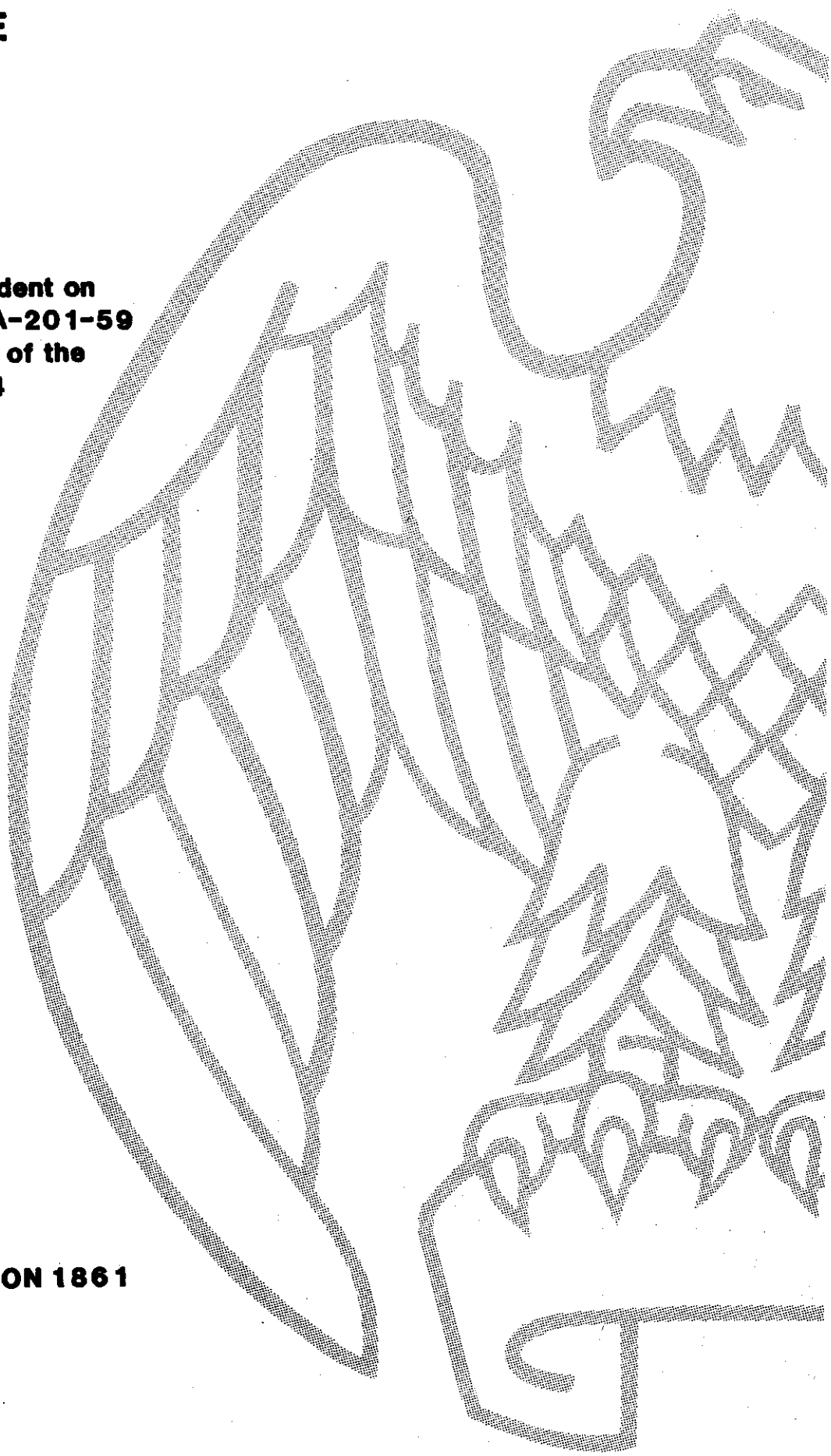
APPLE JUICE

Report to the President on Investigation No. TA-201-59 Under Section 201 of the Trade Act of 1974



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Note.--Information that would reveal the confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.

REPORT TO THE PRESIDENT
ON INVESTIGATION NO. TA-201-59
APPLE JUICE

UNITED STATES INTERNATIONAL TRADE COMMISSION
June 13, 1986

Determination

On the basis of the information developed in the subject investigation, the Commission has determined 1/ that apple juice, not mixed and not containing over 1.0 percent of ethyl alcohol by volume, provided for in item 165.15 of the Tariff Schedules of the United States, is not being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article.

Background

The United States International Trade Commission instituted investigation No. TA-201-59, under section 201(b)(1) of the Trade Act of 1974 (19 U.S.C. 2251(b)(1)), in order to determine whether the above described apple juice is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article. The investigation resulted from a request received by the Commission on December 27, 1985, from the United States Trade Representative.

Notice of the institution of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of January 24, 1986 (51 F.R. 3266). The hearing was held in

1/ Commissioner Rohr dissenting.

Washington, DC, on April 17, 1986, and all persons who requested the opportunity were permitted to appear in person or by counsel.

This report is being furnished to the President in accordance with section 201(d)(1) of the Trade Act of 1974. The information in the report was obtained from responses to Commission questionnaires, fieldwork and interviews by members of the Commission's staff, other agencies, information presented at the public hearing, briefs submitted by interested parties, the Commission's files, and other sources.

VIEWS OF CHAIRWOMAN PAULA STERN AND COMMISSIONERS ALFRED ECKES, SEELEY G. LODWICK, AND ANNE E. BRUNSDALE

We have determined that apple juice 1/ is not being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article. Having made a negative injury determination, we do not reach the question of remedy.

Section 201 requires that we find each of three criteria to be satisfied in order to make an affirmative determination--

(1) imports are in increased quantities;

(2) the domestic industry producing an article like or directly competitive with the imported article is seriously injured or threatened with serious injury; and

(3) the increased imports are a substantial cause of the serious injury or threat to the domestic industry.

In the present case, we find that imports increased and that the domestic industry producing apple juice experienced economic difficulties. However, we find that the domestic industry is not seriously injured or threatened with serious injury.

Domestic industry

The first issue that we must address is that of the domestic industry. Section 201 defines the domestic industry in terms of the domestic producers

1/ Apple juice, not mixed and not containing over 1 percent ethyl alcohol by volume, provided for in item 165.15 of the Tariff Schedules of the United States.

of "an article like or directly competitive with the imported article"; and the terms "like" and "directly competitive" are defined in the legislative history. "Like" articles are "those which are substantially identical in inherent or intrinsic characteristics (i.e., materials from which made, appearance, quality, texture, etc.)." "Directly competitive" articles are those "which, although not substantially identical in their inherent or intrinsic characteristics, are substantially equivalent for commercial purposes, that is, are adapted to the same uses and are essentially interchangeable therefor."

The term "directly competitive" is further defined in section 601(5) of the Trade Act to mean directly competitive at an earlier or later stage of processing—

> An imported article is "directly competitive with" a domestic article at an earlier or later stage of processing, and a domestic article is "directly competitive with" an imported article at an earlier or later stage of processing, if the importation of the article has an economic effect on producers of the domestic article comparable to the effect of importation of articles in the same stage of processing as the domestic article. For purposes of this paragraph, the unprocessed article is at an earlier stage of processing.

In order for articles to be directly competitive at an earlier or later stage of processing, they must remain "substantially the same" during the stages of processing and must "not [be] wholly transformed" into a different article. 2/

2/ See H.R. Rep. No. 1818, 87th Cong., 2d Sess., at 85 (1962). This provision, known as the Morse cherry amendment after Sen. Wayne Morse of Oregon, was first included in the Trade Expansion Act of 1962 (76 Stat. 872). The legislative history of the 1962 act gave three examples of processing as meeting the test—zinc oxide would be zinc ore in a later stage of processing; and a raw cherry would be a glace cherry in an earlier stage of processing, as would live lamb and dressed lamb. Id.

The Commission generally includes in the domestic industry all the domestic productive resources used to produce the domestic article, i.e, employees, physical facilities, and capital. 3/ If the product has several stages of production, the industry would include the resources employed at each level. Because the productive resources in most industries are concentrated at the final stage of production, the Commission generally focuses its data-gathering efforts and analysis on that stage. 4/ It is important that the Commission's injury determination of serious injury embrace the industry as a whole, not just the facilities at one stage of production.

In determining what constitutes the appropriate industry, including whether there are two or more industries, the Commission has traditionally considered, among other factors, (1) the nature of the domestic and imported products involved, including the customs treatment thereof; (2) the domestic facilities used to make the like or directly competitive domestic article, including the ownership and location of plant and equipment (e.g., what articles do domestic producers make, are they made in the same or separate facilities?), the labor skills required, and the marketing involved in selling the product (e.g., are the marketing channels the same or substantially different?); and (3) the requests of domestic producers (e.g., what facilities are alleged to be injured?).

The industry question in this investigation raises several issues that do not generally arise in section 201 investigations. The American Farm Bureau Federation, representing certain apple growers, processors, and concentrators,

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3/ Report of the House Committee on Ways and Means on the Trade Reform Act of 1973, H. R. Rep. No. 571, 93d Cong., 1st Sess. 46 (1973).

4/ Commissioner Brunsdale finds it unnecessary to characterize the relative importance of earlier and later stages of production.

asserted that the Commission should find three domestic industries—(1) six-strength concentrated apple juice (CAJ) (or non-retail three- and four-strength CAJ), (2) retail processed apple juice products, and (3) juice apples. 5/ The Association of Food Industries, representing certain importer interests, argued that there is one domestic apple juice processing industry and that there is no separate juice apple industry. 6/

For reasons set forth below, we find that there is one domestic industry producing an article like or directly competitive with the imported article, the domestic apple juice processing industry. All domestic apple growers are part of this industry since they produce apples utilized in the production of juice. As is indicated by our discussion below concerning the condition of the apple grower segment of the industry, even if we had found it appropriate to consider finding a separate juice apple grower or apple grower industry under section 601(5) of the Trade Act (19 U.S.C. 2481(5)) and had then found such an industry, we would not have found that any such industry was seriously injured or threatened with serious injury.

The imported article that is the subject of this investigation is apple juice. Most of it enters in the form of six-strength concentrate, largely because it is easier and cheaper to transport in that form. 7/

Domestic apple juice is made from juice apples. There are three major categories of domestic apples based on end use—fresh market, canning, and juice. 8/ Domestic apples that have good color and shape and that are free of

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5/ Farm Bureau posthearing brief at 33. See also appendix II to the prehearing brief of the Farm Bureau.

6/ Posthearing brief of the Apple Juice Group of the Association of Food Industries, Inc. at 2.

7/ Report of the Commission (Report) at A-24.

8/ Id. at A-1-A-3.

surface blemishes are sold as fresh market fruit. 9/ Typically, the larger the size of the apple, the higher its price. 10/ Essentially all domestic growers grow apples for the fresh market, where prices are highest. About 55 percent of domestic apples in terms of quantity and an estimated 75 percent in terms of value have been sold in the fresh market in recent years. 11/ Canning apples must be round and over 2-1/2 inches in diameter, but may have surface blemishes since they will be peeled. 12/ Thus, they command a lower price. Juice apples, the third category, traditionally are sort-outs, tree-run fruit, weather-damaged fruit, drops, and leftovers from other grades. 13/

Very few growers produce juice apples exclusively. 14/ Juice apples generally are less costly to grow than apples destined for the other markets because the trees involved require less maintenance and the apples are less likely to be adversely affected by weather. 15/ Growers generally do not keep separate records for fresh apples and juice apples. 16/ Juice apples have accounted for about 22 percent of apple production in terms of quantity and about 10 percent in terms of value in recent years. 17/

The most basic apple juice product is fresh single-strength apple juice, which is the product of pressing fresh apples. 18/ This product may be sold

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9/ Id.
10/ Id.
11/ Id. at A-32. Prices for fresh apples have increased over the past two years and have fluctuated within a stable range since 1979. Id., at A-71.
12/ Report at A-1.
13/ Id.
14/ Id. at A-10.
15/ Id.
16/ Id. at A-50.
17/ Id. at A-32, A-54.
18/ Id. at A-4.

to consumers as fresh apple juice or as fresh cider, and preservatives may be added. 19/ It may be further processed through pasteurization (heat treating) to prevent spoilage before being packaged in retail-sized containers; 20/ and it may also be processed into concentrate, which involves removing water. 21/

In commercial practice generally only two levels of concentrate are produced, three-strength, which is often referred to as frozen concentrate, and six-strength, which is widely referred to as "concentrate" or concentrated apple juice (CAJ). 22/ Six-strength CAJ is a commercial rather than a retail product. 23/ Because of its high level of concentration, it does not need to be frozen to retard spoilage. 24/ It is used to produce three-strength frozen CAJ, reconstituted single-strength apple juice, blended single-strength apple juice made by mixing juice from concentrate with single-strength juice that has never been concentrated, and various mixed juices and other products that use apple juice as an ingredient. 25/ Three-strength frozen CAJ is generally produced from single-strength juice or from six-strength CAJ and packed in retail containers for sale to consumers in the freezer compartments of grocery stores. 26/

Producers of domestic apple juice include cider mills and other producers of fresh single-strength (not pasteurized) apple juice and producers of pasteurized apple juice. 27/ The production of pasteurized apple juice from

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19/ Id.
20/ Id.
21/ Id. at A-5.
22/ Id.
23/ Id. at A-5-6.
24/ Id.
25/ Id.
26/ Id.
27/ Id. at A-12.

domestic fresh apples requires extensive facilities and processing equipment, which represents a large capital investment. 28/ CAJ is produced by dehydrating and concentrating single-strength juice in evaporators. 29/ Such operations require investment in evaporators and other equipment to yield the concentrate. 30/ Most large domestic producers of retail apple juice own concentrating equipment, as do independent smaller producers. 31/ Reconstitutors are firms that purchase CAJ, dilute it by adding water, and package single-strength juice into retail size containers. 32/ Reconstitutors generally use only imported CAJ; they do not press apples or buy domestic apple juice in bulk. 33/ Bottlers are firms that also package single-strength apple juice in retail size containers. 34/ Like reconstitutors, they do not press fresh apples, but they may purchase domestic juice in bulk containers, may reconstitute CAJ themselves and retail package some, or may blend purchased domestic single-strength juice with imported CAJ. 35/

In view of the above, we find that the appropriate domestic industry is the industry producing apple juice, including single-strength apple juice, three-strength frozen apple juice concentrate, apple juice concentrate, and various processed apple juice retail products. This industry includes all domestic growers of apples since they produce juice apples. We find that

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28/ Id.
29/ Id. at A-15.
30/ Id.
31/ Id. at A-15.
32/ Id. at A-16.
33/ Id.
34/ Id.
35/ Id.

this industry is producing an article "like" (i.e., substantially identical to) the imported article or, at the very least, directly competitive (i.e., substantially identical or substantially equivalent for commercial purposes).

We do not find it appropriate to subdivide the processing industry into separate concentrator and retail processor industries as recommended by the Farm Bureau. All large capacity, CAJ-producing plants are owned by producers of domestic apple juice and the act of concentrating is done primarily to facilitate storage and transportation prior to reconstituting or blending.

We disagree with the position of the Farm Bureau that there is a separate juice apple growing industry producing an article directly competitive with imported apple juice at an earlier stage of processing. There is no separate juice apple industry. As discussed above, grower operations are oriented to the fresh market where growers sell over half their apples and from which they derive most of their revenues. For the most part, apples converted into juice are sort-outs, drops, and leftovers, and are the least significant joint product of apple production. The producers of juice apples are the producers of all apples.

Increased imports

Imports of apple juice increased in both actual and relative terms during the period of investigation. Imports more than doubled, rising from 70 million gallons (single-strength equivalent) in crop year 1980/81 to 196 million gallons (single-strength equivalent) in crop year 1984/85. 36/ The

36/ Report at A-24.

ratio of imports to production also rose sharply, from 38 percent in crop year 1980/81 to 124 percent in crop year 1984/85. 37/ Thus, the first of the three statutory criteria is clearly satisfied. 38/

No serious injury or threat to the domestic apple juice producing industry

The Trade Act does not define the term "serious injury or threat thereof," but instead directs the Commission's attention to certain economic factors. Specifically, section 201(b)(2) requires that the Commission, in addressing the question of serious injury or threat, take into account all economic factors that it considers relevant, including (but not limited to) —

> (A) with respect to serious injury, the significant idling of production facilities in the industry, the inability of a significant number of firms to operate at a reasonable level of profit, and significant unemployment or underemployment within the industry;
>
> (B) with respect to threat of serious injury, a decline in sales, a higher and growing inventory (whether maintained by domestic producers, importers, wholesalers, or retailers) and a downward trend in production, profits, wages, or employment (or increasing underemployment) in the domestic industry concerned . . . .

Section 201(b)(2)(D) states that the presence or absence of any of these factors is not necessarily dispositive of the injury question.

In determining whether the domestic apple juice processing industry is seriously injured or threatened with serious injury, we examined the condition of the entire industry. The industry is comprised of several segments. Because it was not feasible to aggregate data for the different segments, we were obliged to discuss such data separately.

37/ Id.

38/ Inasmuch as the actual volume of imports increased, Commissioner Brunsdale finds it unnecessary to decide whether an increase in imports relative to domestic production is sufficient alone to meet the first of the statutory criteria.

We focused primarily on data supplied by, or involving, two segments of the apple juice industry--apple juice processors and all apple growers. While concentrators, reconstitutors, bottlers, and other facilities are also involved in the production of apple juice and are part of the industry, processors and growers together account for an estimated 85 percent of domestic industry resources, as measured in terms of value added to the product. Where appropriate we have cited data on these other segments of the industry. As the discussion below makes clear, data for apple growers largely paralleled the data for domestic apple juice processors.

Apple juice processors. Domestic apple juice processors account for about two thirds of productive resources in the domestic apple juice industry. The processors are facing economic difficulties, but are not seriously injured or threatened with serious injury. Domestic apple juice production has remained relatively constant in recent years, and recent production is considerably above that of the late 1970's. As expected, however, production has varied somewhat from year to year. Production peaked at 182 million gallons in crop year 1980/81, a record year for domestic production of apples (including juice apples). 39/ It then declined to 153 million gallons in crop year 1981/82, increased slightly to 154 million gallons in 1982/83, increased further to 169 million gallons in 1983/84, and declined again to 158 million gallons in 1984/85 and an estimated 153 million gallons in 1985/86. 40/ Annual domestic juice production averaged slightly

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39/ Id. at A-24, A-32. All figures used in this paragraph are in terms of single-strength equivalent.

40/ Id. at A-44.

over 100 million gallons in the late 1970's. 41/ Prices paid for both fresh apples and juice apples have been relatively stable in recent years. 42/

The capacity of reporting U.S. producers to press juice apples has also been fairly constant in recent years and was about 5 percent higher in crop year 1985/86 than in 1981/82. 43/ Capacity utilization by these producers has fluctuated, peaking at 59 percent in 1983/84, but it declined to 44 percent in 1985/86 in part due to increases in capacity. 44/

The capacity of reporting CAJ producers also rose during the period, from 51 million gallons in 1981/82 to 59 million gallons in 1985/86 (all figures are in single-strength equivalent). 45/ The utilization rate for producers of domestic CAJ declined sharply from 26 percent in 1981/82 to 13 percent in 1982/83, but it has increased progressively since then to 17 percent in 1985/86. 46/

According to USDA data, domestic juice producers processed a fairly constant 21 to 24 percent of domestic apples into juice during the most recent 6 years, which was up from an average of 18 percent during the 1970's. 47/ Capacity utilization data for domestic apple juice producers would have been

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41/ Id. at A-24.
42/ Id. at A-71.
43/ Id. at A-38. Chairwoman Stern and Commissioner Brunsdale note that capacity utilization has been fairly low because domestic concentrators convert juice into concentrate to lower storage costs, not for the purpose of exporting it. Almost all domestically produced apple juice is consumed domestically. Less than 1 percent of domestic production is exported. Id. at A-29.
44/ Report at A-44. Capacity utilization figures are based on assumptions which do not necessarily reflect practical levels of capacity utilization. The trends in utilization levels are more instructive than actual utilization levels.
45/ Report at A-39.
46/ Id. at A-44.
47/ Id. at A-33.

higher if processors had not increased capacity. These data tend to discount any severe contraction in the utilization of facilities in this segment of the industry.

It appears that at least 17 domestic apple juice processing facilities ceased pressing domestic juice apples and/or producing CAJ during the period 1981-85. 48/ However, these closings tended to involve smaller, non-integrated plants. Several new plants have opened in recent years, as is indicated by the data showing increasing capacity, relatively steady apple juice production, and relatively steady capacity utilization levels. Data indicate that processors in recent years have channeled an increasing percentage of their domestically produced juice into the higher-priced fresh juice market and away from the concentrated-reconstituted juice market. 49/

Net sales for reporting domestic producers of apple juice rose by almost 40 percent between 1982 and 1985, and gross profits (net sales less cost of goods sold) rose by a similar percentage during the same period. 50/ Operating income for these producers was positive throughout the period, and 1985 operating income was the highest since 1982. 51/ These firms reported net losses in 3 of the 4 reporting years largely as a result of sharply rising interest and depreciation expenses. 52/ Tree Top, one of the largest domestic

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48/ Id. at A-30.

49/ Id. at A-42. As stated above, all large domestic CAJ facilities are owned by domestic apple juice processors. Processors increasingly have elected to sell their domestically produced juice in the fresh juice market rather than converting it into concentrate. Instead, their concentrate needs are met by imports. The quantity of single-strength apple juice produced by these firms has remained relatively constant over the last 5 years. During the first half of the most recent crop year, the amount of juice processed increased significantly over the year earlier period. Id.

50/ Report at A-60.

51/ Id.

52/ Id.

processor 53/ did not supply data and opposed the granting of relief. 54/

Employment in reporting domestic facilities producing apple juice products increased from 547 persons in 1981 to 707 persons in 1984 before declining to 614 persons in 1985. 55/ Total wages paid also increased, except in 1985. 56/

Inventories of reporting firms of domestically produced apple juice were 3.3 million gallons as of yearend 1981 (June 30) 57/ and increased to 4.7 million gallons for 1982. Thereafter, from 1982 to 1985 inventories never fell below 4.3 or rose above 5.4 million gallons. This represented about 20 percent of each year's production. 58/ Inventories of apple juice held by importers fluctuated over the past 5 years in question, but appear to have trended downward. 59/

In summary, domestic apple juice production and processor capacity, capacity utilization, inventories, financial performance, and employment have all remained relatively constant in recent years. While the processor segment of the processing industry is facing economic difficulties, these difficulties

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53/ Id. at A-60.

54/ Another large processor, Cadbury Schweppes, which entered the industry in 1982 by acquiring the facilities of Duffy-Mott, was also opposed to the granting of relief. The data that Cadbury Schweppes supplied were of limited use in view of a recent acquisition and reorganization. It should be noted that firms accounting for about two thirds of domestic apple juice processing either did not favor the granting of relief or expressed no position on the issue. The request for relief was supported by firms accounting for about one third of domestically produced apple juice.

55/ Report at A-51.

56/ Id.

57/ Id. at A-45.

58/ Id.

59/ Id. at A-62.

are not of such magnitude as to constitute serious injury. In addition, present trends do not suggest a worsening of conditions in the foreseeable future or the threat of serious injury in the absence of present serious injury.

Apple growers. Entry into the commercial apple-growing business is capital intensive and requires a long-term commitment by the grower. Persons entering the business do so primarily for the purpose of growing apples for the higher-priced fresh market, which has accounted for about 55 percent of grower sales (in terms of quantity) and an estimated 75 percent of grower revenues in recent years. Like domestic processors, domestic apple growers are also facing economic difficulties but are not seriously injured or threatened with serious injury.

Domestic apple production and the share of domestic apples utilized in juice production have remained relatively constant in recent years. Domestic apple production declined from its record high level of 8.83 billion pounds in crop year 1980/81 to 7.75 billion pounds in 1981/82, but increased irregularly to 8.29 billion pounds in 1984/85 (all figures are in terms of fresh weight). 60/

The quantity of apples consumed in juice production declined from 2.14 billion pounds (fresh weight) in 1980/81 to 1.80 billion pounds in 1981/82, but increased irregularly to an estimated 1.88 billion pounds in 1985/86. 61/ The share of total apple production utilized in juice production has remained a relatively constant 21-24 percent in recent years, which is significantly higher than the average of 18 percent utilized in juice production during the 1970's. 62/

60/ Id. at A-32.
61/ Id. at A-33.
62/ Id.

While the estimated number of juice apples not gathered or harvested has increased in recent years, 63/ at the same time the volume and value of juice apples processed into juice has increased. In addition, the number of acres of producing apple trees has increased in recent years. The USDA reported that the total area planted to apples increased 6 percent between 1978 and 1982. 64/ These new plantings replace older, poorer yielding trees with younger, higher yielding ones. The plantings also mean replacements with dwarf trees that allow for more densely planted orchards, increasing overall yields for the orchard. 65/ Furthermore, domestic apple production is expected to increase significantly by 1990 over present levels. 66/

Employment data gathered from a sampling of 80 domestic growers suggest that employment in apple growing operations (including production of juice apples) remained relatively constant during the most recent 5-year period. 67/ Employment and hours worked trended upward in several categories. 68/.

Juice apples, while constituting an average of about 22 percent of the total apple crop, constitute only about 10 percent of the value of that crop, 69/ and thus have a relatively small effect on the profitability of overall apple growing operations. Financial data received from domestic apple growers suggest that sales of both all apples and juice apples rose during the period 1981-84. 70/ Although many apple growers reported that they operated

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63/ Id. at A-34.
64/ Id. at A-8-9.
65/ Id. at A-80.
66/ Id. at A-34.
67/ Id. at A-49.
68/ Id.
69/ Id. at A-52. Data for 1985 are not wholly comparable because not all firms furnishing data for the earlier years were able to supply 1985 data.
70/ Report at A-55-56.

at a loss on their overall apple operations, 71/ losses appear to have preceded the surges in imports in 1983 and 1985 and do not appear to correlate with them. 72/ We do not consider losses on overall apple growing operations sufficient evidence of serious injury to the domestic industry producing apple juice.

Inventories of all apples and juice apples of reporting U.S. growers' fluctuated during the period in question. Grower inventories as of December 31 have trended upward, but March 31 inventories, which reflect stocks after most of the crop from the previous fall has been sold off, have remained constant in the last 3 years. 73/

In summary, grower operations are oriented to the fresh apple market where growers sell over half their apples and from which they derive most of their revenues. Domestic production, sales, producing acreage, inventories, and employment in the apple grower segment of the apple juice producing industry have been either relatively constant or increasing in recent years. While financial data for some domestic growers indicate that they have experienced difficulties, we do not find that they are seriously injured. In addition, trends do not suggest that they are threatened with serious injury.

Causation 74/

We note that even if we had determined that the apple juice producing

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71/ Id.
72/ Id. at A-52.
73/ Id. at A-48.
74/ Since the Commission has not found the industry seriously injured or threatened with serious injury, Commissioner Brunsdale finds it inappropriate to address the issue of causation. She acknowledges that the apple grower segment of the industry is comprised of geographical pockets of growers and that these pockets have had a variety of experiences over the past several years. While growers in some regions, particularly Washington State, have done well, other growers have experienced difficulties. These difficulties do not, however, support a conclusion that the grower segment, on a national basis, is seriously injured.

industry is seriously injured, we would not have found that imports were the substantial cause of serious injury. Any such economic difficulties are concentrated in the grower segment of the industry. As we have noted, the driving force behind the grower's decision to enter or expand production is the return on sales in the fresh apple market. To the extent that importers of juice have affected over-all operations, that impact has been limited to a narrow source of grower revenues--juice apple sales. Based on limited questionnaire data for large growers, about 10 percent of revenues for large growers comes from juice apple sales; for smaller growers, the share tends to be slightly higher.

Other problems unrelated to imports of juice are affecting the overall performance of the growers of apples. Although we do not find that domestic apple growers as a whole are seriously injured or threatened with serious injury, it appears that growers in some regions of the country are experiencing greater difficultlties than growers located in other regions. Washington State growers, who account for 35 percent of all domestic apple production, have doubled their sales and production of fresh market apples in the past 12 years. 75/ A further expansion of around 50 percent is projected by 1990. To some extent they have displaced apples produced in other regions of the country and in so doing, may have adversly affected growers in those other regions. For example, they have displaced apples from other regions in the fresh market and caused those apples to be sold in the less profitable canning and juice apple markets. 76/

75/ Table circulated by the Office of Investigations, May 28, 1986.

76/ Only 15 percent of Washington State apples have been utilized in juice production in recent years, but an estimated 46 percent of California apples, 36 percent of Michigan apples, and 29 percent of New York apples were or will be utilized in juice during crop year 1985/86. In the mid-1970's a significantly smaller percentage of the apple production of those states was utilized in juice.

As the result of these trends as well as generally increasing production trends, more domestic apples, once destined for the higher-return fresh market, must now be marketed as canned or juice apples by some growers. A reduction in the percentage of apples sold in the fresh market will adversely affect returns on a grower's overall apple production. Thus, the difficulties that some growers are experiencing also appear to be related to changing competitive conditions in the fresh market.

Finally, it should be noted that domestic apple juice consumption could not have risen by the 40 percent that it has in recent years without significant imports of foreign juice unless domestic apples had been diverted from the fresh market.

VIEWS OF VICE CHAIRMAN SUSAN W. LIEBELER

Apple Juice, Inv. No. TA-201-59

I concur with the majority that apple juice, not mixed and not containing over 1 percent ethyl alcohol by volume, is not being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article.

Section 201 of the Trade Act of 1974[1] authorizes the International Trade Commission ("Commission") to recommend temporary import relief, under certain circumstances, to domestic industries. The Commission begins a Section 201 investigation by defining the domestic industry. It then inquires whether three statutory requirements are met: (1) Have the foreign products under investigation been imported in increased quantities? (2) Is the domestic

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[1] 19 U.S.C. § 2251 (1982).

industry seriously injured or threatened with serious injury? (3) Are the increased imports a substantial cause of the injury or the threat of injury? Only if the Commission answers all three questions affirmatively can it consider the question of remedy. I consider these matters in turn.

I. Like Product and Domestic Industry

The imports in this investigation consist of apple juice, not mixed and not containing over one percent ethyl alcohol by volume. Almost all the apple juice imports under investigation come into the country in the form of six-strength concentrate.(CAJ)[2] Once here, the concentrate is diluted with water. It may also be blended with domestic juice.

Section 201 defines the domestic industry as the domestic producers of "an article like or directly

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[2] Staff Report at A-24.

competitive with" the imported article.[3] In the legislative history of Section 201, the Senate Finance Committee explained that:

> "like" articles are those which are substantially identical in inherent or intrinsic characteristics (i.e., materials from which made, appearance, quality, texture, etc.), and "directly competitive articles" are those which, although not substantially identical in their inherent or intrinsic characteristics, are substantially equivalent for commercial purposes, that is, are adapted to the same uses and are essentially interchangeable therefor.[4]

There is no question that the imported apple juice, even though it comes into the country in concentrated form, is like or directly competitive with domestic apple juice. Single-strength juice made from U.S. apples or from domestic CAJ is substitutable for single-strength juice made from imported CAJ.[5] A simple processing procedure turns the imported concentrate into apple juice which is "substantially identical" to the domestic product.

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[3] 19 U.S.C. § 2251(b)(3) (1982).

[4] S. Rep. No. 1298, 93rd Cong., 2d Sess. 122 (1974).

[5] CAJ is used to make 100 percent apple juice products and other products in which apple juice is only one ingredient.

When determining the proper definition of the domestic industry, the Commission traditionally has considered the industry to include all the facilities involved in the production of the product.[6] When several stages are involved in the production of an article, it has considered the industry to include the facilities involved in the various stages to be part of the industry.[7]

I have identified two basic groups of domestic productive resources involved in the production of apple juice: growers and processors. The apple growing farms produce as a residual product the juice apples that are subsequently pressed into domestic juice.[8] It would be incorrect to define the domestic industry solely in terms of growers' juice apple operations. Domestic apple juice

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6 E.g., Certain Canned Tuna Fish, Inv. No. TA-201-53, USITC Pub. No. 1558 (1984), at 5-7; Unwrought Copper, Inv. No. TA-201-52, USITC Pub. 1549 (1984) at 7-8.

7 Id.

8 Some juice operations are more complicated. The juice may be evaporated and formed into concentrate. Later, just like the foreign concentrate, the domestic concentrate may be reconstituted into apple juice.

is made from juice apples, which traditionally are sort-outs, tree-run fruit, weather damaged fruit, drops,[9] and leftovers from other grades.[10] Few growing operations are dedicated to juice apples. Almost all grower operations are dedicated to growing the most profitable apples -- fresh apples and peelers for canning.[11] Juice apples are accidents of nature and growers try to avoid production of such fruit. It would be bizarre indeed to have a "domestic industry" that consisted of articles no one intended to produce.

Thus, the productive facilities involve the entire apple growing operation, not just juice apples. The productive facilities for apple growing are common to juice, canned, and fresh apples. Trees are planted, watered, fertilized, sprayed, and picked using common production factors. The sorting of fruit also involves

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[9] Drops are apples that fall or are accidentally knocked to the ground during harvesting by pickers. Staff Report at A-2.

[10] Id.

[11] See generally Staff Report at A-1-3.

common production factors.[12] Consequently, the correct analysis is to view apple growing operations in their entirety as one component of a domestic apple juice industry.

The second component of the apple juice industry consists of the processors who produce apple juice from apples and concentrate. The different types of processors will be examined in turn.

There are various methods by which apple juice is produced. Most broadly, it is produced directly from pressing apples, from mixing water with concentrate, or a combination of the two. Members of the processing sector include cider mills and other producers of fresh single-strength (not pasteurized) apple juice and producers of pasteurized apple juice.[13] There are about 25 large firms known to the Commission that account for

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[12] The only significant exception to this common use of production factors occurs in the harvesting of drops, but this accounts for only a minor proportion of the overall expenses incurred by the grower.

[13] Staff Report at A-12.

75-80 percent of the total domestic production of apple juice.[14]

There are also processors making CAJ by dehydrating and concentrating single-strength juice in evaporators. Concentrating is done to reduce storage and transportation costs. During 1981-85, at least 16 U.S. firms produced or had the capacity to produce CAJ.[15] Most large producers of domestic apple juice own concentrating equipment. Currently, large capacity CAJ-producing plants are owned by large producers of domestic apple juice.[16]

Reconstitutors are firms that purchase CAJ, dilute it by adding water, and package single-strength reconstituted juice into retail size containers. Reconstitutors generally use only imported CAJ.[17]

Bottlers are firms that also package single-strength apple juice in retail size containers. Bottlers, however,

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[14] Staff Report at A-15

[15] Staff Report at A-15

[16] Staff Report at A-15-16

[17] Staff Report at A-16

may purchase domestic juice in bulk containers, reconstitute CAJ themselves, or blend purchased domestic juice with imported CAJ.

The domestic industry includes all these processors as well as the growers. Petitioner[18] argues that the Commission should find multiple industries, including one comprised of only juice apple growers.[19] Petitioner asserts that the like product is six-strength concentrate and the producers thereof comprise a separate industry. Petitioner then argues that there are two other domestic industries, juice apple growers and U.S. producers of retail processed juice, which are directly competitive with the imported concentrate.

Respondents argue that apples are not directly

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[18] The term "petitioner" is used herein to refer to those supporting the petition.

[19] Preliminary Submission to the International Trade Commission on the Domestic Industries to be Examined in Inv. TA-201-59 (Apr. 11, 1986), at 1.

competitive with apple juice concentrate.[20] They also state that the Commission has not found one integrated industry where the raw product and the processing sector do not exhibit substantial economic interdependence as well as substantial interlocking ownership.[21] Finally, Respondents, arguing in the alternative, note that "to the extent that apple growers are considered at all, the Commission must examine their total operations, including apples sold for the fresh market and for canning.[22]

Both Petitioner and Respondents cite Section 601(5) of the Trade Act of 1974 in support of their arguments. This section provides that

> an imported article is "directly competitive with" a domestic article at an earlier or later stage of processing and a domestic article is "directly competitive with" an imported article at an earlier or later stage of processing, if the importation of the article has an economic effect on producers of the domestic article comparable to the effect of

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[20] Posthearing brief submitted on behalf of Apple Juice Group of the Association of Food Industries, Inc., at 9 (Apr. 24, 1986).

[21] Prehearing brief submitted on behalf of Apple Juice Group of the Association of Food Industries, Inc., at 10-11.

[22] Id. at 12.

importation of articles in the same stage of processing as the domestic article.[23]

Petitioner notes that "the effect upon domestic growers of juice apples is the same regardless of whether imports enter in the form of juice apples or in the form of six-strength concentrate."[24] Petitioner also argues that reconstitutors and concentrators of non-six strength concentrate are harmed to the same degree as the domestic producers of CAJ.[25] Petitioner concludes that products which meet the "directly competitive" test are entitled to their own industry definition except under extraordinary circumstances.[26]

The statute provides that the Commission should assess injury against "the domestic industry producing an article like or directly competitive with the imported article."[27] There is no discretion to find more than

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23 19 U.S.C. § 2481(5) (1980).

24 Id. at 10.

25 Id. at 11-12.

26 Id. at 20-26.

27 19 U.S.C. § 2251(b)(1) (1980)(emphasis added).

one industry if there is only one imported article. Thus, all producers of articles like and directly competitive are aggregated into one industry. I am not persuaded by Commission decisions that may be to the contrary.[28]

Petitioner cites United Shoe Workers of America v. Bedell,[29] as support for the proposition that the Commission has the authority to find multiple industries. I do not find this argument persuasive.

Bedell and its progeny stand for the proposition that component parts manufacturers are not entitled to adjustment assistance even if they are put out of business because of the importation of finished products. These cases were decided under Section 223(3) of the Trade Act of 1974 and its predecessor[30] which contain language substantially identical to that at issue here. Under the trade adjustment assistance program, workers may be

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28 See, e.g., Mushrooms, Inv. No. TA-201-43, USITC Pub. No. 1089 (1980), at 6-14.

29 506 F.2d 174, 185-86 (D.C. Cir. 1974)

30 19 U.S.C. § 2272(3) (1980).

certified as eligible for adjustment assistance, if in addition to meeting other criteria, "increases in imports of articles like or directly competitive with articles produced by such workers' firm . . . contributed importantly to such total or partial separation" of the worker from the firm.[31] As noted earlier, Section 201 refers to "the domestic industry producing an article like or directly competitive with the imported article."[32]

These cases raise a serious question whether growers have standing in an escape clause case. They do not indicate that more than one industry can be found when a directly competitive article is present. For instance, in Gropper v. Donovan,[33] petitioners made finished fabric. Increased imports of garments (the result of assembling finished fabric) reduced the demand for domestic finished fabric and allegedly caused petitioner to close. Trade adjustment assistance was denied by the Secretary of Labor because the petitioner's product was

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31 Id.

32 19 U.S.C. (2251(b)(1) (1980).

33 569 F. Supp. 883 (Ct. Int. Trade 1983).

not like or directly competitive with the imported product. The court found that these products were not interchangeable with nor substitutable for the downstream product.[34] It is possible that under this line of cases, decided on the basis of statutory language and legislative history directly relevant to our own statutory mandate,[35] the juice apple growers might not be eligible for adjustment assistance due to increased imports of apple juice in any form.[36] As the court noted in Morristown Magnavox Former Employees v. Marshall,

> Congress has made a policy decision and drawn a line; our duty is to give the language of the statute a meaning that will carry out that policy.

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[34] See also Holloway v. Donovan, 585 F. Supp. 1427 (Ct. Int. Trade 1984) (car parts not like or directly competitive with cars); Morristown Magnavox Former Employees v. Marshall, 671 F.2d 194 (6th Cir. 1982) (TV components not like or directly competitive with imported TV's).

[35] The decisions with respect to adjustment assistance were formerly made by the Commission. The language governing the required industry definitions are based in the escape clause. See, e.g., Gropper v. Donovan, supra note 33, at 886. Congress was aware of the Bedell decision when it amended section 201 in 1974. S. Rep. No. 1298, 93rd Cong., 2d Sess. 122 (1974).

[36] I do not offer an opinion on the outcome of such a case.

> The result may appear harsh in this day of high unemployment and rising cost of living, but the remedy for congressional policies that do not extend beyond lawful bounds is in the legislature. * * * The restriction in the bill of such adjustment to job loss resulting from competition of "like or directly competitive" products has been repeatedly criticized and debated in Congress. But to date all proposals to eliminate or mitigate these two restrictions have been defeated.

Nonetheless, I do not concur with the argument of Respondents that apple growers have no standing. As noted earlier, the Commission often includes all the domestic facilities involved in the production of the like or directly competitive product. Such an analysis makes sense.[37] Moreover, whether a particular component or raw material is directly competitive with an imported product is a factual determination left to the Commission. Although it is a close call as to whether finding growers directly competitive with imported concentrate would comport with the case law in this area, I am persuaded that such a finding is defensible based on

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[37] The amount of vertical integration in the United States does not persuade me one way or the other on whether a domestic product is like or directly competitive with an import.

Commission practice.[38] Thus, even though I have reservations about whether the growers have standing under Bedell, I choose the economically meaningful interpretation and include the growers within the industry producing the like or directly competitive product.

As indicated above, I conclude the apple growers are properly included within the domestic industry as part of the domestic productive resources employed in the production of the like or directly competitive article. This provides juice apple growers with an opportunity to seek relief under the statute. Having defined the domestic industry, I turn next to the question of increased imports.

II. Increased Imports

The statute requires the Commission to "determine whether an article is being imported into the United

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[38] There does not appear to be a way to determine whether a more liberal definition of directly competitive would withstand judicial scrutiny. Any petitioner of a

(Footnote continued to page 16)

States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof. . ."[39] If the Commission finds that imports have not increased, it may not recommend any remedy.[40]

Several Commission opinions suggest that the "increased quantities" requirement can be satisfied by an increase in the market share of imports.[41] This

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(Footnote continued from page 15)
component part granted adjustment assistance would not appeal. It is unlikely that anyone else would have standing to raise the issue.

39 19 U.S.C. § 2251(b)(1) (1982) (emphasis added).

40 19 U.S.C. § 2251(d)(1) (1982).

41 See, e.g., Nonrubber Footwear, Inv. No. TA-201-55, USITC 1717 ((July 1985) (hereinafter cited as Nonrubber Footwear; Views of Chairwoman Stern at 11-12; Views of Commissioner Lodwick at 81-82; Views of Commissioner Rohr at 95; Views of Commissioner Eckes at 60); Stainless Steel and Alloy Tool Steel, Inv. No. TA-201-48, USITC Pub. No. 1377, at 16 (1983); Sugar, Inv. No. TA-201-16, USITC Pub. No. 807, at 11 (1977); Unwrought Copper, Inv. No. TA-201-52, USITC Pub. No. 1549, at 829 (1984) (Views of Commissioners Eckes, Lodwick and Rohr) (hereinafter cited as Copper); Certain Canned Tuna Fish, Inv. No. TA-201-53, USITC Pub. No. 1558, at 8 (1984) (Views of Commissioners Eckes, Lodwick and Rohr) (hereinafter cited as Tuna); Potassium Permanganate, Inv. No. TA-201-54, USITC Pub. No. 1682, at 6-7 (1985) (Views of Chairwoman Stern and Commissioners Lodwick and Rohr) (hereinafter cited as Potassium Permanganate);
In response to a question by then-Chairman Eckes at
(Footnote continued to page 17)

interpretation is contrary to the clear language of the statute and the intent of Congress. The statute uses the phrase "increased quantities." The word quantity, in its normal use, refers to an amount and carries no connotation of relativity.[42] When Congress wanted the Commission to consider the relative market share of imports, it used precise language to convey that intent.[43] Later in

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(Footnote continued from page 16)
the hearing for Carbon Steel, the petitioners were unable to cite a single case in which the Commission made an affirmative injury determination where imports had not increased absolutely. Despite this lack of precedent, however, the Commission majority in Carbon Steel made affirmative determinations with respect to plates and structural shapes and units even though imports of both products had declined. (I made negative determinations with respect to both product groups because they failed the increased imports requirement. Carbon Steel, at 145, 153 (Views of Vice Chairman Liebeler).)

42 In 1984 former Commission Vice Chairman Michael J. Calhoun testified that his prior interpretation of "increased quantities" was erroneous and that Section 201 requires an absolute increase in imports. Import Relief for the U.S. Non-Rubber Footwear Industry: Hearing Before the Subcommittee on International Trade of the Senate Committee on Finance, 98th Cong., 2d Sess. (June 22, 1984).

43 See, e.g., Section 406 of the Trade Act of 1974, 19 U.S.C. § 2437(e)(2) (1982) ("Market disruption exists within a domestic industry whenever imports of an article, like or directly competitive with an article produced by such domestic industry, are increasing rapidly, either absolutely or relatively, so as to be a significant cause
(Footnote continued to page 18)

Section 201, for example, it provided that the Commission can examine both the absolute and relative increase in imports to determine whether the increased quantity of imports is a substantial cause of serious injury.[44] Thus, the statute provides clear support for the position that imports must be increasing absolutely.[45]

Imports of apple juice enter under TSUS item 165.15, which covers both apple and pear juice. Apple juice makes up the large majority of items entering under this item

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(Footnote continued from page 17)
of material injury, or threat thereof, to such domestic industry.") (Emphasis added).

44 19 U.S.C. § 2251(b)(2)(C)(1982). For example, a given absolute increase will normally have a larger impact in a shrinking market than in a growing market.

45 The legislative history also supports this interpretation. The Senate Report on the Trade Act of 1974 distinguished between the finding of increased imports and causation. According to the Senate Committee: "An industry must be seriously injured or threatened by an absolute increase in imports, and the imports must be deemed to be a substantial cause of the injury before an affirmative determination should be made." S. Rep. 1298, 93rd Cong., 2d Sess. 121 (1974). (Emphasis added.) We offer this reference to the legislative history because the majority cites a different position to support their "relative increase" position. The legislative history is mixed and only relevant if the statute is ambiguous. The statute is not ambiguous and thus the legislative history is not relevant on this point.

and nearly all is imported in concentrated form.[46] In order to evaluate whether an absolute increase in imports has occurred, the period under investigation must be determined. Typically in a section 201 case, the Commission looks at data for the last five years. Imports of juice increased from 70 million gallons in crop year 1980/81[47] to 209 million gallons in 1984/85. Imports also increased from 113 million gallons in July 1984-January 1985 to 120 million gallons in July 1985-January 1986. Therefore, this criterion of the statute is met.

III. Serious Injury and Threat of Serious Injury

A. Definition

Section 201 requires that the injury or threat to the industry be serious in order for relief to be granted. Although serious injury plays an important role

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[46] Staff Report at A- 24.

[47] The crop year extends from July 1 of one year to June 30 of the following year.

in a Section 201 investigation, the statute does not define the term. Instead, it lists several factors that are evidence of serious injury:

> the significant idling of productive facilities in the industry, the inability of a significant number of firms to operate at a reasonable level of profit, and significant unemployment or underemployment within the industry.[48]

The legislative history only reiterates what is in the statute, and emphasizes that the enumerated factors are only evidence of injury and thus no single factor is dispositive.[49]

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[48] Sections 201(b)(2)(A) and (B) of the Trade Reform Act of 1974, 19 U.S.C. § 2251(b)(2)(A) and (B) (1982).

[49] S. Rep. 1298, 93rd Cong., 2d Sess. 121 (1974). In addition, the Commission may take into account any other economic factors it considers relevant. 19 U.S.C. § 2251(b)(2) (1982). The 1984 amendments to Section 201 added a subsection which addresses the relevant weight to be accorded the factors:

> [T]he presence or absence of any factor which the Commission is required to evaluate in subparagraphs (a) and (b) shall not necessarily be dispositive of whether an article is being imported into the United States in such increased quantities as to be a substantial cause of serious injury or threat of serious injury to the domestic industry. Trade and Tariff Act of 1984, 19 Stat. 2999 (amending 19 U.S.C. § 2251(b)(2)(D) (1982)). Section 201(b)(7), as amended by the 1984 Act, defines the phrase

(Footnote continued to page 21)

Serious injury is obviously a much stricter standard than the material injury standard used in Title VII investigations. The degree of severity that Congress intended when it used the term "serious" was described in the Report of the Senate Finance Committee:

> For many years, the Congress has required that an "escape clause" be included in each trade agreement. The rationale for the "escape clause" has been, and remains, that as barriers to international trade are lowered, some industries and workers inevitably face serious injury, dislocation and perhaps economic extinction. The "escape clause" is aimed at providing temporary relief for an industry suffering from serious injury, or the threat thereof, so that the industry will have sufficient time to adjust to the freer international competition.[50]

The Commission has defined serious injury in past investigations as "an important, crippling, or mortal injury,

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(Footnote continued from page 20)
"significant idling of productive facilities" as "the closing of plants or the underutilization of production capacity". Id. (amending 19 U.S.C. § 2251(b)(7) (1982)).

50 S. Rep. No. 1298, 93d Cong. 2d Sess. 119 (1974). (Emphasis added.) It is also worth noting that the Committee in proposing to relax the standards for "escape clause" relief decided to weaken the causation standard, rather than change the serious injury standard.

one having permanent or lasting consequences."[51] In determining whether there is threat of serious injury, the Commission must consider:

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[51] See, e.g., Electric Shavers, Inv. No. TA-201-57, USITC Pub. 1819 at 8 (1986); Bolts, Nuts and Screws of Iron or Steel, Inv. No. TA-201-2, USITC Pub. 747 at 19 (1975) (Views of Commissioner George Moore). I regard this definition as consistent with a "major contraction of a domestic industry or its extinction." The use of the term "serious injury" in the same phrase as "extinction" suggests that "serious injury", if not strictly limited to economic extinction, is something very close. See Nonrubber Footwear, at 32 (1985) (Views of Vice Chairman Liebeler); Potassium Permanganate, at 20 (Views of Vice Chairman Liebeler).

I direct my inquiry toward the viability of the industry instead of the factors of production only after a careful analysis of the Act as a whole. The statute directs the Commission to determine whether increased imports are a substantial cause of serious injury "to a domestic industry producing an article like or directly competitive with the imported article." 19 U.S.C. § 2251(b)(1) (1982) (emphasis added). Thus, Congress, in enacting Section 201, was concerned with the effect of imports on domestic industries, rather than on those who provide labor and capital to individual firms. This interpretation is not weakened by the statutory requirement that the Commission consider unemployment and the profitability of firms. Such factors are indicia of injury to an industry. Furthermore, the use of the terms "industry" and "producer" or "firm", sometimes in the same sentence and in opposition to one another, see, e.g., 19 U.S.C. § 2251(b)(3)(A) (1982) ("The Commission may, in the case of a domestic producer which also imports, treat as part of such domestic industry only its domestic production."), makes it clear that Congress did not equate the returns to the firms and workers with the existence of

(Footnote continued to page 23)

> a decline in sales, a higher and growing inventory, and a downward trend in production, profits, wages, or employment (or increasing underemployment) in the domestic industry concerned. . . . and all [other] factors which it considers relevant."[52]

The legislative history states that, by threat of serious injury, Congress meant injury that is clearly imminent.[53] The Commission traditionally requires that the threat be real rather than speculative and that serious injury be highly

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(Footnote continued from page 22)
the industry. Finally, the House Report on the Trade and Tariff Act of 1984, which amended several provisions of Section 201, underscored congressional concern with the viability of the industry. It declared that, in assessing the condition of the industry, the Commission should not treat the industry's profit data as dispositive, but should also give careful consideration to plant closings and employment trends. H. R. Rep. No. 1156, 98th Cong., 2d Sess. 142 (1984). An industry may be profitable in an accounting sense, even though it is shrinking or dying. If the providers of capital are earning what they could earn in their next best use (i.e., their opportunity costs), and if barriers to entry and exit in the industry are low, then plant closings and employment trends may indicate a contracting or dying industry. See my discussion of serious injury in Carbon Steel, at 135-36 (Views of Vice Chairman Liebeler).

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19 U.S.C. § 2251 (b)(2) (1982).

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The Senate Finance Committee's Report on the Trade Act of 1974 states that "[i]t is the intention of the Committee that the threat of serious injury exists when serious injury, although not yet existing, is clearly imminent if import trends continued unabated." S. Rep. 1298, 93d Cong., 2d Sess. 121 (1974).

probable in the foreseeable future.[54]

B. Is the Domestic Apple Juice Industry Seriously Injured?

1. The Growers

Since the bumper harvest of crop year 1980/81, domestic production of all apples has been relatively stable.[55] Production totaled 8.8 billion pounds in crop year 1980/81, 7.8 billion pounds in crop year 1981/82, 8.1 billion pounds in crop year 1982/83, 8.4 billion pounds in crop year 1983/84, and 8.3 billion pounds in crop year 1984/85.[56] This represents a decrease in production since 1980/81 of only around 6 percent. Thus, there is no indication that the grower sector is suffering a "significant idling of productive facilities."[57]

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54 Nonrubber Footwear: Report to the President, Inv. No. TA-201-50, USITC Pub. No. 1545 (1984) at 19 (hereinafter referred to as Footwear III).

55 Staff Report at A-24.

56 Staff Report at A-32, Table 13.

57 Juice apple production mirrors the trend for total apple production, changing from 2.1 billion pounds in 1980/81 to 1.8 billion pounds in 1981/82 and 1982/83 to

(Footnote continued to page 25)

Financial data for apple growers is not consistent with a finding of serious injury. For large growers, net sales of all apples increased from $17.7 million in 1981 to $20.5 million in 1984.[58] Net income before income taxes as a share of net sales was (3.8) percent in 1981, 0.8 percent in 1982 and 1983, and (1.2) percent in 1984. Although this means that large apple growers were barely breaking even, a claim of serious injury is belied by their planned future investments in apple

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(Footnote continued from page 24)
2.0 billion pounds in 1983/84, to 1.9 billion pounds in 1984/85. Reflecting increased consumer demand for apple juice, the ratio of juice apples to total utilized apple production increased from a U.S. average of 16 percent in the first half of the 1970's to 20 percent in the last half of the decade, to 23 percent in the first half of this decade. Staff Report at A-33, Table 14. It is estimated that this ratio will drop slightly to 21 percent in crop year 1985/86. As can be seen from the data on juice apples, there has been no significant contraction there either.

[58] Staff Report at A-53, Table 26, addresses income-and-loss experience on overall operations of farms on which apples are grown. Figures for 1985 are not reliable because 7 of the 38 growers did not provide data for that year. I hesitate to rely on data for small growers, since the responding growers account for about one-half of one percent of total production by small growers. In any event, their figures do not materially differ from those for large growers, and, in fact, their net income ratios have been generally higher. Staff Report at A-56, Table 28.

growing. Apple growers were asked to predict expected production to the year 1990. Using 1985 as a base year (1985=100), large farms forecast a production index increase to 127 in the year 1990. Small farms were more optimistic, projecting an index of 151. In light of the fact that juice apples are the least profitable portion of the crop, growers are adjusting their future product mix by planting new trees in order to produce more apples for the fresh market.[59] If growers did not believe they had the ability "to operate at a reasonable level of profit," one would expect to see exit from the industry, not projected future growth. In fact, the acreage of producing apple trees has been stable during the last three crop years.[60] In short, the apple growing sector has been stable during the past few years and there is no sign of serious injury to the industry.

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[59] Staff Report at A- 80. Sixty percent of the larger growers stated that they had responded to increased imports of CAJ by investing in the renewal of existing orchards or in new orchards. New plantings replace older trees that produce smaller apples suitable only for juice.

[60] Staff Report at A- 35-36, Tables 15 and 16.

2. The Processors

The diversity of processing operations, discussed above, is matched by the processors' divergent views of the petition seeking relief. Major U.S. producers such as Tree-Top, Cadbury, National and Bowman, oppose relief. This is significant because these producers represent from one-third to one-half of U.S. juice apple production.[61] Seneca, also a major producer, is neutral.

Why should so many processors oppose relief? One of the most eloquent explanations for processor opposition came from Tree Top, Inc., a grower-owned apple processing and marketing cooperative. Tree Top noted that processors of raw product have found they can use imported apple juice concentrate to their advantage in many ways:[62]

> It is a low-cost substitute for fruit solids which can allow the processor to divert more of his raw product to higher profit items such as dried apples while still retaining shelf space for apple juice with a blend of local raw product and imported concentrate.

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61 Because of incomplete questionnaire responses, staff was able to estimate only roughly these firms' share of the market.

62 Letter from Dennis Colleran, President and General Manager of Tree Top, Inc., to Commission (April 8, 1986).

When imported concentrate prices are favorable, the processor can realize increased margins.

Blending local raw product with purchased concentrate helps the processor maintain a consistent quality and flavor despite variations in available apples. Raw product deliveries are not flexible, but purchased concentrates can be useful in setting up reliable production schedules.

Processors can leverage their capital investments more effectively with additional production volume derived from purchased concentrates.

In the event of crop failures, processors can protect their shelf space by supplementing raw product with purchased concentrate.

According to industry sources, all but one or two producers of domestic apple juice purchase imported CAJ.[63] Many national brand name apple juice products are made entirely from imported CAJ. These makers state that a very large and steady supply of raw material is needed to support a national line, and it can be secured only from foreign sources.[64] Thus, for many U.S. producers of juice, import "relief" might injure the industry.

There is no indication that the processors are suffering serious injury. U.S. production of single-strength apple juice

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63 Staff Report at A-45.

64 Staff Report at A-45.

was highest in crop year 1980/81, when the largest apple crop was harvested, at 182 million gallons.[65] Since then, production has fluctuated rather minimally, from 153 million gallons in crop year 1981/82, to 154 million gallons in crop year 1982/83, to 169 million gallons in crop year 1984/84, to 158 million gallons in crop year 1984/85. Production is estimated to be 153 million gallons for crop year 1985/86.[66]

The income-and-loss experience for ten producers accounting for 30 percent of U.S. production showed net sales rising from $104.9 million in 1982 to $142.2 in 1985. Operating income as a share of net sales was 5.3 percent in 1982, 2.7 percent in 1983, 2.2 percent in 1984, and 2.8 percent in 1985.[67] Gross profits increased steadily during 1982-85 in absolute terms,

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65 Staff Report at A-23, Table 7.

66 Staff Report at A-44, Table 20 (USDA data). Because of increased consumer preference for apple juice, these figures are about 50 percent higher than comparable figures during the mid-1970's. Staff Report at A-24, Table 8.

67 All data in the text of this paragraph are from Staff Report at A-60, Table 31. It should be noted that Cadbury Schweppes furnished information which was too late to be included in the financial tables. However, it opposed the petition.

and were relatively stable as a percentage of net sales.[68] While a number of processors support the petition (they account for about one-third of U.S. production), the processors accounting for the bulk of production oppose it or are neutral. This is in and of itself a significant indication that the financial data reported above do not reflect serious injury.

I do not find there to be a threat of serious injury to the growers or processors. Although there is significant worldwide capacity to produce apple juice, and imports have increased, growers are not reducing apple acreage. Rather forecasts are for increased plantings. Processors have stated important reasons for their use of imported CAJ and there is no reason to think they will not benefit from the imports in the future.

IV. CONCLUSION

Although some data indicate that the industry has contracted in the last few years, the industry's decline has

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[68] The relatively low operating incomes may be accounted for by heavy promotional expenses because of intense competition for supermarket shelf space.

not been sufficient to constitute serous injury, nor is there evidence that a threat of serious injury exists. Therefore, I determine that the domestic industry is not seriously injured or threatened with serious injury. Because of my determination of no serious injury or threat thereof, I do not reach the issue of causation.

DISSENTING VIEWS OF COMMISSIONER DAVID B. ROHR

Unlike my colleagues, I believe that the statutory requirements for import relief for an injured domestic industry under Section 201 of the Trade Act of 1974 have been satisfied in this investigation. Apple juice is being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic apple juice industry. The fundamental points of disagreement between my colleagues and myself are in our characterization of the domestic industry and in our application of the statutory criteria in the context of an agricultural industry.

The fact that this investigation involves an agricultural product is important. Agricultural products do not easily fit within the traditional analytic frameworks of Section 201 investigations, which have developed primarily in the context of manufactured products. Applying the statutory criteria to a realistically defined apple juice industry, and recognizing the unique problems of agricultural industries, there can be no question that this industry is experiencing serious injury, a substantial cause of which is imported apple juice.

The Domestic Apple Juice Industry

The first issue in this investigation is the definition of the domestic industry. The industry with which the statute is concerned is "the domestic industry producing an article like or directly competitive with the imported article." This definition has always been interpreted more expansively than its counterpart in the countervailing and antidumping duty laws. The goal of the Commission should be to develop a commercially realistic definition of the industry.

The imported article in this investigation is, generically, apple juice. More

specifically, the imports consist primarily of concentrated (6X) apple juice. This is a commercial product used in the production of other products for sale to ultimate consumers. In addition, there are smaller quantities of imports of apple juice in lesser concentration. The predominance of 6X imports is important for it focuses the investigation on competition at the bulk, rather than the retail, level of trade.

The difficulty for the Commission in this investigation, as in many other investigations involving agricultural products, exists on two levels. First, we must determine what product or products fit the statutory criteria of being "like or directly competitive" with this imported apple juice. Then, we must define the parameters of the domestic industry which produces that product.

On one hand, the more narrowly and precisely that these definitions are made, the more focused is the Commission's investigation, and the less chance there is for the Commission to be faced with competing domestic interests that can not be reconciled within the statutory framework of a Section 201 investigation. On the other hand, narrow definitions may obscure commercial reality, which often involves many different stages of production and different, though related, products.

The domestically produced product with which this investigation is concerned is apple juice, without regard to concentration or degree of processing. It is true that distinctions may be drawn, for example, between different strengths of apple juice based upon how they reach the ultimate consumers. Fresh squeezed, single-strength juice, often sold directly to consumers or retailers by apple growers, can be distinguished from concentrated apple juice, primarily used by companies that blend or otherwise reconstitute the juice for commercial sale as frozen triple-strength concentrate or single-strength pasteurized juice. While such differences affect our analysis of the market, they do not require analysis of separate industries.

For purposes of this investigation, the significant question is who we include within the scope of the domestic industry. The production of apple juice includes many different stages, from apple growers at one end to packagers of retail products at the

other. The analysis is complicated because some stages may be combined with others or eliminated altogether. A further complication is that apple juice production is seldom the sole activity of any producer. Growers produce apples for juice and for other markets; processors process apple juice and other beverages.

The initial stage in the production of apple juice is the growing of apples to be processed into juice. Unlike, for example, oranges, certain varieties of which are grown by specialized growers for the juice market, no specific variety of juice apple is grown; and few, if any, growers produce solely for the juice market. Apples used in the production of apple juice are, rather, those which, because of damage or imperfection, cannot be sold in the more profitable fresh or canning markets. Nonetheless, juice apples have historically represented a relatively stable portion (20 to 25 percent) of total domestic apple production, with certain geographic locations having historically high or lower percentages.

In investigations involving manufactured products, Commission precedent is to look, to the extent possible, only at that portion of the individual firms' operations producing the goods competing with the imports. In our recent investigation of foundry products, TA-201-58, for example, the foundries in the investigation produced a much wider array of products than those alleged to be causing injury. In that investigation, the Commission focused its investigation only on those operations producing the like or directly competitive products to those alleged to be causing injury.

To be sure, the difference between a decorative tree-grate and a manhole assembly is more easily visualized than the difference between a fresh market apple and a juice apple, but the distinction is there. The market perceives the difference between such apples. It assigns different prices to each. Producers also know that a certain portion of their production will be of apples for which juice is the only use.

Also, certain costs of producing apples, such as maintenance of the trees, will be the same whether the apples are sold in the fresh or the juice market. By analogy, however, this is to say no more than that raw steel goes into the manufacture of plate,

sheet, or wire rod. The grower does make a decision, independent of his decisions with regard to fresh market apples, whether to "produce", i.e. harvest, juice apples, and, if he does so, he incurs a set of expenses independent of expenses on his other apples.

Similar considerations led the Commission in a recent dumping investigation, *Red Raspberries from Canada*, 731-TA-196, USITC Pub. No. 1707 (1985), under the more restrictive provisions of that statute to distinguish between fruit intended for the fresh and processing, and even more specifically, the bulk processing market. Similarly, in *Table Wine from the Federal Republic of Germany, France, and Italy*, 701-TA-258-60, 731-TA-283-85, USITC Pub. No. 1771 (1985), the Commission distinguished between grapes grown for table use or for raisins from those used for wine.

A separate question is whether growers of juice apples should be viewed as part of the "industry" or merely as suppliers to the apple juice industry, defined as the processors. The Commission's application of the countervailing duty and antidumping duty laws suggest that such an interpretation is reasonable. Section 201, however, is not limited by the requirements applicable to the unfair trade laws. In view of the particular circumstances of this agricultural investigation, a broader interpretation is necessary. It is appropriate to look at growers as a part of the domestic industry and to focus, as much as possible, specifically on their activities relating to juice apples.

In addition to apple growers, apple juice processors must be considered part of the domestic industry. There are three segments of the processing industry. The first consists of the pressing of juice apples to produce single strength apple juice, which can be sold fresh or pasteurized or passed on to the next stage of production. The second segment of the industry consists of the concentrators who produce the basic commercially-used product, 6X Concentrated Apple Juice (CAJ). Most concentrating capacity in the U.S. is owned by the large producers of single strength juice. The final stage of production is the reconstituting or packaging of the retail product by companies who use either imported or domestic CAJ or domestic single strength juice. The larger producers often operate at all levels.

The interests of companies who operate on these different levels are not always the same. A producer whose operations include packaging facilities and who can take advantage of low priced imported CAJ may see his interests differently from a producer who must sell his product in direct competition with the imported product. The focus of the Commission's analysis must be on the latter. It is a mistake for the Commission, which is ill-equiped for the task, to try to balance the competing interests of such producers. The task of the Commission is to determine whether that portion of domestic production that competes with the imports is injured, whether that injury is serious, and whether imports are a substantial cause of that injury. That is what I have done.

Increasing Imports

The first question that the Commission must answer in any Section 201 investigation is whether imports are increasing. In this investigation, imports have risen dramatically using all relevant measurements. U.S. imports for consumption under the tariff schedule classification for apple juice (which includes a small quantity of pear juice) rose from 44 million gallons (single strength equivalent, SSE) in 1980 to 214 million gallons SSE in 1985. Adjusted to a crop year basis, the increase is also dramatic, from 70 million gallons SSE, valued at 52 million dollars, in 1980/81 to 209 million gallons SSE, valued at 140 million dollars, in 1984/85. Further adjusted to discount the presence of pear juice, the increase is from 70 million gallons in 1980/81 to 196 million gallons in 1984/85.

Focusing on imported CAJ, the 6X commercial product in the form in which it is most commonly imported, the increase is from 9 million gallons to 29 million gallons over the period of the investigation. In relation to U.S. production, imports rose from 38 percent to 124 percent of domestic production. Partial data for the current year reflect further increases in imports, even though the data do not include those quarters in which imports have traditionally been heaviest. Thus, imports increased over the period of investigation; they are currently increasing; and they are projected to

increase even further. The increased imports criterion for relief under section 201 has been met.

Serious Injury

In order to analyze the condition of the domestic apple juice industry, it is necessary to look separately at the growing and processing sectors because injury, or lack thereof, will be evidenced by different indicators in each. However, the question before the Commission is whether there is serious injury to the industry as a whole. This judgment is necessarily qualitative rather than quantitative. Because of unique features of agricultural industries, the purely statistical indicators must be approached cautiously as they may not reveal the actual conditions of production, employment, and profitability in the industry.

For processors, production declined irregularly over the period of investigation from an estimated 182 million gallons to 153 million gallons. Based upon our questionnaire responses, which are significantly understated in absolute volumes but appear to accurately reflect trends, production of CAJ shows a sharper drop, from 670 thousand gallons to 155 thousand gallons. Similarly, sales of domestically produced CAJ dropped to virtually nothing, from 290 thousand gallons in 1981/82 to 15 thousand gallons in 1985/86. The evidence, as a whole, establishes a substantial reduction in production of apple juice, particularly of the concentrated product that is in direct competition with the imports.

Capacity utilization in concentrating facilities producing CAJ decreased from approximately 26 percent in 1981/82 to 13 percent in 1982/83 before stabilizing at 16 to 17 percent for the remainder of the period. At least 17 plants, equivalent to almost one-quarter of 1985 concentrating capacity, closed during the period of investigation. Employment by processors increased until 1984. However, there were significant declines in the number of employees, hours worked, and compensation in 1985.

The financial position of firms in the processing sector was not strong in 1982 and

declined further over the period of the investigation. After registering a small profit in 1982, the industry experienced losses from 1983 through 1985. More than half of the firms reporting to the Commission experienced losses in each year for which the Commission has financial data. These losses are reported by both small and large firms and, thus, cannot be attributed to a particular scale of operations. All the key financial ratios for the domestic producers deteriorated over the period and reflect the very serious financial problems facing this industry and the limited resources available to deal with these problems.

The statistics for apple grower operations are also mixed. Production both of all apples and of juice apples peaked in the 1980/81 crop year at 8.8 and 2.1 billion pounds, respectively. After a sharp drop in 1981/82, production of all apples fluctuated around 8.2 billion pounds. Juice apple production followed the same trend, fluctuating around 1.85 billion pounds.

Most production indicators for grower juice apple operations remained stable throughout much of the period of investigation. There are two significant exceptions. The number of acres devoted to apple production declined for small growers in 1985 and for large growers in 1984. Most significantly, there was a huge increase in the number of juice apples not harvested or left to rot in the orchards. After remaining one percent or less of the crop for most of the period of investigation, data for the current crop year show that as much as four to five percent of this year's crop is being left unharvested.

The financial picture of the growers is also very precarious. Only in 1982 and 1983 did growers achieve even small overall profits, registering losses in the other years of the investigation. Net sales of juice apples declined steadily after 1982. Grower assets and capital equity have declined sharply, and the debt to equity ratios of the growers deteriorated, reflecting at least in substantial part the significantly declining revenues from juice apples.

Statistics, however, do not tell the whole story of conditions in this industry or

of the serious injury that it is experiencing. Production, for example, must be seen in light of the overall growing and harvesting of apples. The planting of apple trees entails a commitment to long-term production, a part of which is production of juice apples. Of course, production of apples will vary to some extent in the short run due to many factors. Some will be exogenous, such as the weather; some are within the growers' control, for example pruning and fertilizing. However, the most important factor affecting overall production in a particular year is the number of bearing apple trees. This is the result of planting decisions made years before the current growing season. As a result, it is unlikely that production statistics will reflect current factors affecting the market.

Further, it is also clear that the decision to produce juice apples will not be the major determinant of the decision to plant trees or plan production for a given year. Producers make their decisions in an attempt to satisfy the overall demand, particularly the fresh market demand, for apples. In so doing, a certain percentage of the crop, roughly one quarter, will be grown, whether intentionally or not, for the juice market.

It could be argued therefore, from the statistics, that production of juice apples is not important for growers and that reduction in demand for juice apples could not have a serious impact on overall grower operations. This would not be correct. The current indicators of production reflect decisions made long before apple juice imports began to increase. Most production indicators will not begin to reflect the current impact of imports for some time. This does not mean that the injury isn't occurring now, but only that there are lags in the statistics.

The one indicator which most accurately reflects the current impact of the market on production is the percentage of juice apples that are being left unharvested. The decision whether to invest the three to five cents per pound cost to harvest juice apples is made by the grower on the basis of current market conditions. This indicator reflects that, under normal market conditions, one percent or less of the crop will be left unharvested. In the most recent year, however, four to five percent is being left

to rot because it is uneconomic to harvest them. Because juice apples themselves are roughly 25 percent of the crop, this means that as many as 20 percent of juice apples are being left unharvested. To analogize to manufacturing cases, this is equivalent to a 20 percent decline in juice apple production, with concomitant effects on the pressing and concentrating segments of the industry.

In the short run, the inability to sell juice apples will pose difficulties for individual firms. This may or may not be serious for such firms depending upon the market for their other apple products. However, the continued inability to sell the apples is certainly indicative of serious injury to the industry as a whole.

Juice apples will continue to be grown. As long as apples are grown, some apples will be fit only for juice. But, if the juice market is not available, as the trends clearly suggest, those apples will simply be left to rot. Long-run apple production cannot but be affected by the fact that as much as 25 percent of the crop is generating no economic return.

A second important aspect of the situation concerns the financial impact of declining sales of juice apples on growers. Here, too, the importance of the "injury" depends on the relationship between production of juice apples and total apple production. The data collected by the Commission establishes the juice apple production has not been, and is unlikely to be, "profitable" in a conventional sense. The cost of growing an apple, whether it is eventually sold in the fresh market or the juice market, will essentially be the same. When these costs are allocated to juice apples and total expenses attributable to juice apples are compared to revenues derived from juice apples, "losses" are virtually certain to result.

"Profitability", however, is not the issue. The key element in the analysis of the financial data in this investigation is the contribution that juice apple revenue makes to total apple revenue. In this context, juice apples may or may not be significant, and the revenue loss may or may not be serious. Opponents of import relief concluded that the contribution of juice apples is not significant. Apple growers, evidenced by

their many statements to the Commission, clearly believe otherwise. I believe that the sale of juice apples is significant, and the revenue loss to growers is serious.

For the crop years 1980/81 through 1984/85, juice apple production for smaller growers represented 27, 23, 27, 33, and 22 percent of total apple production. Over the same period, revenue for the smaller growers from sales of these apples averaged 12.7, 17.3, 19.9, 11.8, and 7.6 percent of total revenue. For larger growers, juice apple production averaged 20, 20, 20, 19, and 15 percent of production and 10.8, 13.2, 12.9, 10.2, and 8.5 percent of revenue. Thus, there has been a precipitous drop in the contribution of juice apples to apple growers income. I believe this to be a strong indication of serious injury to the growers.

The industry, however, is composed not only of juice apple growers, but also of apple juice processors. For juice processors, the largest portion of their capital investment is for their apple pressing and concentrating facilities. Assuming a 4 million gallon capacity, a pressing facility requires approximately 4 million dollars. A bottling plant to process CAJ, on the other hand, would require only 600 thousand dollars.

The comparatively smaller investment required to enter the market with a bottling plant, taking advantage of cheaper imported CAJ, puts considerable pressure on processers that have made an investment in domestic pressing facilities to cut costs and also use the cheaper imports. Similarly, a significant factor affecting the processing sector is the fact that the largest pressing and concentrating facilities are owned by companies that are integrated throughout the various stages of production and that are in a position to use imported CAJ in their operations as a substitute for domestically produced juice. The evidence suggests that the domestic facilities, particularly in the concentrating segment of the industry, are suffering major losses as they are idled, while the bottlers, and those integrated companies which are in a position to do so, turn to imported CAJ to maintain their competitive edge in the market place and their overall profits.

I believe that, as a consequence of these factors, the apple juice industry is experiencing serious injury, with repercussions for both growers and processors. For growers, it is unlikely that they will be able to maintain long-term production with a quarter of their production bringing in almost no revenue. For processors, it is likely that the current trend towards the closing of pressing and concentrating facilities will continue. This will increase pressure on growers and accelerate the movement out of the pressing and concentrating segments of the industry. Given the relatively large investment required for pressing and concentrating, compared to using CAJ, the longer facilities are idled and the more that go out of business, the more difficult it will be to reenter these segments of the industry. The result will be a further reduction in demand for domestically grown juice apples.

Substantial Cause

Having determined that imports are increasing and that the domestic industry is seriously injured, it only remains to be determined whether imports are a substantial cause of that injury. Often, this is a difficult question despite attempts to simplify it using abstract economic theories. Here, it is not difficult and the information gathered by the Commission is clear.

The point of competition between the imports and the domestic product is at the level of the retail packager. This is the purchaser who can decide whether to use imported CAJ or juice from domestic apples. The Commission extensively investigated these companies, some of whom also own domestic pressing and concentrating facilities. The virtually universal response of purchasers of the imported CAJ to explain their decision to close domestic facilities, to cut back domestic production, or to reduce purchases of domestically produced concentrate was the availability of low priced imported concentrate. Financial losses are being suffered despite the increasing overall demand for apple juice because the price of apple juice has been decreasing due to the availability of low priced imported CAJ, which is in turn forcing down the price

of domestic CAJ and, ultimately, the price of juice apples. Regardless of the theories, this is how the businessmen in the industry, whether or not they support import relief, explain the situation. Imports are clearly an important cause of the current situation.

An issue that remains of concern is the question of unfair trading practices. The presence of subsidies or less than fair value sales, is not relevant to the questions that the Commission must decide in a Section 201 investigation. In this investigation, the Commission, in fact, did receive information relating to alleged subsidies being granted to producers of a particular country. As required by the statute, we referred the matter to the Department of Commerce for action under the appropriate statutes. Under Section 201, however, it is the impact of all imports, not just imports from a particular country and not just unfair imports, that must be the subject of our determination. It is not proper to discount the effect of particular imports because they might be subject to action under some other statute.

It was also argued that some of the plants and firms that have left the industry over the period of investigation were too small and inefficient to survive. Whether true or not, the information gathered by the Commission suggests that both large and small and old and new facilities went out of production or are experiencing low levels of capacity utilization and profits. In the presence of such generalized conditions, it is not possible to conclude that obsolete technologies or poor management decisions by particular firms have been as important a cause of injury as imports. Thus, there is no other cause which is as important a cause of injury to the industry as imports.

Conclusion

This investigation defies easy analysis in accordance with the traditional frameworks of Commission Section 201 determinations. The data obscure as much as they reveal about the operation of this industry. Imports have started the industry onto a slide from which it will be difficult to recover. Whether we label this slide serious injury or threat thereof is not important. Whether we parse distinctions between

growers and processors is not important.

The reality is that over the last few years a massive surge of imports has seriously dampened prices and caused a severe disruption in the utilization of the productive resources of this industry. It has reduced revenues significantly and poses a threat to the continued viability of the industry. It has caused serious dislocations in the traditional relationships between the various parts of the industry and introduced new factors to which the industry must adjust. The facilitation of this adjustment to new international competitive factors is a legitimate purpose of section 201.

I recognize that temporary relief from imports would not have solved all the problems of the apple juice industry. The evidence suggests, however, that the industry may not have the resources or ability because of imports to get off of its current downward spiral. Import relief would have provided growers the opportunity to reduce their reliance on juice apples. It would have allowed processors to utilize and upgrade their domestic pressing and concentrating facilities. Certainly, unless major efforts were to have been made during the period of relief, the industry might have been no better off. I believe that the industry recognized this when they brought this petition for temporary relief. They made their case and should have been given the opportunity to adjust that Section 201 provides.

This is why I have made an affirmative determination and concluded that this industry satisfied the requirements for import relief under section 201 of the Trade Act of 1974.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On December 27, 1985, the U.S. International Trade Commission instituted investigation No. TA-201-59 under section 201(b) of the Trade Act of 1974 to determine whether apple juice, not mixed and not containing over 1 percent ethyl alcohol by volume, provided for in item 165.15 of the Tariff Schedules of the United States (TSUS), is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing articles like or directly competitive with the imported article. The investigation resulted from a request received by the Commission on December 27, 1985, from the United States Trade Representative (USTR).

Notice of the institution of the investigation and scheduling of a public hearing to be held in connection therewith was given by posting a copy of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of January 24, 1986 (51 F.R. 3266). The public hearing was held in Washington, DC, on April 17, 1986. The briefing and vote on injury were held on May 21, 1986. 1/

The Products

Juice apples

Apples are the fresh fruit of a deciduous tree. Juice apples are apples that are destined for pressing into apple juice. Most of the apples grown in the United States are sold as fresh-market fruit (fresh-market sales). The sale of fresh-market apples is based primarily on eye appeal of the fruit, i.e., color and shape. Apples that have good color and shape and that are free of surface blemishes are sold as fresh-market fruit; the larger the size of such fruit, the higher the price the apple generally commands. A second category of harvested apples is the processing or canning grade. Canning apples ("peelers") must be over 2-1/2 inches in diameter; peelers may have surface damage since they will be peeled in the process of making apple sauce or slices, but they must be round for the peeling machines to handle them properly. The third major category of apples is juice apples. Approximately one-third of the apples grown East of the Mississippi River are used for juice. In Washington State, about 15 percent of the crop is juice apples; production for the country as a whole averages about 23 percent. The sources of juice apples traditionally are sort-outs, tree-run fruit, weather-damaged fruit, drops, and leftovers from other grades.

Sort-outs are those apples selected out mechanically because they are smaller than 2-1/2 inches in diameter; such selection is performed throughout

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1/ Copies of the letter from the USTR, the Federal Register notice, and a list of witnesses appearing at the hearing are presented in app. A.

the marketing season (until the next crop) as apples are taken from storage and sorted for fresh-market sales or for canning (peeling). 1/

Tree-run and damaged apples are, respectively, those harvested when the average grade of the fruit on the tree is such that it is most suitable for juice apples, and fruit that has been damaged by hail or otherwise bruised. When the fruit in the orchard is harvested in its entirety for use as juice apples, it is usually grown with less care (and less expense).

Drops are another source of juice apple supply. As the pickers pick apples in orchards oriented toward fresh-market or canning apples, apples fall or are accidentally knocked to the ground; these are drops. The only use for drops is juice production. The total amount of drops in an average year is 4 to 6 percent of the total crop. If strong winds occur during the harvesting period, when the apples are more prone to drop, the share of drops increases and may be as much as 15 percent of the total. Drop apples must be picked up from the ground within a short period of time, otherwise they will begin to rot. In cooler areas, such as New York, the time available to the grower to pick up drops can be as much as 7 to 10 days, as decay begins more slowly. In orchards located in the South, such time may be as little as 1 to 2 days, because decay starts immediately in warmer weather. The growers thus must decide quickly whether or not to pick up drops. The cost of picking up drops is reported by the growers to be 1 to 3 cents per pound, with a possible further cost of 1.5 cents for cold storage. 2/ Additional costs are for transportation, storage bins, and interest. Thus, if juice producers are not buying juice apples at the time of harvest, the grower must decide whether to invest approximately 3 cents or more per pound in his drops. The grower's decision whether or not to pick up drops or leave them on the ground depends on juice apple prices and the grower's perception of the willingness of producers of domestic apple juice to purchase such juice apples. 3/ Supporters of import relief contend that growers increasingly make the decision not to pick up drops since juice apple prices have decreased, and at the lower prices, the growers consider such markets uncertain and limited. Supporters of relief state that at a price of around 5 cents per pound, the drops would be picked up, adding to the supply of juice apples. Respondents argue that drops are crop abandonment that is normal in the growing of a perennial product where, if demand is to be satisfied in a year of lesser harvest, an oversupply is unavoidable during years of better harvests.

Leftovers from other grades are an addition to the sortouts. Sortouts are separated mechanically from other grades according to size; leftovers are selected out on the grading table, generally by hand. The juice apple market also serves to accommodate these leftovers, as described below.

1/ Some canners prefer to peel larger apples; they may set their size limit over 2-1/2 inches for better profit margins on canning apples.

2/ If the grower expects to sell the juice apples within 90 days, he can put them in cold storage. If they are not sold in 90 days, he loses his investment in those drops. The cost of cold storage is generally $0.60 per bushel (42 pounds.)

3/ Telephone conversation with * * * and transcript of the hearing, pp. 76-77.

The largest fresh-market apples serve a high-paying, high-price market segment that is very steady; most often the largest Red Delicious apples with the best eye appeal are sold in this market segment. When, however, these apples have blemishes or bruises, or are damaged by hail or suffer other surface damage, they too are put into the juice apple category, because Red Delicious apples are not suitable for peeling or making sauce. Other varieties of large apples, even those suitable for canning/peeling, may still not be used for canning, because the mechanical apple-peeling machines cannot handle apples larger than 3 to 3-1/4 inches in diameter, thereby also relegating these apples to the juice apple market.

The smallest fresh-market apples are bagged apples. Between the smallest and largest fresh-market apples is a category of midsized apples. This is a very dynamic and competitive category of the fresh market in which Eastern apples compete with Western apples, and Macintosh, Rome, and other varieties compete with Red Delicious. Exports are generally from this category; conversely, when there are fewer exports, more apples remain in this category. When the price of juice apples is higher, the packers maintain somewhat higher standards of quality and appearance; they pack better fresh-market fruit by diverting apples into the juice bin more generously. If juice apple prices are weaker, the packer will not take out the marginal quality apples from the fresh-market pack. There are no data available as to the quantity of these diverted apples nationwide.

Another category for which the juice apple market is the only outlet are peelers that are too large to be utilized in making apple slices for end products such as pie fillings. The uniform size of the apple slices is a requirement for this end product. Tree-run apples processed for slices contain not only smaller (sort outs), but also larger size fruit than that required for slicing.

The supply of juice apples is affected by the price the grower receives for such apples. When the grower considers juice apple prices to be low, he will divert juice apples to the fresh market, selling smaller size, lower grade apples on the fresh market (bagged in 3-pound bags) rather than on the juice market. Such testimony was given by a Washington State grower. 1/ The Commission's staff queried an Eastern grower on the same issue; he stated that about one-half of the juice apples from sort-outs can be diverted to the fresh market. In the current marketing season the above-mentioned Eastern grower realizes about * * * cents per pound from sales of diverted juice apples sold on the fresh market; if the producer could receive a similar price, he would rather sell the same apples for juice and save the packing and selling efforts. The diverted juice apples exert downward pressure on the prices of lower grade fresh market apples. 2/

1/ Transcript of the hearing, p. 90.
2/ Telephone conversation with * * * and transcript of the hearing, p. 184.

Single-strength apple juice

"Single strength" means a juice that, when in its natural unconcentrated or undiluted condition, is suitable for sale as a natural fruit juice. For apple juice, this means, technically, a juice having a sugar level in the range of 9 to 14 degrees Brix. In the remainder of this report, single-strength apple juice will frequently be referred to merely as "apple juice" or as "juice."

Fresh single-strength juice.--Fresh single-strength apple juice is the product of pressing fresh apples without further processing to prevent spoilage or increase the concentration of the sugars. Some fresh single-strength juice is filtered to remove seeds, skins, stems, and so forth; it appears cloudy, not clear. More filtering produces a clearer juice. The cloudy juice is often referred to as "cider." Preservative agents are sometimes added to fresh apple juice to extend the relatively short shelf life of the product. When fresh single-strength apple juice is packed in retail-size containers it is called "fresh pack." Fresh apple juice includes sweet apple cider sold by cider mills and by roadside stands, often in 1-gallon and 1/2-gallon glass or paperboard containers. Fresh pack apple juice is also sold by dairies and retail food stores; it is kept under refrigeration with other fresh juices or dairy products, typically in 1/2 gallon, quart, or pint containers of plastic, glass, or paperboard. Fresh single-strength apple juice is also sold in bulk by the producer of the juice to other companies that in turn retail pack and sell to consumers.

Fresh single-strength apple juice is the most basic apple juice product; other apple juice products, such as concentrates, are made from fresh single-strength apple juice.

Pasteurized single-strength juice.--Pasteurized single-strength apple juice has been heat processed to prevent spoilage prior to filling retail-size containers; it has the degree of sweetness of natural unconcentrated juice. Such juice is usually filtered to a clear consistency; it may be fortified with vitamins or with apple essence to enhance apple flavor, but sugar is seldom added. The quality of this product in the minds of retail consumers is dependent upon appearance and flavor, which can be altered in the manufacturing process. Pasteurized single-strength apple juice may be produced from fresh apple juice that is pressed from domestic apples, from concentrated apple juice made from domestic apples, from imported concentrated apple juice, or from any combination of imported and domestic juices. Pasteurized single-strength apple juice is sold from the nonrefrigerated grocery shelves in food chain stores, grocery stores, delicatessens, and fast-service food stores and is frequently served in cafeterias, restaurants, hotels, or other food-serving establishments in individual servings. In stores, the product is packed in glass containers, usually of 8, 10, 12, 16, 24, 32, or 64 ounces, and in metal cans, usually of 8, 12, or 16 ounces.

The process of manufacturing pasteurized single-strength apple juice requires filtration equipment, heat exchangers for flash pasteurization, and high-speed bottling and can-closing equipment that is not required in the production of fresh pack apple juice. Much of this equipment can be used to process other fruit juices or fruit drinks in addition to apple juice.

Concentrated apple juice

Concentrated apple juice is the product obtained by removing water from fresh single-strength apple juice. In the concentrating process, the natural sugars and acids in the juice remain with the product; their ratio to the shrinking liquid volume increases as more water is removed. The concentration of sugars is measured in degrees Brix. Also in the concentrating process, volatile flavors are driven off from the natural juice by heat, but these flavors are usually recaptured by distillation to obtain another product called apple essence. When the apple essence is added back during the reconstitution of the concentrate, the single-strength product obtained acquires a flavor very similar to that of the original single-strength juice.

In commercial practice, only two levels of apple juice concentrate are usually produced. The first is a 3-to-1 concentrate, having a range of 44 to 46 degrees Brix. This is often called three-strength (or 3X) concentrate (three times more concentrated than single-strength juice); when three parts of water are added to 3X concentrate, it makes single-strength juice. The three-strength concentrate is often referred to as "frozen concentrated apple juice."

The second commercially significant concentrate is a 6-to-1 concentrate having a range of 69 to 72 degrees Brix (but usually 71 degrees Brix). This is often called six-strength concentrate or "6X" (six times more concentrated than single-strength juice). It is widely referred to in the industry as "concentrate" or as "concentrated apple juice" (CAJ). In this report, the term "CAJ" will be used throughout to mean concentrated apple juice of 69 to 72 degrees Brix.

Frozen concentrated apple juice.--Frozen concentrated apple juice is a three-strength concentrate; it is a retail-packaged consumer product produced from either domestic single-strength apple juice by concentration or from CAJ (domestic or imported) by dilution and freezing. It is usually marketed in 6- or 12-ounce cans in the freezer compartment of retail food stores, together with frozen concentrated orange juice and other frozen fruit juices.

Concentrated apple juice.--Concentrated apple juice of 69 to 72 degrees Brix is a commercial product produced, traded, and sold to and used only by manufacturers in making other products that contain apple juice. 1/ Because of the high level of concentration, CAJ does not need to be frozen to prevent spoilage. It is usually packed in plastic or metal drums containing from 55 to 60 gallons each for trade and transport.

1/ Past experiments in retail marketing 69 to 72 degrees Brix concentrated apple juice in the United States have not resulted in a viable business. For example, the U.S. Department of Agriculture reported on such experiments in Consumer Preference for a 6-to-1 Apple Juice Concentrate, Marketing Research Report No. 343, July 1959. The product was manufactured in a Michigan processing plant and test marketed. The 6-to-1 concentrate was not successful as a consumer product.

CAJ is used both in the manufacture of products that are 100 percent apple juice and in the manufacture of other products in which apple juice is only one ingredient. For 100 percent apple juice products, CAJ is used to produce three-strength frozen concentrated apple juice, reconstituted single-strength apple juice made entirely from CAJ, and blended single-strength apple juice made by mixing juice from concentrate with single-strength juice that has never been concentrated. Products other than 100 percent apple juice that use CAJ as an ingredient include mixed fruit juices containing apples and some other fruit (in either frozen concentrate or single-strength forms); fruit drinks (products whose level of juice content is less than single strength); fermented (hard) cider, apple wine, and other products containing alcohol; apple vinegar; jellies, jams, and fruit butters; and flavorings and sauces.

Reconstituted and blended apple juice

When apple juice concentrate is diluted with water to concentration levels of single-strength juice it is called reconstituted juice. Single-strength juice made from U.S. apples or from domestic CAJ is substitutable for single-strength juice made from imported CAJ. None of the parties have disputed the substitutability of domestic apple juice with apple juice made from imported CAJ.

When single-strength apple juice that has never been concentrated is mixed with apple juice from concentrate it is called a blended juice. Blends are made to adjust the taste of the product or to lower its cost. Blending for taste may involve mixing a sweeter (low acid) single-strength juice with juice from a more acid concentrate or mixing a high-acid single-strength juice with juice from a sweeter concentrate, thus modifying the taste of the unblended juices. Some apples are sweeter (e.g., Red Delicious), others are more acid (e.g., Granny Smith); furthermore, all apples are more acid in the first days of harvest and sweeter toward the end of the harvest as they become more mature. Also, a season or growing area with more sunshine produces sweeter apples than one having more cloudy days. The amount of precipitation and the temperatures throughout the growing season also affect the sugar/acid balance of the apples. Accordingly, the sugar/acid balance of a CAJ shipment, whether imported or domestic, varies depending on the apple variety, the maturity of the fruit when pressed, and the weather in the area where the apple was grown. Blending for cost reduction purposes may be done when the price of concentrate is low enough compared with the price of single-strength juice so that mixing them results in a lower cost blended juice.

The parties dispute the substitutability of CAJ used for blending. The parties opposing import relief maintain that imported CAJ assures the availability of CAJ with the proper acid content to blend with domestic single-strength juice, particularly with the relatively sweet juice of the Red Delicious apple grown in Washington State, thereby assuring U.S. consumers of consistent quality (taste) over time for the same brand of apple juice.

The parties in support of relief from imports of CAJ maintain that blending with imported CAJ is also done for cost reduction, that such blending displaces significant amounts of domestic juice from the end products and, hence, causes the reduced use of juice apples by U.S. producers of domestic

apple juice. 1/ They further claim that domestic CAJ is also suitable for blending; for example, New York State and Michigan apples are high in acid and would complement well the juice of Red Delicious apples from Washington State, if such domestic CAJ production were economically viable. 2/ They further claim that much of the CAJ imported from Argentina is made from Red Delicious apples; hence, it cannot possibly be blended for taste purposes, but only for cost reduction.

U.S. Tariff Treatment

The imported apple juice covered by this investigation is provided for under TSUS item 165.15. This tariff item provides for apple or pear juice, concentrated or not concentrated, whether or not sweetened, that is not mixed with other fruit juices (nor with each other) and that does not contain over 1.0 percent of ethyl alcohol by volume. If concentrated, the imported apple juice may be in liquid, powdered, or solid form. 3/

The current rates of duty applicable to imported apple juice are "free" for products from countries eligible for column 1 treatment and 5 cents per gallon for products of column 2 countries. 4/ These rates have been in effect since January 1, 1971. 5/ Because the column 1 duty rate is free, imported

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1/ Transcript of the hearing, p. 23.

2/ * * *.

3/ For the current statutory description of the products, the TSUS headnotes relating to beverages and fruit juices and the rates of duty for apple juice, see excerpts from the Tariff Schedules of the United States Annotated (TSUSA) (schedule 1, pt. 12, subpt. A) in app. B.

4/ The col. 1 rate of duty is the most-favored-nation (MFN) rate and is applicable to imported products from all countries except those Communist countries and areas enumerated in general headnote 3(d) of the TSUSA, which are assessed the col. 2 rate of duty. Currently, the only Communist countries receiving the MFN duty rate are the People's Republic of China, Hungary, Romania, and Yugoslavia. The col. 2 rate applies to products of the enumerated Communist countries, whether imported directly or indirectly.

5/ Prior to the effective date of the Tariff Schedules of the United States on Aug. 31, 1963, apple juice was not specifically provided for in the U.S. tariff treatment of imported products. Rather, "cider" was provided for at the rate of 5¢ per gallon under paragraph 738 of the Tariff Act of 1930, and nonenumerated fruit juices were provided for at 70¢ per gallon under paragraph 806. U.S. customs treatment prior to the TSUS held that cider could be either apple cider or pear cider, including fermented ciders containing alcohol and subject to the provisions of the Internal Revenue Code for wines. Apple juice was dutiable under the provision for cider. In 1939, the rate of duty on cider was reduced to 3¢ per gallon in a trade agreement with Canada, and this rate was affirmed under the GATT in 1948 as the MFN-Trade-Agreement rate. When the TSUS became effective, the MFN 3 cents-per-actual-gallon rate was converted to a 0.5¢ per gallon rate on natural unconcentrated juice to avoid increasing the

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apple juice covered in this investigation is not eligible for duty-free treatment under the Generalized System of Preferences, nor is it afforded preferential duty treatment if imported from least developed developing countries (LDDC's), from beneficiary countries under the Caribbean Basin Economic Recovery Act of 1983, or from Israel under the free-trade area established between the Governments of the United States and Israel.

The specific rates of duty on imported fruit juices, including apple juice, are assessed per gallon of natural unconcentrated juice, or per gallon of reconstituted juice that is equivalent to the number of gallons of natural unconcentrated juice that could be obtained from the imported concentrate. 1/ The degree of concentration of an imported fruit juice is determined by the Brix value of the concentrate in relation to the Brix value of the natural unconcentrated juice. 2/ The average Brix value of unconcentrated natural apple juice in the trade and commerce of the United States for purposes of finding the dutiable quantity of imports of the concentrate has been determined to be 13.3 degrees Brix. 3/ Official statistics on imports of concentrated apple juice are reported only in gallons of natural unconcentrated juice equivalents.

The U.S. Market

The production of apple juice is one of the uses for apples grown in the United States. The apple business in the United States is the largest of the noncitrus tree-fruit businesses today; it encompasses apple growers, packers, and processors of apples. Processors of apples include producers of domestic apple juice, as well as producers of domestic processed apple products such as apple sauce; sliced, canned, and dried apples; frozen apples; and other apple products. Often the same firm makes apple juice and processed apple products.

Apples are grown in 48 States of the United States; commercial production is reported annually for 35 States by the U.S. Department of Agriculture. In 1982, according to the U.S. Census of Agriculture, 41,187 farms in the United

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(continued)

incidence of the duties under the then new schedules; the col. 2 rate was not converted. As a result of modifications in the col. 1 rates of duty granted under the GATT in 1967 (Kennedy Round), the MFN rate on apple juice was reduced in 4 annual stages and became free of duty effective Jan. 1, 1971.

1/ The term "natural unconcentrated juice" as used in the TSUS has essentially the same meaning as the term "single-strength juice" or "single-strength equivalent juice" as used elsewhere in this report.

2/ Brix value is defined in headnote 3(c), pt. 12A, schedule 1 of the TSUSA as the refractometric sucrose value of the juice, adjusted to compensate for the effect of any added sweetening materials, and thereafter corrected for acid. For tariff purposes, any fruit juice having a degree of concentration that does not exceed 150 percent of the average Brix value of that juice in its natural unconcentrated form is regarded as a natural unconcentrated juice.

3/ 19 CFR 151.91.

States had apple trees. The total area planted was 591,000 acres, with 59 million apple trees; this was an increase of 6 percent in the number of acres and farms since 1978. The number of commercial apple growers is not known but is estimated to be a fraction of the total Census figure.

Growers

Nearly 85 percent of the U.S. juice apple production is harvested in seven States--California, Michigan, New York, North Carolina, Pennsylvania, Virginia, and Washington. These States are also the major producers of apples for all uses, but the share of the crop in each State that is used for juice apples varies owing to different growing and marketing operations. For example, in Washington, which has the lowest ratio of juice apples to total apples produced, only 15 percent of the growers' crops during the most recent 5 years were designated as juice apples, but in California, which has the highest ratio, 46 percent of the growers' crops were used as juice apples.

Growing operations.--Regardless of geographic location, the various functions of growing a commercial apple crop are much the same, although the decisions on what apple varieties to grow and how to market them vary by growers and locations. Major grower activity begins in late winter with pruning of excess branches from trees before new growth begins in the spring; the preferred practice is to prune each tree at least once every 2 years. Then, starting in the spring (the date depends on the weather) and continuing throughout the summer until near harvest time, there is a constant program of spraying to control diseases and insects and, if the grower chooses, applying growth regulators for improved yields and marketable fruit. Ten to fifteen sprayings in a season may be applied, or an average of one every 7 to 10 days. Harvesting, which starts in July or August in Southern States and extends until November for late-harvest crops, is virtually all done by hand. Most harvest laborers are brought into the orchards from seasonal labor supplies and housed nearby in facilities provided by the growers. The apples are picked and placed, without sorting, into large bins (wooden crates) in the orchard. Each bin holds up to 25 bushels (from 800 to 900 pounds). Unsorted apples placed in such bins are called "orchard-run" fruit. The bins of orchard-run fruit are taken directly for fresh-market packing, canning, juice production, or storage. When placed in storage, the fruit generally remains in the bins until withdrawn from storage. The storage may be either cold storage, which is a conventional refrigerated room, or "controlled atmosphere" (CA) storage. CA storage rooms are specially constructed large rooms that can be hermetically sealed. The oxygen level in the CA rooms is reduced from the normal 20.5 percent to below 5 percent. The lack of oxygen retards the "breathing," thus ripening, of the apples. CA rooms are also refrigerated. Apples remain in good condition for up to 90 days in conventional refrigerated storage and for up to 1 year in CA rooms.

A grower may deliver his apples to a cooperative, sell orchard-run fruit to a cash buyer on the spot market, or market his own fruit. In order to market through a cooperative and share in the proceeds from the cooperative's sales, the grower must be a member of the grower cooperative organization. Some cooperatives specialize in handling apples for juice, sauce, etc.; others

may specialize in fresh-market fruit only. 1/ For membership in the cooperative the grower purchases stock in the cooperative, usually based on an apple tonnage, for the privilege of delivering fruit to the cooperative for sale or processing in the plant owned by the cooperative. The profits of the cooperative are shared among the members. Cooperatives may also purchase apples from nonmember growers. The apple grower may also sell his orchard-run fruit to cash buyers on the spot market. Noncooperative producers of domestic apple juice buy juice apples for cash at the going market price. 2/ The third marketing option is a do-it-yourself method whereby the grower invests in a packing house, storage facilities, and fresh-market packing equipment and/or fresh-juice-pressing equipment (e.g., cider mill). Such grower operations, when large enough, sell fresh apples regionally, nationally, and internationally, or when smaller, sell their fruit locally. There are few growers that produce juice apples exclusively; several such growers did not even harvest their apples in 1985, particularly in Western New York State, where domestic producers of juice decreased their purchases.

Cost of growing.--The cost of producing fresh market apples or canning apples varies with the grower's circumstances. Growers in Washington State indicate growing costs of about 8 cents per pound; costs in other parts of the country can be lower because no irrigation expense is incurred. 3/ When the apples are intended for juice production from the outset of the growing season, the cost of producing is lower because: (1) the trees are cheaper to prune, (2) more apples are allowed to grow on the same tree, thus saving on mechanical or chemical thinning and achieving larger tonnage of smaller fruit, (3) fewer sprayings are needed for juice apples, and (4) harvest costs are less because the apples can be picked more rapidly and with less care. Also, juice apple production is less exposed to such risks as hail and wind damage, because such damage is not material for juice apple acceptance.

Apples that drop to the ground are suitable only for juice production. In Washington State, drops account for about 4 percent of the total crop, but they are traditionally not picked up, because at the prevailing juice apple prices during the last 5 years, it has not been economical to pick them up from the ground. In other parts of the country, drops generally have been picked up when the price of juice apples was 4 cents per pound or higher. As the price of juice apples declined to 3 to 3.5 cents per pound in the Midwest and East during 1985, more drops remained on the ground.

1/ At present, some cooperatives do not accept new members, as is the case with Knouse Foods, a grower-owned firm that produces juice and other processed apple products. Knouse buys only juice apples and canning apples, not fresh-market apples. Knouse no longer buy apples from nonmembers, as it used to in past years. Tree Top is also a cooperative that buys only juice apples and processing apples and has closed its membership rolls.

2/ Such firms as Duffy-Mott, Red Check, and National are noncooperative cash buyers.

3/ For example, a Pennsylvania grower reported growing costs of 4.8 cents per pound.

A California apple grower stated that he would realize greater profits if he could grow only juice apples and sell them for 5.5 cents per pound than if he grew canning (processing) apples and sold those for 8 cents per pound. 1/ This grower also stated that California apple producers have to sell an ever-increasing share of their total production for other than the fresh market, because they cannot compete with Washington State fresh apples; hence, an increasing share of the California apple crop must be utilized by juice/CAJ producers and producers of other apple products (sauce, slices, dried, frozen, and so forth). As the consumption of the latter products is not increasing, the juice market needs to absorb the apples. According to this grower, every cannery in California has a juice-pressing plant; in his estimation, the California juice plants are utilizing about 20 percent of their productive capacity.

A juice apple broker in California predicted a larger influx of Washington State apples in the coming years as that State's production increases by an expected 50 percent by 1990, which will divert to the juice market an even larger share of California apples that are now sold on the California fresh market. 2/

Juice production of growers.--Small juice pressing operations (called cider mills) and on-the-farm apple presses supply all of the production of apple juice by growers. Such output is of fresh single-strength apple juice, commonly called cider, a large share of which is sold at harvest time. Such fresh juice is widely available from local sources and competes with single-strength pasteurized apple juice made with domestic or imported apple juice. Domestic apple juice produced by growers represents approximately 5 percent of total production of domestic apple juice, according to responses by growers to the Commission's questionnaires.

Entry into and exit from the industry.--Entry into apple growing on a commercial scale is capital intensive and requires a long-term commitment by the operator. Growers that make this commitment do not expect to leave the industry if they have a poor crop caused by weather or an occasional year of low prices, because the trees remain in place and will have a crop again the following year. The family of one respondent to the Commission's questionnaire has been growing apples commercially since 1886. The decision to exit from the industry is usually a slow process; however, some respondents to the questionnaire indicated that they were seriously considering leaving the industry entirely within the next year. Other growers reported reducing their acreage of apple trees over the past 5 years, and many growers reported efforts to reduce the proportion of juice apples in their total output of all apples. Some examples of growers' comments on their operations are reproduced in appendix C.

1/ Telephone interview by staff with * * *, May 1, 1986.
2/ Telephone interview with * * *, May 1, 1986.

Packers

Packers are firms that receive orchard-run apples in bins, each containing some 1,000 pounds of fruit, from growers for sorting, grading, and packing into 42-pound boxes for fresh-market sales. The apples that do not meet the requirements for sales on the fresh market are graded out in this operation and sold on the juice apple market to domestic producers of juice. Packers may purchase the apples and pack and sell them for their own account, or they may pack them on a contract basis for a fee (with the grower keeping title). The packers may also pack and sell the grower's fruit on a net-return-to-the-grower basis, deducting expenses; grower cooperative packers fall into the last group. Figure 1 illustrates a tally sheet to an apple grower selling fresh-market apples through a packer on a net return basis. It shows three quality grades for color (e.g., extra fancy, fancy, and fancy standard) and several size grades, each separately priced. Apples that are not packed for lack of adequate quality (or lack of demand) are classified as culls and sold as juice apples, at the lowest return to the grower.

Processors of U.S. apples

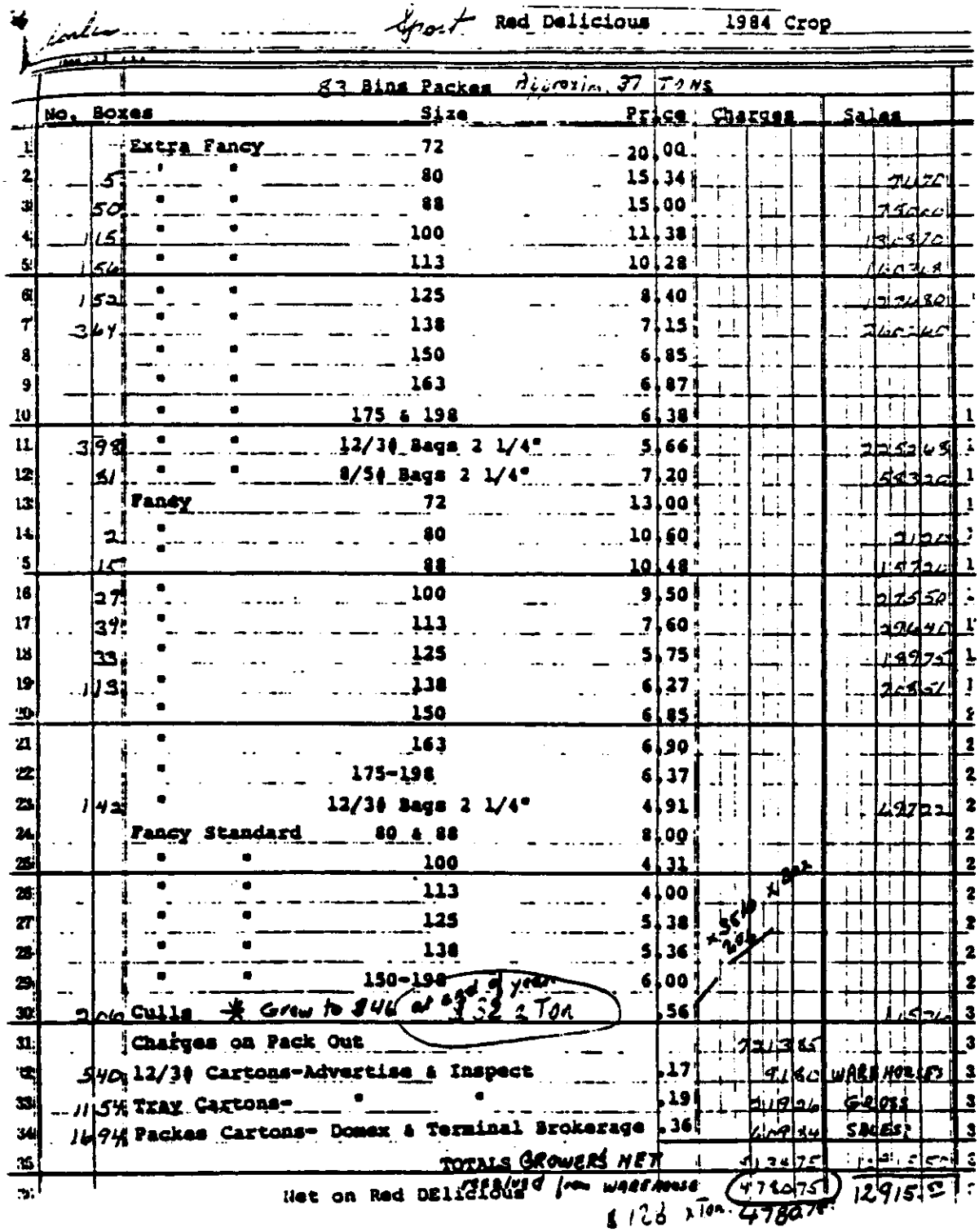
Apple processors are firms that press, peel, slice, pulp, can, freeze, or dehydrate fresh apples. They seldom are the same firms that pack apples for fresh-market sales. Among the processors are the producers of domestic apple juice, 1/ firms that press U.S.-grown apples into apple juice.

Producers of domestic juice

Producers of domestic apple juice include cider mills and other producers of fresh single-strength (not pasteurized) apple juice and producers of pasteurized apple juice. The production of pasteurized apple juice from domestic fresh apples requires extensive facilities and processing equipment, which represents a large capital investment. In the process of making apple juice from fresh fruit, juice apples are dumped into a tank of water, washed, and initially inspected. Apple cores and peelings from canning operations may be added in those plants that also process other apple products. The apple meat is pulverized in a hammermill, at which point it is referred to as "pulp." A press aid is added to the pulp, and the mixture is sent through a screw-type press. The cider extracted from the pulp, which is now referred to as "pomace," is sent over a shaker screen to eliminate solids and then sent on to a treatment tank. After treatment and settling, the juice is decanted and sent through a pressure filter using diatomaceous earth. The filtered juice is held in storage tanks.

The investment required for a facility capable of pressing enough apples to produce 4 million gallons of apple juice annually with a 1-shift operation

1/ For the purposes of this report, producers of domestic apple juice are firms that produce apple juice by pressing U.S.-grown apples. They are different from firms that make apple juice only by reconstituting imported CAJ. The latter are referred to as "reconstitutors."



Red Delicious 1984 Crop

83 Bins Packed Approx. 37 TONS

	No. Boxes	Size	Price	Charges	Sales
1		Extra Fancy 72	20.00		
2	5	" " 80	15.34		76.70
3	50	" " 88	15.00		750.00
4	115	" " 100	11.38		1308.70
5	156	" " 113	10.28		1603.68
6	152	" " 125	8.40		1276.80
7	347	" " 138	7.15		2480.05
8		" " 150	6.85		
9		" " 163	6.87		
10		" " 175 & 198	6.38		
11	398	" " 12/3# Bags 2 1/4"	5.66		2252.68
12	81	" " 8/5# Bags 2 1/4"	7.20		583.20
13		Fancy 72	13.00		
14	2	" 80	10.60		21.20
5	15	" 88	10.48		157.20
16	27	" 100	9.50		256.50
17	39	" 113	7.60		296.40
18	33	" 125	5.75		189.75
19	113	" 138	6.27		708.51
20		" 150	6.85		
21		" 163	6.90		
22		" 175-198	6.37		
23	142	" 12/3# Bags 2 1/4"	4.91		697.22
24		Fancy Standard 80 & 88	8.00		
25		" " 100	4.31		
26		" " 113	4.00		
27		" " 125	5.38		
28		" " 138	5.36		
29		" " 150-198	6.00		
30	2060	Culls * Grew to 846 at 3rd of year 52 a Ton	.56		1153.60
31		Charges on Pack Out		723.85	
32	540	12/3# Cartons-Advertise & Inspect	.17	91.80	WARE HOUSE
33	1154	Tray Cartons- " "	.19	219.26	GROSS
34	1694	Packer Cartons- Domex & Terminal Brokerage	.36	609.84	SALES
35		TOTALS GROWERS NET		4134.75	
36		Net on Red Delicious received from warehouse 4780.75			12915.20

$128 x Ton 4788.74

Figure 1.--Packer's tally to grower for season's pack of fresh market apples and culls (juice apples) of one variety, Washington State, 1984 crop.

is currently estimated at about $4 million. 1/ In addition, the operating costs of the plant would be about 2.2 cents per pound of fresh apples. An itemized listing of these investment costs is shown in the following tabulation:

Item	Investment costs for equipment
Apple bin boxes	$614,400
Cold storage facilities	2,400,000
Forklift equipment	25,500
Conveying equipment	75,000
Apple pressing	700,000
Juice screening	8,500
Juice collection and treatment	19,000
Juice heat exchanger	9,000
Juice holding tanks	25,000
Ultrafiltration	178,000
Pomace disposal	1/
Total	4,054,400

1/ Not shown in the total.

At this stage the apple juice is in single-strength form, in bulk, and ready for packaging into consumer-size retail units. Additional packaging equipment and investment requirements are needed for bottling and packing. The investment cost for the basic equipment needed to package apple juice in a plant producing 4 million gallons per year is estimated to be $596,000. These costs are itemized as follows:

Item	Investment costs for equipment to package pasteurized apple juice
Juice storage	$25,000
Heat exchanger	20,000
Can handling, empty	60,000
Can (or bottle) filler equipment	110,000
Can closure equipment	100,000
Can handling, filled	25,000
Cooling	136,000
Labeling	25,000
Case packer	20,000
Palletizer	75,000
Warehousing	1/
Total	596,000

1/ Variable and not shown in the total.

1/ Estimates of investment costs and operational costs were supplied by * * *, a producer of domestic juice.

In order to produce domestic apple juice for retail sale from domestic apples, a firm needs both preparation equipment and packaging equipment. In order to reconstitute apple juice from concentrate, a firm needs only packaging equipment, which represents a much smaller investment.

There are many companies with presses that produce domestic apple juice. The larger ones (about 25 firms) are known to the Commission; the smaller firms have not all been identified by the parties, nor could they be identified by the Commission. The larger ones account for about 75 to 80 percent of the total production of domestic apple juice. Three of the largest firms are Tree Top, Cadbury Schweppes (Duffy Mott), and Seneca. They account for an estimated * * * percent of total sales of apple juice (imported and domestic combined.)

Concentrators of domestic juice

Producers of CAJ produce it by dehydrating and concentrating single-strength juice in evaporators; hence, they are called concentrators. Such operations require investment in evaporators and other equipment to make the concentrate.

Questionnaire responses and other information indicate that at least 16 U.S. firms produced CAJ or had the capacity to produce CAJ from domestically grown apples during 1981-85. By 1985, several of these firms closed or idled completely their capacity to produce CAJ or were no longer in existence. These domestic CAJ producers include Coca Cola in Michigan, which ceased production in 1982 and thereafter purchased imported CAJ; Musselmans in Pennsylvania, which was sold in 1981 to another firm that did not utilize the CAJ capacity and subsequently sold it to Knouse in 1984, which did not refurbish the CAJ capacity; and the Sebastopol Cooperative in California, which went out of business in 1983 and the facilities of which were acquired shortly thereafter from the banks by the Vacu-Dry Co. 1/ The Albion Cooperative in New York went out of business in 1985. American Conserving Co. in Washington State ceased operations, and its CAJ concentrating equipment was liquidated. One of the smaller concentrators that concentrates other fruit juices besides apple juice (Gama Foods in Washington State) stated that American Conserving went out of business because it tried to survive by producing apple juice concentrate only; "apple alone cannot carry a small company because the margins in CAJ are too small. One has to be large, as Tree Top, or has to diversify the concentrate product line as Gama Foods in order to stay in business, at least here (in Washington State.)" 2/ The Michigan concentrators closed or idled are Cherry Hill and R.V. Saur.

Most large producers of domestic apple juice (Tree Top, Duffy Mott, Seneca, Knouse, etc.) own concentrating equipment, and some smaller producers of domestic single-strength apple juice also own such equipment. By concentrating apple juice, the costs of storing and transporting juice are reduced significantly; to reduce such costs was the purpose of Cadbury

1/ Vacu-Dry refurbished this CAJ capacity in 1985.
2/ Telephone conversation with the president of Gama Foods, May 5, 1986.

Schweppes when it built * * * concentrating facility, in 1984/85. In addition, other firms, generally smaller in size, are or have been primarily in the business of concentrating apple juice or fruit juices with an emphasis on apple juice. Currently all large-capacity CAJ-producing plants are owned by large producers of domestic apple juice.

Reconstitutors

Reconstitutors are firms that purchase CAJ, dilute it by adding water, and package single-strength reconstituted juice into retail-size containers. Some reconstitutors dilute the CAJ from 69 to 72 degrees Brix to 45 degrees Brix and package it into retail-size frozen concentrate (6 ounces, 12 ounces, and so forth). Reconstitutors generally use only imported CAJ; they do not press apples, nor do they buy domestic apple juice in bulk and retail package it or blend it with imported CAJ.

Bottlers

Bottlers are firms that also package single-strength apple juice in retail-size containers. Similar to reconstitutors, bottlers do not press fresh apples. Unlike reconstitutors, however, bottlers may purchase domestic juice in bulk containers. Bottlers may also reconstitute CAJ themselves and retail package some, or they may blend purchased domestic single-strength juice with imported CAJ.

U.S. importers

More than 100 companies imported CAJ in varying quantities during 1981-85. Some of the apple juice concentrate is imported by food-trading companies, many of which specialize in fruit concentrates and flavors. The importing trading companies, in turn, sell the CAJ to U.S. firms that use the imported CAJ. Many of the U.S. user firms also import some or all of their needs directly rather than purchasing from the U.S. importer-trading companies.

The imported apple juice is shipped from the foreign sources to the United States in 5-gallon pails, 50- to 60-gallon plastic or steel drums, or in 3,000- to 3,800-gallon high-strength flexible plastic bags/containers. Generally, the importers arrange for shipments to be forwarded directly to the users/purchasers; rarely do the importers keep inventories of imported CAJ.

U.S. importers were asked what determines the country of origin for their imports of CAJ. The responses indicate that, in addition to supply, price, and quality, the seasonal availability of foreign CAJ is also a factor in the importers' selection of foreign suppliers. U.S. importers seek out countries whose supply of apple juice exceeds local demand. Eighty-two percent of the responding importers purchase from more than one country; the larger importers purchase from 6 to 9 different countries. Seventy-three percent purchase from countries in both hemispheres to assure year-round supply.

Some of the CAJ imported from West Germany and Austria originates in Eastern European countries; 1/ it is reprocessed in Western Europe before export to the United States. One importer reported the following:

* * * * * * *

Some U.S. importers are exclusive agents/importers for specific foreign exporters/producers of CAJ. The exclusive importing rights are generally based on long-term business relationships and verbal agreements between the larger foreign producers and U.S. importers, rather than on written contracts.

Channels of distribution

Users of imported CAJ purchase the concentrate through U.S. importers and directly from foreign sources (table 1). Such users consist of producers of domestic apple juice that blend apple juice produced from domestically grown apples with imported concentrate, reconstitutors of apple juice from concentrate, producers of mixed fruit juices and beverages, and other food producers such as bakeries, wineries, and so forth. Table 2 provides estimates of the total quantity of concentrated apple juice sold by importers to these producers. During 1981 and 1985, the largest shares of imported CAJ were sold to companies that blend imported concentrate with juice produced from domestically grown apples, followed by reconstitutors of single strength and three-strength frozen concentrated apple juice for retail sale (44 to 46 degree Brix). Sales of imported CAJ to producers of mixed fruit juices and drinks increased from 5.3 percent of total sales in 1981 to 9.1 percent in 1985.

Table 1.--Concentrated apple juice (CAJ): Distribution of purchases from U.S. importers and directly from foreign sources, crop years 1980/81 to 1984/85

(In percent)

Item	1980/81	1981/82	1982/83	1983/84	1984/85
Purchases from:					
U.S. importers	50.4	58.5	35.3	35.8	42.6
Foreign sources directly	49.6	41.5	64.7	64.2	57.4
Total	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

1/ Transcript of the hearing, p. 46.

Table 2.--Concentrated apple juice (CAJ): Importers' sales of imports, by types of users, 1981 and 1985

Type of user	1981		1985	
	Quantity	Percent of total	Quantity	Percent of total
	1,000 gallons		1,000 gallons	
Companies that blend imported CAJ with domestic juice	2,243	41.4	9,780	49.7
Reconstitutors or bottlers	1,982	36.6	4,648	23.6
Producers of frozen concentrate (44 to 46 degree Brix)	656	12.1	2,327	11.8
Other producers of apple juice products	62	1.1	50	.3
Producers of mixed fruit juices and drinks	288	5.3	1,788	9.1
Other food producers	148	2.7	923	4.7
Dairy companies	37	.7	161	.8
Total	5,416	100.0	19,677	100.0

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Note.--Because of rounding, figures may not add to the totals shown. Quantities are in 1,000 gallons of concentrate.

Producers of domestic apple juice package the juice in bottles or cans for retail sale. The bulk of such juice is sold to retail stores directly or through brokers or wholesalers. Some domestic apple juice, however, is sold in bulk to bottlers or dairy companies with bottling facilities, which package the juice and distribute it to retail stores, and a portion of the juice is sold to food services. Finally, a small percentage is sold to producers of mixed fruit juices and blends. Questionnaire responses concerning such sales are presented in table 3.

Data on sales of apple juice by producers of reconstituted CAJ, provided in table 4, are limited to a few questionnaire respondents that account for only a small share of total sales. These responses indicate that total sales have shifted from food service industries to the retail market, particularly direct sales to retail stores.

Table 3.--Single-strength apple juice: Distribution of sales by producers of domestic juice, by types of purchasers, 1981 and 1985

Type of purchaser	1981		1985	
	Quantity	Percent of total	Quantity	Percent of total
	1,000 gallons		1,000 gallons	
Retailers	13,866	31.9	17,884	29.3
Brokers/distributors	22,347	51.3	30,669	50.3
Bottlers	3,473	8.0	5,506	9.0
Dairy companies	77	.2	1,966	3.2
Food service suppliers	3,147	7.2	4,758	7.8
Producers of other fruit juice	612	1.4	228	.4
Total	43,522	100.0	61,011	100.0

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Note.--Quantities are in 1,000 gallons of single-strength juice.

Table 4.--Single-strength apple juice: Distribution of sales by reconstitutors, by types of purchasers, 1981 and 1985

Type of purchaser	1981		1985	
	Quantity	Percent of total	Quantity	Percent of total
	1,000 gallons		1,000 gallons	
Retailers	66	4.4	2,368	40.5
Wholesalers/distributors	637	42.7	2,334	39.9
Bottlers	-	-	-	-
Dairy companies	-	-	-	-
Food service suppliers	788	52.9	1,145	19.6
Producers of other fruit juice	-	-	-	-
Total	1,491	100.0	5,847	100.0

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Note.--Quantities are in 1,000 gallons of single-strength juice.

Transportation factors affecting demand

The effects on regional markets of the transportation of juice apples from the grower to the producer, imported concentrate from the port of entry to the producer, and single-strength juice from the producer to the retail market are examined below.

Data from questionnaire responses indicate that the maximum distance juice apples are transported from growers to producers of domestic juice ranges from 10 to 900 miles, with an average maximum distance of roughly 350 miles in all regions of the United States. These data also indicate that the maximum distance single-strength juice is transported from producers to retail markets ranges from 120 to 3,000 miles, with an average maximum distance of roughly 1,300 miles. The costs of transportation as a share of the price of juice apples and single-strength juice, calculated from questionnaire data, are provided in table 5. These data indicate that such costs are very large for juice apples, ranging from 10.5 percent for distances less than 100 miles to over 40 percent for distances of 500 to 1,000 miles. Transportation costs for apple juice are lower than those for juice apples, although still very large, ranging from 4.5 percent for distances less than 100 miles to 27.9 percent for distances greater than 1,000 miles. Therefore, producers of domestic juice tend to be located nearer to the orchards that supply their apples than to their markets for juice.

Table 5.--Apples and apple juice: Transportation costs as a share of the price, by distances

(In percent)

Product	Distance			
	Less than 100 miles	100-500 miles	500-1,000 miles	Greater than 1,000 miles
Juice apples	10.5	24.9	43.5	1/
Single-strength juice	4.5	9.6	13.2	27.9

1/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

CAJ is imported through most major ports in the United States. The largest quantities of imports in 1985 were entered in New York, Washington, Florida, Maryland, and California. With the exception of Florida, these areas are also major apple-growing regions of the United States. Thus, imported concentrate appears to be competing in the same geographic markets in which juice is produced.

Apple Industry Trade Associations

International Apple Institute

The International Apple Institute (IAI) is a trade association whose stated purpose is to provide the means for all segments of the apple industry to join in appropriate collective efforts to profitably produce and market apples and apple products. IAI promotes the use of apples and apple products, collects aggregate data, and assists in the formulation of legislation and regulations that affect the IAI's membership, which includes U.S. growers, processors, brokers, warehousers, distributors, jobbers, retailers, shippers, truckers, related trade associations, and professionals. IAI's membership also includes U.S. importers of CAJ and foreign exporters and producers in 26 foreign countries, including the major suppliers of the CAJ imported into the United States.

IAI is governed by a 30-member Board of Trustees; 15 members are elected from among the U.S. apple grower members of IAI, and the other 15 trustees represent the other segments of the apple industry (processing, shipping, etc.) IAI supports the effort of seeking relief from the subject imports.

Processed Apple Institute

Originally a trade association of producers of domestic apple juice and their suppliers and related industries, the Processed Apple Institute (PAI), since March 1986, allows among its membership reconstitutors and bottlers, as well. PAI performs legislative and regulatory work, including pursuing regulations for labeling the country of origin on the retail product. PAI also performs technical work related to the manufacturing processes employed by the industry. PAI has remained neutral in the current investigation.

Grower associations

Trade, promotion, lobbying, and research associations whose purposes are to benefit apple growers are nearly all based on a Statewide membership, although some regional groups have a wider base, such as the New York and New England Apple Institute. Every State with significant apple production has its own associations that apple growers may join. Those with "Horticultural Society" as part of the title concern themselves largely with production management questions; those with "Commission" or "Board" as part of the title are usually concerned with promotional activities for fresh apples; and the American Farm Bureau Federation and its state chapters, of which many apple growers are members, pursue a wide range of lobbying activities for their members with various governing bodies.

Apparent U.S. Consumption

U.S. per capita consumption of apple juice has trebled since 1975, while per capita consumption of fresh apples and apple products has remained relatively stable, as shown in table 6.

Table 6.--U.S. per capita consumption of apples and apple products, 1975-84

(In pounds of fresh-weight equivalents)

Year	Fresh	Canned 1/	Juice	Frozen	Dried	Total
1975	19.1	4.2	4.4	0.8	1.0	29.5
1976	17.1	3.0	5.1	.7	1.1	27.0
1977	16.9	3.3	5.1	.7	1.0	27.0
1978	17.5	3.6	6.5	.7	1.0	29.3
1979	17.6	3.3	8.1	.6	1.0	30.6
1980	19.1	3.3	7.3	.6	1.0	31.3
1981	16.8	2.7	9.9	.6	1.1	31.1
1982	17.9	2.7	11.0	.7	.9	33.2
1983	18.4	3.1	13.2	.5	.9	36.2
1984	18.1	2/	2/	2/	2/	2/

1/ Sauce and slices.
2/ Not available.

Source: U. S. Department of Agriculture, Economic Research Service.

Table 7 shows U.S. production, imports, apparent consumption, and market penetration of apple juice in the United States during crop years 1/ 1980/81 to 1984/85 and estimated data for crop year 1985/86. Comparable data, as well as the producer price index for apple juice from all sources, for crop years 1975/76 to 1984/85 are shown in table 8. As indicated, U.S. production was highest in crop year 1980/81, when the largest apple crop was harvested. Consumption decreased in crop year 1981/82 and then increased steadily through crop year 1984/85.

1/ The crop year extends from July 1 of one year to June 30 of the following year.

Table 7.--Apple juice: Apparent U.S. consumption on a single-strength basis, crop years 1980/81 to 1984/85 and July-January of crop years 1984/85 and 1985/86

Item	1980/81	1981/82	1982/83	1983/84	1984/85	July-Jan-- 1/	
						1984/85	1985/86
U.S. production of single-strength apple juice million gallons--	182	153	154	169	158	158	153
U.S. imports: 4/							
Quantity million gallons--	70	75	139	138	196	107	116
Percent change from previous year-----	+52	+7	+85	0	+42	3/	+8
Apparent U.S. consumption: 2/							
Quantity million gallons--	252	228	293	307	354	265	269
Percent change from previous year-----	3/	-9	+28	+5	+15	3/	+2
Ratio of imports to--							
U.S. production percent--	38	49	90	82	124	1/ 68	1/ 75
U.S. consumption percent--	28	33	47	45	55	1/ 40	1/ 43
U.S. population million people--	227	230	232	234	236	236	238
Apparent U.S. annual per capita consumption-------gallons--	1.1	1.0	1.3	1.3	1.6	3/	3/

1/ Data on U.S. production for 1984/85 are for the full crop year and for 1985/86 are estimated for the full crop year based on crop production in 1985; data on imports are for the periods from July to January. Hence, ratios are not comparable with those for the full crop years.

2/ Exports of apple juice are not separately reported in official U.S. statistics. According to questionnaire responses, exports of apple juice are less than 1 percent of production.

3/ Not available.

4/ Pear juice excluded.

Source: Compiled from official statistics of the U.S. Departments of Commerce and Agriculture, except as noted.

Table 8.--Apple juice: U.S. production, imports, apparent U.S. consumption, and Producers' Price Index, crop years 1975/76 to 1984/85

Crop year	U.S. production of domestic juice	U.S. imports 1/	Apparent U.S. consumption	Ratio of imports to consumption	Producers' real price index for apple juice from all sources 2/
	Million gallons			Percent	1975=100.0
1975/76	104	27	131	21	100.0
1976/77	96	29	125	23	107.2
1977/78	109	42	151	28	117.6
1978/79	129	63	192	33	132.8
1979/80	169	46	215	21	127.0
1980/81	182	70	252	28	112.3
1981/82	153	75	228	33	120.1
1982/83	154	139	293	47	112.1
1983/84	169	138	307	45	107.8
1984/85	158	196	354	55	99.7

1/ Pear juice excluded.
2/ Data are for calendar years.

Source: U.S. production, calculated from data of the U.S. Department of Agriculture, Crop Reporting Board; U.S. imports, compiled from data of the U.S. Department of Commerce; is computed from data provided for 1985 Apple Crop Statistics and Market Analysis, American Agricultural Marketing Association and deflated using the wholesale price index.

The Question of Increased Imports

U.S. imports

Imports of apple juice enter under TSUS item 165.15, which covers both apple and pear juice. Apple juice makes up the large majority of the imports under this item and nearly all is imported in concentrated form. Importers receiving the Commission's questionnaires were asked what share of their imports is represented by apple juice. The staff estimates that responding importers accounted for almost all pear juice imports but only about 60 percent of apple juice imports. Therefore, the share of pear juice imports for all importers was adjusted. Both reported and adjusted shares are shown in the following tabulation (in percent):

Period	Share of apple juice in total imports: Reported	Adjusted
Crop year:		
1981/82	99	99
1982/83	99	99
1983/84	92	95
1984/85	93	95
July-December:		
1984/85	93	95
1985/86	96	97

Import statistics will be discussed on a crop-year basis (July of one year through the following June). Import statistics are collected on the basis of gallons of natural unconcentrated juice or gallons of reconstituted juice.

Crop-year data.--Imports of apple and pear juice increased from 70 million gallons, valued at $52 million, in crop year 1980/81 to 209 million gallons, valued at $140 million, in 1984/85 (table 9). This represents a 198-percent increase in quantity and a 169-percent increase in value over the period. Imports also increased from 113 million gallons, valued at $79 million, in July 1984-January 1985 to 120 million gallons, valued at $78 million, in July 1985-January 1986 (table 10).

In terms of value, Argentina was the primary supplier in crop years 1980/81 through 1982/83 but slipped to second place in 1983/84 and 1984/85. West Germany was the primary supplier in the latter 2 crop years, moving up from fourth place in 1981/82. Austria, the third largest supplier in crop years 1983/84 and 1984/85, was not among the top 10 suppliers in crop years 1980/81 and 1981/82.

The top three suppliers accounted for 79 percent of total imports in crop year 1980/81; their share then declined to about 60 percent of the total in the remaining years. The top three suppliers in July 1984-January 1985 and July 1985-January 1986 were Argentina, West Germany, and Austria; they accounted for about 60 percent of total imports. Imports converted to a CAJ basis for major suppliers are shown in table 11. 1/

Quarterly data.--Quarterly import data are presented in appendix D for crop years 1980/81 through 1984/85. In 1980/81, 1982/83, and 1984/85, quarterly imports increased from July-September to April-June. In 1980/81, there was a 179-percent increase, and in the latter 2 years, there were increases of about 29 percent. In contrast, crop year 1981/82 had high imports in the July-September and April-June quarters, and crop year 1983/84 had high imports in October-December and January-March. These quarterly trends seem to be dictated by the trends of one or two of the largest suppliers.

Customs district data.--The primary Customs district for entry of imports of apple or pear juice is New York, which accounted for approximately 30 percent of total imports during 1980-85 (table 12). The next three largest entry districts were Seattle, Tampa, and Baltimore. Imports entering New York showed a steady increase from 14 million gallons in 1980 to 57 million gallons in 1985, reflecting a similar increase in total imports from 44 million gallons in 1980 to 214 million gallons in 1985.

1/ CBERA countries did not export any CAJ to the United States until 1985; imports from such countries represented a minute (0.03 percent) share of total imports in that year.

Table 9.--Apple or pear juice: U.S. imports for consumption, by principal sources, crop years 1980/81 to 1984/85

Source	1980/81	1981/82	1982/83	1983/84	1984/85
	Quantity (1,000 gallons)				
West Germany	3,662	6,184	35,025	34,802	49,736
Argentina	38,979	32,166	38,180	36,230	51,685
Austria	682	1,072	10,339	13,962	23,884
Netherlands	2,582	3,620	9,154	9,327	17,195
Spain	1,769	6,375	8,261	12,620	16,601
South Africa	12,196	9,973	10,328	11,275	14,952
Hungary	354	570	1,054	2,860	6,131
Chile	1,688	1,428	2,072	4,237	6,017
France	1,206	893	7,618	420	2,982
Switzerland	802	0	5,957	422	3,754
Israel	1,260	2,643	1,173	1,623	1,601
All other	5,145	11,517	10,666	17,397	14,650
Total	70,325	76,441	139,827	145,175	209,188
	Value (1,000 dollars)				
West Germany	2,830	5,202	27,849	26,443	34,395
Argentina	28,316	25,037	30,389	23,761	30,686
Austria	562	842	8,653	12,154	17,407
Netherlands	1,913	3,595	6,991	9,253	13,541
Spain	1,469	6,095	7,024	9,547	11,522
South Africa	9,547	7,575	8,714	8,189	9,281
Hungary	180	333	1,821	2,763	4,711
Chile	1,034	1,417	2,194	3,086	3,757
France	1,490	624	5,615	762	2,163
Switzerland	574	-	4,196	262	1,986
Israel	850	2,485	1,013	1,281	1,152
All other	3,502	11,198	9,073	13,338	9,698
Total	52,267	64,403	114,040	110,839	140,299
	Unit value (per gallon)				
West Germany	$0.77	$0.84	$0.80	$0.76	$0.69
Argentina	.73	.78	.80	.66	.59
Austria	.82	.79	.84	.87	.73
Netherlands	.74	.99	.76	.99	.79
Spain	.83	.96	.85	.76	.69
South Africa	.78	.76	.84	.73	.62
Hungary	.51	.58	1.73	.97	.77
Chile	.61	.99	1.06	.73	.62
France	1.24	.70	.74	1.81	.72
Switzerland	.72	-	.70	.62	.53
Israel	.67	.94	.86	.79	.72
All other	.68	.97	.85	.77	.66
Average	.74	.84	.81	.76	.67

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 10.--Apple or pear juice: U.S. imports for consumption, by principal sources, July-September, October-January, and crop year to date, 1984/85 and 1985/86

Source	July-Sept.	Oct.-Jan.	Crop year to date 1984/85	July-Sept.	Oct.-Jan.	Crop year to date 1985/86
	Quantity (1,000 gallons)					
Argentina	18,196	21,153	39,349	18,082	15,703	33,785
West Germany	9,008	11,934	20,942	10,566	13,387	23,953
Austria	5,972	5,524	11,496	7,790	5,993	13,783
Spain	2,865	5,386	8,251	3,123	8,437	11,560
Netherlands	3,016	5,113	8,129	4,834	4,663	9,497
South Africa	2,820	6,122	8,942	5,586	1,317	6,903
Chile	2,360	1,199	3,559	2,594	1,399	3,993
Australia	0	140	140	1,259	963	2,222
France	56	572	628	662	448	1,110
Canada	513	514	1,027	418	880	1,298
Israel	74	304	378	217	286	503
Switzerland	901	1,667	2,568	21	39	60
All other	1,526	5,682	7,208	2,639	8,308	10,947
Total	47,307	65,310	112,617	57,791	61,823	119,614
	Value (1,000 dollars)					
Argentina	11,566	12,352	23,918	9,993	8,876	18,869
West Germany	6,847	9,400	16,247	6,278	9,815	16,093
Austria	4,364	4,430	8,794	5,461	4,091	9,552
Spain	1,927	4,463	6,390	1,769	6,434	8,203
Netherlands	2,998	4,022	7,020	3,192	3,139	6,331
South Africa	1,920	3,778	5,698	2,591	1,198	3,789
Chile	1,813	723	2,536	1,609	679	2,288
Australia	-	100	100	654	745	1,399
France	112	488	600	472	762	1,234
Canada	620	506	1,126	442	791	1,233
Israel	175	284	459	113	163	276
Switzerland	643	811	1,454	55	95	150
All other	1,253	3,393	4,646	1,648	7,005	8,653
Total	34,238	44,750	78,988	34,277	43,793	78,070
	Unit value (per gallon)					
Argentina	$0.64	$0.58	$0.61	$0.55	$0.57	$0.56
West Germany	.76	.79	.78	.59	.73	.67
Austria	.73	.80	.76	.70	.68	.69
Spain	.67	.83	.77	.57	.76	.71
Netherlands	.99	.79	.86	.66	.67	.67
South Africa	.68	.62	.64	.46	.91	.55
Chile	.77	.60	.71	.62	.49	.57
Australia	-	.71	.71	.52	.77	.63
France	1.98	.85	.96	.71	1.70	1.11
Canada	1.21	.98	1.10	1.06	.90	.95
Israel	2.37	.93	1.21	.52	.57	.55
Switzerland	.71	.49	.57	2.57	2.44	2.50
All other	.82	.60	.64	.62	.84	.79
Average	.72	.69	.70	.59	.71	.65

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 11.--Concentrated apple juice (CAJ): 1/ U.S. imports for consumption from specified major suppliers, annually and by quarters, crop years 1980/81 to 1984/85, July 1984-January 1985, and July 1985-January 1986

(In thousands of gallons 2/)

Period	European				Southern Hemisphere		Total
	West Germany	Austria	Nether-lands	Spain	Argen-tina	South Africa	
1980/81	469	88	331	227	4,997	1,563	9,015
1981/82	793	137	464	818	4,123	1,278	9,800
1982/83	4,491	1,325	1,173	1,059	4,896	1,324	17,927
1983/84	4,462	1,790	1,196	1,617	4,646	1,446	18,612
1984/85	6,376	3,062	2,205	2,128	6,626	1,918	26,819
July-Jan.--							
1984/85	2,685	1,474	1,042	1,058	5,045	1,146	14,438
1985/86	3,071	1,767	1,218	1,482	4,331	885	15,335
1980/81:							
July-Sept	38	48	0	16	654	237	1,246
Oct-Dec	20	2	51	25	1,120	518	1,907
Jan-Mar	32	6	65	47	1,463	390	2,386
Apr-June	379	32	215	139	1,760	418	3,476
1981/82:							
July-Sept	252	57	13	54	1,501	458	2,810
Oct-Dec	196	16	86	184	477	274	1,789
Jan-Mar	227	61	139	455	294	231	2,003
Apr-June	118	3	226	125	1,851	315	3,198
1982/83:							
July-Sept	476	39	410	74	2,068	552	3,916
Oct-Dec	1,009	381	253	364	1,165	300	4,186
Jan-Mar	1,807	451	281	376	265	192	4,760
Apr-June	1,199	454	229	245	1,398	280	5,065
1983/84:							
July-Sept	810	368	230	46	1,825	451	4,369
Oct-Dec	1,278	436	373	430	1,234	415	4,946
Jan-Mar	1,392	510	408	760	785	311	5,330
Apr-June	982	476	185	381	802	269	3,967
1984/85:							
July-Sept	1,155	766	387	367	2,333	362	6,065
Oct-Dec	1,001	505	492	431	2,121	666	6,158
Jan-Mar	2,166	1,004	688	639	922	279	6,786
Apr-June	2,054	787	638	691	1,250	611	7,810

1/ Includes pear juice estimated at 5 percent annually.

2/ Conversion factor used was 7.8 gallons of single-strength juice per 1 gallon of CAJ.

Source: Compiled from official statistics of the U.S. Department of Commerce, as noted.

Table 12.--Apple or pear juice: U.S. imports for consumption, by principal U.S. Customs districts, 1980-85

(In thousands of single-strength gallons)

Customs district	1980	1981	1982	1983	1984	1985
New York, NY	14,157	23,392	31,268	41,770	53,611	56,983
Seattle, WA	3,226	1,739	6,581	21,337	20,722	34,591
Tampa, FL	8,065	26,192	24,319	30,094	33,758	32,398
Baltimore, MD	3,993	4,202	12,949	10,455	12,937	23,500
Los Angeles, CA	3,580	7,454	6,316	11,973	9,487	14,238
Boston, MA	3,430	3,125	4,894	8,408	9,602	12,184
Buffalo, NY	221	1,852	2,344	5,151	7,617	7,345
Detroit, MI	267	460	405	2,235	2,940	6,681
San Francisco, CA	2,751	1,831	3,194	3,394	3,115	4,919
Philadelphia, PA	131	1,134	361	331	1,356	4,816
Houston, TX	305	2,309	3,515	3,849	3,776	4,573
Charleston, SC	188	732	801	1,185	921	2,969
Ogdensburg, NY	172	382	218	182	215	2,196
Chicago, IL	1/	20	58	746	1,526	2,102
New Orleans, LA	1,024	1,398	321	831	1,338	1,663
All other	2,040	5,381	6,214	7,354	4,939	3,283
Total	43,550	81,603	103,758	149,295	167,860	214,441

1/ Less than 500 gallons.

Source: Compiled from official statistics of the U.S. Department of Commerce.

U.S. exports

Statistics on exports of apple juice from the United States are not collected separately or on the same basis as import statistics. Exports of apple juice are reported under three schedule B items: 165.26 (other unconcentrated fruit juice), 165.60 (other frozen concentrated fruit juice), and 165.88 (other not frozen concentrated fruit juice). Exports of apple juice are believed to account for only a small part of these fruit juice exports. U.S. exports aggregated for these three fruit juice categories averaged about 25 million single-strength gallons for crop years 1980/81 through 1984/85 (table AP-6 in app. D).

Questionnaire responses from producers of domestic apple juice indicate that exports of apple juice were less than 1 percent of production. If U.S.-produced CAJ were exported to the European Community it would be dutiable at 42 percent ad valorem. The Canadian MFN customs duties for apple juice range from 5 to 10 percent ad valorem.

The Question of Serious Injury

U.S. plant closings

Apple growers and processors were asked for information concerning any firms or plants that produced apple juice or CAJ from domestic apples that have closed or were idled in recent years. Responses and testimony yielded the following list of plants that ceased pressing domestic juice apples or went out of business during 1981-85:

State	Number
New York	7
Michigan	4
California	2
Pennsylvania	1
Virginia	1
North Carolina	1
Washington	1
Total	17

Of the CAJ plants closed entirely, the Albion Cooperative and the Coca Cola plant had the largest capacities. 1/ Albion's plant was an investment by apple growers in New York State specifically to produce domestic CAJ. The supporters of import relief, including Albion's former general manager, testified at the Commission's hearing that the facility was a state-of-the-art plant operating 3 shifts with 58 employees, which went bankrupt in 1985. Because their potential customers for CAJ would buy from them only at world market prices, Albion could only have paid to growers such low prices for juice apples that no one would sell them. 2/ Opponents of relief contend that Albion was a victim of inadequate grower support because growers preferred to sell their juice apples to other purchasers for cash rather than wait for the cooperative to distribute its proceeds. 3/ In addition, * * * stated that Albion was "too small to be profitable." 4/

In Michigan, a major apple-growing State where more than one-third of the annual crop is used as juice apples, there were at least 28 firms that processed apples during 1981-85, and 21 of these firms produced apple juice. Three of the firms had the capacity during 1981-85 to produce CAJ: the Coca Cola plant in Paw Paw; Cherry Hill Processing, Inc., in Bailey; and Morrison Orchards in Williamsburg. Coca Cola stopped CAJ production in 1982, partly because its apple-unloading facilities were not winterized and the firm decided that it was not economical to put new investments into a manufacturing

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1/ * * *.

2/ Transcript of the hearing, p. 43; posthearing brief of the American Farm Bureau Federation and the Farm Bureaus of 28 States, pp. 29-30.

3/ Respondents' posthearing brief, pp. 19-20.

4/ Staff interview with * * *.

plant for domestic CAJ. 1/ In its questionnaire response, Coca Cola stated that it "* * *." 2/ Cherry Hill, whose principal business was the production of CAJ, went into bankruptcy in October 1983. 3/ Morrison Orchards continued to produce CAJ during 1981-85, although at a very low capacity utilization rate. 4/

Knouse Foods has five concentrating plants, three of which haven't operated for 4 years and one that has not operated for 3 years. The fifth plant is operated only to keep the new equipment in use, but well below capacity. 5/ Smucker idled its CAJ plant in California in 1984. U.S. Grape had a significant CAJ capacity but left the CAJ business entirely in 1983, closing its plant in Sunnyside, WA, and stating that the low price of offshore concentrate made production of domestic CAJ unprofitable. Gerber Foods was a producer of domestic juice in New York; Gerber closed its plant in 1985 * * *.

U.S. production, capacity, and shipments

U.S. production and utilization of apples.--Table 13 shows U.S. production and utilization of apples during crop years 1980/81 to 1984/85. Production of all apples decreased from 8.8 billion pounds in 1980/81 to 7.8 billion pounds in 1981/82, or by 12 percent. Production increased in the next 2 years and averaged 8.3 billion pounds during crop years 1982/83 to 1984/85. Juice apple production has almost doubled since 1970 (table 14). From 1980/81 to 1981/82, production of juice apples decreased by 16 percent; it subsequently increased together with total apple production. The share of juice apples in total apple production has also increased since 1970, from 16 percent to over 20 percent. During crop years 1980/81 through 1984/85, it remained relatively stable, ranging between 22 and 24 percent, and then decreased to 21 percent in 1985/86.

1/ Telephone interview with T. Butler, May 9, 1986. A representative of Coca Cola indicated that the capacity of the Paw Paw plant to produce CAJ, which was its only apple juice product, was * * * gallons of concentrate (about * * * bushels of apples, or * * * percent of the juice apple supply in Michigan in 1982). He also said that the CAJ equipment has been dismantled. (Telephone conversation with * * *).

2/ Coca Cola subsequently purchased * * * imported CAJ.

3/ The estimated capacity of Cherry Hill to produce CAJ was * * * gallons of concentrate, according to Mr. Butler, who is a trustee for that company's bankruptcy proceedings.

4/ Posthearing brief of counsel for the American Farm Bureau Federation and the Farm Bureaus of 28 States, exhibit 19.

5/ Transcript of the hearing, p. 65.

Table 13.--Apples: U.S. production and utilization, crop years 1980/81 to 1984/85

Item	1980/81	1981/82	1982/83	1983/84	1984/85
	Quantity (million pounds, fresh weight)				
Fresh, domestic sales	4,276	3,887	3,971	4,165	4,274
Fresh, exports 1/	666	567	566	455	390
Not marketed	18	48	12	21	14
Canned	1,202	1,002	1,249	1,201	1,169
Juice	2,139	1,800	1,808	1,984	1,854
Dried	195	190	210	283	284
Frozen	167	173	191	170	198
All other	165	87	116	95	102
Total production	8,828	7,754	8,122	8,373	8,286
Imports: 2/					
Fresh	169	158	216	228	274
Juice	827	899	1,644	1,707	2,460
	Percent of total production				
Fresh, domestic sales	48.5	50.2	48.9	49.7	51.6
Fresh, exports 1/	7.5	7.3	7.0	5.4	4.7
Not marketed	.2	.6	.1	.3	.2
Canned	13.6	12.9	15.4	14.4	14.1
Juice	24.2	23.2	22.3	23.7	22.4
Dried	2.2	2.5	2.6	3.4	3.4
Frozen	1.9	2.2	2.3	2.0	2.4
All other	1.9	1.1	1.4	1.1	1.2
Total production	100.0	100.0	100.0	100.0	100.0
Imports:					
Fresh	1.9	2.0	2.7	2.7	3.3
Juice	9.4	11.6	20.2	20.4	29.7

1/ Fresh exports plus fresh domestic sales equals total fresh utilization; fresh apple exports are calendar-year data.

2/ Juice imports (from table 9) converted to fresh equivalent weights at the rate of 8.5 single-strength gallons per 100 pound of apples, or, 1 gallon equals 11.76 pounds of apples; fresh apple imports are calendar year data.

Source: Production and utilization, compiled from official statistics of the U.S. Department of Agriculture, Crop Reporting board; exports and imports, compiled from official statistics of the U.S. Department of Commerce as noted.

Note.--Because of rounding, figures may not add to the totals shown.

Table 14.--Juice apples: U.S. production, by principal States and by crop years, 5-year averages 1970/71 to 1974/75, 1975/76 to 1979/80, 1980/81 to 1984/85, and annually 1980/81 to 1985/86

Item	5-year averages			Annual					
	1970/71-1974/75	1975/76-1979/80	1980/81-1984/85	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86 1/
	Quantity (million pounds)								
Washington	174	311	427	505	430	331	440	432	310
New York	174	222	301	335	214	303	343	310	293
Michigan	178	183	289	331	216	367	278	253	391
California	135	178	232	200	314	246	212	190	245
North Carolina	27	82	137	157	133	63	176	155	119
Pennsylvania	76	83	125	162	97	118	117	132	133
Virginia	66	83	106	91	106	109	128	94	85
All other	170	254	299	356	288	271	290	288	309
U.S. total	1,000	1,396	1,916	2,137	1,798	1,808	1,984	1,854	1,885
	Ratio of juice apples to total utilized apple production (percent)								
Washington	11	14	15	17	16	13	14	15	15
New York	21	24	29	31	27	27	31	30	29
Michigan	27	28	36	37	33	37	37	33	36
California	29	35	46	39	52	51	46	39	46
North Carolina	12	28	40	39	36	37	42	43	40
Pennsylvania	16	18	24	28	24	23	23	23	24
Virginia	15	22	23	22	23	22	28	20	23
All other	11	15	18	19	18	16	18	18	18
U.S. average	16	20	23	23	23	22	24	22	21

1/ Estimated. Juice apple production is computed from the total apple crop harvested in 1985 and from the average share that was utilized as juice apples in each State during 1980/81 to 1984/85.

Source: Compiled from official statistics of the U.S. Department of Agriculture, Crop Reporting Board.

Small and large apple growers (those with less than 100 acres of apple trees and those with 100 acres or more, respectively) were sampled separately by the Commission's questionnaires. Tables 15 and 16 show production and sales of apples reported by the two sample groups of growers. 1/ For the larger growers, sales of juice apples as a share of their total apple production was slightly below the national average, ranging from 15 to 20 percent from crop year 1980/81 to July-December 1985. The comparable share for the smaller growers was usually above the national average, generally 20 to 26 percent, but reached 32 percent in the sample in 1983/84. The larger growers pressed into juice about one-half of 1 percent of their total production; the share was 1 to 2 percent for the smaller growers.

The estimated amount of juice apples not harvested by the smaller growers was no more than 1 percent of their total production during crop years 1980/81 to 1984/85; it then increased to 5 percent in 1985/86. The estimated amount of juice apples not harvested by the larger growers also was no more than 1 percent of their total production during crop years 1980/81 to 1984/85, and then increased to 4 percent in 1985/86. Professor Brunk, testifying for the respondents at the Commission's hearing, stated that crop abandonment is a normal phenomenon in agricultural production. The U.S. Department of Agriculture (USDA) uses 2 percent as normal crop abandonment in apple growing. 2/

The yield of apple orchards depends on the age of the trees. Table 17 shows the age of apple trees on the farms surveyed by the Commission. No more than 5 percent of the apple trees are over 50 years old. The share of trees in the different age groups was similar for the smaller and larger farms, indicating the presence of uniform orchard management techniques throughout the grower population.

Table 18 shows future production of apples and juice apples forecast by the small and large apple growers surveyed by the Commission. A steady growth in apple production is expected by the growers for 1986-90. The expected share of juice apples in total production, however, is smaller than the actual average in recent years. In light of the fact that juice apples are the least profitable portion of the apple crop, it may be that the low expectations for juice apples reflect hopes of the growers for a relatively greater share in the future for fresh-market apples, which bring higher prices.

U.S. production capacity for apple juice and CAJ.--Single-strength apple juice can be pressed from fresh apples by growers in small-scale operations or by producers in large plants. The aggregate U.S. capacity to press apple juice from fresh apples is made up of a large number of firms. The data reported here should be viewed for trends rather than for absolute values.

1/ According to the Bureau of Census, the smaller growers produce about one-half of the total U.S. apple crop. Although the number of larger growers is only 3 percent of the total number of growers, they account for 50 percent of total production.

2/ A telephone survey by the Virginia Farm Bureau indicated that 17 percent of Virginia's crop was left on the ground. Posthearing brief of the American Farm Bureau Federation and the Farm Bureaus of 28 States, p. 9, and attachments Nos. 3-8 thereto.

Table 15.--Apples: Smaller 1/ U.S. growers' production and sales, crop years 1980/81 to 1984/85 and July-December 1985 2/

Item	1980/81	1981/82	1982/83	1983/84	1984/85	July-Dec. 1985
Total acreage producing all products	4,787	4,833	4,992	5,037	5,234	5,219
Number of acres of apple trees producing	1,275	1,304	1,368	1,336	1,360	1,338
All apples harvested 1,000 bushels	640	606	676	635	642	3/ 666
Sales of apples:						
Fresh-market apples:						
Quantity--1,000 bushels	343	343	359	312	361	204
As a share of total harvested-----percent	54	57	53	49	56	41
Processing apples: 4/						
Quantity--1,000 bushels	125	114	145	124	144	183
As a share of total harvested-----percent	20	19	21	20	22	37
Juice apples sold for juice production:						
Quantity--1,000 bushels	159	136	173	203	128	103
As a share of total harvested-----percent	25	22	26	32	20	21
Juice apples pressed by or for the grower to produce apple juice:						
Quantity----1,000 bushels	10	8	7	9	10	8
As a share of total harvested-------percent	2	1	1	1	2	2
Juice apples not gathered or harvested and left in the orchard: 5/						
Quantity----1,000 bushels	6	1	3	3	8	33
Ratio to total apples harvested-------percent	1	6/	6/	6/	1	5

1/ Less than 100 acres of apples. Responding producers accounted for about 1 percent of total production by small growers.

2/ July-December 1984 data were requested but not received.

3/ Sales by these growers through Dec. 31, 1985, totaled 498,000 bushels. The balance, 168,000 bushels (25 percent of the harvested crop), remained unsold and in storage on that date.

4/ Excluding juice apples.

5/ Estimated.

6/ Less than 0.5 percent.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 16.--Apples: Larger 1/ U.S. growers' production and sales, crop years 1980/81 to 1984/85 and July-December 1985 2/

Item	1980/81	1981/82	1982/83	1983/84	1984/85	July-Dec. 1985
Total acreage producing all products	22,312	21,813	26,081	23,099	22,733	22,949
Number of acres of apple trees producing	13,266	13,299	13,355	13,509	13,495	13,663
All apples harvested: 1,000 bushels	6,300	5,898	6,251	6,447	6,459	3/ 6,934
Sales of apples:						
Fresh-market apples:						
Quantity--1,000 bushels	2,599	2,484	2,466	2,754	2,925	2,057
As a share of total harvested-----percent	41	42	39	43	45	34
Processing apples: 4/						
Quantity--1,000 bushels	2,352	2,257	2,511	2,575	2,465	2,763
As a share of total harvested-----percent	37	38	40	40	38	46
Juice apples sold for juice production:						
Quantity--1,000 bushels	1,281	1,132	1,257	1,249	961	1,150
As a share of total harvested-----percent	20	19	20	19	15	19
Juice apples pressed by or for the grower to produce apple juice:						
Quantity----1,000 bushels	29	32	30	32	29	30
As a share of total harvested-------percent	5/	1	5/	5/	5/	1
Juice apples not gathered or harvested and left in the orchard: 6/						
Quantity----1,000 bushels	33	62	30	50	71	243
As a share of total harvested-------percent	1	1	5/	1	1	4

1/ More than 100 acres of apples. Reporting producers accounted for about 7 percent of total production by large growers.

2/ January-December 1984 data were requested but not received.

3/ Sales by these growers through Dec. 31, 1985, totaled 6 million bushels. The balance 934,000 bushels (13 percent of the harvested crop), remained unsold and in storage on that date.

4/ Excluding juice apples.

5/ Less than 0.5 percent.

6/ Estimated.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 17.--Apples: Age of trees in 1985 on large and small apple farms

Item	1-5 years	6-14 years	15-49 years	50 years or more	Total
Number of acres:					
Large farms 1/	3,520	3,804	7,698	746	15,768
Small farms 2/	389	588	721	85	1,783
Total	3,909	4,392	8,419	831	17,551
Share of total acres of trees of all ages (percent):					
Large farms 1/	22	24	49	5	100
Small farms 2/	22	33	40	5	100
Total	22	25	48	5	100

1/ 54 farms from a 7-State sample of large apple farms each having over 100 acres.

2/ 40 farms from a 7-State sample of small apple farms each having less than 100 acres of apple trees.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 18.--Apples: Expected production and share of juice apples in expected production, by farm sizes, 1986-90

Year	Expected production		Index of expected production		Juice use share of expected production	
	Large farms 1/	Small farms 2/	Large farms	Small farms	Large farms	Small farms
	--1,000 pounds--		----1985=100----		----Percent----	
Reported production:						
1985	7,636	872	100	100	17.8	21.1
Expected production:						
1986	8,466	1,104	111	127	14.6	14.9
1987	8,757	1,148	115	132	14.4	15.2
1988	8,949	1,199	117	138	14.8	14.3
1989	9,381	1,258	123	144	14.7	13.9
1990	9,666	1,315	127	151	14.8	13.7

1/ Totals of 53 large farms averaging 262 acres of apples per farm in a 7-State sample.

2/ Totals of 38 small farms averaging 41 acres of apples per farm in a 7-State sample.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Smaller producers of domestic juice that press fresh, nonpasteurized apple juice (cider) operate their presses only at harvest time, i.e., about 2 to 3 months of the year. Larger concerns generally operate their apple presses at least 7 or more months of the year (September to March).

Single-strength domestic apple juice.--Producers of apple juice made from fresh apples were asked the capacity of their firm to press juice apples and to package single-strength apple juice in retail-size containers. Information was received on 28 firms that pressed juice apples during 1981-85. The data were converted to an equivalent capacity basis using a standard of operating the facilities (hereafter called standard capacity) 2 shifts per day (18 hours), 5 days a week, for 7 months (30 weeks) during each crop year, which is equivalent to operating the facilities for 2,700 hours per crop year. 1/ The operating basis used by the responding firms for reporting maximum capacity ranged from 640 to 6,440 hours per year. Reported capacity of U.S. producers for pressing juice apples accounts for approximately one-half of the total estimated pressing capacity in the United States. 2/ The data on standard capacity in crop years 1981/82 to 1985/86 for pressing apple juice are shown in the following tabulation, along with a comparison of pressing capacity if the operating season were extended to 10 months (in millions of single-strength gallons):

Crop year	Standard capacity (operating 7 months)	Extended capacity (operating 10 months)
1981/82	204	300
1982/83	215	316
1983/84	228	334
1984/85	227	333
1985/86	215	316

The data show that standard capacity for pressing by the reporting firms increased from 204 million gallons in 1981/82 to 228 million gallons in 1983/84, or by 11.8 percent, and then declined to 215 million gallons in 1985/86, or by 5.7 percent from 1983/84.

1/ A 7-month operating period is believed to be realistic for juice apples from the orchard and from conventional storage. When the more expensive controlled-atmosphere storage, some of which is owned by large processing firms, is taken into account, the realistic maximum operating period may be extended to 10 months. Also, many fresh-market packers of apples have CA storage from which juice apples may be obtained, but such supplies during the late months of the crop year are not in amounts equal to the industry's daily pressing capacity, and it is unlikely that all of the U.S. apple-pressing facilities could be operated at full capacity during those months.

2/ Data on capacity were not received from Tree Top in Washington, which is estimated to account for * * * percent of U.S. capacity, and from an unknown number of other firms throughout the United States estimated to collectively account for 10 to 30 percent of U.S. capacity.

Of the 28 firms from which data were received for pressing juice apples, 20 had the capacity to package apple juice into retail-size containers; data were received from 18 of these firms on their packaging capacity. The capacity to retail package apple juice during the 7-month period that coincides with the standard pressing capacity period is shown in the following tabulation, along with the capacity to package during an extended 12-month period, allowing 3 weeks down time for maintenance and repair (in millions of single-strength gallons):

Crop year	Capacity to retail package	
	Operating 7 months	Operating 12 months
1981/82	202	330
1982/83	202	330
1983/84	213	348
1984/85	212	345
1985/86	210	342

These data show that the capacity of the reporting firms that press juice apples to retail package apple juice during 7 months of operations increased from 202 million gallons in 1981/82 to 213 million gallons in 1983/84, or by 5.4 percent, and then declined to 210 million gallons in 1985/86, or by 1.4 percent from that in 1983/84.

CAJ.--Data received from responding CAJ producers were converted to a standard capacity based on operating the facilities 7 months, 5 days per week, 18 hours per day. The following tabulation shows the capacity to produce CAJ in the United States on this standard basis for the past 5 years (in millions of gallons of single-strength equivalent):

Crop year	Capacity
1981/82	51
1982/83	58
1983/84	51
1984/85	61
1985/86	59

The aggregate capacity shown above represents about 65 percent of total CAJ capacity in the United States. The data exclude * * *. * * *.

The cost of producing CAJ from fresh apples in Canada was examined in 1985 by Agriculture Canada, because Canada's apple production is increasing and because an increasing share of the Canadian apple juice market is being taken by imported concentrates. 1/ Data in the study indicate that the cost

1/ The Economic Potential for Concentrated Apple Juice Production in Canada, working Paper No. 10/85, Marketing and Economics Branch, Agriculture Canada, May 1985.

of CAJ-producing equipment was about $400,000 Canadian, or 28 percent of total capital costs for a plant built especially for the purpose of producing CAJ. This cost represents a 38-percent increase over the capital needs if the same plant produced only single-strength apple juice. Further, the study chose a price of U.S. $6.50 per gallon of CAJ to examine the breakeven production level. It found the breakeven 1/ point at a production level of 235,000 gallons of concentrate, which was equivalent to operating the plant 14 hours per day for 4 months. It is likely that costs for equipment and installation in the United States are similar; in that case, the investment needed for a profitable new facility for CAJ production in a juice plant would be U.S. $1.20 for every gallon of CAJ produced in that facility. 2/ In order to produce CAJ, the plant first has to produce (press) single-strength juice, which is then concentrated by the concentrating equipment in the plant. There are many U.S. juice plants that do not now have concentrating equipment but which could probably install such equipment at the cost indicated above.

* * *. The president of * * * stated that he believes that if he could pay 5 to 5.5 cents per pound for juice apples there would be substantial additional quantities of juice apples grown by the growers because there are growers for whom it is easier and less costly to grow juice apples than to grow fresh-market or processing apples, particularly on older, full-size trees. He further stated that he believes the current trend of cutting down the apple trees 3/ and using the farms for other purposes would be reversed if the farmers could sell their juice apples profitably. * * * estimated that with higher juice apple prices there would be enough additional apples for his firm * * *. * * * believes that if the farmers in his area could be assured of 5 cents per pound for juice apples, they would rather grow juice apples in their entire orchard than try to grow fresh-market apples. The cost of producing juice apples when an entire orchard or block (portion of an orchard) is committed to juice apple production is lower since most costs (e.g, pressing, spraying, and harvesting) are less. There is less risk associated with juice apples (weather and so forth), hence the attractiveness of juice apple production at price levels of 5 cents or higher. 4/

Inventorying apples in cold storage or CA storage or keeping single-strength apple juice in holding tanks or retail containers requires substantial space and entails cooling costs. On the other hand, the storage of CAJ requires less space and refrigeration. If large amounts of domestic CAJ were produced during the harvest time, apple juice (in CAJ form) could be stored and transported more economically than juice apples, and it could be used for reconstituting or blending at any time throughout the country.

1/ At 15-percent return on investment.
2/ At Can$1.00 equal to US$0.70.
3/ Transcript of the hearing, p. 76.
4/ Telephone interview with * * *. Also see attachment 19 of the posthearing brief by counsel for the American Farm Bureau.

Production and movements of CAJ and single-strength apple juice made entirely of U.S.-grown apples.--Table 19 shows production and shipments of apple juice and CAJ made entirely from U.S.-grown apples, as reported by questionnaire respondents. Producers of about 20 percent of the domestic apple juice produced provided responses that were complete with the requested breakdown of production and sales by type of juice and by container type (bulk or retail). Production and capacity data were also obtained from additional producers; capacity utilization was calculated based on this increased data base, which accounts for about 60 percent of total production. Utilization data are presented at the end of this section.

The production of CAJ by the reporting firms decreased from 670,000 gallons in 1980/81 to 155,000 gallons in 1984/85. Most of this production is used by the producing firms. Sales of domestically produced CAJ to unrelated buyers virtually ceased in 1984/85, as shown in the following tabulation:

Crop year	Quantity (1,000 gallons)	Value (1,000 dollars)	Unit value (per gallon)
1980/81	290	1,996	$6.88
1981/82	198	1,500	7.58
1982/83	189	1,297	6.86
1983/84	246	1,675	6.81
1984/85	15	96	6.40

There was even less reported production of concentrated apple juice of 45 degrees Brix, the frozen concentrate, indicating that most frozen concentrate is made from imported CAJ.

The production of domestic single-strength apple juice by the reporting firms is shown in table 19. The aggregate production of domestic single-strength apple juice estimated from total U.S. production of juice apples is shown in table 20. Aggregate domestic juice production decreased from 1980/81 to 1981/82 by approximately 16 percent, increased during 1982/83 and 1983/84, and decreased again, by about 7 percent. in 1984/85.

The questionnaire respondents' production and shipments of fresh, non-pasteurized domestic apple juice increased substantially during crop years 1981/82 to 1984/85, whereas their production and shipments of pasteurized domestic apple juice fluctuated more sharply. Fresh juice represented only 5 percent of total domestic juice production by the reporting firms in 1980/81; the comparable share was 13 percent in 1984/85.

Table 19.--Apple juice and CAJ: Production, shipments, and inventories of domestic apple juice and CAJ made entirely from U.S. apples, crop years 1980/81 to 1984/85, July-December 1984, and July-December 1985

Item	1980/81	1981/82	1982/83	1983/84	1984/85	July-December--	
						1984	1985
CAJ 69-72 degree Brix-entirely from U.S. apples:							
Beginning inventory----------1,000 gallons--	69	102	46	14	68	68	176
Production----------do----	670	599	181	321	155	150	106
Shipments (sales) as CAJ 69-72 degree Brix to unrelated U.S. buyers:							
Quantity----------1,000 gallons--	290	198	189	246	15	8	10
Value----------1,000 dollars--	1,996	1,500	1,297	1,675	96	51	62
Used captively in the production of other products 1/----------1,000 gallons--	347	457	24	21	32	8	0
Exports----------do----	-	-	-	-	-	-	-
Ending inventory----------do----	102	46	14	68	176	202	272
CAJ 47-68 degree Brix-entirely from U.S. apples:							
Beginning inventory----------1,000 gallons--	-	-	-	36	89	89	3
Production----------do----	-	-	36	106	-	-	7
Shipments (sales) as CAJ 47-68 degree Brix to unrelated U.S. buyers:							
Quantity----------1,000 gallons--	-	-	-	5	27	19	-
Value----------1,000 dollars--	-	-	-	28	154	109	-
Used captively in the production of other products 1/----------1,000 gallons--	-	-	-	48	59	23	1
Exports----------do----	-	-	-	-	-	-	-
Ending inventory----------do----	-	-	36	89	3	47	9
CAJ 44-46 degree Brix (including frozen concentrate)-entirely from U.S. apples:							
Beginning inventory:							
Retail size----------1,000 gallons--	-	-	-	-	-	-	-
Non-retail size----------do----	198	96	30	47	9	9	4
Production:							
Retail size----------do----	-	-	68	-	-	-	-
Non-retail size----------do----	-	-	-	-	-	-	-
Shipments (sales) to unrelated U.S. buyers:							
Retail size:							
Quantity----------1,000 gallons--	-	-	-	-	-	-	-
Value----------1,000 dollars--	-	-	-	-	-	-	-
Non-retail size:							
Quantity----------1,000 gallons--	-	-	-	-	-	-	-
Value----------1,000 dollars--	-	-	-	-	-	-	-
Used captively in the production of other products 1/----------1,000 gallons--	102	66	51	38	5	3	-
Exports----------do----	-	-	-	-	-	-	-
Ending inventory:							
Retail size----------do----	-	-	-	-	-	-	-
Non-retail size----------do----	96	30	47	9	4	6	4

See footnotes at end of table.

Table 19.--Apple juice and CAJ: Production, shipments, and inventories of domestic apple juice and CAJ made entirely from U.S. apples, crop years 1980/81 to 1984/85, July-December 1984, and July-December 1985--continued

Item	1980/81	1981/82	1982/83	1983/84	1984/85	July-December--	
						1984	1985
Fresh (non pasteurized) SSAJ-made entirely from U.S. apples: 2/							
Production----------1,000 gallons--	1,042	863	1,734	2,658	3,671	1,549	3,301
Shipments (sales) to unrelated U.S. buyers as fresh SSAJ not blended, not mixed:							
Retail size:							
Quantity----------1,000 gallons--	217	346	107	141	717	94	238
Value----------1,000 dollars--	451	719	223	293	1,030	195	495
Non-retail size:							
Quantity----------1,000 gallons--	1,777	1,425	2,970	3,348	3,584	1,833	3,128
Value----------1,000 dollars--	1,369	1,258	1,886	2,576	2,956	1,580	2,361
Used captively in the production of other products 1/----------1,000 gallons--	-	-	-	-	-	-	-
Exports----------do----	-	-	-	-	-	-	219
SSAJ 9-14 degree Brix, pasteurized or otherwise preserved-made entirely of U.S. apples:							
Beginning inventory:							
Retail size----------million gallons--	4.1	3.2	4.7	5.4	4.9	5.1	4.3
Non-retail size----------do----	-	-	-	-	-	-	-
Production:							
Retail size----------do----	19.2	15.9	20.2	24.4	21.7	13.0	15.7
Non-retail size----------do----	2.6	1.4	1.2	1.0	2.0	1.1	1.3
Shipments (sales) to unrelated U.S. buyers:							
Retail size:							
Quantity----------million gallons--	20.1	14.4	19.3	25.1	22.5	12.7	13.4
Value----------million dollars--	27.5	29.3	29.5	35.9	35.3	19.5	20.6
Non-retail size:							
Quantity----------million gallons--	-	-	-	-	-	-	-
Value----------million dollars--	-	-	-	-	-	-	-
Used captively in the production of other products 1/----------million gallons--	2.6	1.2	9.4	7.7	1.9	1.1	1.2
Exports----------do----	-	-	-	-	-	-	-
Ending inventory:							
Retail size----------do----	3.3	4.7	5.4	5.1	4.3	4.4	5.3
Non-retail size----------do----	-	-	-	-	-	-	-

1/ Includes all that have been used in the production of other apple juice products, mixed fruit juices or drinks, jellies, vinegar, wine, etc.

2/ Includes production of SSAJ even if all of it is intended for sale as blended juice or other products. If the reporting firm blended all SSAJ with CAJ, then the total produced quantity is reported under "used in the production of other products".

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 20.--Apple juice, single-strength equivalent: Estimated U.S. production based on the production of juice apples, by principal States, crop years 1980/81 to 1985/86

(In millions of single-strength gallons) 1/

State	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86 2/
Washington	43	37	28	37	37	27
New York	28	18	26	29	26	26
Michigan	28	18	31	24	22	34
California	17	27	21	18	16	21
North Carolina	13	11	5	15	13	10
Pennsylvania	14	8	10	10	11	11
Virginia	8	9	9	11	8	7
All other	30	24	23	25	24	17
Total	182	153	154	169	158	153

1/ Fresh weight converted at the rate of 100 pounds of juice apples per 8.5 gallons of single-strength apple juice.
2/ Estimated on the basis of data in table 14 of this report.

Source: Compiled from official statistics of the U.S. Department of Agriculture, as noted.

Note.--Because of rounding, figures may not add to the totals shown.

Utilization of productive capacity for producers of domestic CAJ and domestic single-strength apple juice is shown in the following tabulation (in percent):

Crop year	CAJ 1/	Single-strength apple juice 2/
1981/82	26	49
1982/83	13	55
1983/84	16	59
1984/85	16	56
1985/86	17	44

1/ Data include firms that account for approximately 70 percent of U.S. production.
2/ Data include firms that account for approximately 60 percent of U.S. production.

Imports and purchases of juice apples and CAJ by producers of domestic juice.--According to industry sources, all but one or two producers of domestic apple juice purchase imported CAJ. Producers of domestic juice purchase or directly import foreign CAJ either to blend it with domestic juice they press or to reconstitute it. Virtually all producers of domestic juice have some customers for which they merely reconstitute imported CAJ to single-strength juice or to frozen three-strength concentrate; for other customers, they blend imported CAJ with domestic juice. They may also sell purely domestic juice, i.e., not blended with any imported CAJ. Those producers of apple juice whose sales consist mostly of private-brand apple juice use more imported CAJ than do firms that produce well-recognized brand names of apple juice. This means that the store brands of apple juice are more likely to be reconstituted from foreign CAJ. However, many national-brand-name apple juice products (* * *) are also made entirely of imported CAJ. The makers of national-brand-name apple juice products state that, for a national-brand-name product, a very large and steady supply of raw material is needed, which can only be secured from foreign sources. * * *. The price of CAJ is also determinant in the purchase decision. The president of New England Apple Products testified that he would buy domestic CAJ if the price were comparable with that of imported CAJ.

Table 21 shows purchases of U.S. apples, domestic apple juice, and imported CAJ by producers of domestic apple juice. The reporting producers of domestic apple juice purchased 396,000 tons (18.8 million bushels) of juice apples in crop year 1980/81. Such purchases decreased by 8 percent in 1981/82, increased by 12 percent in 1982/83 and an additional 7 percent in 1983/84, and then dropped by 13 percent in 1984/85.

Imports and purchases of CAJ by reconstitutors.--Those U.S. firms that bottle apple juice, but do not press U.S. juice apples, have obtained most of their CAJ supply from foreign sources by importing directly or by purchasing from other U.S. importers/trading companies. Table 22 shows such imports and purchases. Reconstitutors directly import 2 to 3 times as much foreign CAJ as they purchase from other U.S. importers/trading companies. Their purchases and imports of foreign CAJ peaked in 1982/83 and 1983/84 and decreased sharply, by 38 percent, in 1984/85. Such purchases quadrupled during July-December 1985 compared with those during the corresponding period of 1984.

Inventories of juice apples and domestic apple juice and CAJ

Growers reported no inventories of apple juice. Inventories of all apples and juice apples reported by the growers are shown in table 23.

Inventories of domestically produced apple juice are shown in table 19. Such inventories were 3.3 million gallons on June 30, 1981; they then increased to 4.7 million gallons in 1982 and remained between 4.3 million and 5.4 million gallons during 1982-85, representing about 20 percent of the same year's production.

Table 21.--Apples and apple juice: Purchases and imports by producers of domestic apple juice, crop years 1980/81 to 1984/85, July-December 1984, and July-December 1985

Item purchased or imported	1980/81	1981/82	1982/83	1983/84	1984/85	July-December--	
						1984	1985
U.S. apples for juice production:							
Quantity----------1,000 tons--	396	363	408	438	382	291	331
Value (net cost)---------million dollars--	30.8	36.8	37.4	41.1	37.4	27.5	28.0
U.S. nonretail CAJ 69-72 degrees Brix:							
Quantity----------1,000 gallons of CAJ--	36	301	106	254	97	46	75
Value----------1,000 dollars--	216	2,106	717	1,540	558	269	397
Foreign nonretail CAJ 69-72 degrees Brix imported directly:							
Quantity----------1,000 gallons of CAJ--	2,337	2,524	5,202	1,922	5,910	2,096	2,020
Value----------1,000 dollars--	1/	1/	1/	1/	1/	1/	1/
Foreign nonretail CAJ 69-72 degrees Brix purchased from U.S. importers:							
Quantity----------1,000 gallons of CAJ--	484	815	895	1,028	1,601	427	843
Value----------1,000 dollars--	2,582	5,459	5,563	5,954	8,442	2,223	4,428
Total foreign non-retail CAJ acquired in apple equivalents: 2/							
Quantity----------1,000 tons--	108	154	280	136	346	116	132
Value----------million dollars--	1/	1/	1/	1/	1/	1/	1/

1/ Not available.
2/ 1 gallon of CAJ-92 pounds of apples.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 22.--Apple juice: Reconstitutors' purchases and imports, crop years 1980/81 to 1984/85, July-December 1984, and July-December 1985

Item purchased or imported	1980/81	1981/82	1982/83	1983/84	1984/85	July-December--	
						1984	1985
U.S. nonretail CAJ 69-72 degrees Brix:							
Quantity----------1,000 gallons of CAJ--	-	-	-	-	-	-	-
Value----------1,000 dollars--	-	-	-	-	-	-	-
Foreign nonretail CAJ 69-72 degrees Brix imported directly:							
Quantity----------1,000 gallons of CAJ--	2,820	3,870	8,565	8,969	4,991	497	4,562
Value----------1,000 dollars--	16,328	27,248	54,564	55,431	22,370	2,589	23,136
Foreign nonretail CAJ 69-72 degrees Brix purchased from other U.S. importer(s):							
Quantity----------1,000 gallons of CAJ--	2,684	5,302	3,060	2,582	2,618	1,049	1,501
Value----------1,000 dollars--	15,813	34,292	18,573	14,031	12,803	5,383	7,155
Total foreign nonretail CAJ 69-72 degrees Brix acquired in apple equivalents: 1/							
Quantity----------1,000 tons--	253	422	535	531	350	71	279
Value----------million dollars--	32.1	61.5	73.1	69.5	35.2	8.0	30.3

1/ 1 gallon of CAJ=92 pounds of apples.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 23.--Apples: U.S. growers' inventories as of Dec. 31 and Mar. 31, crop years 1981/82 to 1985/86

(In thousands of bushels)

Crop year	As of Dec. 31		As of Mar. 31	
	All apples	Juice apples	All apples	Juice apples
Smaller growers: 1/				
1981/82	48	6	11	1
1982/83	85	5	20	3
1983/84	61	7	8	1
1984/85	52	7	7	1
1985/86	107	13	2/	2/
Larger growers: 3/				
1981/82	1,241	144	322	29
1982/83	1,452	162	528	82
1983/84	1,583	247	548	72
1984/85	1,618	217	545	79
1985/86	1,850	275	2/	2/

1/ Less than 100 acres.
2/ Not available.
3/ Over 100 acres.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Inventories of domestic CAJ were the highest at the end of crop year 1984/85. Midyear inventories of domestic CAJ totaled 202,000 gallons in crop year 1984/85 and 272,000 gallons in crop year 1985/86.

Employment

Data on employment reported by apple growers responding to the Commission's questionnaires are presented in table 24. The average number of full-time employees per grower ranged from 2.3 to 2.5 for the small growers and from 7.9 to 8.7 for the larger growers. The average number of part-time harvest employees per grower ranged from 9.7 to 11.3 per farm for the smaller growers and from 51.9 to 58.3 per farm for the larger growers. Full-time employment by the larger growers varies more than that by the smaller growers because the latter have less flexibility in reducing employment. 1/

1/ A reduction by 1 full-time worker per farm by the average smaller grower is equivalent to a reduction of more than 40 percent, whereas it would be only a 12-percent reduction for the average large grower.

Table 24.--Apples: Full-time and part-time employment and unpaid employment on U.S. apple farms, crop years 1980/81 to 1984/85/

Item	1980/81	1981/82	1982/83	1983/84	1984/85
Small growers: 1/					
Average number of year-round, full-time, paid employees employed in apple-growing operations (including paid owner and family members)	76	77	84	84	84
Average number of temporary employees hired for harvesting the apple crop	327	321	373	355	357
Number of unpaid hours worked by owner, family, etc., in the firm's apple-growing operations for which the firm paid no wages 1,000 hours	41	45	45	43	40
Large growers: 2/					
Average number of year-round, full-time, paid employees employed in apple-growing operations (including paid owner and family members	372	402	397	408	384
Average number of temporary employees hired for harvesting the apple crop	2,740	2,478	2,437	2,505	2,498
Number of unpaid hours worked by owner, family, etc., in the firm's apple-growing operations for which the firm paid no wages 1,000 hours	60	65	72	79	80

1/ Less than 100 acres. Data represent 33 growers; the average size of their farms in 1984/85 was 41 acres.

2/ More than 100 acres. Data represent 47 growers; the average size of their farms in 1984/85 was 287 acres.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Six processors reported data on employment for fiscal years 1981-85 in their operations producing domestic apple juice. The number of production and related workers producing domestic apple juice increased steadily from 547 in 1981 to 707 in 1984 and then decreased by 13 percent to 614 in 1985. Hours worked, wages, and total compensation paid to these production and related workers show the same trend as the number of employees (table 25). During the interim period ended December 31, 1985, the number of production workers was 3 percent lower and hours worked and wages paid to such employees were more than 10 percent lower than the corresponding figures in the interim period ended December 31, 1984.

Financial experience of U.S. growers and producers of domestic apple juice

U.S. growers.--Financial data were provided by both large (over 100 acres) and small (under 100 acres) growers. The responses of the large growers indicate a predominantly corporate structure for their operations, whereas the small growers were essentially sole proprietorships. This information is shown in the following tabulation (in percent):

Corporate structure	Large	Small
Corporation	63	13
Partnership	23	29
Sole proprietorship	14	58
Total	100	100

The growers maintain that their financial status has deteriorated because of low prices for juice apples. An individual grower's profitability depends upon a combination of factors such as the proportion of apples in different price ranges sold in relation to total apple production, the share of the total apple crop not utilized or sold, the time of season the crop is sold (storage costs), weather, and the total growing and harvesting costs. These factors vary from year to year and from region to region. Other farm income received by growers includes proceeds from livestock and other crops, land rental, and machine usage. The financial results of the growers show that 47 percent sustained losses on their overall farm operations for the 5-year period and 63 percent suffered losses on their apple growing operations.

The juice apple portion of the average grower's crop represents about 25 percent of his total apple production in terms of quantity and a smaller portion in terms of sales value. The financial data received by the Commission indicate that, in the aggregate, total apple growing operations are unprofitable. The data provided by 66 growers are presented in tables 26 to 29.

Although growers generally do not keep separate records for fresh apples and juice apples, they were asked to estimate their financial operations on juice apples. With respect to juice apples, the data provided indicate that the excess of expenses over sales (on a percentage basis) generally increased over the 5-year period 1981-85. For small growers, juice apple expenses

Table 25.--Average number of U.S. production and related workers engaged in the production of apple juice, and hours worked and wages and total compensation paid to such employees, fiscal years 1981-85 and interim periods ended Dec. 31, 1984, and Dec. 31, 1985

Item	1981	1982	1983	1984	1985	Interim period ended Dec. 31--	
						1984	1985
Average number employed in the reporting establishment(s):							
All persons	2,345	2,387	2,522	2,559	2,434	2,185	2,165
Production and related workers producing--							
All products	1,917	1,949	2,070	2,106	1,953	1,813	1,766
Single-strength apple juice and other apple juice products made entirely from U.S. apples	547	571	681	707	614	366	355
Hours worked by production and related workers producing--							
All products----------1,000 hours--	4,780	4,815	4,859	4,800	4,563	3,051	2,955
Single-strength apple juice and other apple juice products made entirely from U.S. apples----------1,000 hours--	1,029	1,233	1,419	1,478	1,303	556	463
Wages paid to production and related workers producing--							
All products----------1,000 dollars--	30,115	31,088	33,629	35,362	36,101	23,989	25,054
Single-strength apple juice and other apple juice products made entirely from U.S. apples-------1,000 dollars--	6,995	7,967	8,936	9,732	9,061	3,204	3,145
Total compensation paid to production and related workers producing--							
All products----------1,000 dollars--	37,720	40,583	44,424	46,356	46,937	30,895	31,637
Single-strength apple juice and other apple juice products made entirely from U.S. apples--------1,000 dollars--	8,084	9,268	10,575	11,537	10,770	4,368	3,969

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

exceeded sales by 79 percent in 1981 and 94 percent in 1982. The excess of expenses over sales narrowed to 47 percent in 1983, but expenses in 1984 and 1985 were 2.5 to 3 times as large as sales in those years. For large growers, juice apple expenses also exceeded juice apple sales in each of the years covered. The data for both the smaller and larger growers are shown in the following tabulation:

Item	1981	1982	1983	1984	1985
Small growers: 1/					
Net sales----------1,000 dollars--	63	68	135	61	43
Expenses----------do----	113	132	198	153	129
Excess of expenses----------do----	(50)	(64)	(63)	(92)	(86)
Expenses as a share of net sales----------percent--	179.4	194.1	146.7	250.8	300.0
Large growers: 2/					
Net sales----------1,000 dollars--	1,057	1,323	1,284	1,046	1,031
Expenses----------do----	1,812	1,842	2,151	1,938	1,925
Excess of expenses----------do----	(755)	(519)	(867)	(892)	(894)
Expenses as a share of net sales----------percent--	171.4	139.2	167.5	185.2	186.7

1/ 10 growers.
2/ 20 growers.

The parties dispute the importance of the income from juice apples for the growers. Supporters of import relief contend that juice apple revenue provides a key contribution to overhead and business planning. 1/ A representative of a producer of apple juice that testified in opposition to import relief stated that "it is important to note that many growers depend on revenue from juice apples and other processing apples to maintain their cash flow position." 2/ Counsel for parties in opposition to import relief argued that such revenues are not important to the growers because they constitute only 10 percent of the sales value of the crop and are a bonus to the growers as they consider juice a salvage market. 3/

Large growers.--The income-and-loss experience of the large growers on the overall operations of their farms on which apples are grown is shown in table 26 for 1981-85. Net sales rose from $26.9 million in 1981 to $31.0 million in 1984, an increase of 15.0 percent. Net sales in 1985 totaled $25.4 million. 4/ In the aggregate, the reporting growers sustained net losses in 1981, 1984, and 1985. Losses totaled $1.0 million in 1981, or 3.8 percent of sales; $373,000 in 1984, or 1.2 percent of sales; and $1.1 million

1/ Posthearing brief of the American Farm Bureau, p. 38, and transcript of the hearing, pp. 77, 82, 89, 93.
2/ Prehearing brief of New England Apple Products Co., p. 1.
3/ Respondents' prehearing brief, p. 12, and posthearing brief, p. 9.
4/ Only 31 of the 38 growers that provided data in 1984 furnished usable data for 1985.

Table 26.--Income-and-loss experience of large apple growers 1/ on the overall operations of their farms on which apples are grown, 1981-85

Item	1981	1982	1983	1984	1985 2/
Net sales:					
All apples, excluding juice apples					
1,000 dollars	17,654	18,739	19,693	20,486	16,830
Apples for juice production only---do	-1,711	2,610	2,304	2,042	1,754
Apple juice or cider---do	363	370	478	425	67
Total---do	19,728	21,719	22,475	22,953	18,651
Other crops and livestock---do	4,278	4,911	5,431	5,032	3,676
Other farm income---do	2,935	3,343	3,089	3,008	3,106
Total net sales and other income---do	26,941	29,973	30,995	30,993	25,433
Growing and operating expenses:					
Juice apples and apple juice purchased-do	671	819	914	686	578
Other goods purchased for resale---do	855	679	515	481	497
Hired labor---do	8,518	8,959	9,119	9,688	8,275
Plants and seeds purchased---do	285	362	275	245	251
Fertilizers, lime, and chemicals---do	2,412	2,709	2,903	3,120	2,537
Materials and supplies---do	1,423	1,635	1,563	1,727	1,484
Repairs and maintenance---do	1,168	1,334	1,400	1,404	1,195
Depreciation and amortization---do	1,968	2,260	2,511	2,660	2,436
Taxes and insurance---do	2,101	2,170	2,321	2,262	2,139
Gasoline, oil, and fuel---do	1,181	1,138	1,098	1,100	876
Water and electricity---do	570	608	635	696	559
Shipping and selling expenses---do	452	430	397	582	406
Office expenses, including salaries---do	453	497	530	549	516
Officers' or partners' salaries---do	1,108	1,262	1,233	1,256	993
Interest expense---do	1,660	1,670	1,856	2,033	1,761
All other expenses---do	3,147	3,188	3,492	2,877	2,009
Total expenses---do	27,972	29,720	30,762	31,366	26,512
Net income or (loss) before income taxes					
1,000 dollars	(1,031)	253	233	(373)	(1,079)
Depreciation---do	1,968	2,260	2,511	2,660	2,436
Cash flow---do	937	2,513	2,744	2,287	1,357
Number of farms reporting losses	15	19	16	17	18
Number of farms reporting data	37	38	38	38	31
As a share of net sales:					
Total expenses---percent	103.8	99.2	99.2	101.2	104.2
Net income or (loss) before income taxes---do	(3.8)	0.8	0.8	(1.2)	(4.2)

1/ The responding growers accounted for about 6 percent of total production by large growers.

2/ 7 of the 38 growers did not provide data for 1985.

Source: Compiled from data submitted in response to questionnaire of the U.S. International Trade Commission.

in 1985, or 4.2 percent of sales. In 1982, a profit of $253,000 was achieved, and in 1983 net income totaled $233,000; both profits were equivalent to 0.8 percent of sales. The growers' largest expense was labor, which averaged 31 percent of sales over the 5-year period. Estimated cash flow (net income or (loss) before income taxes plus depreciation) was $9.8 million for the reporting period.

Total apple products sales as a share of total farm operations ranged from 72 to 74 percent during the period. The proportion of apples sold (in terms of sales dollars) for juice production ranged from 6.4 to 8.7 percent during the reporting period, as shown in the following tabulation (in percent):

Item	1981	1982	1983	1984	1985
Apples sold, excluding juice apples----	65.5	62.5	63.5	66.0	66.2
Apples sold for juice production only--	6.4	8.7	7.5	6.6	6.9
Apple juice or cider sold----------	1.3	1.2	1.5	1.4	.2
Total apple product sales----------	73.2	72.5	72.5	74.0	73.3
Other crops and livestock sold---------	15.9	16.4	17.5	16.2	14.5
Other farm income----------	10.9	11.2	10.0	9.8	12.2
Total net sales 1/----------	100.0	100.0	100.0	100.0	100.0

1/ Individual items have been rounded in order for the totals to equal 100 percent.

The income-and-loss experience of the large growers on their total apple operations is shown in table 27 for 1981-85. Net sales rose by 11.8 percent from $19.5 million in 1981 to $21.8 million in 1982. A decline of 3.7 percent occurred in 1983 to sales of $21.0 million. In 1984, sales rose by 5.0 percent to $22.1 million. Net sales in 1985 were $19.2 million. In the aggregate, the growers incurred net losses on their apple growing operations in all of the reporting years. Losses totaled $2.8 million, or 14.4 of sales, in 1981; $1.3 million, or 6.2 percent of sales, in 1982; $3.0 million, or 14.1 percent of sales, in 1983; $3.1 million, or 14.1 percent of sales, in 1984; and $2.1 million, or 11.0 percent of sales, in 1985. During the reporting period, 73 percent of the farms reported net losses on their operations.

The sales value realized from apples sold for juice production represented a declining share of total apple product sales, as shown below (in percent):

Item	1981	1982	1983	1984	1985
Apples sold, excluding juice apples----	89.2	86.8	87.1	89.8	91.5
Apples sold for juice production only--	9.0	11.5	10.7	8.3	8.2
Apple juice or cider sold----------	1.8	1.7	2.2	1.9	.3
Total apple product sales----------	100.0	100.0	100.0	100.0	100.0

Table 27.--Income-and-loss experience of large apple growers 1/ on their total apple operations, 1981-85

Item	1981	1982	1983	1984	1985 2/
Net sales:					
All apples, excluding juice apples 1,000 dollars	17,420	18,962	18,304	19,826	17,611
Apples for juice production only 1,000 dollars	1,755	2,507	2,242	1,833	1,569
Apple juice or cider---do---	363	370	477	425	67
Total apple products---do---	19,538	21,839	21,023	22,084	19,247
Growing and operating expenses:					
Juice apples and apple juice purchased---do---	671	819	914	686	578
Harvest labor---do---	4,865	5,297	5,540	5,840	5,170
Storage cost---do---	582	635	636	675	694
Depreciation and rent---do---	2,673	2,915	3,159	3,318	3,023
Interest expense---do---	1,262	1,231	1,400	1,577	1,432
All other fruit costs---do---	12,296	12,291	12,331	13,065	10,470
Total fruit costs---do---	22,349	23,188	23,980	25,161	21,367
Net (loss)---do---	(2,811)	(1,349)	(2,957)	(3,077)	(2,120)
Number of farms reporting losses---	28	26	24	29	22
Number of farms reporting data---	36	37	36	37	30
As a share of net sales:					
Total expenses---percent---	114.4	106.2	114.1	114.0	111.0
Net (loss) before income taxes percent---	(14.4)	(6.2)	(14.1)	(14.0)	(11.0)

1/ The responding growers accounted for about 6 percent of total production by large growers.

2/ 7 of the 37 growers did not provide data for 1985.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Small growers.--The income-and-loss experience of the small growers on the overall operations of their farms on which apples are grown is shown in table 28 for 1981-85. Net sales rose 6.7 percent from $3.8 million in 1981 to $4.1 million in 1982. A decline of 4.0 percent occurred in 1983 to sales of $3.9 million. In 1984, sales rose 21.8 percent to $4.8 million but fell to $4.5 million in 1985, or by 5.4 percent. In the aggregate, the reporting growers were profitable in 1981, 1982, and 1984. Income totaled $262,000, or 6.9 percent of sales, in 1981; $101,000, or 2.5 percent of sales, in 1982; and $240,000, or 5.0 percent of sales, in 1984. In 1983, the growers sustained a loss of $142,000, or 3.6 percent of sales, and in 1985, the loss totaled $16,000, or 0.4 percent of sales. The growers' largest expense was labor, which averaged 25 percent of net sales over the 5-year period. Estimated cash flow (net income or loss before income taxes plus deprecation) totaled $2.9 million for the reporting period.

Table 28-Income-and-loss experience of small apple growers 1/ on the overall operations of their farms on which apples are grown, 1981-85

Item	1981	1982	1983	1984	1985
Net sales:					
All apples, excluding juice apples					
1,000 dollars	1,648	1,807	1,655	1,976	1,830
Apples for juice production only---do	318	337	375	280	124
Apple juice or cider---do	42	58	49	56	55
Total---do	2,008	2,202	2,079	2,312	2,009
Other crops and livestock---do	1,470	1,379	1,336	1,691	1,646
Other farm income---do	345	499	503	771	862
Total net sales and other income---do	3,823	4,080	3,918	4,774	4,517
Growing and operating expenses:					
Juice apples and apple juice purchased-do	23	15	45	59	67
Other goods purchased for resale---do	164	161	132	152	116
Hired labor---do	822	1,050	1,005	1,167	1,201
Plants and seeds purchased---do	57	40	44	34	41
Fertilizers, lime, and chemicals---do	386	392	479	489	453
Materials and supplies---do	204	219	160	251	218
Repairs and maintenance---do	138	199	204	247	192
Depreciation and amortization---do	355	441	493	564	603
Taxes and insurance---do	257	269	257	261	307
Gasoline, oil, and fuel---do	181	180	172	182	177
Water and electricity---do	81	85	95	110	106
Shipping and selling expenses---do	85	42	49	42	52
Office expenses, including salaries---do	13	17	18	15	13
Officers' or partners' salaries---do	197	218	221	244	219
Interest expense---do	269	308	305	360	393
All other expenses---do	329	343	381	357	375
Total expenses---do	3,561	3,979	4,060	4,534	4,533
Net income or (loss) before income taxes					
1,000 dollars	262	101	(142)	240	(16)
Depreciation---do	355	441	493	564	603
Cash flow---do	617	542	351	804	587
Number of farms reporting losses	9	15	15	9	12
Number of farms reporting data	24	26	26	26	26
As a share of net sales:					
Total expenses---percent	93.1	97.5	103.6	95.0	100.4
Net income or (loss) before income taxes---percent	6.9	2.5	(3.6)	5.0	(0.4)

1/ The responding growers accounted for about 0.5 percent of total production by small growers.

Source: Compiled from data submitted in response to questionnaire of the U.S. International Trade commission.

Total apple product sales as a share of total farm operations ranged from 44 to 54 percent during the period. The proportion of apples sold (in terms of sales dollars) for juice production was in the range of 2.8 to 9.6 percent during the reporting period, as shown in the following tabulation (in percent):

Item	1981	1982	1983	1984	1985
Apples sold, excluding juice apples----	43.1	44.3	42.2	41.4	40.5
Apples sold for juice production only--	8.3	8.3	9.6	5.9	2.8
Apple juice or cider sold----------	1.1	1.4	1.3	1.1	1.1
Total apple product sales----------	52.5	54.0	53.1	48.4	44.4
Other crops and livestock sold---------	38.5	33.8	34.1	35.4	36.5
Other farm income----------	9.0	12.2	12.8	16.2	19.1
Total net sales 1/----------	100.0	100.0	100.0	100.0	100.0

1/ Individual items have been rounded in order for the totals to equal 100 percent.

The income-and-loss experience of the small growers on their total apple operations is shown in table 29 for 1981-85. Net sales rose by 8.2 percent from $2.0 million in 1981 to $2.2 million in 1982. A decline of 7.1 percent from 1982 occurred in 1983 to sales of $2.0 million. In 1984, sales rose by 23.1 percent to $2.5 million. Sales in 1985 declined by 18.6 percent, to $2.0 million. In the aggregate, the growers incurred net losses on their apple-growing operations in 1982, 1983, and 1985. Losses totaled $4,000, or 0.2 percent of sales, in 1982; $106,000, or 5.3 percent of sales, in 1983; and $282,000, or 13.9 percent of sales, in 1985. In 1981, the reporting growers earned a profit of $176,000, or 8.8 percent of sales; in 1984, they achieved a profit of $38,000, or 1.5 percent of sales. During the reporting period, 49 percent of the farms reported net losses on their operations.

The sales value realized from apples sold for juice production represented a declining share of total apple product sales, as shown in the following tabulation (in percent):

Item	1981	1982	1983	1984	1985
Apples sold, excluding juice apples----	87.3	82.6	80.1	88.2	92.4
Apples sold for juice production only--	11.5	15.7	18.7	10.3	5.9
Apple juice or cider sold----------	1.2	1.6	1.2	1.5	1.7
Total apple product sales----------	100.0	100.0	100.0	100.0	100.0

Capital expenditures.--Reported capital expenditures for total farm operations increased from $1.8 million in 1981 to $2.4 million in 1982 and 1983. Expenditures declined to $2.3 million in 1984 and $1.8 million in 1985. Capital expenditures made for apple plantings increased from $445,000 in 1981 to $484,000 in 1982. Such expenditures declined to $401,000 in 1983 but then rose to $537,000 in 1984. In 1985, expenditures declined to $444,000. Capital expenditures made by the smaller growers on their overall operations increased from 1981, peaked in 1984, and decreased in 1985. Such expenditures by the larger growers peaked earlier, in 1982, and have decreased consistently

Table 29.--Income-and-loss experience of small apple growers 1/ on their total apple operations, 1981-85

Item	1981	1982	1983	1984	1985
Net sales:					
All apples, excluding juice apples 1,000 dollars--	1,755	1,796	1,618	2,192	1,870
Apples for juice production only 1,000 dollars--	231	342	378	256	119
Apple juice or cider----------do----	24	36	23	38	34
Total apple products---------do----	2,010	2,174	2,019	2,486	2,023
Growing and operating expenses:					
Juice apples and apple juice purchased----------do----	10	26	32	40	30
Harvest labor----------do----	458	574	555	557	580
Storage cost----------do----	72	76	61	85	53
Depreciation and rent----------do----	273	352	356	383	404
Interest expense----------do----	137	168	175	200	206
All other fruit costs----------do----	884	982	946	1,183	1,032
Total fruit costs----------do----	1,834	2,178	2,125	2,448	2,305
Net income or (loss)----------do----	176	(4)	(106)	38	(282)
Number of farms reporting losses-----	7	12	13	11	14
Number of farms reporting data-------	21	24	24	24	24
As a share of net sales:					
Total expenses----------percent--	91.2	100.2	105.3	98.5	113.9
Net income (loss) before income taxes: percent--	8.8	(.2)	(5.3)	1.5	(13.9)

1/ The responding growers accounted for 0.05 percent of total production by small growers in crop year 1984/85.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

since then. Expenditures for apple plantings by both groups of growers increased in 1982, decreased by about 20 percent in 1983, increased again in 1984 by about 30 percent, and decreased by about 20 percent in 1985, as shown in the following tabulation (in thousands of dollars):

	1981	1982	1983	1984	1985
Overall operations:					
Small growers----------	375	396	491	593	481
Large growers----------	1,428	1,978	1,881	1,707	1,323
Total----------	1,803	2,374	2,372	2,300	1,804
Apple plantings:					
Small growers----------	48	50	31	57	20
Large growers----------	397	434	370	480	424
Total----------	445	484	401	537	444

Financial position of U.S. growers.--The major balance sheet information for the growers is presented in table 30. The ratio of debt to equity increased from 82 percent in 1981 to 109 percent in 1985 for the small growers and from 67 percent in 1981 to 97 percent in 1984 for the large growers.

Table 30.--Selected balance sheet items for U.S. apple growers, as of the end of accounting years 1981-85

Item	1981	1982	1983	1984	1985
Small growers: 1/					
Total assets-----1,000 dollars--	5,626	6,250	7,613	6,665	6,690
Total liabilities--------do-----	2,530	2,660	2,900	3,475	3,484
Capital equity----------do-----	3,096	3,590	4,713	3,190	3,206
Debt-to-equity ratio----------	0.82	0.74	0.62	1.09	1.09
Large growers: 2/					
Total assets-----1,000 dollars--	31,459	32,842	34,857	35,839	31,784
Total liabilities---------do----	12,644	14,832	15,817	17,654	14,353
Capital equity----------do----	18,815	18,010	19,040	18,185	17,431
Debt-to-equity ratio----------	0.67	0.82	0.83	0.97	0.82

1/ Data provided by 18 growers.
2/ Data provided by 30 growers for 1981-84, 23 growers for 1985.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Operations of producers of domestic apple juice.--The income-and-loss experience of 10 producers on their operations producing 100 percent apple juice is shown in table 31 for 1982-85. The data reported are equivalent to the total establishment operations for the firms except for one company. Net sales rose by 35.5 percent, from $104.9 million in 1982 to $142.2 million in 1985. In the aggregate, the processors achieved operating profits throughout the reporting period. Operating income totaled $5.5 million, or 5.3 percent of sales, in 1982; $3.1 million, or 2.7 percent of sales, in 1983; $2.9 million, or 2.2 percent of sales, in 1984; and $4.0 million, or $2.8 percent of sales, in 1985. The relatively low operating incomes were primarily due to heavy promotional expenses (included in general, selling, and administrative expenses) because of intense competition for supermarket shelf space. 1/ These promotional expenses include advertising, rebates, and allowances. After achieving a net profit in 1982, the producers sustained net losses in 1983, 1984, and 1985. These net losses were mainly attributable to high interest expense payments.

1/ Promotional expenses increased in 1983 and 1984 for several companies. These development efforts often affect sales volume in a subsequent year.

Table 31.--Income-and-loss experience of 10 producers on their operations producing domestic apple juice, accounting years 1982-85

Item	1982	1983	1984	1985
Net sales 1/----------1,000 dollars--	104,917	116,545	129,622	142,174
Cost of goods sold----------do----	82,191	91,165	101,316	111,539
Gross profit----------do----	22,726	25,380	28,306	30,635
General, selling, and administrative expenses----------1,000 dollars--	17,243	22,285	25,453	26,645
Operating income----------do----	5,483	3,095	2,853	3,990
Interest expense, net----------do----	4,080	4,131	4,819	5,717
Other income, net----------do----	508	304	281	66
Net income or (loss) before income taxes----------do----	1,911	(732)	(1,685)	(1,661)
Depreciation and amortization expense included above--------1,000 dollars--	1,576	2,799	3,114	3,363
Cash flow from operations--------do----	3,487	2,067	1,429	1,702
As a share of net sales:				
Cost of goods sold----------percent--	78.3	78.2	78.2	78.5
Gross profit----------do----	21.7	21.8	21.8	21.5
General, selling, and administrative expenses----------percent--	16.4	19.1	19.6	18.7
Operating income----------do----	5.3	2.7	2.2	2.8
Net income before income taxes-do----	1.8	(0.6)	(1.3)	(1.2)
Number of firms reporting operating losses----------	4	4	5	5
Number of firms reporting net losses---	6	8	6	6

1/ Firms included account for approximately 30 percent of U.S. production.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

S.S. Pierce is the parent company of Seneca Foods, a major apple juice processor that accounted for about * * * percent of total U.S. production in 1985. Seneca did not provide profit-and-loss data, but the 1985 annual report of S.S. Pierce indicated that the profitability of their apple juice operations declined in 1985.

Tree Top, estimated to account for about * * * percent of U.S production, did not provide data. The April 1985 issue of the company's magazine, Tree Topics, stated the following:

> The competitive nature of the current apple juice market allows for a very small profit margin. Utilizing our member raw product for juice is the least profitable use we can make of that fruit. For this reason, we have placed a major emphasis on the effective peeling and dehydration of juice apples.

Cadbury Schweppes, which accounts for about * * * percent of U.S. production, furnished information on its operations producing apple juice products in a late submission; therefore, the data could not be included in the financial tables. * * *. The data provided by the firm are presented below:

* * * * * * *

Capital expenditures.--Six U.S. producers supplied information on their capital expenditures for land, buildings, and machinery and equipment used in the production of apple juice. These expenditures are shown in the following tabulation (in thousands of dollars):

	Capital Expenditures
1982----------	1/ 12,850
1983----------	2,834
1984----------	1,933
1985----------	1,100

1/ * * *.

Research and development expenditures.--One producer provided data on its research and development expenses. These expenses were * * * in 1983, * * * in 1984, and * * * in 1985.

Financial condition of U.S. producers.--Key balance sheet information and selected financial ratios of the 10 U.S. producers of 100 percent apple juice are presented in table 32.

Table 32.--Selected balance sheet and financial ratios for producers of domestic apple juice on their overall operations, as of the end of accounting years 1982-85

Item	1982	1983	1984	1985
Total current assets----1,000 dollars--	43,556	49,587	46,811	56,284
Property, plant, and equipment, net 1,000 dollars--	36,548	37,917	37,013	43,140
Total assets----------do----	93,454	100,044	97,567	110,079
Total current liabilities--------do----	25,255	28,496	31,214	37,594
Long-term debt due after 1 year--do----	14,531	15,197	13,642	25,290
Total liabilities----------do----	57,704	65,810	68,922	83,866
Equity----------do----	35,750	34,234	28,645	26,213
Working capital 1/----------do----	18,301	21,091	15,597	18,690
Current ratio 2/----------	1.72	1.74	1.50	1.50
Total debt-to-equity ratio----------	1.61	1.92	2.41	3.20
Ratio of pretax income or (loss) to--				
Equity----------	5.3	(2.1)	(5.9)	(6.3)
Total assets----------	2.0	(.7)	(1.7)	(1.5)
Invested capital 3/----------	3.5	(1.2)	(3.2)	(2.7)

1/ Current assets minus current liabilities.
2/ Current assets divided by current liabilities.
3/ Working capital plus net property, plant, and equipment.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

The Question of Threat of Serious Injury

U.S. importers' inventories

The importers that responded to the Commission's questionnaires accounted for over 60 percent of all imports of apple juice in 1985. They reported the following end-of-the-crop-year inventories of imported CAJ (in thousands of gallons):

As of the end of the crop year (June 30)--	Inventories of imported CAJ	Single-strength equivalent
1980/81----------	642	4,494
1981/82----------	334	2,338
1982/83----------	447	3,129
1983/84----------	638	4,466
1984/85----------	502	3,514
As of the middle of the crop year (Dec. 31)--		
1984/85----------	515	3,605
1985/86----------	288	2,016

There were no reported inventories of imported single-strength apple juice during 1980-85 (there were no imports of such juice by these firms).

Foreign industries

World production of apples increased significantly over the decade from the early 1970's to the early 1980's, and a certain share of this production in every country, as in the United States, is used as juice apples for the production of apple juice or CAJ. During the 5 crop years 1980/81 to 1984/85, the production of apples in 28 significant apple-producing countries for which historic data are available averaged 22.8 million metric tons per year (or 50.4 billion pounds). 1/ This production was up 35 percent from the average production of 16.9 million metric tons 10 years earlier during 1970/71 to 1974/75 (table 33). In Europe, where the greatest world production of apples occurs, apple production (excluding cider apples) over the decade increased by 5 percent in the 12 countries that are currently members of the European Community (EC), to an average level of 7.8 million tons during 1980/81 to 1984/85. Production increased by 60 percent in six Central and Eastern European countries that are not members of the EC, to 2.9 million tons. The increased production for these six countries--Hungary, Yugoslavia, Bulgaria, Czechoslovakia, Austria, and Switzerland--amounted to 1.1 million tons over the decade, which was more than the 0.9 million ton increase in annual average production in the United States over the same decade. Additionally, apple production in two other Eastern European countries, Poland and Romania, probably averaged 2.3 million tons annually during the most recent 5 years, based on available information; however, comparable historic data are not available. Polish apple production is said to have increased from 1.0 million to 1.8 million tons annually between the late 1970's and 1982-84, and the production of CAJ in Poland, and its export, is said to have shown spectacular increases, making Poland the fourth most important exporting country of concentrated apple juice in the world. 2/ The source also indicated that modern processing equipment used in Poland is imported from Western European sources on the basis of a barter arrangement and paid for with apple juice concentrate.

Imports of CAJ into West Germany from the Eastern bloc countries increased from 5,000 to 11,000 tons, as shown in the following tabulation: 3/

Year	Quantity (tons)
1983----------	5,157
1984----------	5,859
1985----------	10,940

1/ Comparing 5-year averages of annual apple production more accurately reflects foreign industry trends and expectations than would comparing annual changes during a 5-year period because of annual variations in production caused by weather, which can be significant.

2/ AgraEurope, Report on European Agricultural Statistics, July 1985.

3/ Data provided by the German Agricultural Marketing Board in a letter to the Commission dated Apr. 23, 1986.

Table 33.--Apples: World production for all uses in selected regions and countries, by crop years, 5-year averages 1970/71 to 1984/85 and annually 1981/82 to 1985/86

(In thousands of metric tons)

Region and country	5-year averages			Annual				
	1970/71-1974/75	1975/76-1979/80	1980/81-1984/85	1981/82	1982/83	1983/84	1984/85	1985/86
United States	2,857	3,310	3,752	3,517	3,684	3,798	3,758	3,542
Europe: 1/								
EC-12: 2/								
Italy	1,914	1,999	2,131	1,773	2,642	2,056	2,217	2,070
France	1,692	1,663	1,768	1,502	1,978	1,575	1,982	1,772
West Germany	1,658	1,686	1,680	773	2,637	1,313	1,799	1,300
Spain	762	976	946	1,008	891	1,012	959	1,000
Netherlands	443	417	380	260	440	364	388	310
United Kingdom	420	316	299	227	340	292	316	293
Greece	210	236	292	300	265	312	321	319
Other EC	326	328	296	184	338	260	294	274
Total EC	7,425	7,621	7,792	6,027	9,531	7,184	8,276	7,338
Other Europe:								
Hungary	720	926	1,151	1,232	1,279	1,141	1,088	1,130
Romania	3/	3/	4/	525	745	755	600	3/
Yugoslovia	346	409	576	508	746	557	584	600
Bulgaria	331	320	424	433	426	468	400	3/
Czechoslovakia	138	183	351	167	504	427	378	3/
Austria	170	218	261	186	340	263	276	252
Switzerland	97	112	123	83	140	115	159	131
Total	1,802	2,168	2,886	3,134	4,180	3,726	3,485	3/
Southern Hemisphere:								
Argentina	513	827	869	804	817	872	943	600
South Africa	302	372	465	486	423	513	453	499
Chile	103	179	367	335	370	410	420	480
Australia	392	296	302	294	301	267	340	320
New Zealand	144	179	242	235	192	256	285	311
Total	1,454	1,853	2,245	2,154	2,103	2,318	2,441	2,210
Other countries:								
China	992	2,113	2,856	3,006	2,430	3,591	2,941	5,000
Turkey	836	1,050	1,566	1,450	1,600	1,750	1,600	1,900
Japan	960	857	918	846	923	1,048	812	969
Canada	412	434	476	422	478	485	441	490
Mexico	182	297	339	280	394	302	437	403
Total	3,382	4,751	6,155	6,004	5,825	7,176	6,231	6,762
Grand total, specified countries	16,920	19,703	22,830	20,836	25,324	24,203	24,191	3/

1/ Does not include varieties grown specifically for making alcoholic apple cider.
2/ The 12 member countries of the EC are Belgium, Denmark, France, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, West Germany, and the United Kingdom. Spain and Portugal became member countries on Jan. 1, 1986; data are not available for Portugal.
3/ Not available.
4/ Production in Romania during 1980/81 to 1984/85 averaged 608,000 metric tons annually.

Source: Compiled from official statistics of the Foreign Agriculture Service, U.S. Department of Agriculture, except as noted.

Apple production in five Southern Hemisphere countries with significant apple industries increased by 54 percent over the decade and averaged 2.2 million tons annually during the most recent 5-year period. Apple production in Argentina, the leading supplier of CAJ to the United States in most recent years, increased over the decade from 513,000 tons annually to 869,000 tons, or by 69 percent. Other Southern Hemisphere countries that export apple juice are the Republic of South Africa, Chile, Australia, and New Zealand.

The supply and utilization of fresh apples in 10 countries is shown in table 34. Five of the top six U.S. import sources are included in the table. Argentina utilized from 40 to 45 percent of its apples in processing in the past few crop years, and it imports no fresh apples. The Netherlands, Spain, and West Germany sold most apples in the domestic fresh market, placing only about 20, 6, and 30 percent, respectively, into processing. South Africa exported slightly more fresh apples than were sold in its domestic fresh market and utilized about 25 percent in processing. The processing figures include all types of operations, of which juice production is only a part.

Questionnaire responses provide some information about the foreign juice-processing industry, specifically that part producing concentrated apple juice (69-72 degrees Brix). This is the primary product exported, although some 45 degree Brix concentrate is exported as well. The concentrate is generally exported in 50- to 65-gallon plastic or steel drums.

Generally, there are three or more foreign firms exporting concentrated apple juice from each of the different countries that export to the United States. There are at least 15 countries that export significant quantities of CAJ to the United States: Argentina, Spain, Turkey, West Germany, Austria, Italy, Hungary, the Netherlands, Belgium, South Africa, New Zealand, Denmark, Mexico, Chile, and Israel. Chile's capacity to produce CAJ is being doubled by construction of a new plant by Coca Cola. 1/

Table 35 shows data on production and exports from the major supplying countries. In 1985, Argentina produced CAJ at 79 percent of its capacity; almost all exports were to the United States. According to the source of the data in the table, West Germany's capacity to produce CAJ is "big enough to process available apples without problems." West Germany's exports to the United States represented a relatively small share, 5 to 7 percent, of its total production in 1981 and 1982, but they increased to 17 to 26 percent in 1983-85. Austria's exports to the United States showed the sharpest increase among the countries shown during 1981-85, from 3 percent of production in 1981 to 61 percent in 1985. Chile operated at full capacity in 1984 and 1985; the data presented do not include the new plant of Coca Cola, which reportedly aims to produce 882,000 gallons of CAJ in 1986 and 1.7 million gallons in 1987.

1/ Prehearing brief of counsel for the American Farm Bureau Federation, p. 21.

Table 34.--Apples: Supply, utilization, and share of production processed, by countries and crop year

Country/ crop year	Supply		Utilization			Share of production processed
	Production	Imports	Exports	Market	Processed	
	Metric tons					Percent
Argentina:						
1/83-12/83	817,000	0	220,475	266,525	330,000	40
1/84-12/84	934,000	0	200,000	334,000	400,000	43
1/85-12/85	942,800	0	215,000	327,800	400,000	42
1/86-12/86	600,000	0	100,000	230,000	270,000	45
Australia:						
1/84-12/84	267,000	0	16,000	196,000	55,000	21
1/85-12/85	340,000	0	28,000	196,000	116,000	34
1/86-12/86	320,000	0	30,000	193,000	97,000	30
Canada:						
7/83-6/84	484,853	91,288	77,352	228,152	211,378	44
7/84-6/85	440,558	97,276	40,533	232,301	215,000	49
7/85-6/86	490,000	100,000	60,000	260,000	210,000	43
Chile:						
1/84-12/84	410,000	0	208,370	151,630	50,000	12
1/85-12/85	420,000	0	203,000	157,000	60,000	14
1/86-12/86	480,000	0	235,000	175,000	70,000	15
France:						
8/83-7/84	1,574,900	122,400	546,100	772,200	185,000	12
8/84-7/85	1,981,700	83,200	620,000	784,200	148,000	7
8/85-7/86	1,772,000	100,000	640,000	785,000	150,000	8
Netherlands:						
7/83-6/84	403,000	218,000	154,000	381,000	86,000	21
7/84-6/85	431,000	204,000	154,000	395,000	75,000	17
7/85-6/86	340,000	280,000	150,000	390,000	70,000	21
New Zealand:						
10/84-9/85	255,700	4,100	126,000	52,700	81,100	32
10/85-9/86	285,000	3,000	149,000	56,000	83,000	29
10/86-9/87	311,000	3,000	157,000	57,000	100,000	32
South Africa:						
1/83-12/83	423,396	359	143,896	162,359	117,500	28
1/84-12/84	513,105	367	221,372	163,800	128,300	25
1/85-12/85	453,132	325	199,619	155,838	98,000	22
1/86-12/86	498,530	275	214,255	155,850	128,700	26
Spain:						
7/84-6/85	1,012,000	560	56,150	805,210	50,000	5
7/85-6/86	959,000	3,000	29,400	766,700	70,000	7
7/86-6/87	1,000,000	4,000	40,000	804,000	60,000	6
West Germany:						
7/83-6/84	1,313,071	716,618	51,545	1,554,447	410,297	31
7/84-6/85	1,799,269	708,996	35,233	1,883,112	548,120	30
7/85-6/86	1,300,000	700,000	40,000	1,600,000	325,000	25

Source: Foreign Agricultural Service, U.S. Department of Agriculture.

Table 35.--Concentrated apple juice (CAJ) (69-72 degree Brix): All apples produced, apples used for CAJ, capacity to produce CAJ, production of CAJ, and exports of CAJ to the United States, by sources, 1981-85

Item	1981	1982	1983	1984	1985
Argentina:					
All apples produced 1/	905	804	817	933	928
Apples used for CAJ 1/	268	334	345	393	366
percent of total	30	42	42	42	39
Capacity to produce CAJ 2/	10,000	10,000	10,000	10,000	10,000
Capacity utilization (%)	58	72	74	84	79
Production of CAJ 3/	5,762	7,188	7,425	8,449	7,861
Exports of CAJ to US 3/	5,201	6,537	5,738	7,342	7,627
percent of total	90	91	77	87	97
West Germany:					
All apples produced 1/	772	2,637	1,313	1,799	1,850
Apples used for CAJ 1/	232	791	394	540	555
percent of total	30	30	30	30	30
Capacity to produce CAJ	4/	4/	4/	4/	4/
Production of CAJ 3/	9,453	32,289	16,077	22,028	22,653
Exports of CAJ to US 3/	700	1,513	4,202	3,746	5,525
percent of total	7	5	26	17	24
Austria:					
All apples produced 1/	243	428	231	353	293
Apples used for CAJ 1/	160	330	150	270	210
percent of total	66	77	65	76	72
Capacity to produce CAJ 3/	6,200	6,030	8,000	8,300	8,800
Production of CAJ 3/	4,087	8,500	3,890	7,000	5,450
Capacity utilization (%)	66	141	49	84	62
Exports of CAJ to US 3/	113	492	1,736	2,290	3,350
percent of total	3	6	45	33	61
Belgium: 5/					
All apples produced 1/	581	523	640	600	601
Apples used for CAJ 1/	75	81	90	97	145
percent of total	13	15	14	16	24
Production of CAJ 3/	1,935	2,105	2,315	2,515	3,675
Exports of CAJ to US 3/	387	1,052	1,158	1,505	2,446
percent of total	20	50	50	60	66
Spain:					
All apples produced 1/	1,062	891	1,075	1,019	1,057
Apples used for CAJ 1/	39	90	83	115	170
percent of total	4	10	8	11	16
Capacity to produce CAJ 6/	10,494	10,494	10,494	10,494	10,494
Production of CAJ 3/	720	1,750	1,600	2,350	3,450
Capacity utilization (%)	7	17	15	22	33
Exports of CAJ to US 3/	428	1,031	1,111	1,965	2,508
percent of total	59	59	69	84	73
Chile:					
All apples produced 1/	340	353	340	407	422
Apples used for CAJ 1/	21	36	35	51	48
percent of total	6	10	10	12	11
Capacity to produce CAJ 3/	686	745	745	1,078	1,078
Production of CAJ 3/	413	763	913	1,209	1,157
Capacity utilization (%)	60	102	92	112	107
Exports of CAJ to US 3/	349	386	689	969	975
percent of total	84	50	75	80	84

1/ 1,000 metric tons.
2/ 1,000 gallons CAJ; capacity based on 100 working days per year.
3/ 1,000 gallons CAJ.
4/ "Big enough to process available industrial apples without problems."
5/ Capacity to produce CAJ not available.
6/ 1,000 gallons CAJ; capacity based on 28,750 gallons per day, 365 days per year.

Source: Posthearing submission by counsel to parties opposing import relief.

The Question of Imports as a Substantial Cause of Serious Injury

Market penetration

The ratio of imports of apple juice to apparent U.S. consumption rose from 28 percent in crop year 1980/81 to 55 percent in crop year 1984/85, as shown in the following tabulation:

Crop year	Ratio of imports to apparent consumption (percent)
1980/81	28
1981/82	33
1982/83	47
1983/84	45
1984/85	55
July-January	
1984/85	40
1985/86	43

Prices

The price of apple juice depends on the demand for apple juice and on factors affecting the supply of apple juice, which in turn depends on factors affecting the supply of juice apples and imported concentrate. The price of juice apples depends on factors affecting the supply of juice apples such as weather conditions and the market for apples in other uses, and the demand for juice apples, which derives from the demand for apple juice. These interrelationships are examined using data from public sources and from questionnaire responses.

Apple juice.--Apple juice is supplied primarily from two sources: pressing domestically grown apples (i.e., domestic apple juice) and reconstituting imported CAJ. The supply of apple juice from domestically grown apples is affected by the supply of juice apples during a given crop year, the market for apples in other uses, and the supply of imported CAJ. 1/ The quantity of domestic apple juice produced increased fairly steadily from 1975 to 1980 and then fell off somewhat from 1981 to 1985 (tables 8 and 20).

The remainder of the apple juice consumed in the U.S. market is supplied by reconstituting imported CAJ. Imported CAJ may be simply reconstituted and sold as single-strength juice or frozen concentrate, or it may be blended with apple juice produced from domestically grown apples either for the purposes of taste modification or cost reduction. The total quantity of imported CAJ has increased substantially over the last 10 years, with very large increases occurring since 1981 (table 8).

1/ During a given crop year, some juice apples may be abandoned if the costs of gathering wind-drops from the ground or of transporting apples culled from packing or storage exceed prices paid for such apples.

Two factors may have influenced the demand for apple juice during the past 10 years. First, some evidence indicates that there has been a shift in consumers' preferences towards greater consumption of fruit juice and drinks. 1/ Second, the ready availability of a standardized quality of juice may have stimulated the demand for apple juice. 2/ Per capita consumption more than doubled from 1975 to 1983, the last year for which data are available.

Indexes of the price of apple juice provided by the American Agricultural Marketing Association (AAMA) and calculated from a limited number of questionnaire responses are provided in tables 36 and 37. 3/ The nominal price index provided by the AAMA of apple juice produced from domestically grown apples and imported CAJ increased steadily from 1975 to 1981 and then declined from 1982 to 1984. When adjusted for inflation, the price index increased from 1975 to 1978 and then declined irregularly during 1979 to 1984. The rise in the price of apple juice during 1975 through 1979 was accompanied by a steadily increasing quantity of apple juice consumed. Thus, the rise in the price may have resulted from an increase in the demand for apple juice. From 1981 to 1984, the supply of apple juice, primarily that produced from imported CAJ, continued to increase while the price of apple juice declined.

Table 36.--Index of prices 1/ of apple juice produced from domestically grown apples and imported concentrate, 1975-84

(1975=100)

Year	Price index		Year	Price index	
	Nominal	Real		Nominal	Real
1975	100.0	100.0	1980	168.1	112.3
1976	111.6	107.2	1981	197.8	120.1
1977	129.9	117.6	1982	190.6	112.1
1978	158.0	132.8	1983	186.4	107.8
1979	167.9	127.0	1984	176.0	99.7

1/ Prices were deflated using the wholesale price index, provided by the Bureau of Labor Statistics.

Source: 1985 Apple Crop Statistics and Market Analysis, American Agricultural Marketing Association.

1/ See for example, Food News, Oct. 19, 1984, and Fruit Grower, May 1985.

2/ Note that an increase in the supply of apple juice by itself would cause an increase in consumption. In addition, an increase in the supply may cause a long-run shift in the consumers' taste for the product, increasing demand.

3/ Sufficient questionnaire data were not available to calculate separate price series for single-strength or frozen concentrated juice produced from domestic and imported sources, on a quarterly basis.

Table 37.--Index of weighted-average prices 1/ of apple juice reported by producers, 1981-85

(1981=100)

Year	All apple juice		Domestic		Reconstituted from imported CAJ	
	Nominal	Real	Nominal	Real	Nominal	Real
1981	100.0	100.0	100.0	100.0	100.0	100.0
1982	107.7	103.7	110.3	106.2	107.2	103.2
1983	98.5	93.2	99.0	93.7	100.0	94.6
1984	98.5	91.2	100.5	93.1	97.8	90.6
1985	91.8	84.3	95.1	87.3	87.8	80.6

1/ Prices were deflated using the wholesale price index, provided by the Bureau of Labor Statistics.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

The nominal and inflation adjusted price indexes for apple juice produced from domestic and imported sources calculated from questionnaire responses indicate a general downward trend in prices from 1982 to 1985. The decline in the price of apple juice during this period was more pronounced for juice made from imported concentrate than that made from domestic apples.

Juice apples.--The price of juice apples is influenced by factors affecting the supply of juice apples and by the demand for juice apples, which depends on the demand for apple juice and the supply of imported CAJ. Juice apples are supplied from two sources: (1) those not suitable for the fresh or canning markets that are sorted at harvest, during the packing process, or from storage, and (2) wind drops that are recovered from the ground. Because juice apples that are sorted at harvest or from storage are a coproduct of apple production geared primarily for other markets, 1/ the costs of production are not separable from those associated with apple production for other uses. Therefore, the supply of such apples from a given harvest is largely determined by the quantity and quality of apples harvested and the markets for fresh and canning apples. 2/ A poor harvest may result in a decline in the overall quantity of apples in all uses or it may result in a larger share of the total crop that is used for juice. The costs of recovering wind-drops from the ground, in contrast, are separable. Therefore, the supply of wind-drop apples depends on the cost of gathering relative to the price received for such apples.

1/ The question of whether a juice apple is a coproduct or a byproduct of apples destined for the fresh market or for canning depends on whether a grower targets his production for the fresh, canning, or juice apple market.

2/ The quality and quantity of an apple harvest is primarily affected by weather conditions and diseases.

Total juice apple utilization increased fairly steadily from a 5-year average of 1 billion pounds during crop years 1970/71 to 1974/75 to 1.4 billion pounds during 1975/76 to 1979/80 and 2.1 billion pounds in crop year 1980/81. Such utilization leveled off during crop years 1981/82 to 1984/85 (table 14).

The demand for juice apples depends on the demand for apple juice and the supply of the substitute input, imported CAJ. As discussed above, the demand for apple juice has increased during the last 10 years. At the same time, imports of CAJ have increased significantly.

Data on the price of juice apples provided by the U.S. Department of Agriculture show irregular movements from crop year 1975/76 to crop year 1984/85 (table 38). Prices increased from 2.63 cents per pound in crop year 1975/76 to 5.50 cents per pound in 1978/79 and then declined during the next 2 crop years to 3.69 cents per pound in 1980/81. The price of juice apples rose to 5.15 cents per pound in crop year 1982/83 and then declined during crop years 1983/84 and 1984/85 to 4.40 cents per pound in the latter year.

Table 38.--Prices of apples, 1/ by uses, crop years 1975/76 to 1984/85

(In cents per pound)

Crop year	All uses		Fresh		Canned		Juice	
	Current	Constant 1975/76 prices	Current	Constant 1975/76 prices	Current	Constant 1975/76 prices	Current	Constant 1975/76 prices
1975/76	6.50	6.50	8.80	8.80	2.88	2.88	2.63	2.63
1976/77	9.10	8.59	11.50	10.86	6.00	5.67	4.58	4.32
1977/78	10.60	9.41	13.80	12.86	6.65	5.91	5.45	4.84
1978/79	10.40	8.44	13.90	11.28	5.95	4.83	5.50	4.46
1979/80	10.90	7.85	15.40	11.09	6.25	4.50	5.15	3.71
1980/81	8.70	5.57	12.10	7.75	4.87	3.12	3.69	2.36
1981/82	11.10	6.48	15.40	8.98	6.05	3.53	4.40	2.57
1982/83	10.00	5.51	13.20	7.28	6.60	3.64	5.15	2.84
1983/84	10.50	5.71	14.90	8.10	5.85	3.18	4.45	2.42
1984/85	11.20	6.02	15.50	8.34	6.85	3.68	4.40	2.37

1/ Prices were deflated using the wholesale price index, provided by the Bureau of Labor Statistics.

Source: Noncitrus Fruits and Nuts, U.S. Department of Agriculture, Crop Reporting Board, various issues.

Although it is difficult to sort out all factors affecting this market, a few events are noteworthy. First, the increase in the price of juice apples from 1975 to 1978, which was accompanied by an increase in both juice apple utilization and imports of concentrate, was probably caused by an increase in the demand for apple juice. Juice apple utilization peaked in crop year 1980/81 and imported CAJ increased 52 percent over the previous year, causing

the price of juice apples to drop to 3.69 cents per pound. Since 1980, juice apple utilization appears to have leveled off. However, imports of CAJ have continued to rise. These increases in the level of imports, particularly during crop years 1982/83 to 1984/85, coincided with a decline in the price of juice apples.

Data on prices of juice apples compiled from questionnaire responses are provided in table 39 for crop years 1981/82 through 1984/85 and for July-December 1985. These data show a slight, irregular downward trend in the price of juice apples in current and constant dollars from 1981/82 to 1984/85. During July-December 1985, prices dropped significantly. Data on quarterly selling prices of juice apples for the same period, provided in table 40, show an irregular downward trend in the price of juice apples from the last half of crop year 1981/82 to October-December 1985. However, any trend in quarterly purchase prices is less evident.

Table 39.--Selling and purchase prices 1/ of juice apples, crop years 1981/82 to 1984/85 and July-December 1985

(In cents per pound)

Period	Selling prices		Purchasing prices	
	Current	Constant 1981/82 prices	Current	Constant 1981/82 prices
1981/82	5.31	5.31	4.93	4.93
1982/83	5.08	4.80	5.70	5.39
1983/84	4.56	4.25	4.89	4.55
1984/85	4.59	4.23	5.23	4.82
1985 (July-December)	3.60	3.31	3.89	3.58

1/ Prices were deflated using the wholesale price index, provided by the Bureau of Labor Statistics.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Concentrated apple juice.--Unit values of imported CAJ are provided in table 41 for imports from all sources and in table 42 for countries that supplied the largest quantity of imports in 1984/85. Unit values of imported CAJ increased steadily from 35 cents per gallon of single-strength equivalent (SSE) in crop year 1975/76 to $1.06 per gallon of SSE in crop year 1979/80. Unit values declined in crop year 1980/81 to 74 cents per gallon of SSE and then increased to 84 cents per gallon of SSE in 1981/82. Unit values declined steadily during the next 3 crop years to 67 cents per gallon of SSE in crop year 1984/85. Unit values from all countries reported in table 42 declined during crop year 1984/85 and the last half of 1985 and were lower during July-December 1985 than during the preceding crop years.

Table 40.--Quarterly purchase and selling prices of juice apples, July 1981-December 1985

(In cents per pound)

Period	Selling price	Purchase price
1981/82:		
July-September	3.44	4.78
October-December	5.47	4.39
January-March	6.16	5.98
April-June	6.63	6.57
1982/83:		
July-September	5.30	5.77
October-December	4.91	5.34
January-March	5.86	6.83
April-June	5.22	7.30
1983/84:		
July-September	5.92	6.12
October-December	4.33	4.49
January-March	4.45	5.47
April-June	4.02	6.01
1984/85:		
July-September	4.25	6.10
October-December	4.57	4.56
January-March	4.99	6.32
April-June	4.89	6.48
1985:		
July-September	3.81	5.87
October-December	3.58	3.42

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 41.--Estimated unit values 1/ of imported concentrated apple juice from all sources, crop years 1975/76 to 1984/85 and July-December 1985

(Per gallon of SSE)

Crop year	Current	Constant 1975/76 prices	Crop year	Current	Constant 1975/76 prices
1975/76	$0.35	$0.35	1981/82	$0.84	$0.49
1976/77	.60	.57	1982/83	.81	.45
1977/78	.79	.70	1983/84	.76	.41
1978/79	.92	.74	1984/85	.67	.36
1979/80	1.06	.76	1985 (July-December)	.65	.35
1980/81	.74	.47			

1/ Prices were deflated using the wholesale price index, provided by the Bureau of Labor Statistics.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 42.--Estimated unit values of imported concentrated apple juice from largest suppliers, crop years 1982/83 to 1984/85 and July-December 1985

(Per gallon of SSE)

Period	Argentina	Federal Republic of Germany	Austria	Netherlands	Spain	Republic of South Africa
1982/83	$0.80	$0.80	$0.84	$0.76	$0.85	$0.84
1983/84	.66	.76	.87	.99	.76	.73
1984/85	.59	.69	.73	.79	.69	.62
1985 (July-December)	.56	.67	.69	.67	.71	.55

Source: Compiled from official statistics of the U.S. Department of Commerce.

Purchase prices of CAJ were asked by the Commission in its questionnaire from producers of apple juice. Purchase prices of domestic CAJ (i.e., that produced from domestically grown apples) and imported CAJ, calculated from questionnaire data, are provided in table 43 for crop years 1981/82 through 1984/85 and for July-December 1985. The purchase price of domestic CAJ declined steadily from 1982/83 to July-December 1985. The price of imported CAJ also declined steadily from crop years 1982/83 to 1984/85, before increasing slightly during July-December 1985. The purchase price of imported CAJ was consistently below the domestic purchase price during the period covered.

Table 43.--Purchase prices 1/ of domestic and imported concentrated apple juice, crop years 1981/82 to 1984/85 and July-December 1985

(Per gallon)

Period	Domestic		Imported	
	Current	Constant 1981/82 prices	Current	Constant 1981/82 prices
1981/82	$6.68	$6.68	$6.39	$6.39
1982/83	7.07	6.68	6.42	6.07
1983/84	6.16	5.74	5.30	4.93
1984/85	5.88	5.42	4.61	4.25
1985 (July-December)	5.53	5.09	4.86	4.48

1/ Prices were deflated using the wholesale price index, provided by the Bureau of Labor Statistics.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Quarterly prices of imported and domestic CAJ are provided in tables 44 and 45 for the same period. These data show an irregular downward trend in prices of both domestic and imported concentrate from July-September 1982 through April-June 1985. Again, prices increased slightly during July-December 1985.

Table 44.--Quarterly purchase prices of domestic and imported concentrated apple juice, July 1981-December 1985

(Per gallon)

Period	Domestic	Imported
1981/82:		
July-September	$7.52	$5.75
October-December	6.00	6.26
January-March	6.62	6.50
April-June	7.13	6.56
1982/83:		
July-September	7.47	7.24
October-December	7.08	6.57
January-March	6.71	6.30
April-June	6.50	5.67
1983/84:		
July-September	6.74	5.75
October-December	6.03	5.56
January-March	6.17	5.53
April-June	6.21	4.90
1984/85:		
July-September	6.50	5.06
October-December	5.83	4.43
January-March	6.03	4.58
April-June	5.22	4.55
1985:		
July-September	5.56	4.65
October-December	5.30	5.04

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 45.--Quarterly purchase prices of imported concentrated apple juice, by sources, July 1981-December 1985

(Per gallon)

Period	Argentina	West Germany	Austria	Netherlands	Spain	Republic of South Africa
1981/82:						
July-Sept---	$5.91	$5.68	2/	2/	2/	2/
Oct.-Dec----	5.74	6.40	$5.20	$6.45	$6.04	2/
Jan.-Mar----	6.42	6.91	2/	6.45	6.00	2/
Apr.-June---	5.55	7.30	2/	6.45	7.30	2/
1982/83:						
July-Sept---	6.12	7.20	2/	7.35	2/	2/
Oct.-Dec----	6.38	6.59	6.25	7.25	6.28	2/
Jan.-Mar----	5.50	6.47	5.40	6.35	6.25	2/
Apr.-June---	5.46	5.62	2/	5.65	6.04	2/
1983/84:						
July-Sept---	5.40	5.78	5.59	5.65	2/	$5.40
Oct.-Dec----	5.48	5.60	5.61	5.50	5.45	2/
Jan.-Mar----	5.40	5.42	5.85	5.50	5.85	5.50
Apr.-June---	4.52	5.28	5.46	2/	5.12	5.55
1984/85:						
July-Sept---	4.37	5.38	5.51	5.85	2/	4.57
Oct.-Dec----	4.18	4.48	5.00	5.35	4.15	2/
Jan.-Mar----	5.75	4.68	4.74	5.75	4.48	4.27
Apr.-June---	4.35	4.73	4.80	5.85	4.33	4.55
1985:						
July-Sept---	5.19	4.69	4.55	4.60	4.35	4.73
Oct.-Dec----	4.67	4.99	5.30	4.70	5.00	4.55

1/ The numbers of firms reporting purchases from each country were as follows: Argentina, 5; West Germany, 11; Austria, 3; Netherlands, 1; Spain, 3; and the Republic of South Africa, 2.

2/ No purchases reported.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Exchange rates

The largest importer testified that exchange-rate variations have not played any role in the selection of source countries. 1/ One of the factors considered in examining the competitive position of domestic producers of juice apples and apple juice vis-a-vis foreign producers of CAJ is the exchange rate between the U.S. dollar and the currencies of the major foreign supplying countries. Quarterly indexes of exchange rates and producer prices of the top six supplying countries of apple juice concentrate during 1985 are presented in table 46 from data reported by the International Monetary

1/ Transcript of the hearing, p. 255.

Table 46.--Exchange rates: 1/ Nominal-exchange-rate equivalents of selected currencies in U.S. dollars, real-exchange-rate equivalents, and producer price indicators in specified countries, 2/ indexed by quarters, January 1981-December 1985

Period	U.S. Producer Price Index	Argentina			Austria			Netherlands		
		Producer Price Index	Nominal-exchange-rate index	Real-exchange-rate index 3/	Producer Price Index	Nominal-exchange-rate index	Real-exchange-rate index 3/	Producer Price Index	Nominal-exchange-rate index	Real-exchange-rate index 3/
			Dollars/austral			Dollars/schilling			Dollars/guilder	
1981:										
Jan.-Mar.	100.0	100.0	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June	102.2	132.8	57.89	75.2	102.0	91.8	91.6	102.1	90.4	90.2
July-Sept.	102.9	185.9	43.14	78.0	102.5	86.4	86.1	104.6	84.5	85.9
Oct.-Dec.	102.8	236.7	33.85	78.0	103.2	93.9	94.3	105.8	92.5	95.2
1982:										
Jan.-Mar.	103.7	313.3	21.36	64.5	105.6	89.8	91.4	108.6	88.7	92.8
Apr.-June	103.8	389.1	16.06	60.2	107.5	88.3	91.4	109.7	86.6	91.5
July-Sept.	104.3	663.3	5.84	37.1	104.2	84.7	84.6	110.7	83.7	88.8
Oct.-Dec.	104.4	967.2	5.24	48.5	103.4	84.1	83.3	110.7	83.4	88.4
1983:										
Jan.-Mar.	104.5	1388.3	3.83	50.8	105.9	87.3	88.5	110.8	85.8	91.0
Apr.-June	104.8	1849.2	2.81	49.7	105.7	84.5	85.2	111.1	81.8	86.8
July-Sept.	105.8	2820.3	2.95	54.7	105.1	79.6	79.0	112.7	77.2	82.3
Oct.-Dec.	106.4	4693.8	1.24	54.5	106.6	78.4	78.6	112.9	76.0	80.7
1984:										
Jan.-Mar.	107.5	7175.8	0.79	52.8	109.8	77.6	79.3	115.7	75.0	80.7
Apr.-June	108.2	11923.4	0.53	58.9	110.7	77.6	79.4	116.4	74.9	80.5
July-Sept.	107.9	19971.9	0.32	58.7	109.0	72.1	72.8	117.1	69.4	75.3
Oct.-Dec.	107.7	33350.8	0.17	51.5	109.7	68.9	70.2	117.3	66.3	72.2
1985:										
Jan.-Mar.	107.5	59061.7	0.09	48.5	114.3	64.6	68.7	118.1	62.0	68.1
Apr.-June	107.6	132607.8	0.04	48.7	114.9	68.1	72.7	119.3	65.5	72.6
July-Sept.	106.8	178198.4	0.03	45.8	111.3	73.8	76.9	118.6	71.2	79.1
Oct.-Dec.	107.5	182632.0	0.03	46.7	110.1	81.4	83.3	4/ 117.6	78.4	4/ 85.8

See footnotes at end of table.

Table 46.--Exchange rates: 1/ Nominal-exchange-rate equivalents of selected currencies in U.S. dollars, real-exchange-rate equivalents, and producer price indicators in specified countries, 2/ indexed by quarters, January 1981-December 1985--Continued

Period	U.S. Producer Price Index	South Africa			Spain			West Germany		
		Producer Price Index	Nominal-exchange-rate index	Real-exchange-rate index 3/	Producer Price Index	Nominal-exchange-rate index	Real-exchange-rate index 3/	Producer Price Index	Nominal-exchange-rate index	Real-exchange-rate index 3/
			Dollars/rand			Dollars/peseta			Dollars/mark	
1981:										
Jan.-Mar--:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June-:	102.2	102.1	91.9	91.8	105.3	92.2	95.0	102.5	91.7	91.9
July-Sept-:	102.9	106.3	82.0	84.7	108.3	85.8	90.3	104.7	85.8	87.3
Oct.-Dec--:	102.8	109.7	80.0	85.4	111.1	87.5	94.5	106.2	93.0	96.1
1982:										
Jan.-Mar--:	103.7	112.9	77.9	84.8	115.2	83.1	92.3	108.1	89.9	92.6
Apr.-June-:	103.8	117.0	71.6	80.6	118.3	79.3	90.3	109.1	87.7	92.2
July-Sept-:	104.3	120.9	67.0	77.6	120.1	74.9	86.3	110.1	84.1	88.7
Oct.-Dec--:	104.4	125.3	68.3	82.0	122.7	70.0	82.3	110.5	83.4	88.3
1983:										
Jan.-Mar--:	104.5	127.9	71.1	87.0	130.5	64.7	80.8	110.2	86.7	91.4
Apr.-June-:	104.8	130.6	70.7	88.2	134.2	60.5	77.5	110.5	84.0	88.6
July-Sept-:	105.8	132.8	69.5	87.3	137.3	55.9	72.6	111.4	79.0	83.1
Oct.-Dec--:	106.4	135.1	65.6	83.3	142.3	54.4	72.8	112.1	77.9	82.1
1984:										
Jan.-Mar--:	107.5	136.9	62.4	79.5	148.3	54.4	75.1	113.1	77.2	81.3
Apr.-June-:	108.2	140.1	60.4	78.2	152.2	55.0	77.3	114.0	77.0	81.1
July-Sept-:	107.9	143.8	49.0	65.3	154.1	55.9	72.7	114.5	71.5	75.8
Oct.-Dec--:	107.7	149.5	42.4	58.9	156.2	49.3	71.5	115.3	68.3	73.2
1985:										
Jan.-Mar--:	107.5	156.7	37.9	55.2	161.8	46.7	70.3	116.5	64.1	69.5
Apr.-June-:	107.6	162.9	39.2	59.3	164.4	48.3	73.8	117.0	67.6	73.5
July-Sept-:	106.8	168.3	34.4	54.2	165.7	50.3	78.1	117.0	73.2	80.2
Oct.-Dec--:	107.5	5/176.9	29.1	5/ 48.0	167.3	52.9	82.3	116.8	80.8	87.7

1/ Exchange rates expressed in U.S. dollars per unit of foreign currency.

2/ Producer price indicators--intended to measure final product prices--are based on average quarterly indexes presented in line 63 of the International Financial Statistics.

3/ The real value of a currency is the nominal value adjusted for the difference between inflation rates as measured here by the Producer Price Index in the United States and the respective foreign country. Producer prices in the United States increased 7.5 percent between January 1981 and December 1985 compared with increases of 182,532 percent in Argentina, 10.1 percent in Austria, 17.6 percent in the Netherlands, 76.9 percent in South Africa, 67.3 percent in Spain, and 16.8 percent in West Germany during the same period.

4/ Derived from Netherlands producer price data for October only.

5/ Derived from South African producer price data for October and November only.

Source: International Monetary Fund, International Financial Statistics, April 1985 and 1986.

Note.--January-March 1981=100.0

Fund. 1/ Exchange-rate indexes of the Argentine austral, the Austrian schilling, the Netherlands guilder, the South African rand, the Spanish peseta, and the West German mark indicate that during January 1981-December 1985, the nominal value of the respective currency of each country depreciated by 99.97 percent, 18.6 percent, 21.6 percent, 70.9 percent, 47.1 percent, and 19.2 percent, respectively, relative to the U.S. dollar. 2/ The level of inflation in the Netherlands and West Germany was slightly higher than in the United States over the 20-quarter period, whereas the level of inflation in Austria was approximately the same as in the United States. Therefore, changes in the real value of the Netherlands guilder, the West German mark, and the Austrian schilling were not significantly different from changes in the nominal value. In contrast, the high levels of inflation in Argentina, South Africa, and Spain over the same period resulted in the devaluation of the currency of each of the aforementioned countries in real terms by 53.3 percent, 52.0 percent, and 17.7 percent, respectively, relative to the U.S. dollar--significantly less than the respective apparent depreciations of 99.97 percent, 70.9 percent, and 47.1 percent, respectively, represented by the nominal devaluation.

Factors other than imports affecting the domestic industry

Factors other than imports that may be affecting the apple juice industry include markets for apples in other uses and markets for other fruit juices.

Per capita consumption of apples in other uses remained fairly constant from 1975 to 1983 (table 6). Inflation-adjusted prices of apples in all uses, provided in table 38, rose from 1975/76 to 1977/78, declined during the next 3 years, then leveled off from 1980/81 to 1984/85. Thus, there does not appear to be any major change in the market for other apples that is affecting the apple juice industry.

The market for other fruit juices also does not appear to be adversely affecting the apple juice industry. The inflation-adjusted price index of all fruit juices provided by the Bureau of Labor Statistics indicates that prices were constant from 1980 to 1983 and then rose by roughly 9 percent in 1984. Per capita consumption of orange juice, which comprises the largest share of fruit juice consumption, declined from 1980 to 1983, the last year for which data are available. The inflation-adjusted price index of orange juice rose by 16.7 percent from 1980 to 1981, fell by 12.3 percent from 1981 to 1983, and then rose by 27.7 percent in 1984.

Competitive Efforts Against Imports

Growers of juice apples and producers of domestic apple juice were asked in questionnaires what, if any, efforts their firm had taken during the past 5 years to compete against imports of CAJ.

1/ The six foreign countries are West Germany, Argentina, Austria, the Netherlands, Spain, and the Republic of South Africa.

2/ International Financial Statistics, April 1985 and 1986.

Small growers

Nineteen of the thirty-nine questionnaires returned from growers with less than 100 acres planted in apple trees contained no response to the question of what efforts they have taken to compete against imports of CAJ. Eight of the remaining twenty respondents stated that they have taken no efforts, the reason (indicated by a few growers) being that small growers do not compete against imports.

The 12 small growers that cited efforts taken to compete against imports presented a wide variety of alternative measures. By far the major alternative, specified by eight of these growers, was investment in new plantings. These plantings replace older, poorer yielding trees with younger, higher yielding ones that hopefully will produce better quality apples, meaning better and fewer juice apples. The plantings also mean replacements with dwarf trees that allow for more densely planted orchards, increasing overall yields for the orchard.

Other efforts taken include voicing opinions through farm bureau and agricultural cooperative marketing associations, accepting lower prices for juice apple deliveries, or even dumping (discarding) some orchard-runs. Yet other efforts were replacing, repairing, or adding to old machinery to reduce labor costs; investing in new spray programs, using cheaper chemicals and integrated pest control to reduce crop management costs; joining cooperatives to expand juice apple markets; and keeping wages for laborers as low as legally or practically possible.

Although the predominant efforts made by these small growers were to keep production costs in check and increase production for the fresh market, many growers noted that they felt any efforts were futile because there was no way to compete against the low labor costs and subsidized production they perceived to exist in other countries.

Large growers

Of the growers that had more than 100 acres of apple trees, nearly 70 percent, or 35 firms, answered the question concerning efforts they have taken in apple production with regard to competitive imports of CAJ. Additional investment was the most commonly named activity. Of the firms that supplied answers, 60 percent had invested in the renewal of existing orchards or in new orchards. The new plantings often eliminate older trees that produce smaller apples suitable only for juice. Twenty-nine percent of the larger growers had made investments in new equipment, either for orchard operations or, more frequently, for fresh-apple-packing operations to gain higher average returns; 26 percent had made investments in new storage facilities. Nearly one-fourth of the responding firms had made specific cost-reduction efforts on existing equipment or facilities. To grow fewer juice apples was the stated goal of 43 percent of the firms. Efforts named also included a change in labor practices; some used less hand labor to reduce labor costs, while others used more hand labor to reduce the proportion of juice apples produced. A change in the use of chemical spray materials was mentioned by 11 percent of the firms; some used more spray to reduce hand labor costs, while others used less

spray to save expenses. Other efforts listed by the respondents included diversification into crops other than apples (10 percent), organizational changes in the way they do business (e.g., from bulk shipping apples to packaging the apples); technological improvements in their CA storage facilities; and joining a grower cooperative or entering into marketing contracts to assure a market for their apples at harvest time.

Producers of domestic apple juice

Five firms described their efforts to compete against imports of CAJ.

* * * * * * *

Adjustment If Relief Were to be Granted

Industry members were also asked in questionnaires sent to growers of juice apples and producers of domestic apple juice what adjustments would be made in their operations should temporary relief be granted as a result of this investigation.

Small growers

Of the 39 questionnaires received from small growers, 21 contained no response to the question of what adjustments would be made in their operations if temporary relief were granted. Of those 18 growers that responded to the question, 10 indicated that new, updated, or rejuvenated plantings would be the adjustment made. Other adjustments included new or reconditioned machinery, new storage facilities, new employees, investment specifically in the production of juice or CAJ, and more numerous and more efficient markets for apples.

Only a few of the responses estimated the cost of any possible adjustments, resulting in a range of $1,000 to $12,000 for orchard investment costs, and a range of $60,000 to $500,000 for machinery investment costs. Most of these estimates appeared to be based on the particular circumstances of the individual orchard, so they probably are not reflective of general investment costs unless they can be adjusted on a per acre basis.

The competitive advantage to be gained from these adjustments manifests itself in a number of ways for the growers. Predominantly, it is believed, these changes will mean better prices for apples, thus providing increased profits, more reinvestment money, and a stronger market share for these growers. Other advantages would include longer and better condition storage

capability, meaning improved quality and market power (i.e., waiting for a better price); increased yields and lower production costs; new technology and products; and better employee pay. One interesting suggestion was that these adjustments would result in the development of a domestic CAJ industry (possibly with labeling to indicate "Made in the U.S.A.") This suggests a grower feeling that competition could be at the level of the concentrate market, not just the juice market. One grower suggested the possibility of increased vertical integration as another advantage.

It was noted by some growers, however, that the relief shouldn't be temporary because of the need for higher domestic returns to support a higher domestic standard of living and because temporary relief would not help a small grower.

Large growers

Responses of large growers to the question of what adjustments they would make if relief were granted were varied and not focused in any one direction, except that they almost all agreed that juice apples were being sold below the cost of production. Of the 53 questionnaires, 37 (or 70 percent) supplied responses to the question of adjustment actions.

Twenty-seven percent of the responses indicated positive actions--things the grower would do on his farm if relief were granted. Most frequently named was removal of older trees and replanting, or investing in new orchards (12 percent of the total responses); next were actions to sell more fresh apple juice locally or increase juice apple supplies. Other actions cited would be investments to upgrade equipment, storage facilities and migrant housing, or to improve pruning. Twenty-five percent responded that they would continue their ongoing efforts against imports but would take no new actions if relief were granted.

Eighteen percent responding indicated a less positive approach; they stated that it is not possible to make adjustments in their operations or stated that they believe temporary relief would be of no value.

Producers of domestic apple juice

* * * replied in detail with projected and anticipated possible adjustments the firm would make if relief were granted. * * *.

Other Comments of Producers

Producers of domestic juice and/or CAJ

A number of producers of domestic apple juice identified actions they would like to see with regard to imported CAJ if some form of remedy were recommended. These are summarized as follows:

1. Require that the country of origin be printed on the labels of retail apple juice containers.

2. Assessments that apply on domestic products to obtain funds for organizations and promotion should be applied to imported CAJ on an equal basis.

3. An increase in the price of imported CAJ. One firm also said that imports would not be a problem if the minimum price of the imported CAJ were $6.50 per gallon).

4. Require that imported CAJ or apples of which it was made not contain chemicals not permitted in the United States, or contain chemicals in quantities not permitted in the United States.

Further, several firms specifically noted that a temporary remedy was no solution because of the long investment times for apple orchards and apple juice production.

Growers

Growers also provided general observations regarding the industry as a whole. Some mentioned that the same rules and regulations with respect to the use of chemical spray materials that are enforced for domestic juice should be enforced for imported CAJ as well; others noted that the United States needs to develop a domestic CAJ industry. Other comments included the period of time that relief would be in effect needs to be sufficient to renew orchards, imports of CAJ or apples should be subject to the same promotional assessments that apply to U.S. apples, currency exchange rates should be brought in "line", and the oversupply of apples in the United States is likely to continue.

During the course of the investigation, 54 letters were received from apple growers in 8 States. The predominant source of the letters was Michigan with 24; the others were West Virginia (7), Washington (5), New York (5), Pennsylvania (5), Virginia (3), North Carolina (1), Wisconsin (1), and 3 unspecified.

The growers all expressed their fears concerning imports of concentrated apple juice. They feel that these imports are the cause of all their problems--low prices for juice apples; the inability to cover harvest, labor, and pesticide costs; the loss of jobs in the growing and processing industries; the closing of plants that press juice apples; and the inability to sell all their apples, leaving them on the ground to rot.

The growers believe that foreign producers of concentrated apple juice are being subsidized by their governments, because the concentrate is so inexpensive. They believe that foreign producers can use pesticides that are

not allowed in the United States, and that their labor costs are lower. One grower mentioned the transshipment of products from Eastern to Western Europe.

All these growers believe some sort of temporary protection would help because it would raise the price for juice apples and increase profits, as well as raise the prices for canning and fresh market apples. The price for the imported concentrate would also be higher, enabling the domestic product to be competitive with the imports. If imports were restricted, they believe, the decreased availability of concentrate could be made up with domestic apples and processors would go back to pressing fresh apples. Several growers also suggested that the imported concentrate should be labeled with the country or origin, to distinguish it from a domestic product.

APPENDIX A

NOTICE IN THE FEDERAL REGISTER OF INSTITUTION OF INVESTIGATION NO. TA-201-59, LETTER FROM THE UNITED STATES TRADE REPRESENTATIVE, AND LIST OF WITNESSES APPEARING AT THE HEARING

INTERNATIONAL TRADE COMMISSION

[Investigation No. TA-201-59]

Import Investigations; Apple Juice

AGENCY: International Trade Commission.

ACTION: Institution of an investigation under section 201 of the Trade Act of 1974 (19 U.S.C. 2251) and scheduling of a hearing to be held in connection with the investigation.

SUMMARY: Following receipt on December 27, 1985, of a request from the United States Trade Representative, the United States International Trade Commission instituted investigation No. TA-201-59 under section 201 of the Trade Act of 1974 to determine whether apple juice, not mixed and not containing over 1.0 percent of ethyl alcohol by volume, provided for in item 165.15 of the Tariff Schedules of the United States, is being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article. The Commission will make its determination in this investigation by June 27, 1986 (see section 201(d)(2) of the act (19 U.S.C. 2251(d)(2))).

For further information concerning the conduct of this investigation, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, Part 206, Subparts A and B (19 CFR Part 206), and Part 201, Subparts A through E (19 CFR Part 201).

EFFECTIVE DATE: December 27, 1985.

FOR FURTHER INFORMATION CONTACT: Stephen Vastagh, 202-523-0283, Office of Investigations, U.S. International Trade Commission, 701 E Street, NW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-724-0002. Information may also be obtained via electronic mail by accessing the Office of Investigations' remote bulletin board system for personal computers at 202-523-0103.

SUPPLEMENTARY INFORMATION:

Participation in the investigation.—Persons wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules (19 CFR 201.11), not later than twenty-one (21) days after publication of this notice in the Federal Register. Any entry of appearance filed after this date will be referred to the Chairwoman, who will determine whether to accept the late entry for good cause shown by the person desiring to file the entry.

Service list.—Pursuant to § 201.11(d) of the Commission's rules (19 CFR 201.11(d)), the Secretary will prepare a service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance. In accordance with § 201.16(c) of the rules (19 CFR 201.16(c)), each document filed by a party to the investigation must be served on all other parties to the investigation (as identified by the service list), and a certificate of service must accompany the document. The Secretary will not accept a document for filing without a certificate of service.

Hearing.—The Commission will hold in connection with this investigation beginning at 10:00 a.m. on April 17, 1986, at the U.S. International Trade Commission Building, 701 E Street NW., Washington, DC. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission not later than the close of business (5:15 p.m.) on April 8, 1986. All persons desiring to appear at the hearing and make oral presentations, with the exception of public officials and persons not represented by counsel, should file prehearing briefs and attend a prehearing conference to be held at 9:30 a.m. on April 8, 1986, in room 117 of the U.S. International Trade Commission Building. The deadline for filing prehearing briefs is April 11, 1986. Posthearing briefs must be submitted not later than the close of business on April 24, 1986. Confidential material should be filed in accordance with the procedures described below.

Parties are encouraged to limit their testimony at the hearing to a nonconfidential summary and analysis of material contained in prehearing briefs and to information not available at the time the prehearing brief was submitted. Any written materials submitted at the hearing must be filed in accordance with the procedures described below and any confidential materials must be submitted at least three (3) working days prior to the hearing (see § 201.6(b)(2) of the Commission's rules (19 CFR 201.6(b)(2))).

Parties are requested to use the following units of measure when presenting data and charts in briefs, testimony, and other submissions: (1) Thousands, millions, or billions of pounds for quantities of apples; (2) cents per pound for prices of apples, whether for fresh market or for processing; (3) thousands or millions of gallons of single strength equivalent for quantities of concentrate or fresh juice; and (4) dollars and cents per single strength gallon for prices of juice, whether concentrate of freshly squeezed. The uniform use of such units will make the data in all submissions comparable. Convert all concentrate to single strength equivalent using conversion factors published in relevant publication of the U.S. Department of Agriculture.

Written submissions.—As mentioned, parties to this investigation may file prehearing and posthearing briefs by the dates shown above. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before April 24, 1986. A signed original and fourteen (14) copies of each submission must be filed with the Secretary to the Commission in accordance with § 201.8 of the Commission's rules (19 CFR 201.8). All written submissions except for confidential business data will be available for public inspection during regular business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary to the Commission.

Any business information for which confidential treatment is desired shall

be submitted separately. The envelope and all pages of such submissions must be clearly labeled "Confidential Business Information." Confidential submissions and requests for confidential treatment must conform with the requirements of § 201.6 of the Commission's rules (19 CFR 201.6).

Remedy.—In the event that the Commission makes an affirmative injury determination in this investigation, remedy briefs will be due to the Secretary no later than the close of business on May 28, 1986, and must conform with the requirements of § 201.6 of the Commission's rules. Parties are reminded that no separate hearing on the issue of remedy will be held. Those parties wishing to present oral arguments on the issue of remedy may do so at the hearing scheduled for April 17, 1986.

Authority: This investigation is being conducted under the authority of section 201 of the Trade Act of 1974. This notice is published pursuant to section 201.10 of the Commission's rules (19 CFR 201.10).

Issued: January 17, 1986.

By order of the Commission.

Kenneth R. Mason,

Secretary.

[FR Doc. 86-1500 Filed 1-23-86; 8:45 am]

BILLING CODE 7020-02-M

THE UNITED STATES TRADE REPRESENTATIVE
WASHINGTON
20506

OFFICE OF THE CHAIRWOMAN
USITC

1145
85 DEC 27 P 4:33

December 23, 1985

The Honorable Paula Stern
Chairwoman
U.S. International Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

Dear Madam Chairwoman:

Pursuant to section 201(b)(1) of the Trade Act of 1974 (19 U.S.C. 2251(b)(1)), I request that the U.S. International Trade Commission conduct an investigation to determine whether apple juice provided for item 165.15 of the Tariff Schedules of the United States is being imported in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing a like or directly competitive article.

I look forward to receiving the Commission's report.

Sincerely,

Clayton Yeutter

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing on:

Subject : Apple Juice

Inv. No. : TA-201-59

Date and time : April 17, 1986 - 10:00 a.m.

Sessions were held in connection with this investigation in the Hearing Room of the United States International Trade Commission, 701 E Street, N.W., in Washington.

Congressional appearances:

Honorable Guy Vander Jagt, United States Representative, State of Michigan

Honorable William Goodling, United States Representative, State of Pennsylvania

Donald Upson, Executive Assistant, on behalf of: Honorable Frank Horton, United States Representative, State of New York

Joe Jessup, Administrative Assistant, on behalf of: Honorable D. French Slaughter, State of Virginia

Government appearance:

Federal Trade Commission, Bureau of Competition, Washington, D.C.

Benjamin Cohn, Attorney

Lorenzo Brown, Economist

In support of the petition:

Skadden, Arps, Slate, Meagher & Flom--Counsel
Washington, D.C.
on behalf of

The American Farm Bureau Federation
California Farm Bureau Federation
Colorado Farm Bureau
Connecticut Farm Bureau Association, Inc.

- more -

Skadden, Arps, Slate, Meagher & Flom--Counsel

Delaware Farm Bureau, Inc.
Georgia Farm Bureau Federation
Illinois Agricultural Association
Iowa Farm Bureau Federation
Kansas Farm Bureau
Kentucky Farm Bureau Federation
Maine Farm Bureau Association
Maryland Farm Bureau, Inc.
Michigan Farm Bureau
Missouri Farm Bureau Federation
New Hampshire Farm Bureau Federation
New Jersey Farm Bureau
New Mexico Farm & Livestock Bureau
New York Farm Bureau, Inc.
North Carolina Farm Bureau Federation
Ohio Farm Bureau Federation, Inc.
Oregon Farm Bureau Federation, Inc.
Pennsylvania Farmers Association
Tennessee Farm Bureau Federation, Inc.
South Carolina Farm Bureau
Utah Farm Bureau Federation
Vermont Farm Bureau, Inc.
Virginia Farm Bureau Federation, Inc.
Washington State Farm Bureau
Wisconsin Farm Bureau Federation

Kenneth L. Nye, Director, Horticulture Department, American Farm Bureau Federation

Thomas C. Butler, Manager, Michigan Processing Apple Growers Coordinator, American Agricultural Marketing Association

APPLE GROWERS

Paul Baker, Ransomville, New York

Bill Flippin, Tyro, Virginia

Jerry Sietsema, Grand Rapids, Michigan

Doug Zahn, Methow, Washington

Skadden, Arps, Slate, Meagher & Flom (continued)

APPLE PROCESSORS AND CONCENTRATORS

Dean Carey, Knouse Foods

Peter Morrison, Morrison's, Inc.

Sam Reid, Murray's Cider Company, Inc.

Stacey Wood, formerly of Albion Cooperative, Inc.

AGRICULTURAL ECONOMISTS

Professor Desmond O'Rourke, Washington State University

Professor Donald Ricks, Michigan State University

Thomas R. Graham)
Shirley A. Coffield)
William J. Guzick)--OF COUNSEL
William P. Ingram)

In opposition to the petition:

Harris & Berg--Counsel
Washington, D.C.
on behalf of

The Apple Juice Group of the Association of Food Industries

Dr. Max Brunk, Consultant, Professor Emeritus of Cornell University

Frank Armstrong, III, Chairman and President of National Fruit Product Company, Inc.

Jack B. Hartog, Jr., President, Hartog Foods International, Inc.

Norman Oppenheimer, President, Camerican, Inc.

Robert Ward, Consultant

Herbert E. Harris II)
Cheryl Ellsworth)--OF COUNSEL

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Arnold & Porter--Counsel
Washington, D.C.
on behalf of

Mangal Upper Galilee Juice Ltd.

Yaakof Gali, Managing Director, Galilee Development Company Ltd.

Patrick F.J. Macrory)
Moshe Goldberg)--OF COUNSEL

New England Apple Products Co., Inc., Littleton, Massachusetts

David F. Rowse, President

German Fruit Juice Association Bonn, Germany

Wernder Gneiting, CMA New York

Capital Legal Foundation, Washington, D.C.
and
Competitive Enterprise Institute, Washington, D.C.

James Moody, Esq.

Fred Smith

APPENDIX B

EXCERPTS FROM THE TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1986), SCHEDULE 1, PART 12, SUBPART A

Item	Stat. Suf-fix	Articles	Units of Quantity	Rates of Duty		
				1	Special	2
		PART 12. - BEVERAGES				
		Part 12 headnotes:				
		1. This part covers only products which are fit for use as beverages or for beverage purposes.				
		2. The standard for determining the proof of brandy and other spirits or liquors of any kind when imported is the same as that which is defined in the laws relating to internal revenue. The Secretary of the Treasury, in his discretion, may authorize the ascertainment of the proof of wines, cordials, or other liquors and fruit juices by distillation or otherwise, when it is impracticable to ascertain such proof by the means prescribed by existing law or regulations.				
		3. The duties prescribed on products covered by this part are in addition to the internal-revenue taxes imposed under existing law or any subsequent Act. The duties imposed on products covered by this part which are subject also to internal-revenue taxes are imposed only on the quantities subject to such taxes; except that, in the case of distilled spirits transferred to the bonded premises of a distilled spirits plant under the provisions of section 5232 of the Internal Revenue Code of 1954, the duties are imposed on the quantity withdrawn from customs custody.				
		4. Provisions for the free entry of certain samples of alcoholic beverages are covered by part 5 of schedule 8.				
		Subpart A. - Fruit Juices				
		Subpart A headnotes:				
		1. The products described in this subpart are covered herein whether or not containing ethyl alcohol, but any such products which are also described in subpart C or D of this part are classifiable in said subpart C or D.				
		2. For the purposes of this subpart, a concentrated juice may be in liquid, powdered, or solid form.				

Item	Stat. Suffix	Articles	Units of Quantity	Rates of Duty 1	Special	2
		3. For the purposes of this subpart — (a) the term "gallon" in the "Rates of Duty" column of the provisions applicable to fruit juices means gallon of natural unconcentrated juice or gallon of reconstituted juice; (b) the term "reconstituted juice" means the product which can be obtained by mixing the imported concentrate with water in such proportion that the product will have a Brix value equal to that found by the Secretary of the Treasury from time to time to be the average Brix value of like natural unconcentrated juice in the trade and commerce of the United States; and (c) the term "Brix value" means the refractometric sucrose value of the juice, adjusted to compensate for the effect of any added sweetening materials, and thereafter corrected for acid.				
		4. In determining the number of gallons of reconstituted fruit juice which can be obtained from a concentrate, the degree of concentration shall be calculated on a volume basis to the nearest 0.5 degree, as determined by the ratio of the Brix value of the imported concentrated juice to that of the reconstituted juice, corrected for differences of specific gravity of the juices. Any juice having a degree of concentration of less than 1.5 (as determined before correction to the nearest 0.5 degree) shall be regarded as a natural unconcentrated juice.				
		5. In determining the degree of concentration of mixed fruit juices (item 165.65), the mixture shall be considered as being wholly of the component juice having the lowest Brix value.				
		Subpart A statistical headnote:				
		1. For the purposes of statistical reporting in this subpart, the term "gallon" in the "Units of Quantity" column means gallon of natural unconcentrated juice or gallon of reconstituted juice (as defined in headnote 3(b) above).				
		Fruit juices, including mixed fruit juices, concentrated or not concentrated, whether or not sweetened:				
		Not mixed and not containing over 1.0 percent of ethyl alcohol by volume:				
165.15	00	Apple or pear	Gal.	Free 1/		5¢ per gal. 1/
		Citrus fruit:				
165.25		Lime		10¢ per gal. 1/	Free (E) 1/ 8¢ per gal.(I)1/	70¢ per gal. 1/
	20	Not concentrated	Gal.			
	40	Concentrated	Gal.			
		Orange:				
165.27	00	Not concentrated and not made from a juice having a degree of concentration of 1.5 or more (as determined before correction to the nearest 0.5 degree)	Gal.	20¢ per gal. 1/	Free (E) 1/	70¢ per gal. 1/
165.29	00	Other	Gal.	35¢ per gal. 1/	Free (E) 1/	70¢ per gal. 1/

1/ Imports under this item may be subject to Federal Excise Tax (26 U.S.C. 5001 and 5041) as follows:
A) If containing distilled spirits, a tax of $12.50 per proof gallon and a proportionate tax at the like rate on all fractional parts of a proof gallon.
B) If containing wine, a tax of —
1) 17¢ per wine gallon on still wines containing not more than 14% of alcohol by volume;
2) 67¢ per wine gallon on still wines containing more than 14% and not exceeding 21% of alcohol by volume;
3) $1.25 per wine gallon on still wines containing more than 21% and not exceeding 24% of alcohol by volume;
4) $3.40 per wine gallon on champagne and other sparkling wines; and
5) $2.40 per wine gallon on artificially carbonated wines.

APPENDIX C

CERTAIN APPLE GROWERS' COMMENTS ON THEIR OPERATIONS THAT WERE SUPPLIED VOLUNTARILY WITH THE RETURN OF THE COMMISSION QUESTIONNAIRE

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APPENDIX D

STATISTICAL TABLES

Table D-1.--Apple or pear juice: U.S. imports for consumption, by principal sources and quarters, crop year 1980/81

Source	July-Sept.	Oct.-Dec.	Jan.-March	April-June	Crop year total
	Quantity (1,000 gallons)				
Argentina	5,105	8,738	11,411	13,725	38,979
South Africa	1,852	4,039	3,041	3,264	12,196
West Germany	295	159	251	2,957	3,662
Netherlands	0	398	509	1,674	2,582
France	348	259	74	525	1,206
Spain	129	193	365	1,081	1,769
Chile	143	186	511	847	1,688
New Zealand	21	375	268	842	1,506
Canada	53	10	363	574	1,000
Israel	272	159	515	314	1,260
Switzerland	447	160	195	0	802
All other	1,058	196	1,109	1,314	3,675
Total	9,723	14,872	18,612	27,117	70,325
	Value (1,000 dollars)				
Argentina	5,284	6,195	7,372	9,464	28,316
South Africa	1,918	2,645	2,234	2,750	9,547
West Germany	357	163	142	2,169	2,830
Netherlands	-	287	365	1,262	1,913
France	339	325	352	473	1,490
Spain	136	303	318	712	1,469
Chile	117	122	278	517	1,034
New Zealand	20	252	148	585	1,005
Canada	65	24	277	502	869
Israel	190	87	375	198	850
Switzerland	307	158	108	-	574
All other	888	136	581	768	2,370
Total	9,621	10,697	12,550	19,400	52,267
	Unit value (per gallon)				
Argentina	$1.04	$0.71	$0.65	$0.69	$0.73
South Africa	1.04	.65	.73	.84	.78
West Germany	1.21	1.03	.56	.73	.77
Netherlands	-	.72	.72	.75	.74
France	.97	1.25	4.78	.90	1.24
Spain	1.06	1.57	.87	.66	.83
Chile	.82	.66	.54	.61	.61
New Zealand	.94	.67	.55	.69	.67
Canada	1.23	2.44	.76	.87	.87
Israel	.70	.55	.73	.63	.67
Switzerland	.69	.99	.56	-	.72
All other	.84	.69	.52	.58	.64
Average	.99	.72	.67	.72	100/74

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-2.--Apple or pear juice: U.S. imports for consumption, by principal sources and quarters, crop year 1981/82

Source	July-Sept.	Oct.-Dec.	Jan.-March	April-June	Crop year total
	Quantity (1,000 gallons)				
Argentina	11,711	3,723	2,291	14,441	32,166
South Africa	3,574	2,141	1,805	2,454	9,973
Spain	418	1,433	3,547	976	6,375
West Germany	1,966	1,527	1,774	917	6,184
Mexico	450	1,913	452	1,954	4,768
Netherlands	100	673	1,082	1,765	3,620
New Zealand	422	1,080	1,621	489	3,613
Israel	490	556	1,145	452	2,643
Chile	736	57	6	629	1,428
Canada	230	251	239	274	994
All other	1,819	603	1,658	597	4,677
Total	21,916	13,957	15,620	24,948	76,441
	Value (1,000 dollars)				
Argentina	7,546	2,843	2,027	12,620	25,037
South Africa	2,453	1,675	1,246	2,201	7,575
Spain	359	1,523	3,198	1,014	6,095
West Germany	1,577	1,261	1,474	891	5,202
Mexico	527	2,260	416	1,768	4,972
Netherlands	82	801	1,076	1,636	3,595
New Zealand	315	998	1,147	563	3,023
Israel	354	534	1,095	501	2,485
Chile	641	72	5	700	1,417
Canada	273	344	394	397	1,407
All other	1,378	461	1,385	372	3,595
Total	15,505	12,772	13,463	22,663	64,403
	Unit value (per gallon)				
Argentina	$0.64	$0.76	$0.88	$0.87	$0.78
South Africa	.69	.78	.69	.90	.76
Spain	.86	1.06	.90	1.04	.96
West Germany	.80	.82	.83	.97	.84
Mexico	1.17	1.18	.92	.90	1.04
Netherlands	.81	1.19	.99	.93	.99
New Zealand	.75	.92	.71	1.15	.84
Israel	.72	.96	.96	1.11	.94
Chile	.87	1.25	.83	1.11	.99
Canada	1.18	1.37	1.64	1.45	1.42
All other	.76	.76	.84	.62	.77
Average	.71	.92	.86	.91	.84

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-3.--Apple or pear juice: U.S. imports for consumption, by principal sources and quarters, crop year 1982/83

Source	July-Sept.	Oct.-Dec.	Jan.-March	April-June	Crop year total
	Quantity (1,000 gallons)				
Argentina	16,128	9,086	2,065	10,902	38,180
West Germany	3,710	7,867	14,093	9,354	35,025
South Africa	4,307	2,340	1,498	2,183	10,328
Austria	303	2,972	3,520	3,543	10,339
Spain	574	2,842	2,935	1,911	8,261
Netherlands	3,200	1,975	2,194	1,785	9,154
France	4	1,944	5,275	395	7,618
Switzerland	0	202	1,857	3,898	5,957
Chile	695	294	5	1,078	2,072
Canada	111	699	378	391	1,579
Israel	147	471	241	314	1,173
All other	1,362	1,958	3,069	3,754	10,141
Total	30,541	32,650	37,130	39,508	139,827
	Value (1,000 dollars)				
Argentina	14,487	7,117	1,376	7,409	30,389
West Germany	2,650	7,503	10,935	6,762	27,849
South Africa	3,720	1,981	1,099	1,914	8,714
Austria	407	2,665	2,754	2,828	8,653
Spain	332	2,873	2,295	1,524	7,024
Netherlands	1,893	1,808	1,750	1,542	6,991
France	9	2,310	3,105	191	5,615
Switzerland	-	109	1,363	2,725	4,196
Chile	1,062	316	7	809	2,194
Canada	207	749	456	516	1,928
Israel	118	431	164	299	1,013
All other	1,520	1,941	2,946	3,064	9,473
Total	26,405	29,803	28,248	29,583	114,040
	Unit value (per gallon)				
Argentina	$0.90	$0.78	$0.67	$0.68	$0.80
West Germany	.71	.95	.78	.72	.80
South Africa	.86	.85	.73	.88	.84
Austria	1.34	.90	.78	.80	.84
Spain	.58	1.01	.78	.80	.85
Netherlands	.59	.92	.80	.86	.76
France	2.16	1.19	.59	.48	.74
Switzerland	-	.54	.73	.70	.70
Chile	1.53	1.08	1.36	.75	1.06
Canada	1.86	1.07	1.21	1.32	1.22
Israel	.80	.91	.68	.95	.86
All other	1.12	.99	.96	.82	.93
Average	.86	.91	.76	.75	.82

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-4.--Apple or pear juice: U.S. imports for consumption, by principal sources and quarters, crop year 1983/84

Source	July-Sept.	Oct.-Dec.	Jan.-March	April-June	Crop year total
	Quantity (1,000 gallons)				
West Germany	6,320	9,966	10,858	7,658	34,802
Argentina	14,232	9,622	6,121	6,255	36,230
Austria	2,870	3,402	3,975	3,714	13,962
Spain	359	3,354	5,932	2,974	12,620
Netherlands	1,794	2,910	3,181	1,442	9,327
South Africa	3,516	3,234	2,425	2,100	11,275
Chile	2,364	1,026	80	768	4,237
Canada	338	819	850	574	2,581
Hungary	195	605	1,444	616	2,860
Turkey	358	341	1,263	1,060	3,022
Israel	450	660	354	158	1,623
Switzerland	1/	46	0	376	422
All other	1,279	2,598	5,089	3,250	12,214
Total	34,075	38,583	41,572	30,945	145,175
	Value (1,000 dollars)				
West Germany	4,619	7,336	8,108	6,381	26,443
Argentina	9,799	6,355	3,940	3,667	23,761
Austria	2,174	2,567	3,405	4,008	12,154
Spain	356	2,880	4,050	2,260	9,547
Netherlands	1,480	2,432	3,691	1,649	9,253
South Africa	2,804	2,178	1,408	1,800	8,189
Chile	1,787	650	87	563	3,086
Canada	480	803	933	606	2,823
Hungary	161	347	1,586	670	2,763
Turkey	689	209	793	675	2,366
Israel	388	440	317	136	1,281
Switzerland	1	38	-	223	262
All other	1,037	2,214	3,301	2,357	8,911
Total	25,775	28,449	31,619	24,995	110,839
	Unit value (per gallon)				
West Germany	$0.73	$0.74	$0.75	$0.83	$0.76
Argentina	.69	.66	.64	.59	.66
Austria	.76	.75	.86	1.08	.87
Spain	.99	.86	.68	.76	.76
Netherlands	.83	.84	1.16	1.14	.99
South Africa	.80	.67	.58	.86	.73
Chile	.76	.63	1.09	.73	.73
Canada	1.42	.98	1.10	1.06	1.09
Hungary	.83	.57	1.10	1.09	.97
Turkey	1.93	.61	.63	.64	.78
Israel	.86	.67	.89	.86	.79
Switzerland	1.89	.83	-	.59	.62
All other	.81	.85	.65	.73	.73
Average	.76	.74	.76	.81	.76

1/ Less than 500 gallons.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-5.--Apple or pear juice: U.S. imports for consumption, by principal sources and quarters, crop year 1984/85

Source	July-Sept.	Oct.-Dec.	Jan.-March	April-June	Crop year total
	Quantity (1,000 gallons)				
West Germany	9,008	7,806	16,899	16,022	49,736
Argentina	18,196	16,542	7,194	9,753	51,685
Austria	5,972	3,941	7,830	6,142	23,884
Netherlands	3,016	3,838	5,367	4,973	17,195
Spain	2,865	3,364	4,984	5,388	16,601
South Africa	2,820	5,192	2,174	4,765	14,952
Hungary	0	878	2,288	2,964	6,131
Chile	2,360	1,163	389	2,105	6,017
France	56	461	987	1,478	2,982
Switzerland	901	1,644	183	1,026	3,754
Israel	74	172	661	695	1,601
All other	2,039	3,035	3,974	5,604	14,650
Total	47,307	48,036	52,930	60,915	209,188
	Value (1,000 dollars)				
West Germany	6,847	5,683	12,230	9,635	34,395
Argentina	11,566	9,446	4,166	5,507	30,686
Austria	4,364	3,112	5,425	4,506	17,407
Netherlands	2,998	2,989	3,682	3,873	13,541
Spain	1,927	2,807	3,288	3,500	11,522
South Africa	1,920	3,168	1,346	2,847	9,281
Hungary	-	342	2,726	1,643	4,711
Chile	1,813	674	221	1,049	3,757
France	112	341	677	1,033	2,163
Switzerland	643	798	95	451	1,986
Israel	175	190	393	393	1,152
All other	1,873	1,873	2,730	3,222	9,698
Total	34,238	31,423	36,979	37,659	140,299
	Unit value (per gallon)				
West Germany	$0.76	$0.73	$0.72	$0.60	$0.69
Argentina	.64	.57	.58	.56	.59
Austria	.73	.79	.69	.73	.73
Netherlands	.99	.78	.69	.78	.79
Spain	.67	.83	.66	.65	.69
South Africa	.68	.61	.62	.60	.62
Hungary	-	.39	1.19	.55	.77
Chile	.77	.58	.57	.50	.62
France	1.98	.74	.69	.70	.73
Switzerland	.71	.49	.52	.44	.53
Israel	2.37	1.11	.59	.57	.72
All other	.92	.62	.69	.57	.66
Average	.72	.65	.70	.62	.67

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table D-6.--Other fruit juices, including apple juice: 1/ U.S. exports of domestic merchandise, by markets, crop years 1980/81 to 1984/85

Market	1980/81	1981/82	1982/83	1983/84	1984/85
	Quantity (1,000 gallons)				
Canada	6,924	7,806	8,334	8,661	6,521
Japan	966	1,076	1,315	1,571	2,889
Saudi Arabia	1,160	2,480	3,324	2,560	2,659
United Arab Emirates	566	1,376	1,330	1,347	1,694
Bahamas	1,611	722	929	804	1,558
Panama	666	501	478	427	582
Netherlands Antilles	1,865	1,238	1,122	851	643
Leeward and Windward Isles	1,265	1,270	1,259	1,162	1,116
Hong Kong	321	365	190	165	495
Singapore	229	372	429	271	457
Israel	121	178	47	89	52
All other	8,095	7,633	6,169	6,866	4,716
Total	23,789	25,017	24,926	24,774	23,382
	Value (1,000 dollars)				
Canada	6,520	7,088	7,471	7,549	6,988
Japan	2,223	2,802	3,065	3,212	5,581
Saudi Arabia	1,635	3,055	3,829	3,006	2,232
United Arab Emirates	696	1,355	1,067	1,350	1,819
Bahamas	1,650	1,341	1,623	1,750	1,639
Panama	1,295	1,196	1,097	1,207	1,231
Netherlands Antilles	1,990	1,908	1,850	1,522	1,211
Leeward and Windward Isles	1,191	1,176	1,079	1,298	1,170
Hong Kong	936	675	421	395	802
Singapore	457	525	670	482	532
Israel	168	251	91	78	34
All other	13,317	10,957	8,711	9,793	6,330
Total	32,078	32,329	30,974	31,642	29,569
	Unit value (per gallon)				
Canada	$0.94	$0.91	$0.90	$0.87	$1.07
Japan	2.30	2.61	2.33	2.05	1.93
Saudi Arabia	1.41	1.23	1.15	1.17	.84
United Arab Emirates	1.23	.99	.80	1.00	1.07
Bahamas	1.02	1.86	1.75	2.18	1.05
Panama	1.95	2.39	2.30	2.83	2.11
Netherlands Antilles	1.07	1.54	1.65	1.79	1.88
Leeward and Windward Isles	.94	.93	.86	1.12	1.05
Hong Kong	2.91	1.85	2.22	2.39	1.62
Singapore	2.00	1.41	1.56	1.78	1.17
Israel	1.39	1.41	1.95	.87	.66
All other	1.65	1.44	1.41	1.43	1.34
Average	1.35	1.29	1.24	1.28	1.26

1/ Nonenumerated fruit juices under schedule B Nos. 165.26, 165.60, and 165.88.

Source: Compiled from official statistics of the U.S. Department of Commerce.