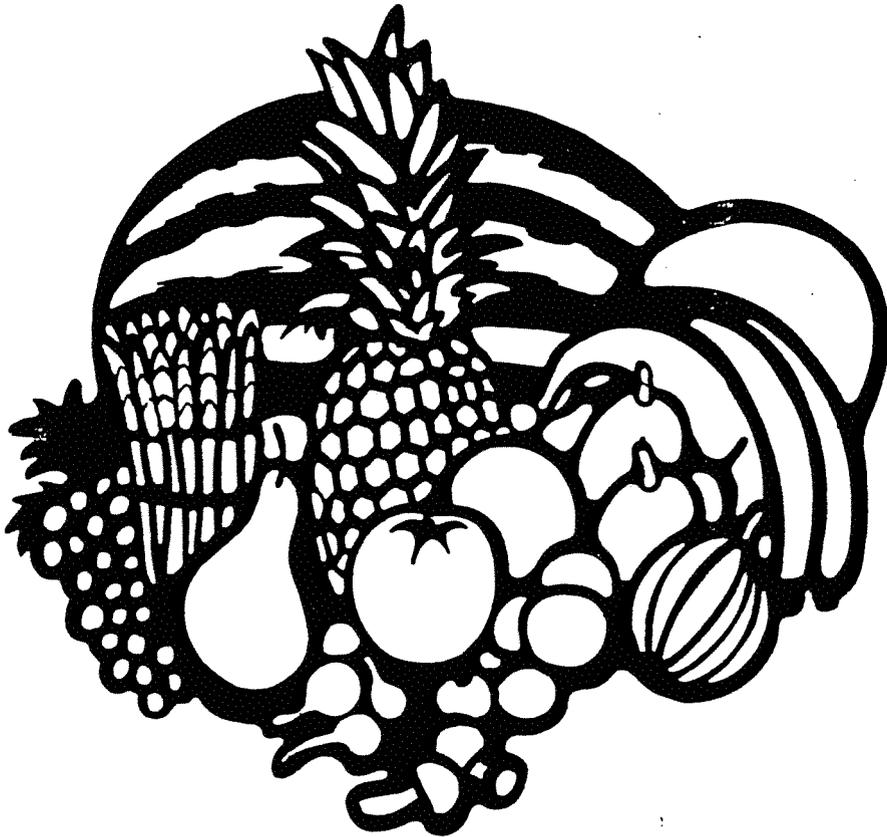
**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

Washington, D.C.

United States Standards for Grades of Raspberries

Effective May 29, 1931



UNITED STATES STANDARDS FOR GRADES OF
RASPBERRIES¹

SOURCE: 32 FR 8876, June 22, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective May 29, 1931

Sec. GRADES

- 51.4320 U.S. No. 1.
51.4321 U.S. No. 2.

UNCLASSIFIED

- 51.4322 Unclassified.

APPLICATION OF TOLERANCES

- 51.4323 Application of tolerances.

DEFINITIONS

- 51.4324 Well colored.
51.4325 Well developed.
51.4326 Overripe.
51.4327 Damage.
51.4328 Serious damage.

AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624

GRADES

- § 51.4320 U.S. No. 1.

"U.S. No. 1" consists of raspberries of one variety which are well colored, well developed and not soft, overripe, or broken; which are free from cores, sunscald, mold, and decay, and from damage caused by dirt or other foreign matter, shriveling, moisture, disease, insects, mechanical or other means.

(a) *Tolerances.* In order to allow for variations incident to proper grading and handling, not more than 10 percent, by volume, of the berries in any lot may fall to meet the requirements of this grade, including therein not more than 5 percent for defects causing serious damage, and including in this latter amount not more than 1 percent for berries which are affected by mold or decay.

- § 51.4321 U.S. No. 2.

"U.S. No. 2" consists of raspberries of one variety which fail to meet the requirements of the U.S. No. 1 grade but

¹Packing of the product in conformity with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act or with applicable State laws and regulations.

which do not contain more than 10 percent, by volume, of berries in any lot which are seriously damaged by any cause, including therein not more than 2 percent for berries which are affected by mold or decay.

UNCLASSIFIED

- § 51.4322 Unclassified.

"Unclassified" consists of raspberries which have not been classified in accordance with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

- § 51.4323 Application of tolerances.

The contents of individual packages in the lot are subject to the following limitations:

(a) Individual packages may contain not more than one and one-half times the tolerance specified: *Provided*, That the average for the entire lot is within the tolerance specified.

DEFINITIONS

- § 51.4324 Well colored.

"Well colored" means that the whole surface of the berry shows a color characteristic of a mature berry.

- § 51.4325 Well developed.

"Well developed" means that the berries shall not be misshapen owing to anthracnose injury, frost injury, lack of pollination, insect injury, or other causes.

- § 51.4326 Overripe.

"Overripe" means dead ripe or soft, necessitating immediate consumption.

- § 51.4327 Damage.

"Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the raspberries.

- § 51.4328 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the berry. Berries which are badly deformed, crushed, leaky, moldy, decayed, or which have poor color characteristic of immature berries, or berries from which the core has not been removed, shall be considered as seriously damaged.



United States
Department of
Agriculture

Agricultural
Marketing Service

Washington, D.C.

Effective
December 27, 1946

United States Standards for Grades of Spinach Leaves (Fresh)



United States Standards for Grades of Spinach Leaves (Fresh)¹

Effective December 27, 1946

SOURCE: 18 FR 7137, Nov. 1, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Sec.	GRADES
51.1730	U. S. Extra No. 1.
51.1731	U. S. No 1.
51.1732	U. S. Commercial.

APPLICATION OF TOLERANCES

51.1733 Application of tolerances.

DEFINITIONS

51.1734 Similar varietal characteristics.
51.1735 Well trimmed.
51.1736 Damage.

AUTHORITY: The provisions of this Part 51 issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624, unless otherwise noted.

GRADES

§ 51.1730 U.S. Extra No. 1.

"U.S. Extra No. 1" shall consist of spinach leaves of similar varietal characteristics which are fairly clean, well trimmed, free from coarse stalks, seedstems, seedbuds, crowns and roots, sandburs or other kinds of burs, decay, and from damage caused by clusters of leaves, wilting, discoloration, freezing, foreign material, disease, insects, mechanical or other means.

(a) In order to allow for variations incident to proper grading and handling, not more than 5 percent, by count, of any lot may fail to meet the requirements of this grade, including not more than 1 percent for spinach leaves which are affected by decay.

§ 51.1731 U.S. No. 1.

"U.S. No. 1" shall consist of spinach leaves of similar varietal characteristics which are well trimmed, free from coarse stalks, seedstems, seedbuds, crowns and roots, sandburs, or other kinds of burs, decay, and from damage caused by clusters of leaves, wilting, discoloration,

¹ Packing of the product in conformity with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act or with applicable State laws and regulations.

freezing, dirt, or other foreign material, disease, insects, mechanical or other means.

(a) In order to allow for variations incident to proper grading and handling, not more than 10 percent, by count, of any lot may fail to meet the requirements of this grade, including not more than 1 percent for spinach leaves which are affected by decay.

§ 51.1732 U.S. Commercial.

"U.S. Commercial" shall consist of spinach leaves of similar varietal characteristics which are well trimmed, free from coarse stalks, seedstems, seedbuds, crowns and roots, sandburs, or other kinds of burs, decay, and from damage caused by clusters of leaves, wilting, discoloration, freezing, dirt or other foreign material, disease, insects, mechanical or other means.

(a) In order to allow for variations incident to proper grading and handling, not more than 20 percent, by count, of any lot may fail to meet the requirements of this grade, including not more than 1 percent for spinach leaves which are affected by decay.

APPLICATION OF TOLERANCES

§ 51.1733 Application of tolerances.

The contents of individual containers in the lot, based on sample inspection, are subject to the following limitations, provided the averages for the entire lot are within the tolerances specified:

(a) When a tolerance is 10 percent, or more, individual containers in any lot shall have not more than one and one-half times the tolerance specified.

(b) When a tolerance is less than 10 percent, individual containers in any lot shall have not more than double the tolerance specified.

DEFINITIONS

§ 51.1734 Similar varietal characteristics.

"Similar varietal characteristics" means that the spinach shall be generally of one type, as crinkly leaf type, or

flat leaf type. No mixture of varieties shall be permitted which materially affects the appearance of the lot.

§ 51.1735 Well trimmed.

"Well-trimmed" means that the leafstems or petioles are not excessively long in relation to the size of the leafblades.

§ 51.1736 Damage.
"Damage" means any defect which materially affects the appearance, or the edible or shipping quality of the individual leaves or of the lot as a whole.

This is a reissue of U.S. Standards for Grades of Spinach Leaves (Fresh) which were effective December 27, 1946. No substantive change is made in the text of the standards.



United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, D.C.

United States Standards for Grades of Spinach Plants

Effective November 19, 1956



UNITED STATES STANDARDS FOR GRADES OF
SPINACH PLANTS ¹

Source: 21 FR 8043, Oct. 19, 1956, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective November 19, 1956

Sec.	GRADES
51.2880	U.S. No. 1.
51.2881	U.S. Commercial.
UNCLASSIFIED	
51.2882	Unclassified.
APPLICATION OF TOLERANCES	
51.2883	Application of tolerances.
DEFINITIONS	
51.2884	Similar varietal characteristics.
51.2885	Well grown.
51.2886	Fresh.
51.2887	Fairly clean.
51.2888	Well trimmed.
51.2889	Damage.
51.2890	Serious damage.

AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

Sec.	GRADES
51.2880	U.S. No. 1.

"U.S. No. 1" consists of spinach plants of similar varietal characteristics which are well grown, fresh, fairly clean, well trimmed, and which are free from decay, and free from damage caused by coarse stalks or seed stems, discoloration, foreign material, second growth, freezing, disease, insects or mechanical or other means.

(a) In order to allow for variations incident to proper grading and handling, not more than a total of 10 percent, by weight, of the spinach plants in any lot may fail to meet the requirements of the grade: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for serious damage, including therein not more than 1 percent for decay.

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

51.2881	U.S. Commercial.
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"U.S. Commercial" consists of spinach plants which meet all the requirements for U.S. No. 1 grade except that the spinach plants need only be free from damage by dirt and except for the increased tolerances specified in this section.

(a) In order to allow for variations incident to proper grading and handling, not more than a total of 20 percent, by weight, of the spinach plants in any lot may fail to meet, the requirements of the grade: *Provided*, That not more than one-half of this amount, or 10 percent, shall be allowed for serious damage, including therein not more than 1 percent for decay.

Sec.	UNCLASSIFIED
51.2882	Unclassified.

"Unclassified" consists of spinach plants which have not been classified in accordance with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

Sec.	APPLICATION OF TOLERANCES
51.2883	Application of tolerances.

(a) The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations: *Provided*, That the averages for the entire lot are within the tolerances specified for the grades:

(1) For a tolerance of 10 percent or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified; and,

(2) For a tolerance of less than 10 percent, individual packages in any lot may contain not more than double the tolerance specified.

Sec.	DEFINITIONS
51.2884	Similar varietal characteristics.
51.2885	Well grown.
51.2886	Fresh.
51.2887	Fairly clean.
51.2888	Well trimmed.
51.2889	Damage.

"Similar varietal characteristics" means that the spinach shall be of one type, such as crinkly leaf type or flat leaf type. No mixture of types shall be permitted which materially affects the appearance of the spinach in the container.

"Well grown" means that the plants are not stunted or poorly developed.

"Fresh" means that the spinach is not more than slightly wilted.

"Fairly clean" means that the individual spinach plant is reasonably free from dirt or other adhering foreign matter, and that the general appearance of the spinach plants in the container is not materially affected.

51.2888	Well trimmed.
51.2889	Damage.

"Well trimmed" means that the spinach plant is cut at the crown of the root, or cut so that the root is not longer than 1 inch.

"Damage" means any defect which materially affects the appearance, or the edible or shipping quality of the individual plant, or the general appearance of the spinach in the container. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Coarse central stalks or seed-stems when causing more than 10 percent waste of the individual plant; or when the flower buds are plainly visible;

(b)	Discoloration when materially affecting the general appearance of the plant, except that heart leaves which are yellow or partially blanched shall not be considered as damaging the plant; and,
(c)	Foreign material when materially affecting the edible quality, or the general appearance of the spinach in the container. Foreign material means weeds, grass, or any loose material other than spinach.
51.2890	Serious damage.
(b)	"Serious damage" means any defect which seriously affects the appearance, or the edible or shipping quality of the individual plant, or the general appearance of the spinach in the container. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:
(a)	Discoloration when the plants are badly discolored;
(b)	Insects when the plant is noticeably infested, or when it is seriously damaged by them;
(c)	Mildew, white rust or similar diseases when seriously affecting the edible quality or appearance of the plant; and,
(d)	Decay.

Dated: October 16, 1956.

[SEAL] ROY W. LENNARTSON,
Deputy Administrator,
Marketing Services.

[F. R. Doc. 56-8438; Filed, Oct. 18, 1956;
8:51 a. m.]



United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, D.C.

United States Standards for Grades of Summer Squash

Revised,
Effective January 6, 1984



UNITED STATES STANDARDS FOR GRADES OF
SUMMER SQUASH¹

SOURCE: 32 FR 8868, June 22, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 48 FR 83203, Dec. 31, 1981.

Revised, Effective January 6, 1984

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AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GENERAL

§ 51.4050 General.

(a) These standards apply only to squash which are picked in the immature stages of development and eaten without the removal of seeds and seed cavity tissue. Squash commonly used in this manner are yellow crookneck, yellow straightneck, white scallop (patty pan, cymling), zucchini, cocozelle, etc., each including one or more varieties.

(b) Because of the size differences between varieties and the difference in size preference in various markets, there are no size requirements in the grades. However, if so desired, size may be specified in connection with the grade, in terms of minimum or maximum diameter or both, or minimum or maximum length or both. When size is specified it shall be stated in terms of inches and quarter inches.

GRADES

§ 51.4051 U.S. No. 1.

"U.S. No. 1" consists of squash of one variety or similar varietal characteristics, with stems or portions of stems attached, which are fairly young and fairly tender, fairly well formed, firm, free from decay and breakdown, and from damage caused by discoloration, cuts, bruises and scars, freezing, dirt or other foreign material, disease, insects, mechanical or other means.

(a) *Tolerances.* In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) *For defects.* Ten percent for squash in any lot which fails to meet the requirements of this grade, including therein not more than 5 percent for defects causing serious damage, and including in this latter amount not more than 1 percent for squash which is affected by decay or breakdown.

(2) *For size.* Five percent for squash in any lot which is smaller than any specified minimum size and 10 percent for squash which is larger than any specified maximum size.

¹ Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

§ 51.4052 U.S. No. 2.

"U.S. No. 2" consists of squash of one variety or similar varietal characteristics which are not old and tough, but are firm, free from decay and breakdown, and free from damage caused by freezing, and from serious damage caused by discoloration, cuts, bruises, scars, dirt or other foreign material, disease, insects, mechanical or other means.

(a) *Tolerances.* In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) *For defects.* Ten percent for squash in any lot which fails to meet the requirements of this grade, including therein not more than 1 percent for squash which is affected by decay or breakdown.

(2) *For size.* Five percent for squash in any lot which is smaller than any specified minimum size and 10 percent for squash which is larger than any specified maximum size.

UNCLASSIFIED

§ 51.4053 Unclassified.

"Unclassified" consists of squash which has not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

§ 51.4054 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:

(a) For a tolerance of 10 percent or more, individual packages in any lot may contain not more than one and one-half times the tolerances specified, except that at least one defective and one off-size specimen may be per-

mitted in any package: *Provided*, That the average for the entire lot is within the tolerance specified for the grade.

(b) For a tolerance of less than 10 percent, individual packages in any lot may contain not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package: *Provided*, That the average for the entire lot is within the tolerance specified for the grade.

DEFINITIONS

§ 51.4055 Fairly young and fairly tender.

"Fairly young and fairly tender" means a desirable stage of maturity for summer squash. This is indicated by fairly tender skin for the variety, fairly tender undeveloped seeds, and firm, moist seed cavity tissue.

§ 51.4056 Fairly well formed.

"Fairly well formed" means that the shape of the squash is characteristic of the variety or type, and that it is not so badly twisted, grooved or otherwise misshapen by any cause as to damage the appearance of the squash.

§ 51.4057 Firm.

"Firm" means that the squash does not yield appreciably to slight pressure, and is not noticeably wilted.

§ 51.4058 Damage.

"Damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the squash. The following specific defects shall be considered as damage:

(a) Discoloration caused by scars, bruises or other means which materially damages the appearance of the squash.

(b) Cuts, bruises, or scars which penetrate materially into the squash.

(c) Insects. Worms or other insects present inside the squash. Worm holes which are unhealed, or more than three-eighths of an inch in depth, or more than one in a squash. Superficial insect injury which materially detracts from the appearance of the squash.

§ 51.4059 Old and tough.

"Old and tough" means too far advanced in maturity to be suitable for use as summer squash. The skin is tough for the variety and the seeds are tough.

§ 51.4060 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the squash. The following specific defect shall be considered as serious damage:

(a) Insects, when worms or other insects are present in the squash, or when worm holes are more than three-eighths of an inch in depth, or when there are more than three worm holes in a squash.

§ 51.4061 Diameter.

"Diameter" means the greatest dimension of the squash measured at right angles to a line running from the stem to the blossom end.

§ 51.4062 Length.

"Length" means the greatest dimension of the squash measured from the blossom end to the stem end, or in the case of crooknecks, to the curved surface farthest from the blossom end.

{Agricultural Marketing Act of 1946, Secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended [7 U.S.C. 1622, 1624]}

Done at Washington, D.C. on: December 1, 1983.

William T. Manley,
Deputy Administrator, Marketing Program Operations.

[FR Doc. 83-32551 Filed 12-8-83; 8:45 am]

Defects	Injury	Damage	Serious damage
Healed cracks	When healed cracks more than slightly detract from the appearance, edible, or shipping quality of the fruit.	When healed cracks on the eyes are more than 1/2 inch in width and not more than 1/2 inch in depth or which materially detract from the appearance, edible, or shipping quality of the fruit. When healed cracks between the eyes materially affect the appearance of the fruit shell.	When healed cracks on the eyes are more than 3/4 inch in width and not more than 3/4 inch in depth or which seriously detract from the appearance, edible, or shipping quality of the fruit. When healed cracks between the eyes seriously affect appearance of the fruit shell.
Mechanical or other means	When physical injury (cleanliness, mechanical damage) more than slightly affects the appearance or edible quality of the pineapple.	When physical injury (cleanliness, mechanical damage) materially affects the appearance or edible quality of the pineapple.	When physical injury (cleanliness, mechanical damage) seriously affects the appearance or edible quality of the pineapple.

¹ Classification of defects is based on a 10 size fruit (ten, 4-pound average fruit per 40 pound box). Accordingly larger or smaller fruit are permitted to have defects relative to their size.

Dated: May 30, 1990.

Daniel Haley,
Administrator.

[FR Doc. 90-12879 Filed 6-1-90; 8:45 am]



United States
Department of
Agriculture

Agricultural
Marketing
Service

Washington, D.C.

United States Standards for Grades of Fall and Winter Type Squash and Pumpkin

Effective October 13, 1983



UNITED STATES STANDARDS FOR GRADES OF
FALL AND WINTER TYPE SQUASH AND PUMPKIN¹

Effective October 13, 1983

(48 F.R. 46487)

Sec.
51.4030 General.
51.4031 Grades.
51.4032 Size.
51.4033 Tolerances.
51.4034 Application of tolerances.
51.4035 Definitions.

§ 51.4030 General.

These grade standards apply to squash and pumpkin, both of the cucurbit family (*Cucurbita pepo*, *C. moschata*, *C. maxima*, *C. mixta*), having a hard shell and mature seeds.

§ 51.4031 Grades.

(a) "U.S. No. 1" consists of squash or pumpkin which meet the following requirements:

- (1) Basic requirements:
 - (i) Similar varietal characteristics;
 - (ii) Well matured; and,
 - (iii) Not broken or cracked.

(2) Free from: Soft rot or wet breakdown.

(3) Free from damage by:

- (i) Scars;
 - (ii) Dry rot;
 - (iii) Freezing;
 - (iv) Dirt;
 - (v) Disease;
 - (vi) Insects; and,
 - (vii) Mechanical or other means.
- (4) Tolerances (See § 51.4033).

(b) "U.S. No. 2" consists of squash or pumpkin which meet the following requirements:

- (1) Basic requirements:
 - (i) Similar varietal characteristics;
 - (ii) Fairly well matured; and,
 - (iii) Not broken or cracked.

(2) Free from: Soft rot or wet breakdown.

(3) Free from serious damage by:

- (i) Scars;
 - (ii) Dry rot;
 - (iii) Freezing;
 - (iv) Dirt;
 - (v) Disease;
 - (vi) Insects; and,
 - (vii) Mechanical or other means.
- (4) Tolerances (See § 51.4033).

§ 51.4032 Size.

Minimum and/or maximum size of any lot of squash or pumpkin may be specified in connection with the grade in terms of whole pounds and/or fractions thereof.

§ 51.4033 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by weight or by count when fairly uniform in size, are provided as specified:

(a) *Defects*. Ten percent for specimens in any lot which fail to meet the requirements of the specified grade: *Provided*, That included in this amount not more than 2 percent shall be allowed for soft rot or wet breakdown or serious damage by dry rot.

(b) *Size*. Five percent in any lot for specimens which are smaller than a specified minimum weight, and 15 percent which are larger than a specified maximum weight.

§ 51.4034 Application of tolerances.

When packed in containers the entire contents shall be the sample or when in bulk or bulk bins, the sample shall consist of approximately 50 pounds or

25 specimens when fairly uniform in size. Samples are subject to the following limitations:

(a) For a tolerance of 10 percent or more, individual samples in any lot may contain not more than one and one-half times the tolerance specified, except that when the individual sample contains 15 specimens or less, individual samples may contain not more than double the tolerance specified: *Provided*. That at least two defective or off-size specimens may be permitted in any individual sample: *And Provided Further*, That the average for the entire lot is within the tolerance specified for the grade.

(b) For a tolerance of less than 10 percent, individual samples in any lot may contain not more than double the tolerance specified: *Provided*. That at least one defective or off-size specimen may be permitted in any individual sample: *And Provided Further*, That the average for the entire lot is within the tolerance specified for the grade.

§ 51.4035 Definitions.

(a) "Similar varietal characteristics" means having the same general characteristics, such as shape, texture and color.

(b) "Well matured" means reaching a stage of development which is indicative of good handling and keeping quality for the variety.

(c) "Fairly well matured" means reaching a stage of development in which the outer skin (shell) is not tender.

(d) "Cracked" means split open, exposing the flesh.

(e) "Damage" means any specific defect described in this section or an equally objectionable variation of any one of these defects, any other defect or any combination of defects, which materially detracts from the appearance or edible or marketing quality. The following specific defects shall be considered as damage:

(1) Scars, except stem scars caused by rodents or other means, which are not well healed and corked over, or which

cover more than 10 percent of the surface in the aggregate, or which form depressions or pits that materially affect the appearance.

(2) Stem scars which are unhealed on varieties which normally retain their stems after harvesting.

(3) Dry rot which affects an area more than 1 inch (2.5cm) in diameter in the aggregate on a 10 pound (4.5kg) specimen or correspondingly smaller or larger areas depending on the size of the specimen.

(f) "Serious damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect or any combination of defects which seriously detracts from the appearance or the edible or marketing quality. The following specific defects shall be considered as serious damage:

(1) Scars, except stem scars, caused by rodents or other means which are not well healed or corked over, or which cover more than 25 percent of the surface in the aggregate, or which form depressions or pits that seriously affect the appearance.

(2) Dry rot which affects an area more than 2 inches (5cm) in diameter in the aggregate on a 10 pound (4.5kg) specimen, or correspondingly smaller or larger areas depending on the size of the specimen.

(Agricultural Marketing Act of 1946, secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended (7 U.S.C. 1622, 1624))

Done at Washington, D.C., on October 6, 1983.

Eddie F. Kimbrell,
Deputy Administrator, Commodity Services.

[FR Doc. 83-27792 Filed 10-12-83; 8:45 am]

¹Compliance with the provisions of these standards shall not excuse failure to comply with provisions of applicable Federal or State laws.