UNITED STATES INTERNATIONAL TRADE COMMISSION

MUSHROOMS

Report to the President
on Investigation No. TA-201-10
Under Section 201 of the Trade Act of 1974

USITC Publication 761
Washington, D. C.
March 1976

UNITED STATES INTERNATIONAL TRADE COMMISSION

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Note.--The whole of the Commission's report to the President may not be made public since it contains certain information that would result in the disclosure of the operations of individual concerns. This published report is the same as the report to the President, except that the above-mentioned information has been omitted. Such omissions are indicated by asterisks.

REPORT TO THE PRESIDENT

U.S. International Trade Commission,
March 17, 1976

To the President:

In accordance with section 201(d)(1) of the Trade Act of 1974 (88 Stat. 1978), the United States International Trade Commission herein reports the results of an investigation made under section 201(b)(1) of that act, relating to mushrooms.

The investigation was undertaken to determine whether--

> mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States (TSUS),

are 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 articles.

The investigation was instituted on September 30, 1975, upon receipt of a petition filed on September 17, 1975, by the Mushroom Canners Committee of the Pennsylvania Food Processors Association and the Mushroom Processors Tariff Committee.

Notice of the investigation and hearing was published in the Federal Register of October 6, 1975 (40 F.R. 46158). A public hearing in connection with the investigation was conducted on January 6 and 7, 1976, in the Commission's hearing room in Washington, D.C. All interested parties were afforded an opportunity to be present, to produce evidence, and to be

heard. A transcript of the hearing and copies of briefs submitted by interested parties in connection with the investigation are attached.

The information for this report was obtained from fieldwork, from responses to questionnaires sent to domestic growers and canners, and from the Commission files, other Government agencies, evidence presented at the hearings, briefs filed by interested parties, and other sources.

Determinations, Findings, and Recommendations of the Commission

On the basis of its investigation, the Commission determines 1/ that mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States, are being imported in such increased quantities as to be a substantial cause of serious injury or the threat thereof 2/ to the domestic industry producing articles like or directly competitive with the imported articles.

Findings and recommendations

Commissioners Leonard, Minchew, and Ablondi 3/--

> determine, pursuant to section 201(d)(1) of the Trade Act, that adjustment assistance as provided in title II, chapters 2, 3, and 4 of that act can effectively remedy the serious injury or the threat thereof to the domestic industry and recommend the provision of such assistance.

1/ Commissioners Leonard, Parker, and Ablondi determine in the affirmative. Commissioners Moore and Minchew determine in the negative. Commissioner Bedell abstains.

2/ Commissioner Leonard determines that the domestic industry is seriously injured, and Commissioners Parker and Ablondi determine that the domestic industry is threatened with serious injury.

3/ Commissioner Minchew noting that the Commission has made an affirmative determination has made a recommendation of remedy.

Commissioner Parker--

finds that to prevent the injury described in section 201(b) of the Trade Act, it is necessary to impose a tariff-rate quota system for the ensuing 5-year period applying to the mushrooms covered by the Commission's notice of investigation which are the subject of my affirmative determination, with the existing rates of duty applying to imports of mushrooms within the tariff quotas and rates of duty hereinafter specified applying to such imports outside the tariff quotas, and with the tariff quotas established and allocated to countries subject to rates of duty provided for in rate-of-duty column numbered 1 of the TSUS as hereinafter specified.

The proposed rates of duty for imports outside the tariff quotas should be as follows:

First three years	Fourth year	Fifth year
3.2¢ per lb. on drained weight + 35% ad val.	3.2¢ per lb. on drained weight + 25% ad val.	3.2¢ per lb. on drained weight + 15% ad val.

The within-quota imports entered in any year should be established and allocated to countries as follows:

Country	Aggregate annual quota (Millions of pounds, drained weight)
Republic of China (Taiwan)---	31.7
Republic of Korea----------	11.8
Japan----------	1.4
Dominican Republic----------	.7
France----------	.6
Costa Rica----------	.5
Ecuador----------	.5
All others----------	.8
Total----------	48.0

Commissioner Moore--

having found in the negative, makes no recommendation to the President under section 201(d)(1) of the Trade Act of 1974.

Views of Chairman Will E. Leonard

On September 17, 1975, the United States International Trade Commission received a petition filed by the Mushroom Canners Committee of the Pennsylvania Food Processors Association, York, Pa., and the Mushroom Processors Tariff Committee, Washington, D.C., requesting an investigation under section 201(b)(1) of the Trade Act of 1974 (Trade Act) with respect to imports of mushrooms. On September 30, 1975, the Commission instituted an investigation to determine whether mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States (TSUS), are 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 articles.

Section 201(b)(1) of the Trade Act requires that each of the following conditions be met if the Commission is to make an affirmative determination in an investigation and thus find a domestic industry eligible for import relief (as used herein, the term "import relief" includes import restraints as well as adjustment assistance):

(1) That imports of the articles concerned are entering the United States in increased quantities;

(2) That the domestic industry producing articles like or directly competitive with the imported articles concerned is being seriously injured or threatened with serious injury; and

(3) That increased imports are a substantial cause of the serious injury, or the threat thereof, to the domestic industry producing articles like or directly competitive with the imported articles concerned.

Determination and recommendation

Having reviewed the evidence gathered by the Commission in the course of this investigation on mushrooms (investigation No. TA-201-10), I determine that the criteria as set forth in section 201(b)(1) of the Trade Act for an industry to be eligible for relief from imports have been met with respect to the imports that are the subject of this investigation. Specifically, I determine that mushrooms, the subject of this investigation, are being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic mushroom industry producing mushrooms like or directly competitive with such imported mushrooms.

Further, I determine, pursuant to section 201(d)(1) of the Trade Act, that adjustment assistance can effectively remedy the serious injury that I find to exist, and therefore I recommend the provision of such assistance.

Domestic industry

As a part of the determination of whether the criteria of section 201(b)(1) of the Trade Act have been satisfied it is necessary to identify the domestic industry which produces articles like or directly competitive with the imported articles and which may be suffering the requisite injury. Although section 201(b)(3) of the Trade Act sets forth guidelines to be employed by the Commission in determining what the domestic industry is, the term is not specifically defined. Therefore, the Trade Act in effect permits the Commission discretion

in evaluating the economic facts gathered during the course of an investigation and in defining the domestic industry or industries on the basis of these facts, having taken into account the guidelines mentioned above. 1/

In attempting to define the domestic industry producing articles like or directly competitive with the imported articles, it is helpful to look to the legislative history of the Trade Act. In its report on the section which became section 201 of the Trade Act, the Senate Committee on Finance states:

> "like" articles are those which are substantially identical in inherent or intrinsic characteristics . . . and "directly competitive" articles are those which . . . are substantially equivalent for commercial purposes, that is, are adapted to the same uses and are essentially interchangeable therefor. 2/

Most of the imported canned mushrooms are of the same species as those canned in the United States, and are comparable in flavor and appearance to them. Thus domestic canned mushrooms are "like" the imported canned mushrooms that were the subject of this investigation.

Further, in an investigation of the competitive conditions in the United States between domestically produced and imported fresh

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1/ For a further discussion of the meaning of the term "domestic industry" as used in sec. 201(b)(1) of the Trade Act, see Bolts, Nuts, and Screws of Iron or Steel: Report to the President on Investigation No. TA-201-2 . . . , USITC Publication 747, November 1975, pp. 4-7.

2/ Trade Reform Act of 1974: Report of the Committee on Finance . . ., S. Rept. No. 93-1298 (93d Cong., 2d Sess.), 1974, p. 122.

and processed mushrooms conducted under section 332 of the Tariff Act of 1930 (19 U.S.C. 1332) the Commission reported:

> To a substantial degree, mushrooms in the fresh, canned, and frozen forms are used interchangeably with one another. 1/

The present investigation also revealed that canned mushrooms and fresh mushrooms are used interchangeably in many circumstances. It is apparent, therefore, that fresh and canned mushrooms are directly competitive with each other, as such term is defined by the Senate Committee on Finance, and hence fresh mushrooms produced in the United States are directly competitive with the imported article under consideration.

I conclude in this investigation that there is only one domestic industry to be considered, consisting of the facilities in the United States devoted to the growing and canning of mushrooms. As indicated above, consumers consider fresh and canned mushrooms to be largely interchangeable in their end uses, and one form of mushroom is selected over another primarily due to such factors as cost and availability.

Further, about half of the domestic canners grew part or all of their fresh mushroom requirements for their canning operations. These canners accounted for about a fourth of the total U.S. output of fresh mushrooms and about a third of the sales of the domestically canned mushrooms. Some canners may ship part of their supplies (either grown or purchased by them) to the fresh market at times when their canning operations have sufficient supplies or when returns

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1/ Mushrooms: Report to the President on Investigation No. 332-72 . . . , TC Publication 580, May 1973, p. A-3.

from the sales of fresh produce appear to be more favorable than returns from their canning operations. 1/

Increased imports

The first criterion which must be satisfied for an industry to be eligible for import relief is that imports must be entering in increased quantities. Imports have increased within the meaning of the statute when the increase is either actual or relative to domestic production or consumption. In determining whether imports have increased, it is necessary to find the trend in import levels over a period of years which presents a realistic picture of activity in importation and to find whether the trend of imports is upward or downward. 2/ The first criterion is satisfied in this investigation.

During the period 1968/69 to 1974/75, the volume of canned mushroom imports has increased without interruption (with the exception of 1973/74) from 31 million pounds (fresh-weight basis) to 77 million pounds. During this same time period the ratio of canned imports to total domestic production of mushrooms 3/ increased from 16 percent

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1/ These facts with respect to mushrooms create a significant distinction between this investigation and an earlier investigation of the Commission concerning asparagus. See Asparagus: Report to the President on Investigation No. TA-201-4 . . . , USITC Publication 755, January 1976.

2/ For a more detailed discussion of the concept "increased imports" as used in sec. 201(b)(1) of the Trade Act, see Birch Plywood Doorskins: Report to the President on Investigation No. TA-201-1 . . . , USITC Publication 743, October 1975, pp. 13-19.

3/ Total production of mushrooms refers to total production of fresh mushrooms as reported by the U.S. Department of Agriculture for sales to the fresh market and for sales to domestic processors, i.e., represents the production of the domestic industry being considered.

to 26 percent. (This ratio has increased every year with the exception of 1970/71 and 1973/74, and reached a peak of 29 percent in 1972/73.)

Serious injury

The second criterion, "serious injury, or the threat thereof," is expressed in the disjunctive. The criterion is satisfied if a finding of either "serious injury" or the "threat of serious injury" is made. Because I find "serious injury" to exist, I shall limit my discussion to this aspect of the criterion.

The Trade Act does not define the term "serious injury." Instead, it sets forth certain guidelines in the form of economic factors which the Commission should take into account. Section 201(b)(2)(A) of the Trade Act states that the Commission should take into account all economic factors which it considers relevant, including (but not limited to)--

> . . . 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. 1/

An industry may be seriously injured even though all members of that industry are not seriously injured; indeed, some members of a seriously injured industry may be relatively healthy. The evidence in this investigation reveals that growers and canners have both been injured, although it points to the fact that canners have been the

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1/ For a more detailed discussion of the concept of "serious injury" as used in sec. 201(b)(1) of the Trade Act, see Bolts, Nuts, and Screws of Iron or Steel: Report to the President on Investigation No. TA-201-2 . . . , USITC Publication 747, November 1975, pp. 9-12.

more seriously injured. Further, the product of these canners of mushrooms has accounted for a larger share of the total mushroom market than have the fresh mushrooms. In these circumstances and on the basis of the evidence set out below, I find that the domestic industry defined herein is suffering serious injury.

There has been a significant idling of productive facilities. At least three domestic mushroom canners, which were not associated with the 1973-74 botulism scare, have ceased mushroom-canning operations since the 1960's. During 1974 and 1975, at least two canners operated at less than 50 percent of their past capacity. Domestic production of canned mushrooms peaked at 137 million pounds (fresh-weight basis) in 1971/72 and then decreased irregularly to 112 million pounds in 1974/75.

The Commission received financial data from 25 mushroom-canning firms for 1973 and 1974 and from 13 firms for 1975. These firms accounted for more than 80 percent of total mushroom canners' sales in 1973 and 1974 and about 35 percent in 1975. Of the 25 reporting firms, 17 reported net operating losses in 1973, and 16 reported net operating losses in 1974. For 1975, 7 of the 13 firms reported net operating losses. The ratio of net operating losses to net sales for the firms was 8.1 percent in 1973, 6.0 percent in 1974, and 2.5 percent in 1975. The Commission's previous investigation of the mushroom industry initiated in 1972 1/ revealed that the ratio of net operating profits to net sales in the mushroom-canning industry ranged from 0.6 percent

1/ Report to the President on Investigation No. 332-72 . . ., TC Publication 580, May 1973.

to 3.1 percent during 1968-72. These ratios are before such items as taxes and interest expenses. Presumably after taxes, etc., no profits would be shown for most of this period.

Since it was not feasible to canvass all mushroom growers, questionnaires were sent to a sample group similar to that used in the previous mushroom investigation. Prior to 1973, there was a favorable profits-to-sales ratio for mushroom growers; however, the results obtained from the sample indicated that the ratio of net profits to net sales was 6.4 percent in 1973, 2.4 percent in 1974, and 3.8 percent in 1975. These profits do not reflect a labor cost for owners of unincorporated farms, which form the bulk of mushroom farms, and are substantially below profits reported prior to 1973. Thus, the evidence obtained during the Commission's investigation reveals that a significant number of mushroom growers and canners were unable to operate at a reasonable level of profit.

Cannery employment of production and related workers in the domestic industry also declined from 1,780 in 1972/73 to 1,360 in 1974/75, while man-hours worked declined from 1.8 million to 1.5 million during the same period. The response of growers in the survey in the current investigation was unsatisfactory as to data on employment.

The situation with respect to mushroom growers and canners, as reflected above, is different from that which I found with respect to canners of asparagus in a previous investigation (No. TA-201-4)

under section 201(b)(1) of the Trade Act. 1/ In the asparagus case, I found negatively, in part because asparagus growers and canners were able to shift their productive facilities to other crops; this alternative does not appear to be available to producers of mushrooms. The specialized buildings (which are situated on small plots of land) and equipment employed in the growing and canning of mushrooms cannot be economically adapted to the growing and processing of other crops.

Substantial cause

The Trade Act contains both a definition of the term "substantial cause" and certain guidelines to be considered by the Commission in determining whether increased imports are a substantial cause of the requisite serious injury. Section 201(b)(4) of the Trade Act defines the term "substantial cause" to mean "a cause which is important and not less than any other cause." The guidelines to be considered by the Commission with regard to substantial cause are contained in section 201(b)(2)(C), which states that in making its determination the Commission shall take into account all economic factors which it considers relevant, including (but not limited to)--

> . . . an increase in imports (either actual or relative to domestic production) and a decline in the proportion of the domestic market supplied by domestic producers. 2/

1/ Asparagus: Report to the President on Investigation No. TA-201-4 . . ., USITC Publication 755, January 1976.

2/ For a more detailed discussion of the concept of "substantial cause" as used in sec. 201(b)(1) of the Trade Act, see Wrapper Tobacco: Report to the President on Investigation No. TA-201-3 . . ., USITC Publication 746, November 1975, pp. 4-7.

The report of the Senate Committee on Finance on the bill which was to become the Trade Act states, with respect to the question of substantial cause:

> The Committee recognizes that "weighing" causes in a dynamic economy is not always possible. It is not intended that a mathematical test be applied by the Commission. The Commissioners will have to assure themselves that imports represent a substantial cause or threat of injury, and not just one of a multitude of equal causes or threats of injury. 1/

Upon analysis, the injury caused by the increasing imports in this investigation is no less important a cause of the injury complained of by domestic members of the industry than any other cause. The increased imports are, as the statute requires, a substantial cause, that is, an important cause and not less than any other cause. Evidence adduced during the investigation supports this conclusion. The ratio of canned mushroom imports to total domestic production increased from 16 percent in 1968/69 to 26 percent in 1974/75, while the share of total domestic consumption taken by canned mushroom imports increased from 14 percent in 1968/69 to 21 percent in 1974/75.

Several causes of the injury to the domestic industry have been suggested as more important than increased imports, e.g., the domestic botulism scare of 1973-74 and the diversion of raw product to the fresh market.

1/ Trade Reform Act of 1974: Report of the Committee on Finance . . ., S. Rept. No. 93-1298 (93d Cong., 2d sess.), 1974, at pp. 120-121.

With respect to the botulism scare of 1973-74, imports of canned mushrooms were increasing rapidly before 1973. In fact, during the 4 marketing years 1968/69 through 1971/72, imports of canned mushrooms increased 100 percent, while the ratio of imports of canned mushrooms to consumption of canned mushrooms increased from 24 to 33 percent. Thus, imports were increasing their share of the domestic market before the botulism scare of 1973/74. Further, the botulism scare seems to have been only a transitory cause of the reduction in canned mushroom consumption, affecting the consumption of both domestically produced and imported canned mushrooms alike. Apparent U.S. consumption of canned mushrooms reached 189 million pounds (fresh-weight basis) in 1972/73, declined to 178 million pounds in 1973/74, and rose to 193 million pounds in 1974/75. These figures would point to the fact that whatever cause of the injury to the domestic industries the botulism scare may have been, it is an ever lessening cause of the injury, as the increasing consumption in 1974/75 would not likely have occurred if the danger of botulism were still salient to the consumer and thus eroding confidence in the product.

There has been a suggestion that the diversion of raw product to the fresh market is a cause of injury to the canning segment of the domestic industry. However, trade statistics indicate that during the last 5 years, consumption of canned mushrooms was not affected adversely. Consumption of canned mushrooms increased from 158 million pounds (fresh-weight basis) in 1970/71 to 193 million pounds in 1974/75, with the great majority of this increase being accounted for by imports. Thus, any diversion that has taken place does not appear to have limited unduly

opportunities for selling canned mushrooms, as the statistics show that in the face of such diversion consumption of canned mushrooms has grown.

Recommendation of adjustment assistance

Section 201(d)(1) of the Trade Act provides, in part, that if the Commission finds with respect to any article, as a result of its investigation, the serious injury or the threat thereof described in section 201(b)(1), it shall--

> (A) find the amount of the increase in, or imposition of, any duty or import restriction on such article which is necessary to prevent or remedy such injury, or
>
> (B) if it determines that adjustment assistance under chapters 2, 3, and 4 can effectively remedy such injury, recommend the provision of such assistance . . . .

From the information developed in this investigation, I determine that adjustment assistance under chapters 2, 3, and 4 of title II of the Trade Act can effectively remedy the serious injury being suffered, and recommend the provision of such assistance. 1/

While the domestic industry has been seriously injured, it has made efforts to compete with the increased imports. These efforts to improve its competitive position have taken several forms. Information obtained by the Commission indicates that domestic canners and growers have helped finance research at The Pennsylvania State University in order to develop more efficient growing, processing, and marketing techniques. Some of these techniques have been incorporated

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1/ For a brief discussion of the purpose of providing relief to domestic industries under the relevant provisions of law and of the legislative history with respect to recommending adjustment assistance as relief, see Stainless Steel Table Flatware: Report to the President on Investigation No. TA-201-8 . . ., USITC Publication 759, March 1976, pp. 30-31.

into their operations. Further, some domestic canners have installed more modern and efficient equipment into their mushroom operations, although many have been unable to do so because of reduced profits. Domestic canners have also tried to become more competitive by increasing the production of the stems-and-pieces style of pack while decreasing production of the whole, buttons, and sliced styles of pack, thereby becoming more labor efficient.

Adjustment assistance under the provisions of the Trade Act referred to above include the provision of technical management assistance to injured firms, loans or loan guarantees to such firms, and payment of readjustment allowances to and training for workers of such firms. Testimony presented during the course of this investigation indicates that such assistance is likely to permit the domestic industry to adjust successfully to the import competition it has experienced. For example, Mr. Edward Perrone, vice president of Silver Brook Foods, a medium-size canner of mushrooms, testified (at pp. 40-41 of the transcript) as follows:

> MR. PERRONE: Before I prepared my direct testimony, Mr. Martin asked me what measures could be undertaken by this country to make this mushroom processing industry become more competitive, and my answer was that the domestic mushroom processors would install more automatic, modern type sterilization equipment. As a matter of fact, my company has such equipment. We can't install it because we don't have the funds or profits with which to do it. The industry could install considerably more automatic equipment. These pieces of equipment are already developed. There's nothing that has to be developed. They're developed and available. We would install more automatic can filling devices to cut back on the amount of labor required.

> In mushroom processing, there are two--other than the raw products--areas where the greatest economy can be achieved. They're labor saving and in shrinkage. The other route that we could travel is the implementation of the Penn State shrink reduction vacuumizing process. Again that takes a lot of money. My company has made an estimate that it would cost $100,000 to install that equipment. You have to have profits to do this. It could be done.
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> COMMISSIONER MINCHEW: Is it your testimony that other processors in the industry are in the same situation as Silver Brook Farms, Incorporated, i.e., they are not generating enough funds to install this new equipment at this time?
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> MR. PERRONE: Sure.

I consider the testimony of Mr. Perrone to reflect the situation accurately with respect to the entire industry under consideration. Adjustment assistance should be provided on an expedited basis, and the funds and other assistance made available thereunder can be provided to those members of the domestic industry which need them to adjust. It is also noted that adjustment assistance will probably deliver the necessary assistance to the industry more rapidly than would import restrictions, as import restrictions operate to increase the profit levels of individual members of the domestic industry only over rather long periods of time. In other words, it may take several years after import restrictions are imposed before a member of the domestic industry generates enough increased profits to allow it to take from such profits the capital needed to make its operations more efficient.

Conclusion

Having examined the evidence gathered by the Commission in the course of this investigation, I determine that the domestic industry being considered is eligible for import relief, since mushrooms the subject of this investigation are being imported into the United States in such increased quantities as to be a substantial cause of serious injury to that industry. I further determine that adjustment assistance can effectively remedy such injury.

Views of Commissioner Joseph O. Parker

On September 17, 1975, the United States International Trade Commission received a petition filed by the Mushroom Canners Committee of the Pennsylvania Food Processors Association, York, Pennsylvania, and the Mushroom Processors Tariff Committee, Washington, D.C. requesting an investigation under section 201(b)(1) of the Trade Act of 1974 (Trade Act) with respect to imports of mushrooms. On September 30, 1975, the Commission instituted an investigation to determine whether mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States (TSUS), are 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 articles.

Section 201(b)(1) of the Trade Act requires that each of the following conditions be met if the Commission is to make an affirmative determination in this investigation and thus find a domestic industry eligible for import relief:

> (1) That imports of the articles concerned are entering the United States in increased quantities;
>
> (2) That the domestic industry producing articles like or directly competitive with the imported articles concerned is being seriously injured or threatened with serious injury; and
>
> (3) That increased imports are a substantial cause (i.e., an important cause and not less than any other cause) of the serious injury, or the threat thereof, to the domestic industry producing articles like or directly competitive with the imported articles concerned.

Since these criteria are cumulative, the failure to satisfy any one of them necessitates a negative determination, i.e., that a domestic industry is not eligible for import relief.

Determination

After considering the evidence obtained by the Commission in this investigation, I have determined that mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the TSUS are, within the meaning of section 201(b)(1) of the Trade Act, being imported in such increased quantities as to be a substantial cause of the threat of serious injury to the domestic industry producing like or directly competitive articles.

Domestic industry

The petition filed by the Mushroom Canners Committee of the Pennsylvania Food Processors Association and the Mushroom Processors Tariff Committee alleges that increased imports are a substantial cause of serious injury or the threat thereof to the domestic mushroom processing industry. The petition does not allege that increased imports are a substantial cause of serious injury or the threat thereof to the producers of fresh mushrooms and no contention was made during the course of the Commission investigation by growers that they are part of the domestic industry. I determine, therefore, that the domestic industry in this investigation is composed of the domestic facilities devoted to the production of canned mushrooms.

Threat of serious injury

In its explanation of section 201 of the Trade Act, the Report of the Senate Committee on Finance states:

> It 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 continue unabated. 1/

While the domestic industry has suffered injury during recent years, it cannot be said to have been substantially caused by increased imports within the meaning of the Trade Act. From 1968 to 1971, the domestic industry's sales and operating profits increased. The domestic industry suffered severe losses in 1973-75. The unfavorable profit and loss experience suffered by the domestic industry in 1973-75 is directly related to the effects of botulism-induced recalls and the attendant adverse publicity. In 1975, however, as the detrimental effects of the botulism recalls subsided, the industry's financial condition began to improve. In part, this was attributable to an appreciable increase in prices resulting from demand outpacing supply. While it cannot be said that the domestic industry is currently suffering serious injury substantially caused by increased imports, it is threatened with serious injury.

In the 1974/75 marketing year, imports of canned mushrooms increased substantially above the level of the 1973/74 marketing year and reached an all-time high of 50 million pounds (drained weight basis). The increasing supply of canned mushrooms available in world

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1 /U.S. Senate, Report of the Committee on Finance, Trade Reform Act of 1974, S. Rept. No. 93-1298, 93d Cong., 2d Sess. (1974), pg. 121.

markets indicates that increasing supplies of mushrooms are available for export to the United States. Taiwan's exports of canned mushrooms in 1975 increased by approximately 20 percent over exports in 1974. Exports of mushrooms from Korea in 1975 increased by 2 million pounds over exports in 1974. The ability of the Peoples Republic of China to increase their exports of mushrooms to West Germany by over 45 million pounds (fresh-weight basis) in 3 years demonstrates vividly the increasing world supply of mushrooms available for exports. Since the United States is one of the world's largest consumers of mushrooms, it is a natural market for this expanding world supply.

In addition, the European Community, the world's largest mushroom market, has restricted imports of canned mushrooms since 1974. Currently such imports are limited to 40 percent of the quantity imported in 1973. Therefore, 60 percent of the market in this major mushroom consuming area is foreclosed to its world suppliers. The effect of the European Community's restriction is to increase the availability of canned mushrooms for export to other consuming areas of which the United States is the principal market.

The investigation by the Commission disclosed that imported canned mushrooms generally undersell domestically canned mushrooms. In the fourth quarter of 1975 the underselling by the importers of canned mushrooms from Taiwan and Korea, ranged from 2 cents per pound to 25 cents per pound, depending on size and style of pack.

Examples of underselling by importers are illustrated by mushroom stems and pieces, in institutional-size cans, which sold at prices

that averaged about 10 percent below the selling prices of U.S. producers for like articles, and by imported mushroom slices and/or buttons, in the most popular retail-size pack, which undersold the domestic by about 17 percent.

Imports are increasing at a time when the domestic industry is in a weakened financial condition because of previous losses to its capital structure, an effect of the botulism recalls.

The effect of increased imports prior to 1972 was minimized because of increasing domestic consumption. Up to and including the marketing year 1971/72, the demand for the domestic product was growing. Imports were at a record high in 1974/75, but the sales by the domestic industry while showing some recovery have not reached to the level attained in 1971/72. There is nothing to indicate any diminution of imports, either actually or relative to domestic production. On the contrary, there is every indication that imports of canned mushrooms will increase at a more rapid rate.

Conclusion

Having determined that the domestic industry is threatened with serious injury within the meaning of section 201 of the Trade Act, I have made an affirmative determination.

Remedy

The tariff quota remedy which I have recommended herein is designed to the maximum extent feasible to eliminate the threat of serious injury which I have found to exist. The remedy takes into account the nature and makeup of the domestic industry and is aimed at eliminating the threat of serious injury to the domestic industry. This would be accomplished by providing price protection in the form of a higher duty against excessive imports which otherwise might continue to be marketed at prices well below the domestic price level. This measure of relief will give the domestic industry time to establish a firm financial foundation and will enable it to adjust to international competition. The remedy recommended will also permit a substantial level of imports at the current duty level and allow the forces of competition to maintain market discipline and thereby encourage the shifts needed to improve production and marketing efficiencies.

It is recognized that there may be some firms which would also need assistance in order to obtain fresh capital to improve operating efficiencies or to shift to other lines of activity. Such assistance, if justified, could be made available under other provisions of the Trade Act by appropriate petition to the Department of Commerce. Adjustment assistance alone, however, in my opinion, would not be adequate to eliminate the threat of serious injury to the domestic industry from increased imports. The tariff quota recommended herein, however, would enhance the possibilities for success of any adjustment assistance which might be sought and provided.

The duties which I have recommended are substantially below the statutory rate. The statutory rate of duty provided by the Tariff Act of 1930 on "otherwise prepared or preserved" mushrooms (i.e., canned mushrooms), 10 cents per pound on the drained weight plus 45 percent ad valorem, has been modified four times in trade agreements--three times in negotiations with France and once (two stages) in negotiations with the European Community. The current rate of duty of 3.2 cents per pound plus 10 percent ad valorem became effective in July 1963. The ad valorem equivalent of the present rate averaged 14 percent based on the value of imports from all countries in 1974/75.

There is a further matter of statutory construction that should be noted. Five Commissioners were present and voting when the Commission made its determination as to injury by a vote of 3 to 2. Of the three Commissioners voting in the affirmative, two recommended the provision of adjustment assistance as the remedy. I recommended the proclamation of a tariff-rate quota system. It is further noted, however, that one of the two Commissioners who voted in the negative as to injury voted to recommend a remedy for the injury found by the majority; that, by virtue of this vote, the Commission, by a seeming majority of three Commissioners has made a recommendation for the provision of adjustment assistance as the necessary remedy for the injury.

In my view, the law does not contemplate that a Commissioner--who has a negative vote as to injury described in section 201(b)

of the Trade Act--can also vote under section 201(d), on the relief necessary to remedy such injury. It is my further view that any vote so cast is a nullity under the law, having no force or effect.

Views of Commissioner Italo H. Ablondi

I concur in major part with the affirmative views expressed by Commissioner Parker. I would further comment by noting that in May 1973 the Commission concluded an investigation pursuant to a request by the President under section 332 of the Tariff Act of 1930 of the competitive conditions in the United States between domestically produced and imported fresh and processed mushrooms. In the Commission's report 1/ I expressed the view that trends at that time indicated that the domestic mushroom producers were threatened with injury sufficient to warrant the serious consideration of some form of relief. My views were given within the context of the investigation requested, which required no specific criteria as to injury. The present investigation, however, was conducted under section 201 of the Trade Act of 1974 which sets out specific criteria with respect to injury. It should be noted that the threat of injury found to exist in the prior investigation was based, in part, on anticipated increases in imports, which, in fact, did increase from 62 million pounds in 71/72 to 77 million pounds in 74/75, or by nearly 25 percent. Were it not for a precipitous increase in the consumption of fresh mushrooms during the same period of time, an industry subject to the instant investigation could now be said to be seriously injured. However, notwithstanding the absence of present injury, I do find that imports continue to pose a threat of serious injury and, accordingly, I am constrained to make an affirmative determination.

1/ Mushrooms: Report to the President on Investigation No. 332-72. . . , TC Publication 580, 1973.

Determination

On the basis of the evidence developed by the Commission in this investigation, I have determined that mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States, are being imported into the United States in such increased quantities as to be a substantial cause of the threat of serious injury to the domestic industry producing articles like or directly competitive with the imported articles.

Remedy

I concur with the views of Chairman Leonard with respect to remedy and determine that adjustment assistance under chapters 2, 3, and 4 of the Trade Act can effectively remedy the problems confronting the domestic industry. Therefore, I recommend the provision of such assistance.

Views of Vice Chairman Daniel Minchew

On September 17, 1975, the Mushroom Canners Committee of the Pennsylvania Food Processors Association, York, Pennsylvania, and the Mushroom Processors Tariff Committee, Washington, D. C., filed a petition with the United States International Trade Commission (Commission) for import relief, pursuant to section 201 of the Trade Act of 1974 (Trade Act). Following receipt of the petition, the Commission instituted an investigation on September 30, 1975, to determine whether mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States, are 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.

Before making an affirmative determination under section 201(b)(1), the Commission must find that all three of the following criteria are met:

(1) that an article is being imported into the United States in increased quantities (the increased imports may be actual or relative to domestic production);

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

(3) that such increased imports of an article are a substantial cause of the serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article.

Determination

As a result of evidence obtained by the Commission during its investigation, I have determined that the criteria by which an industry must be judged eligible for relief from imports, as set forth in section (201(b)(1) of the Trade Act, have not been met in this case. Specifically, I find that the third criterion under section 201(b)(1), as listed above, i.e., that of "substantial cause," has not been met.

Since the criteria of section 201(b)(1) are cumulative, the failure to satisfy any one of them necessitates a negative determination, no matter what the facts show with respect to the other criteria. Because my negative determination is based on a finding that the "substantial cause" criterion has not been met, the following discussion is limited to that criterion alone.

Domestic Industry

The domestic industry consists of that industry, or industries, producing an article which is "like or directly competitive with" the imported article -- in this case, mushrooms, except fresh or dried, under item 144.20 of the Tariff Schedules of the United States. I have concluded that all mushrooms, whether preserved or fresh, are "like or directly competitive" with the items under investigation, and that the domestic producers of such articles must be considered the industry, or industries, to which the statutory criteria are to be applied.

Although the Trade Act sets forth certain guidelines to be used by the Commission in determining what the "domestic industry" may be, it does

not specifically define the term. The Trade Act, in effect, leaves the Commission the discretion to evaluate the relevant facts gathered during the course of the investigation and to define the industry on the basis of these facts.

From the facts in the present case it would be possible to define the industry either as an industry consisting of all fresh mushroom production and mushroom processing facilities, or as two industries -- the fresh mushroom production facilities on the one hand and the mushroom processing facilities on the other. As I have determined that the "substantial cause" criterion has not been met, and since the various products are so closely related and interchangeable, I have concluded that no specific definition of the domestic industry is necessary. Either of the domestic industries would lead me to the same conclusions: that increased imports are not a "substantial cause" of any "serious injury" which the domestic industry may have suffered.

I will now turn to a discussion of the criterion, "substantial cause."

Substantial Cause

Section 201(b)(4) of the Trade Act defines "substantial cause" as a "cause which is important and not less than any other cause." In addressing the question of substantial cause the House Ways and Means Committee stated:

> The Committee intends that a dual test be met--imports must constitute an important cause and be no less important than any other single cause. For example, if imports were just one of many factors of equal weight, imports would meet the test of being "not less than any other cause" but it would be deemed an "important" cause. If there were any other cause more important than imports, then the second test of being "not less than any other cause" would not be met. On the other hand, if imports were one of two factors

> of equal weight and there were no other factors, both tests would be met. 1/

The Senate Finance Committee report addressed the question by stating --

> The Committee recognizes that "weighing" causes in a dynamic economy is not always possible. It is not intended that a mathematical test be applied by the Commission. The Commissioners will have to assure themselves that imports represent a substantial cause or threat of injury, and not just one of a multitude of equal causes or threats of injury. It is not intended that the escape clause criteria go from one extreme of excessive rigidity to complete laxity. 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. 2/

In determining "substantial cause" it is necessary, therefore, to consider two tests. First, a cause must be important, and second, a cause must be not less than any other cause.

I have concluded that there are two factors which may have led to any decline the domestic industry may have suffered. They are (a) increased imports, and (b) the discovery of clostridium botulinum and/or botulinal toxin (botulism) in canned mushrooms in 1973. I consider both factors to be important--thus the first test of substantial cause is satisfied--but consider the discovery of botulism to be a more important factor than increased imports in any "serious injury" the domestic industry may have suffered.

1/ Trade Reform Act of 1973: Report of the Committee on Ways and Means..., H. Rept. No. 93-571 (93d Cong., 1st sess.), pp. 46-47.

2/ Trade Reform Act of 1974: Report of the Committee on Finance..., S. Rept. No. 93-1298 (93d Cong., 2d sess.), pp. 121-122.

The U.S. Food and Drug Administration (FDA) reports that,in early 1973, botulism was found in canned mushrooms from two domestic processors. Inspections were therefore made of all mushroom canning plants in the United States during the period from February 1973 to March 1974. The results revealed that one-half of the plants had operating or equipment problems that created a potentially hazardous situation. As a result, all warehouse stocks of mushrooms were surveyed, including those from processors in 20 foreign countries. Of the 25,491 lots (or about 75 million cans) surveyed, abnormal cans were found in 2,024 lots. Clostridium botulinum and/or botulinal toxin were found in 41 cans of mushrooms. Many cans of mushrooms showed microbiological evidence of underprocessing. The mushrooms were canned by ten firms, eight of them domestic and two of them foreign--Equador and France.

The "botulism scare" gained wide publicity, and it is generally acknowledged in the mushroom industry that consumer confidence in canned mushrooms was greatly reduced.

U. S. Department of Agriculture statistics reveal that the volume of fresh mushroom sales to domestic processors peaked in 1972/73, remained about the same during 1973/74, and then declined about 2 percent during 1974/75. Data collected by the Commission reveals that the volume of U. S. sales of domestically canned mushrooms peaked at 127 million pounds (fresh-weight basis) in 1971/72, declined for the next two years, reaching a low of 108 million pounds in 1973/74, and then increased to 116 million pounds in 1974/75. U. S. imports of canned mushrooms reached 74 million pounds (fresh-weight basis) in 1972/73,

decreased to 70 million pounds in 1973/74, and then increased to 77 million pounds in 1974/75. It would appear that consumption has begun to increase as the "botulism scare" has diminished.

It should be noted, also, that profit-and-loss data which show a huge decrease in the years directly after the "botulism scare" resulted not only from the decrease in consumption, but also from the expenses of recalls of possible contaminated mushrooms. 1/

In looking at the evidence that the Commission has been able to obtain, I feel that I must conclude that the "botulism scare" is a more important cause of any "serious injury" the domestic industry may have suffered and must, therefore, conclude that the "substantial cause" criterion has not been met.

Conclusion

As indicated earlier, I have determined that the requirements of

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section 201(b)(1) of the Trade Act have not been met. Specifically, I find that criterion (3) above--"substantial cause"--has not been satisfied, i.e., that any increased imports of mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States, are not a substantial cause of serious injury, or the threat thereof, to the domestic industry producing articles like or directly competitive with imported mushrooms.

Additional Views of Vice Chairman Daniel Minchew with Regard to Recommendations of Remedy

I have concluded that, with a Commission determination in the affirmative, I am required to join with my fellow Commissioners in recommending a remedy to relieve the serious injury which the Commission has found affecting the domestic industry. 1/

As I stated in the body of my views, I consider increased imports to be an important cause of injury to the domestic industry. That I was unable, in this case, to say that these increased imports are not less important than any other cause,--in this case botulism--, does not diminish my belief that increased imports are a factor in the serious injury that the Commission has found.

Having carefully evaluated the remedies available, and considering the intentions of Congress for the Commission to reach a

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1/ For arguments in favor of a Commissioner who votes in the negative under section 201(b)(1) participating in remedy recommendations see the "Additional Views of Vice Chairman Daniel Minchew with regard to recommendations of remedy" in Asparagus: Report to the President on Investigation No. TA-201-4..., USITC Publication 755, January 1976, pp. 20-25 and in Stainless Steel Table Flatware: Report to the President on Investigation No. TA-201-8..., USITC Publication 759, March 1976, pp. 39-44.

For arguments opposing a Commissioner who votes in the negative under section 201(b)(1) participating in the remedy recommendations see remedy recommendations of Commissioner Italo H. Ablondi in Stainless Steel Table Flatware: Report to the President on Investigation No. TA-201-8..., USITC Publication 759, March 1976, pp. 47-49.

definitive majority view with regard to remedy, 2/ I have concluded that adjustment assistance under chapters 2, 3 and 4 can best remedy the injury that the Commission has found and join with Chairman Will E. Leonard and Commissioner Italo H. Ablondi in this recommendation.

2/ The Trade Reform Act of 1974: Report of the Committee on Finance. . ., S. Rept. No. 93-1298 (93d Cong., 2d sess.), at page 123 states--

> ...the Committee feels strongly that the Commission ought to reach a clear definitive majority view on the nature of the remedy that is most suitable to the injury found.

Views of Commissioner George M. Moore

On September 17, 1975, the United States International Trade Commission received a petition filed by the Mushroom Canners Committee of the Pennsylvania Food Processors Association, York, Pa., and the Mushroom Processors Tariff Committee, Washington, D.C., requesting an investigation under section 201(b)(1) of the Trade Act of 1974 (Trade Act) with respect to imports of mushrooms. On September 30, 1975, the Commission instituted an investigation to determine whether mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States (TSUS), are 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 articles.

Section 201(b)(1) of the Trade Act requires that each of the following conditions be met if the Commission is to make an affirmative determination in this investigation and thus find a domestic industry eligible for import relief:

> (1) That imports of the articles concerned are entering the United States in increased quantities;
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> (2) That the domestic industry producing articles like or directly competitive with the imported articles concerned is being seriously injured or threatened with serious injury; and

> (3) That increased imports are a substantial cause (i.e., an important cause and not less than any other cause) of the serious injury, or the threat thereof, to the domestic industry producing articles like or directly competitive with the imported articles concerned.

Since these criteria are cumulative, the failure to satisfy any one of them necessitates a negative determination, i.e., that a domestic industry is not eligible for import relief.

Determination

After considering the evidence obtained by the Commission in this investigation, I have determined that mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the TSUS are not, within the meaning of section 201(b)(1) of the Trade Act, being imported in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing like or directly competitive articles. Specifically, I find that the third criterion under section 201(b)(1), as set forth above, has not been met, i.e., that increased imports are not a substantial cause of serious injury, or the threat thereof, to the domestic industry producing articles like or directly competitive with the imported articles. Therefore the following discussion is limited principally to the third criterion.

Domestic industry

Most of the domestic producers of canned mushrooms also produce fresh mushrooms. These canners account for approximately one-fourth of the total U.S. output of fresh mushrooms. To separate the growers of fresh mushrooms from the producers of canned mushrooms would create an artificial basis for the definition of the domestic industry in this case. Therefore, I find the domestic industry to be considered here (hereinafter referred to as the domestic industry) as composed of the facilities in the United States devoted to the production of fresh mushrooms as well as the facilities devoted to the processing of canned mushrooms.

Substantial cause

The evidence is clear that imports of canned mushrooms have increased and that the domestic industry has suffered serious injury during the past several years. The remaining issue is whether the increased imports have been a substantial cause of the serious injury suffered by the domestic industry. Section 201(b)(4) of the Trade Act defines the term "substantial cause" to mean "a cause which is important and not less than any other cause."

During the course of the Commission investigation, it became apparent that there were several causes of the injury to the domestic industry.

The food poison botulism was discovered in domestically canned mushrooms in February 1973. As a result of this discovery,

there was an immediate recall of canned mushrooms processed by a domestic producer. Further discoveries of botulism contamination led to additional recalls, and in September 1973 the Food and Drug Administration ordered a nationwide examination of all canned mushrooms. These recalls of canned mushrooms did not cease until December 1974. During the course of this examination, canned mushrooms produced by eight firms were found to have the spore and/or toxin of the bacteria causing botulism.

In the marketing years immediately preceding the discovery of botulism, both production and sales of domestically canned mushrooms had trended steadily upward, both reaching highs in the 1971/72 marketing year. Following the discovery of botulism during 1972/73 marketing year, both production and sales of domestically produced canned mushrooms fell off sharply and continued to drop during the succeeding marketing year. However, when the botulism-related recalls ceased and the buying public recovered its confidence in domestically canned mushrooms, both production and sales of canned mushrooms revived during the 1974/75 marketing year.

The financial experience of the domestic industry can be evaluated in a better perspective when examined in terms of the firms whose products were found to be contaminated with botulism. In 1973 all firms suffered total losses of approximately $5.65 million. Of this amount, however, * * * is accounted for by firms whose products were found to have botulism contamination.

Similarly, of the combined loss of $4.1 million reported for 1974, * * * is accounted for by firms whose products were found to be contaminated. Therefore, the bulk of the losses suffered in both years can be attributed to firms experiencing botulism contamination.

During the marketing year 1972/73, 30 percent of fresh mushroom production was sold on the fresh market. By the 1974/75 marketing year, 42 percent of fresh mushroom production was sold on the fresh market. Over the 5 marketing years 1970/71 to 1974/75, inclusive, mushroom sales to the fresh market increased by 117 percent, while fresh mushroom sales to all processors increased by 19 percent from 1970/71 to 1973/74 and then declined by 2 percent in 1974/75. During the same 5 marketing years, per capita consumption of fresh mushrooms more than doubled. This increased consumption in the fresh market drastically limited the supply of mushrooms for the canners.

An additional problem faced by the mushroom canners was the increasing diversion of mushrooms to processors other than canners, including soup manufacturers and food processors who use mushrooms in their products. Total production of fresh mushrooms increased by 45 million pounds during the 3 marketing years 1972/73 to 1974/75. In this same period, sales of mushrooms to the fresh market increased by 49 million pounds, while sales to all processors dropped by 4 million pounds. Since production of canned mushrooms decreased by more than 4 million pounds in this period, it is

apparent that processors such as soup manufacturers were taking greater amounts of the mushrooms sold to all processors.

Generally speaking, most of the output of the top grade of fresh mushrooms is sold in the fresh market. During the last 5 marketing years the differential between the average price of raw mushrooms sold to the fresh market and the average price of those sold to canners has been increasing. As prices received in the fresh market increased over those received from processors, increasing quantities of mushrooms were diverted to the fresh market. This diversion resulted in a shortage of mushrooms for canning and increased the prices mushroom canners were forced to pay for raw mushrooms. Even with the increase in the price mushroom processors were forced to pay for raw mushrooms, there is no evidence of significant underselling by importers of canned mushrooms.

Historically, most of the domestically produced processed mushrooms have been sold in retail-size containers (for purposes of this discussion containers of 9 ounces and under are considered as retail-size containers), while the bulk of the imported canned mushrooms have been in institutional-size containers (for purposes of this discussion containers of over 9 ounces are considered as institutional-size containers). As a part of the Commission investigation, a comparison was made of the average price of representative retail- and institutional-size containers of domestically produced and imported mushrooms.

Imports of canned mushrooms in retail-size containers are approximately evenly divided between containers of stems and pieces of mushrooms and containers of buttons and sliced mushrooms. Throughout the years 1969-75, inclusive, the average price received by a domestic producer for a case of 24 4-ounce cans of mushroom stems and pieces was highly competitive with that received by importers for a case of 24 4-ounce cans of stems and pieces. The domestic price has intermittently fluctuated above and below the import price, but the two have remained closely competitive. With regard to a case of 24 4-ounce cans of mushroom slices or buttons, however, import prices have been consistently below domestic prices.

Stems and pieces account for the great bulk of imports of institutional-size cans of mushrooms. During the years 1969-75, inclusive, the average price received by a domestic producer for a case of six No. 10 cans of mushroom stems and pieces was, for the most part, highly competitive with the price received by importers for similar merchandise. Domestic prices moved above and below import prices, but throughout the period the two were closely competitive. While the prices for domestically produced and for imported cases of six No. 10 cans of mushroom slices and buttons have been highly competitive in recent years, domestic prices were consistently below import prices throughout the period 1969-75. In the first 4 years of this period, domestic prices were well below import prices.

These price comparisons fail to establish a pattern of price suppression by imports of canned mushrooms. For the most part the prices of domestic and imported canned mushrooms have been highly competitive, although, generally speaking, the import prices of retail-size cans of mushroom slices and buttons has been below the domestic prices, while the opposite situation has prevailed with regard to institutional-size cans of mushroom slices and buttons.

The evidence developed during the Commission's investigation does not provide a basis upon which to conclude that there is a threat of serious injury to the domestic industry. The guidelines of the Trade Act for threat of serious injury have not been met. Sales of domestically produced canned mushrooms have increased in the most recent marketing year, and domestic production of canned mushrooms has increased. Inventories of canned mushrooms declined significantly in both 1974 and 1975. It should also be pointed out that the quota placed on canned mushrooms by the European Economic Community has been liberalized, reducing the threat of a large-scale diversion of canned mushroom imports to the U.S. market.

Conclusion

On the basis of an evaluation of the foregoing economic factors which have caused serious injury to the domestic industry, I have determined that imports were not a substantial cause of such injury to the domestic industry. Therefore, I have made a negative determination.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On September 17, 1975, the Mushroom Canners Committee of the Pennsylvania Food Processors Association, York, Pa., and the Mushroom Processors Tariff Committee, Washington, D.C., filed a petition with the U.S. International Trade Commission for import relief pursuant to section 201 of the Trade Act of 1974.

Following receipt of the petition, the U.S. International Trade Commission instituted an investigation on September 30, 1975, to determine whether mushrooms, prepared or preserved, except fresh or dried, provided for in item 144.20 of the Tariff Schedules of the United States, are 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. Notice of the Commission's invesigation and the place and time of the hearing was published in the Federal Register on October 6, 1975 (40 F.R. 46158). A public hearing in connection with this investigation was held on January 6 and 7, 1976, in the Commission hearing room in Washington, D.C.

In 1964, domestic canners of mushrooms filed a petition with the U.S. Tariff Commission (the former name of the U.S. International Trade Commission) for an "industry" investigation under section 301(b) of the Trade Expansion Act of 1962. In the investigation, the Commission found that canned mushrooms were being imported in increased quantities within the meaning of section 301(b) of the act, but that such increased

imports were not attributable in major part to trade-agreement concessions. 1/ In 1966, the canners requested the President to enter into negotiations under section 204 of the Agricultural Act of 1956 with the Republic of China (Taiwan), the principal supplier of imported canned mushrooms, for the purpose of limiting that country's exports to the United States. 2/ Following a review by an interagency task force, the request for negotiations was denied; the primary reason given for the denial was that canners' profits were above the level that prevailed before imports assumed a significant role. 3/

In 1968 Taiwan took steps to place a limit on its shipments of canned mushrooms to the United States during that year. The export limitation imposed by Taiwan permitted some growth in U.S. imports from Taiwan over those in 1967 but amounted to a substantial reduction in Taiwan's initial export target for the U.S. market. The limitation was operative only in 1968. In 1972 the domestic canners again sought Presidential approval for the initiation, under section 204 of the Agricultural Act of 1956, of discussions with the Governments of Taiwan and the

1/ The Commission's report, Mushrooms Prepared or Preserved..., TC Publication 148, was sent to the President on Jan. 27, 1965.

2/ Sec. 204 of the Agricultural Act of 1956 authorizes the President to negotiate with representatives of foreign governments to obtain agreements limiting the export from those countries and the importation into the United States of any agricultural commodity or product manufactured therefrom. The President is authorized to issue regulations governing the importation of these products. If a multinational agreement has been concluded under this authority among countries accounting for a significant part of world trade in the articles with respect to which the agreement was concluded, the President may also issue regulations governing the importation of the same articles which are the products of countries not party to the agreement.

3/ From Canned Mushrooms: A Situation Report, issued by the U.S. Department of Agriculture, Foreign Agricultural Service, Fruit and Vegetable Division, on July 5, 1972.

Republic of Korea (South Korea) for the purpose of obtaining agreements to limit their exports of canned mushrooms to the United States. Thereupon the President requested the Tariff Commission, under section 332 of the Tariff Act of 1930, to conduct an investigation on the competitive conditions in the United States between domestically produced and imported fresh and processed mushrooms. 1/ The report on this investigation was reviewed by the Interagency Trade Staff Committee, which was to recommend a course of action. Subsequently, discussions were held with Taiwan and South Korea concerning unilateral restraints on their mushroom exports to the United States, but no agreements resulted from the discussions.

1/ The Commission's report Mushrooms..., TC Publication 580, was sent to the President on May 30, 1973.

Description and Uses

The term "mushroom" as used herein refers only to the edible portion (the fruiting body) of the mushroom fungi. Mushrooms are marketed either fresh, dried, frozen, or canned. Fresh mushrooms, used primarily as a garnish with meats and other foods, are also served separately or in gravies, sauces, relishes, salads, and soups. Some consumers will freely interchange canned mushrooms, frozen mushrooms, and, to a lesser degree, dried mushrooms with fresh mushrooms, while other consumers will not.

Fresh mushrooms are perishable and must be marketed within a few days after harvesting even though properly refrigerated. The domestic mushrooms destined for fresh-market sales are usually sold (with roots trimmed off) in 3- or 9-pound baskets either through retail stores or to institutional users (restaurants and other bulk buyers). Consumer handling of the fresh product in retail stores generally results in many damaged mushrooms, which must be sold at reduced prices or discarded. Many attempts have been made to prepackage fresh mushrooms in consumer-size containers. Problems have been encountered, however, in choosing the right types and sizes of containers and in inducing consumers to purchase prepackaged mushrooms; hence, only a small part of fresh-market sales have been accounted for by prepackaged mushrooms.

Virtually all of the prepared or preserved mushrooms, except dried, are canned. Canned mushrooms are usually packed in a light brine solution; however, small quantities are also preserved in vinegar (pickled mushrooms), wine (mushrooms in wine), and oil (marinated mushrooms).

Mushrooms canned in brine are used largely for the same purpose as fresh mushrooms, while those canned in other mediums have limited uses, mainly as appetizers and snacks. Most of the imported canned mushrooms are of the same species as those grown in the United States and are comparable in flavor and appearance to them. Virtually all of the imports from Taiwan, South Korea, and France and most of the imports from Japan, are of this species. A small portion of them, however, consist of either cultivated or wild species not grown commercially in the United States and different from the domestic cultivated mushroom in flavor and appearance. The most important of these is the "shiitake" mushroom from Japan, which is used principally in oriental cuisine. Frequently, because of tradition, fancy packaging, and reputed quality, mushrooms imported from France have a prestige value over the domestic product. They are sold principally to restaurants and gourmet food stores, where consumers are willing to pay a higher price for them.

Mushrooms destined for canning are sold either with roots attached ("pulls") or roots removed ("cuts"), generally in containers holding about 10 pounds; those for processing into soup are sold with roots removed, in bulk containers of similar sizes.

Before they are canned, mushrooms are trimmed (roots removed), washed, graded, sometimes sliced, and then blanched. They are then put into containers, covered with a preserving medium, sealed airtight, and pressure cooked. The three main styles of canned mushrooms are stems and pieces (including random-sliced mushrooms), sliced mushrooms, and whole mushrooms (including buttons). The containers range in size from 2 to 68 ounces (drained weight). Containers holding more than 8 ounces

of mushrooms (drained weight) are generally referred to as institutional sizes.

A relatively small part of the domestic mushroom crop is marketed frozen for the same uses as are fresh mushrooms.

Trade sources indicate that the only method currently being used in the United States to dry mushrooms commercially is freeze-drying. When moisture is added, such mushrooms (usually diced or sliced) regain approximately the size, shape, texture, and flavor of the original fresh product and can be substituted for fresh or canned mushrooms in most uses. Freeze-dried mushrooms, however, cost considerably more than fresh or canned mushrooms, and their acceptance has been limited. Freeze-dried mushrooms are used mainly in convenience dehydrated food products such as soup, gravy, and meat extender mixes.

U.S. Growers and Processors

Mushrooms were first commercially grown in the United States in the latter part of the 19th century. New York City and nearby Long Island constituted the first growing center. By 1890, greenhouse operators in the Kennett Square area 1/ had begun to grow mushrooms in the unused spaces under their greenhouse benches. Soon many farmers in that area were utilizing idle space in barns, sheds, and cellars for growing mushrooms. At the turn of the century, special houses were being built for the sole purpose of growing mushrooms. In addition to being situated near several large metropolitan centers where fresh mushrooms were in demand, the growers in the Kennett Square area could also obtain the horse manure needed to facilitate mushroom growing from nearby stables. At present, well-composted horse manure, synthetic compost, and mixtures of the two are used to produce mushrooms commercially.

Growers

In 1975 mushrooms were commercially grown by about 500 growers--about 30 percent fewer than a decade earlier. Although the number of growers has declined, average operations per grower have expanded and become more productive. Some large-scale growing operations have been established in recent years, including several by multiproduct food processors. During marketing years 1970/71 to 1974/75, the square feet of growing area devoted to mushroom production increased about 28 percent. Table 1 shows the growing area devoted to mushroom production and per-

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1/ The Kennett Square area is composed of southeastern Pennsylvania and nearby portions of Delaware and Maryland.

unit yields in recent years. In 1975/76, growers planned to increase their square feet of growing area by about 6 percent over the area harvested in 1974/75.

Table 1.--Mushrooms: U.S. area harvested and yield per square foot, marketing years 1970/71 to 1974/75

Marketing year (July 1-June 30)	Area	Yield
	Million sq. ft.	Pounds per sq. ft.
1970/71	87	2.36
1971/72	94	2.47
1972/73	102	2.48
1973/74	108	2.60
1974/75	111	2.70

Source: Official statistics of the U.S. Department of Agriculture.

Commercial production is concentrated in Pennsylvania, although mushrooms are also grown near many of the large U.S. population centers. California, New York, Ohio, and Delaware are the other principal producing States. Percentage distribution of the area in production in principal producing States in the marketing year 1974/75 was as follows: Pennsylvania, 56 percent; California, 11 percent; Ohio, 3 percent; New York, 3 percent; and all other States, 27 percent.

Most U.S. mushrooms are grown during the period from October through May, when climatic conditions favor growth. Most growers raise two crops a year, one in the fall and another in the spring. The use of air-conditioning in recent years has resulted in substantially increased production during the summer months; many domestic growers reported that they had been producing an additional 50 percent of a normal mushroom crop during the summer months. However, because of the high cost of energy, growers recently reported that the additional production had been reduced to about 25 percent of a normal crop.

Between 1972/73 and 1974/75, the square footage of mushroom growing area harvested at times other than the normal fall and spring harvest periods 1/ increased by 10 percent.

A typical small mushroom farm consists of a series of "double" mushroom houses, an open composting yard, and storage areas. A typical "double" is of cement block construction and is about 60 feet long and 38 feet wide. Mushroom beds are 5 to 6 feet wide with an aisle on each side and at the ends for picking, watering, and crop protection. A house usually has six or seven tiers of beds.

A recent innovation in the growing of mushrooms has been the tray system, which involves moving a tray holding the growing medium from one controlled environment to another during the period of early growth. With the tray system, the compost is placed directly into movable boxes which are transported by a tractor with a forklift or by other means to the various growing areas. The tray system allows greater use of mechanization and of improved composting methods resulting in increased labor efficiency. Tray operations tend to be considerably larger than those with fixed beds. This method has led to larger houses and greater capital investments in equipment. However, because of the high cost of installing the tray system, industry sources indicate that less than 25 percent of the output is grown by this technique.

1/ One mushroom crop is called a fill, which has approximately a 100-day cycle from initial preparation of the substrata to the final picking.

Canners

At present, canned mushrooms are being produced by 29 firms, compared with 35 firms in 1972 and 34 firms in 1964. More than half of the canners are in Pennsylvania; most of the other firms are in California, Ohio, Michigan, and Washington. Two of the firms are grower-owned cooperatives. In the 1974/75 marketing year, eight of the canners each sold more than 3 million pounds of domestically canned mushrooms. No single firm, however, accounted for more than * * * percent of U.S. sales of domestically canned mushrooms.

For the most part, mushroom-canning operations are similar to the operations of other small canners in the United States. However, unlike most canners, which operate during only a few weeks or months of the year, mushroom canners generally operate throughout most, if not all, of the year, with the principal canning season extending from October to the following May. Most mushroom canners are situated in areas economically unsuited for growing other canning crops and accordingly process few other products.

During the marketing years 1970/71 to 1974/75, about half the domestic canners grew part or all of their fresh mushroom requirements. These canners accounted for about a fourth of the total U.S. output of fresh mushrooms and about a third of the sales of domestic canned mushrooms. Some canners may ship part of their supplies (either grown or purchased by them) to the fresh market at times when their canning operations have sufficient supplies or when returns from the sales of fresh produce appear to be more favorable than returns from their canning

operations. Five domestic canners imported canned mushrooms at one time or another during 1970/71 to 1974/75.

Recent public testimony 1/ and trade source information indicate that seven domestic mushroom canners have ceased mushroom-canning operations since the 1960's. Of these seven processors, four suffered U.S. Food and Drug Administration (FDA) recalls and later went out of business, 2/ and three remained in business but discontinued their canned mushroom production. It is estimated from data available to the Commission that these seven firms accounted for about 10 percent of the annual domestic production of canned mushroom products in 1971/72.

Freezers

In recent years, about 1 percent of the domestically produced prepared or preserved mushrooms, except dried, were frozen. Fewer than five firms currently produce frozen mushrooms, and most of them also produce canned mushrooms. Generally, the firms' freezing operations are small in relation to their canning operations. The freezers accounting for the bulk of domestic output are located in Pennsylvania, Michigan, and Ohio.

Driers

In recent years freeze-drying has been the only method used to dry mushrooms in the United States. Two firms, one in Pennsylvania

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1/ Transcript of the hearing, p. 91.

2/ See appendix for firms involved in FDA recalls and discussion of FDA's investigation of the mushroom-canning industry.

and one in New York State, are believed to be the only major U.S. producers of freeze-dried mushrooms--whereas there were eight freeze-drying firms in 1963. Knowledgeable sources report that in the last several years these two firms have produced about * * * * pounds of freeze-dried mushrooms annually--about the same amount as produced by the eight firms that were freeze-drying in 1963.

Channels of Distribution

U.S. mushroom growers sell the principal part of their output to processors, with the remainder going to the fresh market. Generally, the better quality mushrooms are offered first to the fresh market.

Fresh mushrooms

Buyers that are wholesalers at fresh-market fruit and vegetable distribution centers purchase mushrooms directly from the growers. Most growers sell their mushrooms in wooden baskets holding 3 pounds of mushrooms and in plastic containers holding 10 pounds of mushrooms. Buyers repackage some of the mushrooms; they sell the mushrooms to retail grocery outlets in cardboard cartons holding either 1 or 2 pounds and in wooden baskets holding 3 pounds. Several large buyers ship fresh mushrooms by air freight to distant United States and Canadian markets. Some large growers that package their own mushrooms and ship directly to wholesalers or retail outlets may also buy mushrooms from other growers. Buyers for processors also purchase directly from growers; they buy the mushrooms that the growers could not sell or did not offer to sell to the fresh market.

Canned mushrooms

Three groups of primary suppliers market canned mushrooms in the United States: (1) Canners, which market only the domestically produced product; (2) importers, which market the foreign-produced product; and (3) canner-importers, which market both the domestic and the foreign products. In 1974/75, 52 percent of the canned mushrooms consumed in the United States were marketed by U.S. producers and importers to retail outlets (including chainstores), 37 percent went to institutional outlets, 7 percent went to food reprocessors (e.g., manufacturers of frozen pizzas and TV dinners), 2 percent went to Government outlets, and 2 percent went to all other outlets.

In 1974/75 canners that did not import sold a larger share of their supply directly to retail outlets than did importers that did not can mushrooms. The importers sold a greater part of their product to institutional users than did canners. The canner-importers sold virtually all of their imported canned mushrooms directly to retail outlets such as chainstores, but they sold most of their domestically produced product to institutional outlets; other market outlets took only a small share of their canned product. The following table shows the percentage distribution of sales by canners and importers in 1974/75:

Table 2.--Mushrooms, canned: Percentage distribution of sales by U.S. canners and importers, by type of outlet, marketing year 1974/75

Outlet	Canners, excluding canner-importers	Canner-importers		Importers	Total
		U.S. product	Imported product		
Retail outlets (including chain-stores)	50	26	97	29	52
Institutional outlets	33	72	3	62	37
Food reprocessors	14	1	-	1	7
Government outlets	2	-	-	2	2
All other	1	1	-	6	2
Total	100	100	100	100	100

Source: Compiled from data submitted to the U.S. International Trade Commission by domestic canners and importers.

Historically, most of the domestic product has been sold in retail-size containers, whereas the bulk of the imported product has been in institutional-size containers. In recent years, however, this trend has been changing. In 1974/75, 54 percent of domestically canned mushrooms were sold in retail-size containers, while 46 percent were sold in institutional-size containers. During the same period, 46 percent of the imported product was sold in retail-size containers, while 54 percent was sold in institutional-size containers, as is shown in the following table:

Table 3.--Mushrooms, canned: Percentage distribution of sales of the U.S. and the imported product, by container size, marketing years 1970/71 to 1974/75

Marketing year (July 1-June 30)	U.S. product			Imported product		
	Retail-size	Institutional-size	Total	Retail-size	Institutional-size	Total
1970/71	55	45	100	41	59	100
1971/72	60	40	100	38	62	100
1972/73	57	43	100	53	47	100
1973/74	60	40	100	49	51	100
1974/75	54	46	100	46	54	100

Source: Compiled from data submitted to the U.S. International Trade Commission by domestic canners and importers.

A study published in 1972 by The Pennsylvania State University 1/ reveals that three basic systems are used by canners to distribute canned mushrooms: In less-than-truckload quantities direct to customers, in truckload or rail carload quantities direct to customers, and in truckload or carload quantities to public warehouses. It was found that 56 percent of the volume of canned mushrooms transported was shipped in less-than-truckload quantities, and 44 percent was shipped in truckload or carload quantities. Nearly 60 percent of the canned mushrooms sold by canners were shipped direct to customers, and about 40 percent were distributed through public warehouses.

1/ W. C. Bates, W. T. Butz, and A. P. Stemberger, Alternative Systems for Distributing Canned Mushrooms, Agricultural Experiment Station, The Pennsylvania State University. University Park, Pa., July 1972. The authors of this Pennsylvania State University study have indicated that present mushroom distribution systems are not significantly different from those described in their report.

U.S. Importers

Fresh mushrooms

During the 1974/75 marketing year, no firm imported fresh mushrooms. This perishable commodity, in the fresh condition, has been insignificant or nonexistent in U.S. annual imports.

Canned mushrooms

About 30 concerns import either large or fairly large quantities of canned mushrooms into the United States; data collected by the Commission indicate that 5 domestic mushroom canning concerns are among these importers. A preponderance of the aforementioned 30 importers market canned mushrooms processed in Taiwan, and some also import from Korea. Several of these firms are highly diversified and trade in a wide range of products. Most of the others specialize in the importation of foods and related commodities. About half of the 30 importers have their principal U.S. offices in New York City.

In addition to the importers cited above, there are several dozen firms that import a variety of groceries associated with oriental cuisine. Individually, they import canned mushrooms in small quantities, but, considered as a group, they account for 10 to 15 percent of the U.S. annual imports from Taiwan. For the most part, these small importers are located in New York City, San Francisco, Los Angeles, and Seattle.

U.S. Tariff Treatment

Imported mushrooms are classified for tariff purposes under part 8D of schedule 1 of the Tariff Schedules of the United States (TSUS). The rates of duty currently applicable to imports from countries other than those designated as being under Communist control 1/ and the share of U.S. total imports that entered under each TSUS item in the marketing year 1974/75 are shown in the following table:

Table 4.--Mushrooms: U.S. rates of duty on mushroom imports and percent of total, by TSUS items, 1975

TSUS No.	Commodity	Rate of duty	Percent of total-- Quantity (fresh basis)	Value
	Mushrooms:			
144.10	Fresh	5¢ per lb. + 25% ad val.	1/	1/
144.12	Dried	3.2¢ per lb. + 10% ad val.	14	10
144.20	Otherwise prepared or preserved.	3.2¢ per lb. on drained weight + 10% ad val.	86	90

1/ Less than 0.5 percent.

Source: Compiled by the U.S. International Trade Commission from official statistics of the U.S. Department of Commerce.

These rates reflect concessions granted by the United States in the General Agreement on Tariff and Trade. The statutory rate of duty on "otherwise prepared or preserved" mushrooms (i.e., canned mushrooms), 10 cents per pound on the drained weight plus 45 percent ad valorem, has been modified four times in trade agreements--three times in negotiations with France and once (two stages) in negotiations with the European Community (table 5). The most recent of these reductions

1/ Products of most Communist-controlled countries are dutiable at the statutory rates shown in table 5.

Mushrooms are not among the articles eligible for duty-free entry under the Generalized System of Preferences.

Table 5.--Mushrooms, fresh, dried, or otherwise prepared or preserved: U.S. rates of duty, June 18, 1930, to February 1976

TSUS No.	Description	Statutory rate effective June 18, 1930	Trade-agreement modification	
			Rate	Effective date
	Mushrooms:			
144.10	Fresh	10¢ per lb. + 45% ad val.	5¢ per lb. + 25% ad val.	January 1948.
144.12	Dried	10¢ per lb. + 45% ad val.	5¢ per lb. + 25% ad val.	September 1955.
			4.5¢ per lb. + 22.5% ad val.	July 1962.
			4¢ per lb. + 20% ad val.	July 1963.
			3.2¢ per lb. + 18% ad val.	January 1968.
			3.2¢ per lb. + 16% ad val.	January 1969.
			3.2¢ per lb. + 14% ad val.	January 1970.
			3.2¢ per lb. + 12% ad val.	January 1971.
			3.2¢ per lb. + 10% ad val.	January 1972.
144.20	Otherwise prepared or preserved.	10¢ per lb. + 45% ad val.	8¢ per lb. 1/ + 25% ad val.	June 1936.
			5¢ per lb. 1/ + 15% ad val.	January 1948.
			4¢ per lb. 1/ + 12.5% ad val.	June 1951.
			3.6¢ per lb. 1/ + 11% ad val.	July 1962.
			3.2¢ per lb. 1/ + 10% ad val.	July 1963.

1/ Drained weight.

became effective in July 1963. The ad valorem equivalent of the present rate averaged 14 percent based on the value of imports from all countries in 1974/75, whereas that of the 1930 rate averaged 60 percent.

The statutory rate on dried mushrooms, 10 cents per pound plus 45 percent ad valorem, has been modified three times in trade agreements--twice in negotiations with Japan and once in the Kennedy Round. The statutory rate on fresh mushrooms, 10 cents per pound plus 45 percent ad valorem, has been modified once in an agreement with Canada. Prior to mid-1974, imports of frozen whole mushrooms that were not otherwise prepared or preserved were classified with fresh mushrooms in TSUS item 144.10. Since that time all frozen mushrooms have been classified in item 144.20 (otherwise prepared or preserved mushrooms). The ad valorem equivalents of the present rates, based on the value of imports from all countries averaged 11 percent for dried mushrooms in 1974/75 and 37 percent for fresh mushrooms in 1973/74 (there were no U.S. imports of fresh mushrooms, TSUS 144.10, in 1974/75), while those of the 1930 rate averaged 48 percent for dried mushrooms and 72 percent for fresh mushrooms (table 6).

Table 6.--Mushrooms, canned: U.S. rates of duty and imports for consumption, calendar years 1930-59, marketing years 1959/60 to 1974/75

Period	Rate of duty	Average ad valorem equivalent	Imports: Quantity (drained weight)	Imports: Value
	Cents per pound; percent ad valorem	Percent	1,000 pounds	1,000 dollars
1930:				
Jan. 1-June 17	45 %	45.0	3,834	1,016
June 18-Dec. 31	10¢ per lb. + 45%	80.6	1,143	321
Total 1930			4,977	1,337
1931	10¢ per lb. + 45%	81.4	2,773	761
1932	do	86.5	1,982	478
1933	do	84.8	1,417	356
1934	do	77.4	820	253
1935	do	76.6	560	177
1936:				
Jan. 1-June 14	do	76.7	146	46
June 15-Dec. 31	8¢ per lb. + 25%	50.5	316	99
Total 1936			462	145
1937	8¢ per lb. + 25%	53.7	999	278
1938	do	59.6	890	206
1939	do	63.5	890	185
1940	do	57.9	419	102
1941	do	50.3	38	12
1942	do	49.0	9	3
1943	do	39.9	1/	2/
1944	do	36.4	1/	2/
1945	do	36.5	23	16
1946	do	32.3	11	12
1947	do	30.7	5	7
1948	5¢ per lb. + 15%	23.5	159	94
1949	do	23.4	380	225
1950	do	23.4	337	200
1951:				
Jan. 1-June 5	do	22.9	156	99
June 6- Dec. 31	4¢ per lb.+ 12-1/2%	19.5	277	158
Total 1951			433	257
1952	4¢ per lb.+ 12-1/2%	19.2	955	570
1953	do	19.7	1,718	959
1954	do	20.0	2,572	1,378
1955	do	19.9	2,039	1,105
1956	do	19.2	2,040	1,220
1957	do	18.4	2,071	1,407
1958	do	18.9	2,501	1,567
1959	do	19.1	2,323	1,415
Marketing years (July 1-June 30):				
1959/60	do	18.8	2,237	1,430
1960/61	do	18.8	3,265	2,087
1961/62	do	20.0	10,013	5,367
1962/63	3.6¢ per lb.+ 11%	17.8	10,499	5,520
1963/64	3.2¢ per lb.+ 10%	16.2	13,555	6,949
1964/65	do	15.9	10,409	5,624
1965/66	do	15.8	13,658	7,482
1966/67	do	15.6	16,776	9,530
1967/68	do	15.6	22,009	12,514
1968/69	do	15.7	20,019	11,272
1969/70	do	15.6	27,427	15,731
1970/71	do	14.9	28,097	18,308
1971/72	do	14.8	40,072	26,927
1972/73	do	14.9	48,217	31,566
1973/74	do	14.8	45,515	30,141
1974/75	do	14.3	50,179	37,561

1/ Less than 500 pounds. 2/ Less than $500.

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

The Question of Increased Imports

U.S. imports

U.S. imports have consisted of canned, dried, and fresh or frozen mushrooms. During the 10 marketing years (July 1-June 30) 1965/66 to 1974/75, aggregate U.S. imports of mushrooms in all forms increased irregularly from 28 million to 89 million pounds (fresh-weight basis) (table 7). In 1974/75, canned mushrooms accounted for 87 percent of the total U.S. imports of mushrooms in terms of quantity and for 90 percent in terms of value; dried mushrooms, for 13 percent of the quantity and 10 percent of the value. Imports of frozen mushrooms were negligible and those of fresh mushrooms were nil.

Canned mushrooms.--U.S. imports of canned mushrooms amounted to less than 5 million pounds (fresh-weight basis) during each of the years 1930 through 1959. Thereafter, imports increased irregularly from 5 million pounds in marketing year 1960/61 to 77 million pounds in 1974/75 (tables 7, 8, 9, and 10). U.S. imports of canned mushrooms during 1970/71 through 1974/75 are shown in table 11 by months.

Before the 1960's, France had been the principal supplier of U.S. imports of canned mushrooms. In the 1960's Taiwan and South Korea became the leading suppliers. Imports from Taiwan began in 1960/61, when imports of canned mushrooms from that country amounted to 488,000 pounds. Those from South Korea began in 1963/64, when they amounted to 5,000 pounds. In the marketing year 1974/75, Taiwan supplied 34.2 million of the 50.2 million pounds (drained-weight basis) of canned mushrooms imported from all supplying countries. In the same marketing year, South Korea was the second largest source, supplying 11.1 million pounds; Japan was the third, with 1.7 million pounds; and France was the fourth, with 0.5 million pounds. Tables 12 and 13

Table 7.--Mushrooms: U.S. production, exports, imports for consumption, and apparent consumption, marketing years 1965/66 to 1974/75

(Quantities, fresh-weight basis)

Marketing year (July 1-June 30)	Production	Exports 1/	Imports			Apparent consumption 3/	Ratio of imports to consumption	Ratio of imports to production
			Canned	Dried	Total 2/			
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent	Percent
1965/66----	156	4/	21	7	28	184	15	18
1966/67----	165	4/	26	9	35	200	18	21
1967/68----	181	4/	36	10	44	225	20	24
1968/69----	189	4/	31	12	43	232	19	23
1969/70----	194	4/	42	7	49	243	20	25
1970/71----	207	2	43	10	53	258	20	26
1971/72----	231	1	62	10	72	302	24	31
1972/73----	254	1	74	12	86	339	25	34
1973/74----	279	7	70	12	82	354	23	29
1974/75----	299	5	77	12	89	383	23	30

1/ Compiled from official Canadian import statistics. U.S. exports of mushrooms to other countries are negligible.

2/ Includes small quantities of frozen mushrooms in some years.

3/ Production plus imports minus exports for marketing years 1970/71 through 1974/75.

4/ Marketing year data are not available.

Source: Production data supplied by the U.S. Department of Agriculture; imports compiled from official statistics of the U.S. Department of Commerce; and exports compiled from official Canadian Government statistics.

Table 8.--Mushrooms: U.S. production, exports, imports of canned mushrooms for consumption, and apparent consumption, marketing years, 1965/66 to 1974/75

(Quantity on fresh-weight basis)

Marketing year (July 1-June 30)	Production	Exports 1/	Imports of canned mushrooms	Apparent consumption 2/	Ratio of imports to consumption	Ratio of imports to production
	Million pounds	Million Pounds	Million pounds	Million pounds	Percent	Percent
1965/66---	156	3/	21	177	12	14
1966/67---	165	3/	26	191	14	16
1967/68---	181	3/	36	217	17	20
1968/69---	189	3/	31	220	14	16
1969/70---	194	3/	42	236	18	22
1970/71---	207	2	43	248	17	21
1971/72---	231	1	62	292	21	27
1972/73---	254	1	74	327	23	29
1973/74---	279	7	70	342	21	25
1974/75---	299	5	77	371	21	26

1/ Compiled from official Canadian import statistics. U.S. exports of mushrooms to other countries are negligible.

2/ Production plus imports minus exports for marketing years 1970/71 through 1974/75.

3/ Marketing year data are not available.

Source: Production data supplied by the U.S. Department of Agriculture; imports compiled from official statistics of the U.S. Department of Commerce; and exports compiled from official Canadian Government statistics.

Table 9.--Mushrooms: U.S. production for fresh marketing sales; U.S. production of canned mushrooms, total production, imports, and ratio of imports to production, marketing years 1968/69-1974/75.

(Quantity on fresh-weight basis)

Marketing year (July 1-June 30)	Production		Total production	Imports	Ratio of imports to production
	For fresh market sales	Canned			
	Million pounds	Million pounds	Million pounds	Million pounds	Percent
1968/69	56	93	149	31	21
1969/70	62	99	161	42	26
1970/71	58	113	171	43	25
1971/72	66	137	203	62	30
1972/73	77	121	198	74	37
1973/74	102	106	208	70	34
1974/75	126	112	238	77	32

Source: Production of mushrooms for fresh market sales supplied by the U.S. Department of Agriculture; production of domestically canned mushrooms from data submitted by domestic canners; imports compiled from official statistics by the U.S. Department of Commerce.

Table 10.--Mushrooms: U.S. fresh market sales, sales of domestically canned mushrooms, exports, imports, apparent consumption, and the ratio of imports to consumption for the marketing years, 1968/69 to 1974/75.

(Quantity on fresh-weight basis)

Marketing year	Sales		Exports	Imports	Apparent consumption	Ratio of imports to consumption
	Sales of mushrooms to the fresh market	Sales of domestically canned mushrooms				
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Percent
1968/69	56	95	-	31	182	17
1969/70	62	100	-	42	204	21
1970/71	58	115	2	43	214	20
1971/72	66	127	1	62	254	24
1972/73	77	115	1	74	265	28
1973/74	102	108	7	70	273	26
1974/75	126	116	4	77	315	24

Source: Sales of mushrooms to the fresh market from the U.S. Department of Agriculture; sales of domestically canned mushrooms from data submitted by domestic canners; exports from official Canadian imports statistics; imports compiled from official statistics of the U.S. Department of Commerce.

Table 11.--Mushrooms, canned: U.S. imports for consumption, by months, marketing years 1970/71 to 1974/75

(In thousands of pounds, drained weight)

Month	Marketing year (July 1-June 30)				
	1970/71	1971/72	1972/73	1973/74	1974/75
July	1,439	2,586	5,252	4,110	2,944
August	2,119	1,525	5,423	4,234	2,815
September	1,907	2,738	4,063	3,679	4,869
October	1,440	1,705	3,074	4,908	3,868
November	1,068	1,039	2,467	4,491	3,582
December	784	1,831	3,182	3,616	4,069
January	773	1,724	3,568	4,233	5,768
February	2,574	1,958	2,400	2,684	2,935
March	3,573	5,443	4,243	2,251	4,312
April	4,388	5,860	4,403	4,994	4,945
May	3,869	8,005	5,296	3,613	5,363
June	4,163	5,660	4,846	2,703	4,709
Total 1/	28,097	40,072	48,217	45,515	50,179

1/ Because of rounding, figures may not add to the totals shown.

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

Table 12.--Mushrooms, canned: U.S. imports for consumption, by principal sources, marketing years 1970/71 to 1974/75

Source	Marketing year (July 1-June 30)				
	1970/71	1971/72	1972/73	1973/74	1974/75
	Quantity (1,000 pounds drained weight)				
Republic of China (Taiwan)	24,260	28,169	30,115	30,382	34,227
Republic of Korea	717	7,444	12,643	10,307	11,090
Japan	966	789	1,447	1,254	1.709
Costa Rica	79	399	344	775	399
France	940	1,652	1,264	554	531
Dominican Republic	-	-	166	795	675
Ecuador	439	387	603	390	658
All other	696	1,232	1,635	1,058	890
Total	28,097	40,072	48,217	45,515	50,179
	Value (1,000 dollars)				
Republic of China (Taiwan)	15,293	18,318	19,513	20,387	26,444
Republic of Korea	497	5,139	7,978	6,250	7,236
Japan	699	642	998	784	1.184
Costa Rica	55	295	267	601	347
France	922	1,416	1,182	579	667
Dominican Republic	-	-	95	457	396
Ecuador	244	265	417	268	506
All other	598	852	1,116	812	731
Total	18,308	26,927	31,566	30,141	37,561
	Unit value (per pound) 1/				
Republic of China (Taiwan)	$0.63	$0.65	$0.65	$0.67	$0.77
Republic of Korea	.69	.69	.63	.61	.56
Japan	.72	.81	.69	.62	.69
Costa Rica	.70	.74	.78	.78	.37
France	.98	.86	.94	1.04	1.26
Dominican Republic	-	-	.57	.57	.59
Ecuador	.56	.68	.69	.69	.77
All other	.86	.69	.68	.77	.82
Average	.65	.67	.65	.66	.75

1/ Calculated from the unrounded figures.

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

Table 13.--Mushrooms, canned: U.S. imports for consumption, by principal sources, calendar year, 1970-75

Source	1970	1971	1972	1973	1974	1975
	Quantity (1,000 pounds drained weight)					
Republic of China (Taiwan)	21,893	24,667	36,404	31,070	30,040	35,035
Republic of Korea	313	2,660	9,946	14,010	7,771	13,995
Japan	782	972	1,236	1,101	1,281	1,709
Costa Rica	4	230	395	513	801	149
France	747	990	1,931	926	520	341
Dominican Republic	-	-	29	417	899	689
Ecuador	396	390	462	663	337	457
All other	673	854	1,708	1,092	977	874
Total	24,808	30,763	52,111	49,792	42,626	53,249
	Value (1,000 dollars)					
Republic of China (Taiwan)	12,684	16,027	23,809	20,050	22,018	28,245
Republic of Korea	199	1,851	6,779	8,502	4,931	9,349
Japan	548	720	915	751	864	1,125
Costa Rica	2	166	300	398	647	125
France	680	952	1,644	921	630	444
Dominican Republic	-	-	17	239	522	414
Ecuador	190	242	327	425	236	364
All other	543	629	1,131	861	779	759
Total	14,846	20,587	34,922	32,147	30,627	40,825
	Unit value (per pound)					
Republic of China (Taiwan)	$0.58	$0.65	$0.65	$0.65	$0.73	$0.81
Republic of Korea	.64	.70	.68	.61	.63	.67
Japan	.70	.74	.74	.68	.68	.66
Costa Rica	.50	.72	.76	.78	.81	.84
France	.91	.96	.85	.99	1.21	1.30
Dominican Republic	-	-	.59	.57	.58	.60
Ecuador	.48	.62	.71	.64	.70	.80
All other	.81	.74	.66	.78	.80	.87
Average	.60	.67	.67	.65	.72	.77

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

show imports, by principal sources, on a drained-weight basis, for recent marketing years and calendar years, respectively. Tables 14 and 15 show U.S. imports of canned mushrooms by months for the calendar years 1972-75, for Taiwan and South Korea, respectively. Table 16 shows the percentage distribution of canned mushroom imports by container size and by principal source for the marketing years 1970/71 to 1974/75.

Table 14.--Mushrooms, canned: U.S. imports for consumption, from the Republic of China (Taiwan), by months, calendar years 1972-75

Month	1972	1973	1974	1975
	Quantity (1,000 pounds drained weight)			
January	806	1,743	2,557	3,609
February	799	933	1,299	1,034
March	3,563	2,214	1,398	3,027
April	4,199	2,790	3,712	3,373
May	6,491	3,280	2,487	3,574
June	4,457	3,066	1,886	2,906
July	3,838	2,465	2,058	3,262
August	3,842	2,432	1,932	3,590
September	2,811	2,288	3,871	3,820
October	1,718	3,563	3,093	2,663
November	1,711	3,394	2,915	2,118
December	2,170	2,903	2,834	2,090
Total 1/	36,404	31,070	30,040	35,035
	Value (1,000 dollars)			
January	523	1,055	1,541	2,580
February	486	557	827	725
March	2,318	1,372	993	2,596
April	2,611	1,807	2,614	2,669
May	4,314	2,192	1,827	2,888
June	3,005	1,978	1,496	2,266
July	2,481	1,610	1,607	2,858
August	2,600	1,553	1,597	3,046
September	1,963	1,511	3,237	2,904
October	1,127	2,462	2,291	1,989
November	1,045	2,203	1,993	1,819
December	1,337	1,750	1,993	1,901
Total 1/	23,809	20,050	22,018	28,242

1/ Because of rounding, figures may not add to the totals shown.

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

Table 15.--Mushrooms, canned: U.S. imports for consumption, from the Republic of Korea, by months, calendar years 1972-75

Month	1972	1973	1974	1975
	Quantity (1,000 pounds drained weight)			
January	550	1,243	1,285	1,485
February	782	1,096	875	1,509
March	1,274	1,420	335	1,048
April	1,047	1,336	806	997
May	901	1,494	457	1,158
June	779	1,440	569	1,449
July	1,124	1,415	587	2,401
August	1,216	1,403	528	1,330
September	860	1,037	691	722
October	795	1,061	246	844
November	267	712	420	271
December	353	352	971	781
Total 1/	9,946	14,010	7,771	13,995
	Value (1,000 dollars)			
January	372	761	764	924
February	552	657	513	959
March	886	864	206	688
April	733	833	488	675
May	613	894	301	806
June	522	868	351	881
July	770	840	350	1,552
August	805	824	381	925
September	591	654	484	525
October	519	659	188	678
November	186	432	286	202
December	231	217	618	530
Total 1/	6,779	8,502	4,931	9,349

1/ Because of rounding, figures may not add to the totals shown.

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

Table 16.--Mushrooms, canned: Percentage distribution of U.S. imports, by container sizes 1/ and by principal sources, marketing years 1970/71 to 1974/75

Item	Republic of China (Taiwan)	Republic of Korea	France	Japan	All other	Total
1970/71:						
Retail size	42	42	4	27	62	41
Institutional size	58	58	96	73	38	59
Total	100	100	100	100	100	100
1971/72:						
Retail size	43	24	3	31	46	38
Institutional size	57	76	97	69	54	62
Total	100	100	100	100	100	100
1972/73:						
Retail size	43	33	4	22	45	39
Institutional size	57	67	96	78	54	61
Total	100	100	100	100	100	100
1973/74:						
Retail size	44	44	8	14	66	44
Institutional size	56	56	92	86	34	56
Total	100	100	100	100	100	100
1974/75:						
Retail size	50	39	6	15	51	46
Institutional size	50	61	94	85	49	54
Total	100	100	100	100	100	100

1/ Retail-size containers, as here used, hold not more than 9 ounces each, and institutional-size containers hold more than 9 ounces each.

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

Dried, frozen, and fresh mushrooms.--During the marketing years 1970/71 to 1974/75, annual U.S. imports of dried mushrooms ranged from 979,000 pounds in 1971/72 to 1,231,000 pounds in 1974/75 (table 17). In 1974/75, imports from Japan, Taiwan, and Chile, considered together, accounted for 95 percent of the imports of dried mushrooms from all sources. In relation to total imports of mushrooms in all forms, imports of fresh or frozen mushrooms (virtually all frozen) have been unimportant. During 1970/71 to 1973/74, imports of fresh or frozen mushroom ranged from 80,000 pounds in 1972/73 to 354,000 pounds (fresh-weight basis) in 1971/72, as shown in table 18. In 1974/75 there were no imports of fresh mushrooms, and the statistics on the small imports of frozen mushrooms were reported in combination with those on canned mushrooms.

Table 17.--Mushrooms, dried: U.S. imports for consumption, by principal sources, marketing years 1970/71 to 1974/75

Source	Marketing year (July 1-June 30)				
	1970/71	1971/72	1972/73	1973/74	1974/75
	Quantity (1,000 pounds, dried weight)				
Japan	545	521	449	420	512
Republic of China (Taiwan)	48	239	248	89	117
Chile	286	140	248	469	538
France	21	13	7	3	6
West Germany	76	14	20	11	9
All other	66	52	179	182	49
Total	1,042	979	1,151	1,174	1,231
	Value (1,000 dollars)				
Japan	2,280	2,425	2,352	3,057	2,949
Republic of China (Taiwan)	216	883	732	327	322
Chile	206	214	579	754	512
France	110	101	48	7	23
West Germany	172	42	67	51	42
All other	188	225	486	727	277
Total	3,172	3,890	4,264	4,923	4,125
	Unit value (per pound)				
Japan	$4.19	$4.65	$5.23	$7.28	$5.76
Republic of China (Taiwan)	4.48	3.69	2.96	3.70	2.74
Chile	.72	1.53	2.33	1.61	.95
France	5.36	7.66	6.67	2.23	3.70
West Germany	2.25	3.04	3.28	4.62	4.76
All other	3.12	4.36	2.72	3.99	5.65
Average	3.04	3.97	3.70	4.23	3.35

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

Note.--1 pound of dried mushrooms is equivalent to 10 pounds of fresh mushrooms.

Table 18.--Mushrooms, fresh: U.S. imports for consumption, from the Republic of China (Taiwan) and all other sources, marketing years 1970/71 to 1973/74 1/

Source	Marketing year (July 1-June 30)			
	1970/71	1971/72	1972/73	1973/74
	Quantity (1,000 pounds)			
Republic of China	299	318	72	161
All other	17	36	8	70
Total	316	354	80	231
	Value (1,000 dollars)			
Republic of China	111	118	30	56
All other	5	10	4	40
Total	116	128	34	96
	Unit value (cents per pound)			
Republic of China	37.3	37.2	41.6	34.6
All other	29.8	27.6	50.0	57.1
Average	36.9	36.2	42.5	41.6

1/ There were no imports of fresh mushrooms in 1974/75.

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

The ratio of U.S. imports to domestic production

The ratio of U.S. imports of canned mushrooms to domestic production of canned mushrooms increased almost without interruption from 33 percent in 1968/69 to 68 percent in 1974/75, as shown in table 19. In 1971/72, when U.S. production of canned mushrooms was the highest on record, the ratio of imports to production was 45 percent.

Table 19.--Mushrooms, canned: U.S. production, and imports, marketing years 1968/69 to 1974/75

(Quantities, fresh-weight basis)

Marketing year (July 1-June 30)	Production	Imports	Ratio of imports to production
	Million pounds	Million pounds	Percent
1968/69	93	31	33
1969/70	99	42	42
1970/71	113	43	38
1971/72	137	62	45
1972/73	121	74	61
1973/74	106	70	66
1974/75	112	77	68

Source: Production data estimated by the U.S. International Trade Commission from sales and inventory data submitted by domestic canners; imports compiled from official statistics of the U.S. Department of Commerce.

If U.S. imports of canned, dried, and frozen mushrooms, considered in the aggregate, are compared with domestic production of fresh mushrooms for all purposes, the ratio of imports to production increased from 18 percent in 1965/66 to 34 percent in 1972/73, as shown in table 7 on page A-22. In 1974/75, total imports of 89 million pounds were equivalent to 30 percent of the U.S. fresh mushroom production of 299 million pounds. In the latest year, both imports and production were the highest on record.

The ratio of U.S. imports to domestic consumption

The ratio of imports of canned mushrooms to apparent U.S. consumption of such mushrooms increased irregularly from 19 percent (16 million of 84 million pounds) in the 1964/65 marketing year to 40 percent (77 million of 193 million pounds) in 1974/75 (tables 20 and 21). As consumption was increasing during most of the 11-year period, the imports of canned mushrooms were accounting for an increasing share of a generally rising demand. The advocates of increased protection (domestic canners) assert that the increased market penetration by imports is based on low prices. 1/ However, responding importers declare that the increased imports of canned mushrooms have been necessary to meet the growing U.S. demand. 2/

If apparent consumption is construed to include domestic production of fresh mushrooms (intended for use in both the fresh- and the processed-mushroom markets), less Canadian imports of fresh and canned mushrooms from the United States, plus United States imports of processed mushrooms (canned, dried, and frozen), the ratio of imports to apparent consumption during the period 1965/66 to 1974/75 ranged from 15 percent in 1965/66 to 25 percent in 1972/73, as shown in table 7 on page A-22. The ratio was 23 percent in each of the marketing years 1973/74 and 1974/75.

1/ Petition of Mushroom Canners Committee of the Pennsylvania Food Processors Association and the Mushroom Processors Tariff Committee, p. 10.

2/ Example: Affidavit of M. Suzuki, vice-president, C. Itoh & Co. (America), Inc.

Table 20.--Mushrooms, canned: Sales of U.S. product, U.S. imports for consumption, and apparent consumption, in terms of fresh-weight equivalent, marketing years 1964/65 to 1974/75

(Quantities, fresh-weight basis)

Marketing year (July 1-June 30)	Sales of U.S. product 1/	Imports	Apparent consumption 2/	Ratio of imports to consumption
	Million pounds	Million pounds	Million pounds	Percent
1964/65	68	16	84	19
1965/66	72	21	93	23
1966/67	72	26	98	27
1967/68	80	34	114	30
1968/69	95	31	126	24
1969/70	100	42	142	29
1970/71	115	43	158	27
1971/72	127	62	189	33
1972/73	115	74	189	39
1973/74	108	70	178	39
1974/75	116	77	193	40

1/ Mushroom products canned in airtight containers and consisting of 50 percent or more of mushrooms, by weight.
2/ Sales of U.S. product plus imports. Exports are negligible.

Source: Sales of U.S. product compiled from data supplied by domestic canners and the National Canners Association; imports compiled from official statistics of the U.S. Department of Commerce.

Note.--Data on canned product converted to fresh-weight equivalent on the basis of 1 pound of drained weight to 1.538 pounds of fresh weight.

Table 21.--Mushrooms, canned: Sales of U.S. product, U.S. imports for consumption, and apparent consumption, in terms of processed-weight equivalent, marketing years 1964/65 to 1974/75

(Quantities, processed product-weight basis)

Marketing year (July 1-June 30)	Sales of U.S. product 1/	Imports	Apparent consumption 2/	Ratio of imports to consumption
	Million pounds	Million pounds	Million pounds	Percent
1964/65	44	10	54	19
1965/66	47	14	61	23
1966/67	47	17	64	27
1967/68	52	22	74	30
1968/69	62	20	82	24
1969/70	65	27	92	29
1970/71	75	28	103	27
1971/72	83	40	123	33
1972/73	75	48	123	39
1973/74	70	46	116	39
1974/75	75	50	125	40

1/ Mushroom products canned in airtight containers and consisting of 50 percent or more of mushrooms, by weight.

2/ Sales of U.S. product plus imports. Exports are negligible.

Source: Sales of U.S. product compiled from data supplied by domestic canners and the National Canners Association; imports compiled from official statistics of the U.S. Department of Commerce.

Foreign producers

The Republic of China (Taiwan) and the Republic of Korea (South Korea) predominate as exporters of canned mushrooms to the United States. Although several other countries also are suppliers, Taiwan and Korea are the only ones that warrant separate discussion. In the calendar year 1974, for example, Taiwan and Korea supplied 37.7 million of the 42.6 million pounds imported from all sources.

Taiwan.--Generally, more than 80 percent of Taiwan's production of mushrooms is canned, and virtually all of the production of canned mushrooms is exported. Taiwan rose to a position of preeminence as an exporter of canned mushrooms by adopting comprehensive development and improvement programs for growing and canning. Among other things, these programs embraced research and experimentation in the production of better grades of mushroom spawn, strict standards for the construction and operation of mushroom growing and canning facilities, strategic location of growing sheds in relation to the location of canneries, Government regulations to prevent overproduction of fresh and canned mushrooms, assessment of export-marketing conditions, and the assignment of production quotas.

Taiwan made trial exports of canned mushrooms to the United States and Europe in 1958. The growth in Taiwan's output and in the demand for her exports were so rapid that Taiwan became the world's leading exporter of canned mushrooms by 1962 and has been the leading exporter ever since.

Although it is the leading exporter, Taiwan has not enjoyed continuous growth in the production of fresh and canned mushrooms or in the area

harvested. After producing 73 million pounds of fresh mushrooms in 1964/65, Taiwan increased its production in 3 successive years to 123 million pounds in 1967/68. Its production declined drastically to 69 million pounds in 1968/69. The decline was attributable to Taiwan's placing a restriction on its exports to the United States (pursuant to a 1-year negotiated marketing agreement between the two countries), a very mild winter, and reduced interest on the part of Taiwanese growers. Thereafter, Taiwan's production of fresh mushrooms again increased in 3 consecutive years, amounting to 183 million pounds in 1971/72. This peak was followed by sharp declines. In 1973/74, production was 131 million pounds and in 1974/75, 92 million pounds (half the amount produced in 1971/72). The recent downtrend is attributable, in part, to the migration of farm workers to factory employment in urban areas. In 1974/75 unusually warm winter weather contributed to reduced production and a reduction in the area harvested; indeed, the area harvested in that year, 66 million square feet (based on a preliminary report), was the smallest in more than 10 years. In 1974/75 the yield was 1.4 pounds per square foot, compared with 0.9 pound in 1964/65, 1.0 pound in 1969/70, and 1.6 pounds per square foot in 1971/72.

The growers are organized in cooperatives, the Farmers' Associations. The canners are organized in the Taiwan Canners Association and the Taiwan Mushroom Packers United Export Corporation (TMPUEC). The Official Agricultural Production and Planning Committee establishes production and export goals in terms of standard cases of canned mushrooms, and the production targets are divided among the various canners. Contracts between U.S. importers and Taiwanese packers are made through agents

of TMPUEC. Prices are set in December, when the U.S. importers are assigned allocations, which can be sold or traded.

Taiwan's production of canned mushrooms amounted to 65 million pounds (fresh-weight basis) in 1964/65, 100 million in 1966/67, 84 million in 1968/69, 159 million in 1971/72, 126 million in 1973/74, and 88 million in 1974/75. In each of the years 1973/74 and 1974/75, actual production of canned mushrooms was far short of the production target.

Recent export data for Taiwan are on a calendar-year basis. In 1973, actual exports amounted to almost 140 million pounds (fresh-weight basis). They amounted to 105 million pounds in 1974, compared with the target of 143 million for that year. For 1975, the preliminary figure is 124.9 million, compared with an export target of 127.4 million pounds.

For the calendar years 1975 and 1976, the statistical breakdown of Taiwan's production and export targets are as follows (in millions of pounds):

Allocation of target	1975	1976
United States	62.0	62.9
West Germany	29.3	21.0
Canada	14.7	12.6
Australia	5.0	4.2
Switzerland	5.4	3.8
Other countries	10.9	9.6
Total export target	127.4	114.0
Allocation to reserve stocks	40.2	11.7
Total production target	167.6	125.7

South Korea.--In Korea, the production of canned mushrooms was initiated in the early 1960's. In order to stimulate the development of agriculture, the Korean Government founded a corporation, the Agricultural and Fishery Development Corporation (AFDC).

Through a subsidiary, Korean Mushroom, AFDC established a program to in crease production through improved cultivation methods, control of pests and disease, and the growth of a new high-yield strain of mushroom. The production of fresh mushrooms and canned mushrooms has been highly responsive to this program.

The area devoted to mushroom production increased from 1.2 million square feet in 1965 to 10.7 million in 1967, declined for 2 years and then rose to 13.1 million in 1971 and to 24.3 million in 1974. However, the area declined to 22.5 million square feet in 1975.

In 1965-74, production of fresh mushrooms increased in every year. It amounted to 0.2 million pounds in 1965, 3.8 million in 1967, 22.4 million in 1971, 59.8 million in 1973, and 62.2 million in 1974, but declined to 55.3 million pounds in 1975.

Yields also have increased considerably. The yield was 0.2 pound per square foot in 1965, 0.4 pound in 1967, 1.5 pounds in 1969, 1.7 pounds in 1971, and almost 2.6 pounds in 1974. Counsel for the Korean mushroom industry indicates that the yield is expected to increase further in 1975 (to 2.64 pounds per square foot). 1/

The French variety of white mushrooms accounts for practically all commercial production. In contrast with Taiwan, which produces only one crop per year, Korea produces two crops, one in the spring and the other in the fall.

The most important exporter of canned mushrooms from Korea is the National Agricultural Cooperative Federation. The second most important is the Agriculture and Fishery Development Corporation. In addition,

1/ Prepared statement of Jonathan Russin for the Commission's Hearing, p. 3.

there are several independent companies that export canned mushrooms from Korea.

About 80 percent of the output of fresh mushrooms is canned and roughly 90 percent of the output of canned mushrooms is exported. Exports of canned mushrooms rose from 35,400 pounds (fresh-weight basis) in 1965 to 2.0 million pounds in 1967, declined to 1.3 million in 1968, and then increased in successive years to 61.9 million in 1973. They declined to 59.9 million pounds in 1974. The U.S. Department of Agriculture has received an estimate of 1.47 million standard cases (61.6 million pounds) for Korea's 1975 exports. Country-of-destination data available for January-October 1975 indicate that exports to the United States accounted for 46 percent of the total quantity, exports to Canada, for 22 percent, exports to West Germany, for 15 percent, and exports to other countries, for 17 percent. Full-year data for 1973 and 1974 indicate that exports from Korea to principal destinations were as follows (in millions of pounds):

Country	1973	1974
United States	26.8	18.6
West Germany	22.1	9.9
Netherlands	4.8	6.6
Canada	4.1	17.6
Other countries	4.1	7.2
Total	61.9	59.9

In September 1974 the Korean Canned Mushroom Exporters Association sent two officials to Brussels to study the mushroom market in the European Community and to urge the removal of the import licensing system that restricts imports of mushrooms into the Community. Primarily to enable mushroom producers within the EC--notably, the French and Netherlands producers--to enjoy a larger share of the West German market,

the EC has imposed successively lower import quotas on canned mushrooms. 1/ Also in September 1974 the Government of the Republic of Korea sent two officials to Ottawa "to protest a Canadian move to restrict canned mushroom imports." 2/ This protest was unsuccessful.

In each of the years 1973, 1974, and 1975, the Korean Government or a joint Government-industry team promoted the sale of canned mushrooms in European countries.

With Government approval, the Korea Canned Food Exporters Association sets the minimum prices of exported canned mushrooms. This control is referred to as a system of "check prices." In 1974 the Korean "check prices" were higher than the Taiwanese exporters' prices, and the disparity worked to the disadvantage of the Korean exporters.

1/ The European Community restricted imports of preserved mushrooms into the Community effective August 26, 1974 (Regulation No. 2107/74) and further restricted preserved mushroom imports effective July 28, 1975 (Regulation No. 1918/75). The most recent restriction involved a minimum import price/license program which reduced future imports from third countries to 25 percent of the quantity of preserved mushrooms imported by the applicant in the corresponding calendar quarter of 1973.

2/ United States Agricultural Attache's Annual Canned Vegetable (Mushroom) Report: Korea, June 30, 1975.

The Question of Serious Injury or Threat Thereof to the Domestic Industry

U.S. production

Fresh mushrooms.--U.S. annual production of fresh mushrooms (for all uses) increased from 207 million pounds in 1970/71 to 299 million pounds in 1974/75 (table 22). Fresh mushrooms are sold not only in the fresh market but also to canners and other outlets, including soup processors. Sales by type and percent of total sales in recent years are shown in table 22.

Table 22.--Mushrooms: U.S. producers' sales, by type and percent of total, marketing years 1966/67 to 1974/75

(Quantities, fresh-weight basis)

Marketing year (July 1-June 30)	Sales to fresh market		Sales to processors 1/		Total production
	Quantity	Percent	Quantity	Percent	
	Million pounds		Million pounds		Million pounds
1966/67	42	25	123	75	165
1967/68	48	26	133	74	181
1968/69	56	30	133	70	189
1969/70	62	32	132	68	194
1970/71	58	28	149	72	207
1971/72	66	29	165	71	231
1972/73	77	30	177	70	254
1973/74	102	37	177	63	279
1974/75	126	42	173	58	299

1/ Includes sales to all processors (canners, soup manufacturers, driers, etc.).

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

Table 22 reveals that during the period 1970/71 to 1974/75 mushroom sales to the fresh market increased by 117 percent, while mushroom sales to processors increased by 19 percent from 1970/71 to 1973/74 and then declined by 2 percent in 1974/75. The share of reported annual

production of fresh mushrooms shipped to processors (including canners, soup processors, driers, and so forth) declined from 72 percent of the total in 1970/71 to 58 percent in 1974/75 (table 22). In the same period the share sold to the fresh market increased from 28 to 42 percent of the annual output.

Canned mushrooms.--U.S. production of canned mushrooms increased from 93 million to 137 million pounds (fresh-weight basis) from 1968/69 to 1971/72, and then decreased irregularly to 112 million pounds in 1974/75, as shown in table 19 on page A-36.

U.S. sales of domestically canned mushrooms (partly estimated) followed an irregular trend from 115 million pounds (fresh-weight basis) in 1970/71 to 116 million pounds in 1974/75. 1/ In the preceding 5-year period of 1965/66 to 1969/70, sales of domestic canned mushrooms increased without interruption from 72 million pounds to 100 million pounds at an average annual rate of increase of 6.8 percent.

1/ On April 5, 1973, following disclosure of the third instance in 1973 of the bacterium Clostridium botulinum in domestically processed mushrooms, the U.S. Food and Drug Administration announced plans to investigate the domestic mushroom-processing industry. As a result of this investigation, Clostridium botulinum spores and/or toxin were found to be present in the canned mushroom product of the firms listed in appendix.

Table 20, page A-38, shows sales data on a fresh-weight basis for the period 1964/65 to 1974/75 and table 21, p. A-39, shows the same information on a processed-product-weight basis.

During the period 1972/73 through 1974/75 about 57 percent of the domestic canners' sales were of mushrooms packed in retail-size containers; the remainder were packed in institutional-size containers. About 90 percent of the domestic product was packed in a brine solution; the remainder consisted largely of specialty packs. In 1974/75, 84 percent of the U.S.-produced mushrooms packed in brine consisted of the stems and pieces, 11 percent were sliced mushrooms, and 5 percent were whole or button mushrooms.

Frozen and dried mushrooms.--Sales of U.S.-produced frozen and freeze-dried mushrooms are small in relation to total sales of fresh and canned mushrooms. During the marketing years 1972/73 through 1974/75, sales of domestically produced frozen mushrooms ranged from 1 million to 2 million pounds annually. There are no data available on domestic production of dried mushrooms, but it is believed that production of dried mushrooms has been about 1 million pounds (fresh-weight basis) annually.

U.S. inventories

Inventories of domestically canned mushrooms held by the canners increased from 14.6 million pounds (fresh-weight basis) on June 30, 1971, to 31.0 million pounds on June 30, 1973 (table 23). Thereafter inventories declined, and on June 30, 1975, reached 25.4 million pounds.

The ratio of yearend inventories to sales declined from 27 percent for the 1972/73 marketing year to 22 percent for the 1974/75 marketing year, compared with an average yearend inventory-to-sales ratio of 17 percent for the marketing years 1968/69 to 1971/72.

On June 30, 1975, 68 percent of the inventory on hand consisted of mushrooms in brine or butter in retail-size containers, 29 percent, of mushrooms in brine or butter in institutional-size containers, and 3 percent, of other canned mushrooms.

Table 23.--Mushrooms, canned: U.S. canners' inventories of the domestically produced product on June 30 of 1971-75

(In millions of pounds, fresh-weight basis)

Item	Inventory, June 30--				
	1971	1972	1973	1974	1975
Mushrooms canned in brine or butter, in--					
Retail-size containers	8.9	14.2	22.4	20.2	17.4
Institutional-size containers	4.3	8.2	7.5	7.8	7.3
Subtotal	13.2	22.4	29.9	28.0	24.7
Other canned mushrooms	1.4	2.6	1.1	1.0	.7
Total	14.6	25.0	31.0	29.0	25.4

Source: Compiled from data submitted to the U.S. International Trade Commission by domestic canners, except as noted.

Note.--Inventory information for the marketing years 1970/71 and 1971/72 was submitted by 28 canners that accounted for 89 percent of sales of canned mushrooms in 1971/72. Inventory information for the marketing years 1972/73, 1973/74, and 1974/75 was received from 25 canners and estimated for 4 additional canners from information available to the Commission from its previous mushroom investigation and other sources. It is believed that these 29 canners accounted for nearly 100 percent of sales of domestically produced canned mushrooms in 1974/75.

U.S. exports

Canned mushrooms.--Although data on U.S. exports are not separately reported, Canada is believed to be the only important export market for U.S. canned mushrooms. Canadian import statistics show that annual imports of canned mushrooms into Canada from the United States during the calendar years 1964-70 1/ ranged from 46,000 pounds in 1964 to 334,000 pounds in 1969 and averaged 159,000 pounds (fresh-weight basis) a year. During the marketing years (July 1-June 30) 1970/71 through 1974/75, Canadian imports of U.S. canned mushrooms ranged from 125,000 pounds in 1970/71 to 561,000 pounds in 1973/74, and averaged 274,000 pounds (fresh-weight basis) a year. In recent years, less than 1 percent of Canadian imports of canned mushrooms have come from the United States; about nine-tenths of the Canadian imports have come from Taiwan, South Korea, and the People's Republic of China.

Fresh, frozen, and dried mushrooms.--Canada is also believed to be the only important export market for U.S. fresh mushrooms. Canadian import statistics show that annual imports of fresh mushrooms from the United States during the calendar years 1964-70 ranged from 833,000 pounds in 1965 to 2,527,000 pounds in 1967 and averaged 1,809,000 pounds (fresh-weight basis) a year. On an marketing year basis for 1970/71 to 1974/75, Canadian imports of fresh mushrooms ranged from 616,000 pounds in 1972/73 to 6,478,000 pounds in 1973/74 and averaged 2,983,000 pounds a year. Data on U.S. exports of frozen and freeze-dried mushrooms are not available; however, these exports are believed to be negligible in relation to exports of canned and fresh mushrooms.

1/ Marketing year data were not available for years prior to 1970/71.

U.S. employment

Growers.--The response of growers in the survey of the current investigation was unsatisfactory as to data on employment. If one assumes that there was little change in annual output per man-hour, then indexes of U.S. production of fresh mushrooms are a good indicator of changes in man-hours of employment in growing operations. Using the marketing year 1968/69 as a base, the index increased in all following years, from 100 in the base year to 122 in 1971/72, and to 158 in 1974/75.

Canners.--During 1968/69 to 1972/73, the number of production and related workers engaged in canning operations increased in each consecutive year, from 1,548 to 1,780. Thereafter, such employment declined to 1,632 in 1973/74 and declined further to 1,360 in 1974/75.

During 1968/69 through 1972/73, man-hours worked by production and related workers engaged in canning mushrooms increased from an estimated 1.4 million to 1.8 million, declining thereafter to 1.6 million in 1973/74 and to 1.5 million in 1974/75.

Financial experience of U.S. producers

Mushroom canners.--Financial data were received from 25 firms for the years 1973-74 and 13 firms for 1975. These firms account for an amount in excess of 80 percent of total mushroom canners' sales for 1973 and 1974. Completed financial data are available for about 35 percent of the canners for 1975. 1/

Net sales of canned mushrooms of the 25 firms decreased slightly from $69.7 million in 1973 to $69.2 million in 1974; 13 firms reported $27.3 million in net sales for 1975 (table 24).

The reporting firms stated that they had net operating losses of $5.6 million in 1973, $4.1 million in 1974, and $692,000 in 1975.

The ratio of net operating loss to net sales was 8.1 percent in 1973, 6.0 percent in 1974, and 2.5 percent in 1975.

Of the 25 reporting firms, 17 reported losses for 1973 and 16 reported losses for 1974. For 1975, 7 of the 13 firms reported losses.

The earlier investigation conducted by this Commission, which covered the years 1968-72, revealed that the mushroom-canning industry realized net operating profits which ranged from 0.6 percent to 3.1 percent in that period.

Table 25 shows the financial experience of those 25 canners and 72 growers included in the current mushroom report for the years 1968-75.

1/ A substantial proportion of the canners reported to the U.S. International Trade Commission that their 1975 financial data will not be available until after the completion of this investigation.

Table 26 shows the financial experience of those firms in whose canned mushroom product the spores and/or toxin of the bacterium Clostridium botulinum were found to be present during the U.S. Food and Drug Administration's Investigation of the mushroom canning industry in 1973-74.

Table 24.--Profit-and-loss experience of U.S. producers of canned mushrooms on their mushroom canning operations, 1973-75

Item	1973	1974	1975
Sales----------1,000 dollars--	69,747	69,162	27,326
Cost of goods sold----------do----	64,513	63,439	25,367
Gross profit----------do----	5,234	5,723	1,959
Selling and administrative expenses----------1,000 dollars--	10,883	9,858	2,651
Net operating (loss)----------do----	(5,649)	(4,135)	(692)
Other expenses----------do----	(1,263)	(1,739)	(431)
Net (loss) before income taxes----------1,000 dollars--	(6,912)	(5,874)	(1,123)
Ratio of net operating (loss) to net sales----------percent--	(8.1)	(6.0)	(2.5)
Ratio of net (loss) before income taxes to net sales-------percent--	(9.9)	(8.5)	(4.1)
Number of firms reporting----------	25	25	13
Number of firms reporting net operating losses----------	17	16	7

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic producers.

Table 25.--Financial experience of those 25 canners and 72 growers included in the current mushroom report for the years 1968-75

Item	1968	1969	1970	1971	1972	1973	1974	1975
Canners								
Number of firms	21	21	22	22	22	25	25	13
Net sales--1,000 dollars	49,381	53,408	58,528	72,254	72,977	69,747	69,162	27,327
Net operating profit or (loss)--1,000 dollars	2,257	2,733	2,773	3,876	1,603	(5,649)	(4,135)	(692)
Ratio of net operating profit or (loss) to net sales--percent	4.6	5.1	4.7	5.4	2.2	(8.1)	(6.0)	(2.5)
Growers								
Number of firms	57	66	68	69	67	71	72	43
Net sales--1,000 dollars	17,904	22,304	27,273	32,603	39,913	33,977	40,429	42,442
Net profit--do	2,288	3,144	5,009	5,949	9,428	980	407	1,681
Ratio of net operating profit to net sales--percent	12.8	14.1	18.4	18.2	23.6	2.9	1.0	4.0

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic mushroom canners and growers.

Table 26.--

* * * * * * * *

Mushroom growers. 1/--Mushroom growers' sales increased from $68.4 million in 1973 to $76.8 million in 1974, and $89.5 million in 1975.

Net profit from the mushroom farms was $4.4 million in 1973, $1.9 million in 1974, and $3.4 million in 1975.

The ratio of net profit to net sales was 6.4 percent in 1973, 2.4 percent in 1974, and 3.8 percent in 1975.

The ratio of net profit to net sales in the earlier investigation ranged from 14.2 percent to 20.6 percent in the years 1968-72.

Data available to the Commission for mushroom farms which are unincorporated do not include in the expenses of each farm an amount for the labor of the owner and the owner's family. Most of the mushroom farms are unincorporated. Normally, an unincorporated farm is fairly close to the owner's residence, enabling members of the family to participate in picking, watering, and other required labors in growing mushrooms. The extent to which the profits shown would be reduced if an appropriate amount for the labor of the owners and their families were included in the expenses of mushroom growing cannot be estimated.

1/ Since it was not feasible to canvass all mushroom growers in the United States, questionnaires were sent to a sample group similar to that used in the previous mushroom investigation.

Table 27.--Profit-and-loss experience of U.S. mushroom growers 1/ on their mushroom operations, 1973-75

Item	1973	1974	1975
Net sales----------1,000 dollars--	68,397	76,840	89,496
Materials----------do----	15,745	18,087	17,345
Labor----------do----	23,357	28,520	34,594
Other expenses----------do----	24,925	28,382	34,141
Total expenses----------do----	64,027	74,989	86,080
Net profit----------do----	4,370	1,851	3,416
Ratio of net profit to net sales percent--	6.4	2.4	3.8

1/ Questionnaires were sent to a sample group similar to that used in the previous mushroom investigation. The figures above were arrived at by inflating the data obtained from the sample group to the universe of all U.S. mushroom growers.

Source: Compiled from data submitted to the U.S. International Trade Commission by the domestic producers.

U.S. producers' efforts to compete with imports

The domestic mushroom industry's efforts to improve its competitive position in relation to imports have taken several forms. The industry has relied heavily upon The Pennsylvania State University (Penn State) to develop and test more efficient mushroom growing, processing, and marketing techniques. Officials at Penn State have indicated that domestic growers and canners have helped finance many of these research projects, and domestic growers and canners have indicated that whenever it was economically possible they have incorporated these improvements into their operations.

Research in the last decade on various aspects of mushroom production has resulted in a mechanical spawn mixing machine for the bed system of growing mushrooms and a unitized ventilation machine. 1/ Work is continuing on a mechanical harvester. The general trend in mushroom engineering has been toward the development of mechanical equipment to reduce labor costs and to provide better environmental control. Yields per square foot have steadily increased over the last 5 years, as indicated in table 1 on page A-8. The Penn State Horticulture Department has recently (1975) developed a means of improving quality and reducing mushroom shrinkage during canning. The implementation of the processes and systems associated with this technique is designed to save labor and reduce product loss.

Mushroom growers and canners have recognized the need to cooperate for their common interest in obtaining supplies, obtaining better

1/ Mushroom growers use the term "spawn" for the vegetative culture of mushroom mycelium ("hair-like roots") and substrate (material on which the mycelium grows). Spawn is used to seed the mushroom beds.

prices, promoting mushroom sales, and encouraging research and educational programs. The American Mushroom Institiute (AMI) has served to unite the growers in a program of cooperative advertising and self improvement through education. The Mushroom Canners Committee of the Pennsylvania Food Processors Association is a national trade organization of companies that are reported to process about 90 percent of the mushrooms canned in the United States. Both the AMI and the Mushroom Canners Committee have helped foster research and educational programs at Penn State, the U.S. Department of Agriculture, and other institutions. They have worked closely with food editors in developing new mushroom recipes, conducted educational programs to encourage wider use of mushrooms, and have provided other useful information for their members and consumers.

Public testimony has revealed that some domestic canners have tried to become more competitive by increasing the production of the stems-and-pieces style of pack, while decreasing production of the whole, buttons, and sliced styles of pack and therefore becoming more labor efficient. 1/ Data collected by the Commission revealed that during 1968/69 to 1971/72 about 76 percent of the mushrooms packed in brine consisted of the stems-and-pieces style of pack, while about 24 percent were of the whole, buttons, or sliced styles of pack. During the 1974/75 marketing year, 84 percent of the mushrooms packed in brine consisted of the stems-and-pieces style of pack, while 16 percent were of the whole, buttons, or sliced styles of pack.

1/ Transcript of the hearing. p.28.

The Question of Imports as a Substantial Cause of Serious Injury

U.S. consumption

Apparent U.S. consumption of mushrooms (including fresh and processed) has been expanding for many years. 1/ During marketing years 1965/66 to 1974/75, annual consumption increased steadily from 184 million pounds (fresh-weight basis) to 383 million pounds (table 7 on p. A-22). The average annual rate of increase during the 10-year period was 7.6 percent. Annual per capita consumption also increased during the period, from 0.94 pound to 1.80 pounds. Several factors contributed to the increase, namely (1) increased availability of mushrooms in many areas of the United States, resulting from aggressive marketing techniqes and improved transportation; (2) an increase in per capita disposable income; and (3) an extension of the marketing season for fresh mushrooms, resulting from increased use of air-conditioning in growing operations.

During marketing years 1968/69 to 1972/73, about three-fourths of the domestic and imported mushrooms consumed (fresh-weight basis) in the United States were processed (primarily canned), and about one-fourth were in the fresh form. In the marketing year 1973/74, processed mushrooms accounted for about 73 percent of the total U.S. consumption of

1/ Data on apparent U.S. consumption of mushrooms (including fresh and processed) is compiled on the basis of U.S. output of fresh mushrooms plus imports of processed mushrooms (on a fresh-weight basis) minus Canadian mushroom imports. U.S. exports of mushrooms to all other countries are negligible.

mushrooms, and in 1974/75, the percentage decreased further to 68 percent, as indicated in table 28. Trade sources cite the canned mushroom botulism scare of 1973/74 as a factor contributing to the recent decreasing share of total mushroom consumption taken by processed mushrooms.

Table 28.--Mushrooms: U.S. consumption of domestic and imported processed and fresh product, marketing years 1970/71 to 1974/75

(In millions of pounds, fresh-weight basis)

Marketing year (July 1-June 30)	Processed 1/	Fresh	Total 2/
1970/71	201	57	258
1971/72	236	66	302
1972/73	263	76	339
1973/74	259	95	354
1974/75	262	121	383

1/ Includes mushrooms canned, dried, frozen, freeze-dried, or used in soup.

2/ Production plus imports minus Canadian imports of U.S.-produced mushrooms (fresh-weight basis).

Source: Compiled by the U.S. International Trade Commission from official statistics of the U.S. Departments of Commerce and Agriculture, and the Canadian Government.

Canned mushrooms.--Annual U.S. consumption of canned mushrooms increased irregularly from 84 million pounds (fresh-weight basis) in 1964/65 to 193 million pounds in 1974/75, as shown in table 20 on page A-38. 1/ The average annual rate of increase from 1964/65 to 1974/75 was 7.9 percent. During 1970/71 to 1974/75, per capita consumption (fresh-weight basis) is estimated to have increased from 0.77 pound to 0.91 pound.

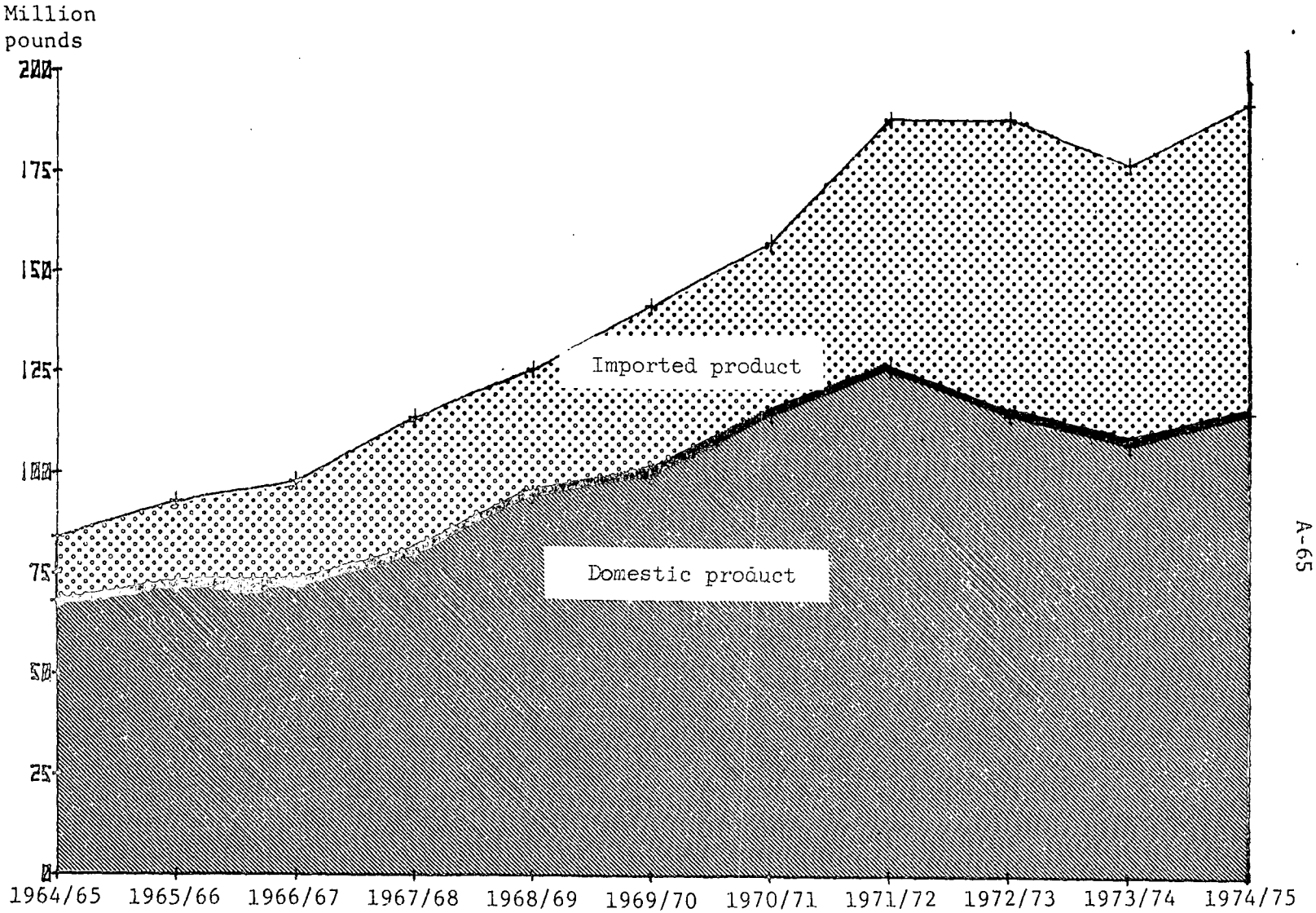
U.S. imports of canned mushrooms increased about 79 percent from 1970/71 to 1974/75. U.S. consumption of the domestic product, with the exception of 1971/72, remained about the same over the period, averaging 116 million pounds. Consumption of canned mushrooms was 35 million pounds higher in 1974/75 than it was in 1970/71, and imports contributed about 34 million pounds of that increase (table 20; fig. 1).

Possible reasons for the small increase in domestically canned mushroom consumption after the 1971/72 marketing year are (1) changing consumer preferences in regard to canned mushrooms as opposed to fresh mushrooms, (2) FDA's investigation and discovery of botulism spores and/or toxin in canned mushroom products in 1973, and (3) displacement by increased imports.

Fresh, frozen, and dried mushrooms.--U.S. consumption of mushrooms in the fresh form increased without interruption during 1970/71 to

1/ Table 20 shows consumption on a fresh-weight basis, and table 21, p. A-39, shows the same information on a processed-product-weight basis.

Figure 1.--Mushrooms, canned: Apparent U.S. consumption, marketing years 1964/65 to 1974/75.



Source: Based on data in table 20.

1974/75 at an average annual rate of 16.3 percent, from 57 million pounds to 122 million pounds (table 29). During the same period, per capita consumption increased from 0.27 pound to 0.57 pound. During the marketing years 1966/67 to 1969/70, annual U.S. consumption of fresh mushrooms averaged about 52 million pounds and increased at an annual rate of 10.3 percent. Table 29 shows production, exports, imports, and apparent consumption of fresh mushrooms in recent years.

Table 29.--Mushrooms, fresh: U.S. production for fresh market sales, exports, imports, and apparent consumption, marketing years 1966/67 to 1974/75

(In thousands of pounds)

Marketing year (July 1-June 30)	Production 1/	Exports 2/	Imports 3/	Apparent consumption 4/
1966/67	41,951	5/	3	41,954
1967/68	47,611	5/	3	47,614
1968/69	56,024	5/	4	56,028
1969/70	62,115	5/	145	62,260
1970/71	58,269	1,399	316	57,186
1971/72	66,323	626	354	66,051
1972/73	76,728	616	80	76,192
1973/74	102,293	6,478	231	96,046
1974/75	126,118	4,430	-	121,688

1/ Sold through fresh market outlets.

2/ Compiled from official Canadian import statistics. U.S. exports of mushrooms to other countries are negligible.

3/ In mid-1974, the Court of Customs Appeals found that imported frozen whole mushrooms were mushrooms otherwise prepared or preserved and not dutiable as fresh mushrooms, as they had been previously.

4/ Production plus imports minus exports.

5/ Marketing year data are not available.

Source: Production data compiled from official statistics of the U.S. Department of Agriculture; imports compiled from official statistics of the U.S. Department of Commerce; exports compiled as noted.

Note.--The ratios of imports to apparent consumption and of imports to production are negligible (less than 1 percent).

Frozen mushrooms have gained in popularity in recent years, but U.S. consumption of frozen mushrooms has been growing much more slowly than that of canned and fresh mushrooms, largely because the product tends to be significantly higher priced and requires refrigeration after purchase. U.S. consumption of frozen mushrooms is believed to have ranged from 2 million to 3 million pounds annually in recent years.

Annual U.S. consumption of dried mushrooms ranged from 11 million pounds (fresh-weight basis) to 13 million pounds during 1970/71 to 1974/75; consumption increased only about 10 percent during the last decade. Most of the dried product was supplied from foreign sources (table 17, p. A-34). Official annual domestic production data are not available on dried mushrooms, but trade sources indicate that such production has averaged about 1 million pounds (fresh-weight basis) in the last few years.

Factors affecting consumption.--Many factors have contributed to the increased consumption of mushrooms, namely (1) increased availability of fresh mushrooms in many areas of the United States, resulting from the location of new growing facilities closer to nontraditional markets and promotional work by the American Mushroom Institute, the Mushroom Canners Committee, and others, (2) an increase in per capita disposable income, (3) an increase in the U.S. population, and (4) the growing popularity of mushrooms among weight-conscious consumers.

The FDA reports that in early 1973, botulinal toxin was found in canned mushrooms from two domestic processors. Inspections were therefore made of all mushroom canning plants in the United States during the period February 1973 to March 1974; results revealed that half had

operating or equipment problems that created a potentially hazardous situation. As a result, all warehouse stocks of mushrooms were surveyed, including those from processors in 20 foreign countries. Of the 25,491 lots (or about 75 million cans) surveyed, abnormal cans were found in 2,024 lots. Clostridium botulinum or botulinal toxin or both were found in 41 cans of mushrooms: 36 contained type B, and 5 contained both types A and B. C. tetain and its toxin were found in 1 can. Many cans of mushrooms showed microbiological evidence of underprocessing. The mushrooms were canned by ten firms, eight of them domestic and two of them foreign. 1/ The canneries were in four States--Pennsylvania, Ohio, New York, and Massachusetts--and two foreign countries, Ecuador and France.

It is generally acknowledged in the mushroom industry that the botulism scare of 1973/74 affected consumer confidence in canned mushroom products. U.S. Department of Agriculture statistics reveal that the volume of fresh mushroom sales to domestic processors peaked in 1972/73, remained about the same during 1973/74, and then declined about 2 percent during 1974/75. Data collected by the Commission reveals that the volume of U.S. sales of domestically canned mushrooms peaked at 127 million pounds (fresh-weight basis) in 1971/72, declined for the next 2 years, reaching a low of 108 million pounds in 1973/74, and then increased to 116 million pounds in 1974/75. U.S. imports of canned mushrooms reached 74 million pounds (fresh-weight basis) in 1972/73, decreased to 70 million pounds in 1973/74, and then increased to 77 million pounds in 1974/75 (table 20 , p. A-38).

1/ See app.

Recently the Mushroom Processors Association of Kennett Square, Pa., developed a process-certified program designed to make certain that past problems (such as the botulism scare of 1973/74) do not recur and to give consumers this positive assurance in the form of a seal of quality. The processors licensed to display this seal on their containers have been thoroughly inspected and found to meet and operate continuously under the manufacturing requirements of the Food and Drug Administration and supplemental requirements of the Mushroom Processors Association. The program includes frequent, unannounced inspections of plants to insure adherence to the processing standards. In January 1976, five canners had been certified to use the seal.

Prices received by U.S. producers

The prices of mushrooms, whether fresh or canned, are greatly influenced by their grade. The U.S. Department of Agriculture has a classification system that embraces three grades, No. 1, No. 2, and No. 3 (also known as "utility" or "culls"). 1/ The No. 1 grade has the best appearance, the mildest flavor, and the highest price. The No. 2 grade is intermediate. The No. 3 grade, the most mature of the three, is lowest in price, the least attractive in appearance, and, in the opinion of many persons, the best in taste. Consequently, the word "quality" is of questionable significance in ranking mushrooms.

In the United States, the majority of the output of the No. 1 grade goes to the fresh market. The No. 1 mushrooms for the fresh market are not the same as the No. 1's for processing. Generally, those for the fresh market have a more attractive color 2/ and are larger than those sold to processors.

The principal canned mushroom styles of pack are whole buttons or sliced buttons and stems and pieces. In the United States, the general practice is to use the No. 1 grade for canning whole buttons and sliced buttons. When this grade is processed, the firmness of the mushroom keeps the veil (where the cap joins the stem) closed, thus maintaining the attractive appearance of the mushroom. With No. 2 and No. 3 grades, the washing and heating (to 170°F. or more) cause the veil to open,

1/ In the trade, a mixture of two or more grades is referred to as "bed run."

2/ Although No. 1's for the fresh markets on the west coast are mostly brown or cream, No. 1's for the fresh markets in the East and Midwest must be white.

and the gill material to be exposed, detracting from the appearance of the product. Consequently, the No. 2 and No. 3 grades are used for cutting into stems and pieces. Some U.S. canners also use the No. 2 grade for chipped and/or diced mushrooms.

Canned mushrooms are available in retail and institutional sizes. The retail sizes are used predominantly in households; the institutional sizes, predominantly in restaurants, hotel dining rooms, and other establishments where mass feeding occurs. The principal retail size is the 4-ounce can. The principal institutional size is the 68-ounce (No. 10) can. Some domestically canned buttons, in retail-size containers, are a mixture of No. 1 and No. 2 grades that are not uniform in size. In the institutional size, the diameter of the button is marked on the case, because uniformity is required in this size of pack.

Fresh mushrooms.--The Pennsylvania Department of Agriculture publishes series of data on prices received by growers of mushrooms in the Kennett Square and Temple areas of Pennsylvania. Until late November 1974, the price-per-pound data were distinguished between "clean-cut bed run" and "pulled bed run" (roots attached). The former mushrooms are higher in price, because the roots have been cut off by the grower. The old series was based on sales to processors. The new series of data, for Kennett Square and Temple, no longer include "pulled" mushrooms, but they distinguish between "clean-cut in bulk for repacking" (sold in fresh-market transactions) and "clean-cut in bulk for processing." The latter statistics are further refined by showing separate data for No. 1, No. 2, and "utility" (spots and opens) mushrooms. The prices in both the old series and the new series considered here do not include precooling, handling,

transportation, containers, or brokerage. In addition, seasonally high summer prices are not reflected, because the bulk of the mushrooms sold to canners in the areas cited are marketed during the main production season. Consequently, the Pennsylvania Department of Agriculture does not collect off-season price data.

The seasonal average price for clean-cut bed run mushrooms ranged from 35 cents per pound in 1969/70 to 45 cents per pound in 1971/72 (table 30; fig. 2). The average price was 34 cents in 1973/74. During the same 5-year period, the seasonal average price for pulled bed run mushrooms ranged from a low of 29 cents per pound in 1973/74 to a high of 40 cents per pound in 1971/72.

On the basis of the revised system of reporting, the average price for No. 1 clean-cut mushrooms, in bulk for processing, was 42 cents per pound in late November and in December 1974, 35-37 cents in January-April 1975, and 39 cents in May and June 1975 (table 31; fig. 3). With the new season, average prices increased sharply, amounting to 47 cents in October, 51 cents in November, and 53 cents in December 1975, and 55 cents in January 1976. During February 2-6, 1976, the average price was 59 cents (69 percent higher than the price during the corresponding week in 1975). During the period covered by table 31, the difference between the average prices of No. 1 and No. 2 grades ranged from 4 cents per pound in March 1975 to 11 cents per pound in November 1975. During February 2-6, 1976, the average price of No. 2 clean-cut mushrooms, in bulk for processing, was 53 cents per pound, compared with 30 cents per pound in the corresponding week of 1975.

Table 30.--Mushrooms for processing: Prices received by growers for clean-cut and pulled bed run mushrooms in Kennett Square and Temple areas of Pennsylvania, by months, marketing years 1969/70 to 1973/74

(In cents per pound)

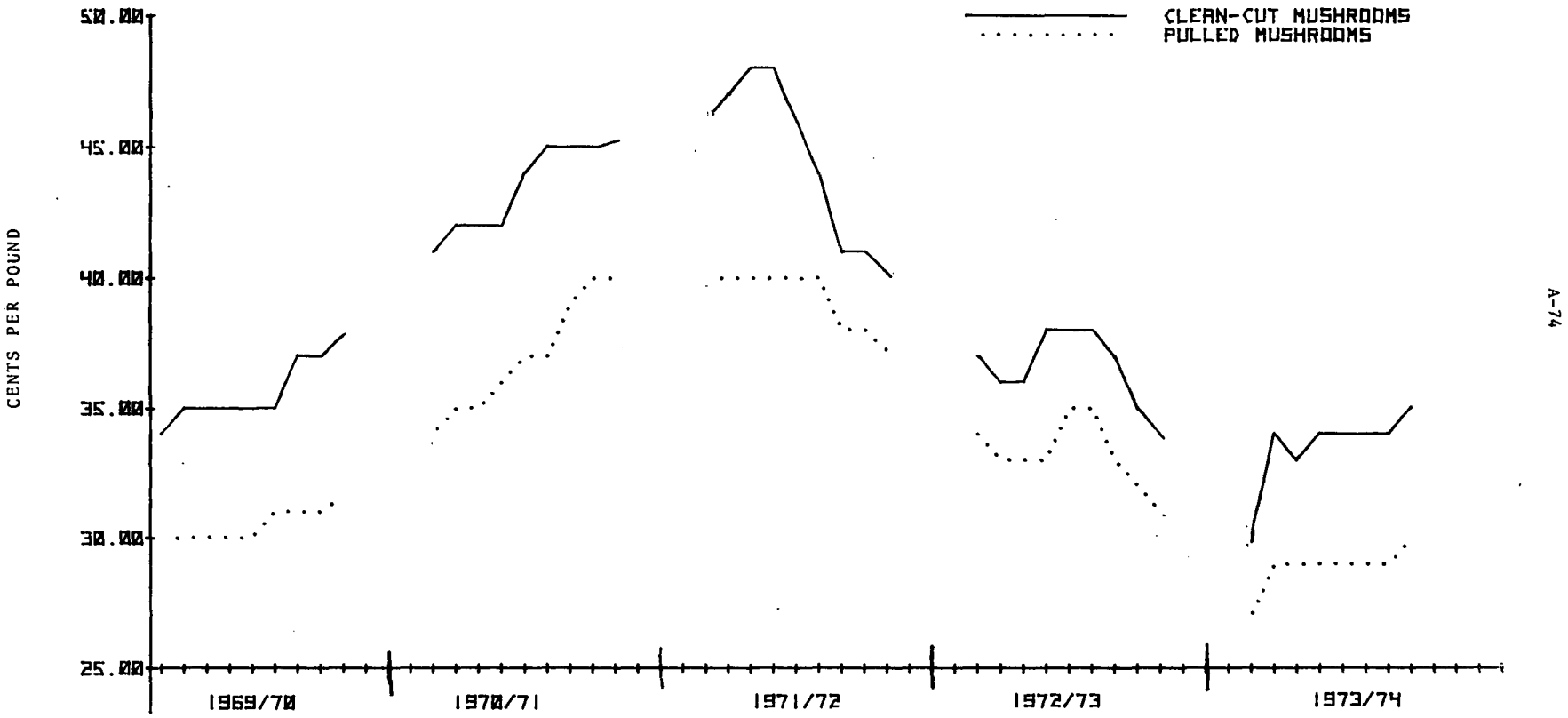
Month	1969/70		1970/71		1971/72		1972/73		1973/74	
	Clean-cut 1/	Pulled 2/	Clean-cut 1/	Pulled 2/	Clean-cut 1/	Pulled 2/	Clean-cut 1/	Pulled 2/	Clean-cut 1/	Pulled 2/
October	34	30	41	34	46	40	37	34	30	27
November	35	30	42	35	47	40	36	33	34	29
December	35	30	42	35	48	40	36	33	33	29
January	35	30	42	36	48	40	38	33	34	29
February	35	30	44	37	46	40	38	35	34	29
March	35	31	45	37	44	40	38	35	34	29
April	37	31	45	39	41	38	37	33	34	29
May	37	31	45	40	41	38	35	32	35	30
Average	35	30	43	37	45	40	37	34	34	29

1/ Clean-cut bed run, Kennett Square and Temple areas.
2/ Pulled bed run (roots attached), Kennett Square only.

Source: Pennsylvania Department of Agriculture, Mushroom Market News.

Note.--Prices do not include precooling, handling, transportation, containers, or brokerage. The Pennsylvania Department of Agriculture did not report prices for June-September of the years shown.

Figure 2.--Mushrooms for processing: Prices received by growers for clean-cut and pulled mushrooms in Kennett Square and Temple areas of Pennsylvania, marketing years 1969/70 to 1973/74.



Source: Based on data in table 30.

Table 31.--Mushrooms for processing: Prices received by growers for No. 1 clean-cut and No. 2 clean-cut (mixed) mushrooms in Kennett Square and Temple areas of Pennsylvania, by months, November 1974-June 1975 and October 1975-February 1976

(In cents per pound)

Marketing year and month	No. 1	No. 2
1974/75:		
November 1/	42	33
December	42	35
January	37	31
February	35	30
March	36	32
April	2/ 37	2/ 32
May	2/ 39	2/ 32
June	2/ 39	2/ 33
1975/76:		
October	2/ 47	2/ 39
November	2/ 51	2/ 40
December	2/ 53	2/ 46
January	2/ 55	2/ 46
February 3/	2/ 59	2/ 53

1/ November 25-29, 1974. This is the first period for which separate data on No. 1 and No. 2 mushrooms are available.

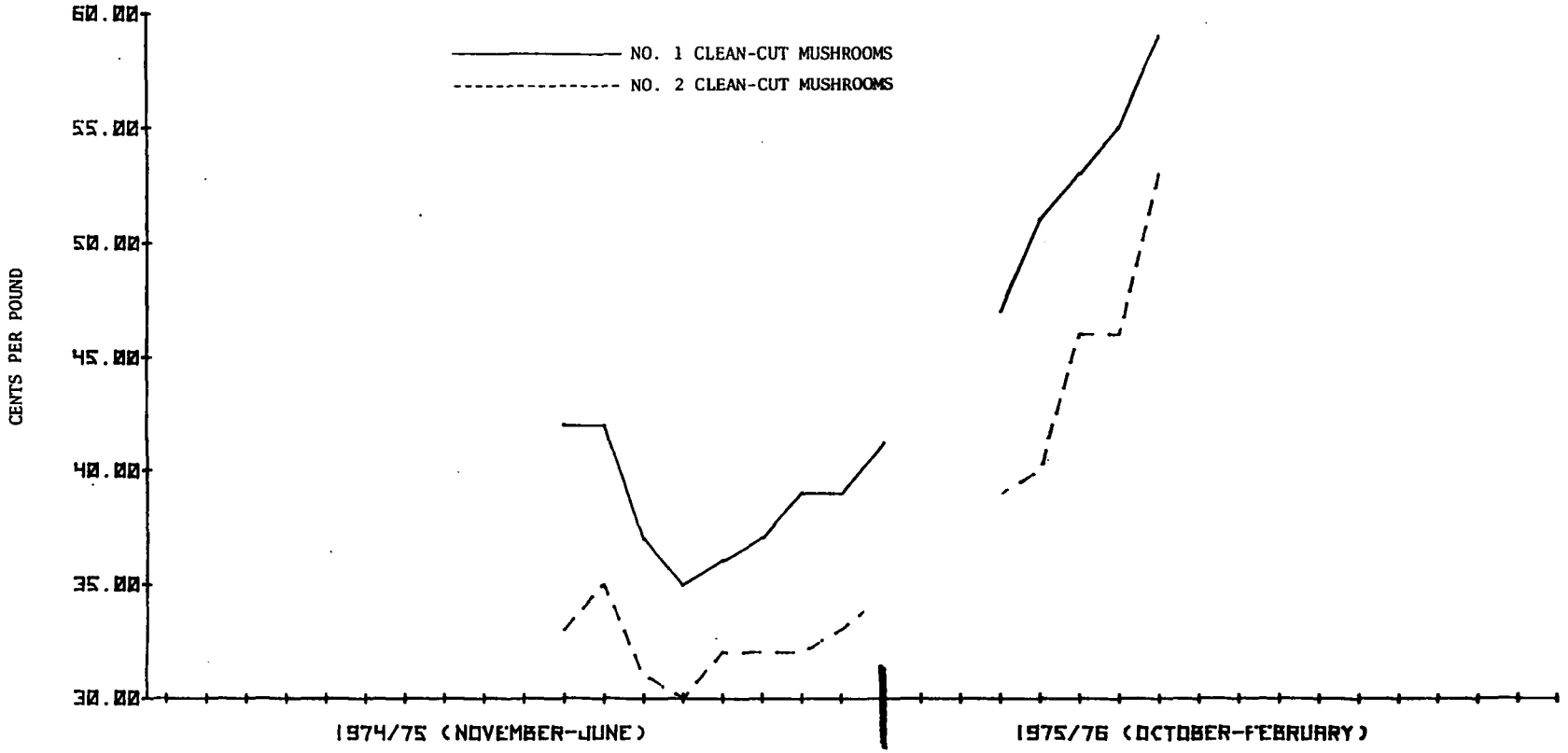
2/ Commencing with April 1975, separate data have been reported for Kennett Square and Temple. In the interest of continuity of the price series, the Commission has averaged the price data for the 2 areas.

3/ February 2-6, 1976.

Source: Pennsylvania Department of Agriculture, Mushroom Market News.

Note.--Prices do not include precooling, handling, transportation, containers, or brokerage. The Pennsylvania Department of Agriculture does not report prices for July-September; these months are off-season.

Figure 3.--Mushrooms for processing: Prices received by growers for No. 1 and No. 2 clean-cut mushrooms in Kennett Square and Temple areas of Pennsylvania, November 1974-June 1975 and October 1975-February 1976.



Source: Based on data in table 31.

Canned mushrooms.--In the Commission's 1973 investigation, prices were obtained on domestically canned mushrooms and those canned abroad from U.S. producers, importers, and canner-importers. Data were compiled on the basis of weighted averages, by principal product descriptions, by quarters in the period January 1969-March 1973. In the current investigation, weighted averages of the producers' and importers' net selling prices have been compiled by quarters in 1973-75. The product descriptions are (1) slices and/or buttons in 4-ounce cans, (2) stems and pieces in 4-ounce cans, (3) slices and/or buttons in 68-ounce (No. 10) cans, and (4) stems and pieces in 68-ounce cans.

During 1969-75, net selling prices of U.S. canners trended upward in most of the classifications for which they reported quarterly price data. During that period, the weighted average of their prices for slices and/or buttons in 4-ounce cans ranged from $6.94 per case in October-December 1969 to $8.83 per case in October-December 1975 (table 32; figs. 4 and 5). During the same period, the domestic producers' net selling prices for stems and pieces in 4-ounce cans increased irregularly, ranging from $4.67 per case in April-June 1969 to $6.77 per case in October-December 1975.

The weighted average of the domestic canners' net selling prices for slices and/or buttons in 68-ounce (No. 10) cans ranged from $17.48 (in April-June 1969) to $26.57 (in October-December 1975). The low and the high prices for stems and pieces in 68-ounce cans were $15.59 per case in January-March 1969 and $24.91 in October-December 1975. (See table 33; figs. 6 and 7.)

Table 32.--Mushrooms, canned: Average prices per case of 24/4 ounce cans of mushroom stems and pieces and slices and/or buttons, received by U.S. producers and by firms importing from China (Taiwan) and Korea, by quarters, 1969-75

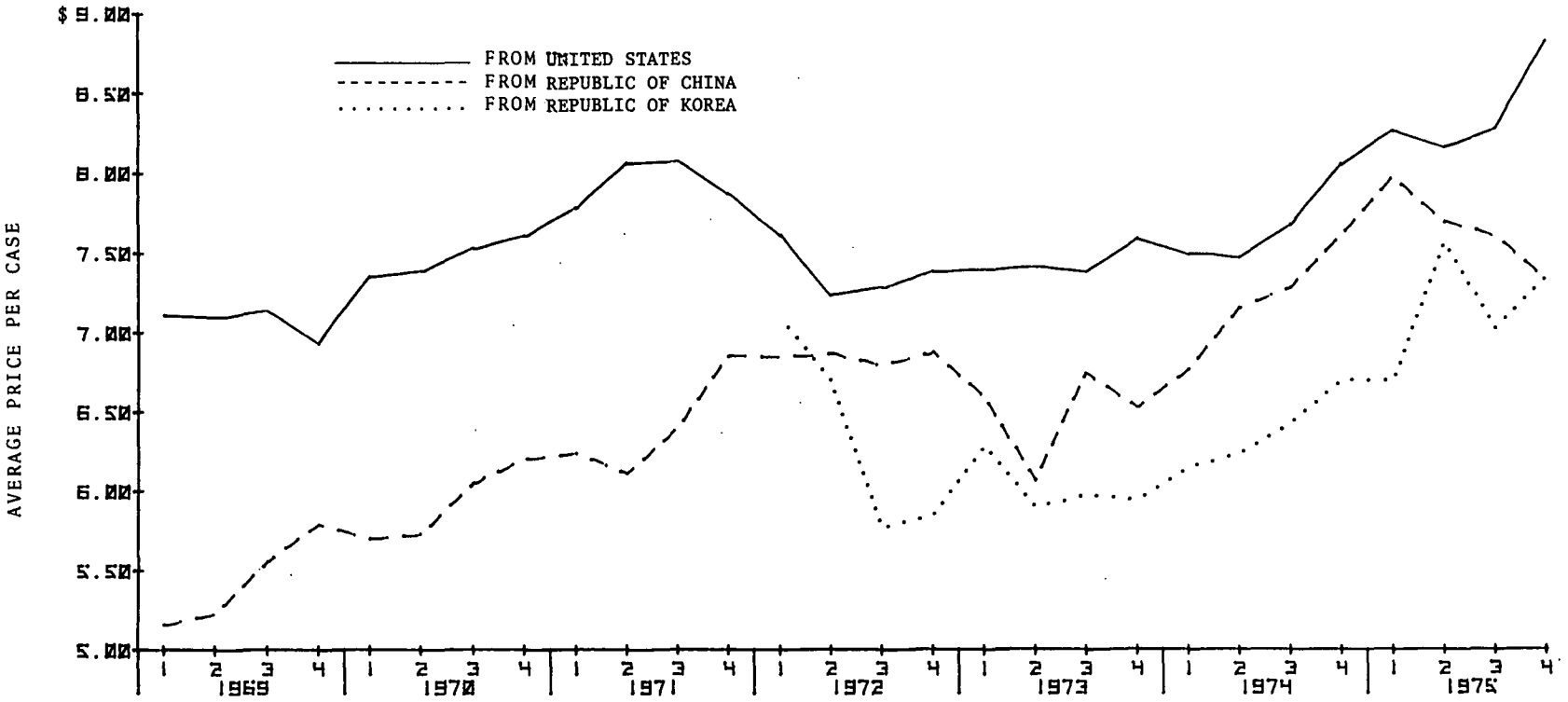
Period	Stems and pieces from--			Slices and buttons from--		
	United States	Taiwan	Korea	United States	Taiwan	Korea
1969:						
January-March	$4.79	$4.57	$4.40	$7.11	$5.16	1/
April-June	4.67	4.47	4.61	7.10	5.23	1/
July-September	4.74	4.54	4.64	7.14	5.56	1/
October-December	4.71	4.58	4.63	6.94	5.79	1/
1970:						
January-March	4.83	4.76	4.78	7.35	5.70	1/
April-June	5.08	4.77	4.88	7.39	5.73	1/
July-September	5.32	5.06	4.93	7.53	6.05	1/
October-December	5.37	5.17	4.98	7.61	6.20	1/
1971:						
January-March	5.69	5.57	5.37	7.78	6.24	1/
April-June	5.72	5.81	5.45	8.06	6.11	1/
July-September	5.84	5.78	5.55	8.08	6.40	1/
October-December	5.80	5.87	5.66	7.88	6.86	1/
1972:						
January-March	5.62	5.82	5.65	7.62	6.85	$7.10
April-June	5.36	5.83	6.00	7.24	6.87	6.70
July-September	5.32	5.76	5.70	7.29	6.80	5.77
October-December	5.07	5.46	5.70	7.39	6.88	5.85
1973:						
January-March	(2/ 4.83	2/ 5.39	2/ 5.34	2/ 7.46	2/ 6.45	2/ 6.29
	(3/ 5.42	3/ 5.45	3/ 5.13	3/ 7.35	3/ 6.76	3/ 6.28
April-June	5.45	5.36	5.09	7.42	6.07	5.90
July-September	5.21	5.30	5.07	7.39	6.75	5.98
October-December	5.36	5.23	4.61	7.59	6.53	5.95
1974:						
January-March	5.46	5.41	5.12	7.50	6.77	6.15
April-June	5.56	5.84	5.23	7.48	7.16	6.24
July-September	5.72	5.96	5.71	7.68	7.29	6.43
October-December	6.10	6.06	5.63	8.06	7.62	6.71
1975:						
January-March	6.25	6.09	5.67	8.27	7.98	6.70
April-June	6.18	6.07	5.71	8.17	7.70	7.57
July-September	6.39	6.15	5.91	8.28	7.61	7.03
October-December	6.77	6.32	6.04	8.83	7.34	7.36

1/ Not Available.
2/ Computed during investigation No. 332-72.
3/ Computed during investigation No. TA-201-10.

Source: Compiled from data submitted to the U.S. International Trade Commission (both under its present name and under its former name--U.S. Tariff Commission) by domestic canners and importers.

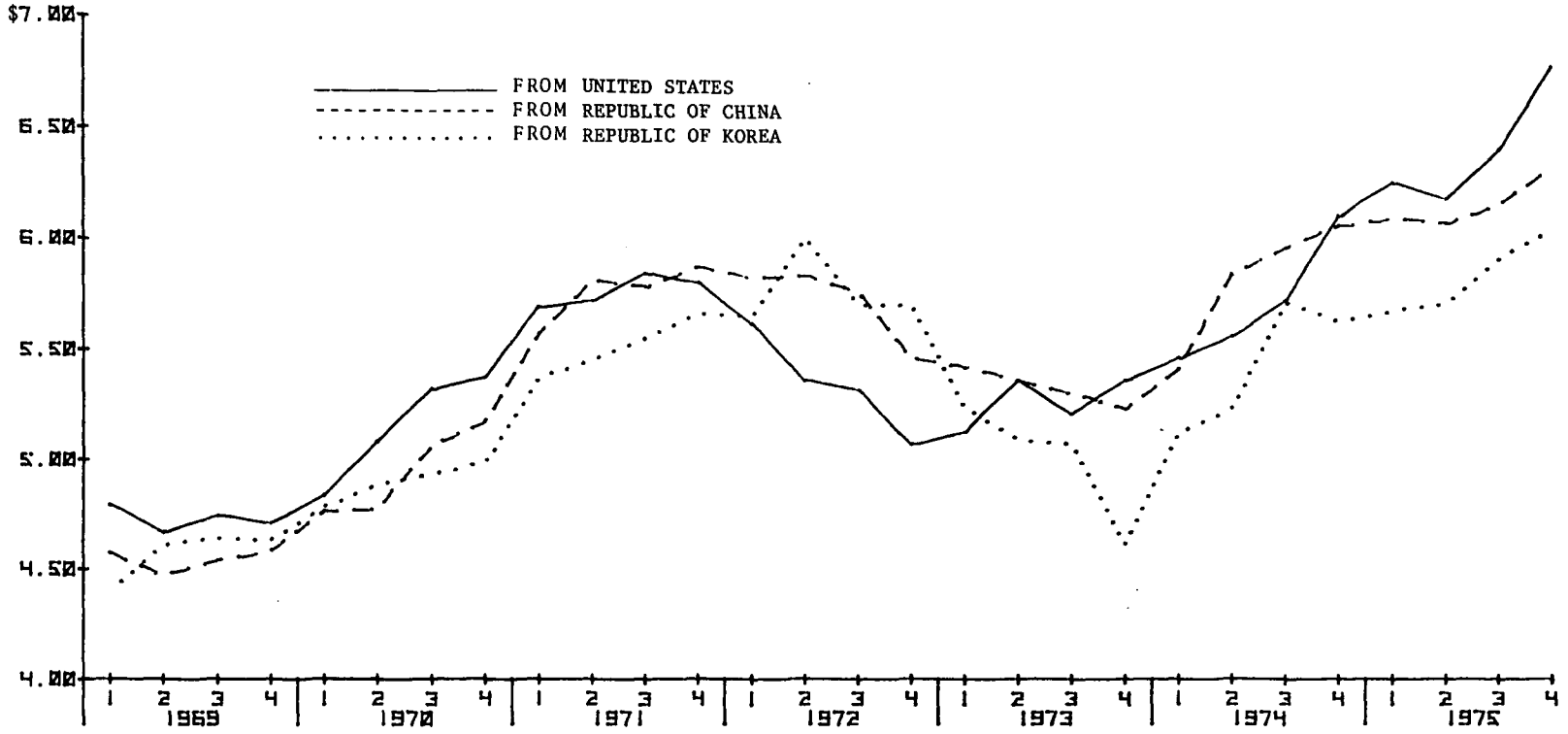
Note.--Prices are f.o.b. point of shipment and net of all discounts, allowances, brokers' fees, and freight paid by canner or importer.

Figure 4.--Mushrooms, canned: Average prices per case of 24/4-ounce cans of mushroom slices and/or buttons received by U.S. producers and by firms importing from the Republic of China (Taiwan) and the Republic of Korea, by quarters, 1969-75.



Source: Based on data in table 32.

Figure 5.--Mushrooms, canned: Average prices per case of 24/4-ounce cans of mushroom stems and pieces received by U.S. producers and by firms importing from the Republic of China (Taiwan) and the Republic of Korea, by quarters, 1969-75.



Source: Based on data in table 32.

Table 33.--Mushrooms, canned: Average prices per case of 6/No. 10 cans 1/ of mushroom stems and pieces and slices and/or buttons, received by U.S. producers and by firms importing from China (Taiwan) and Korea, by quarters, 1969-75

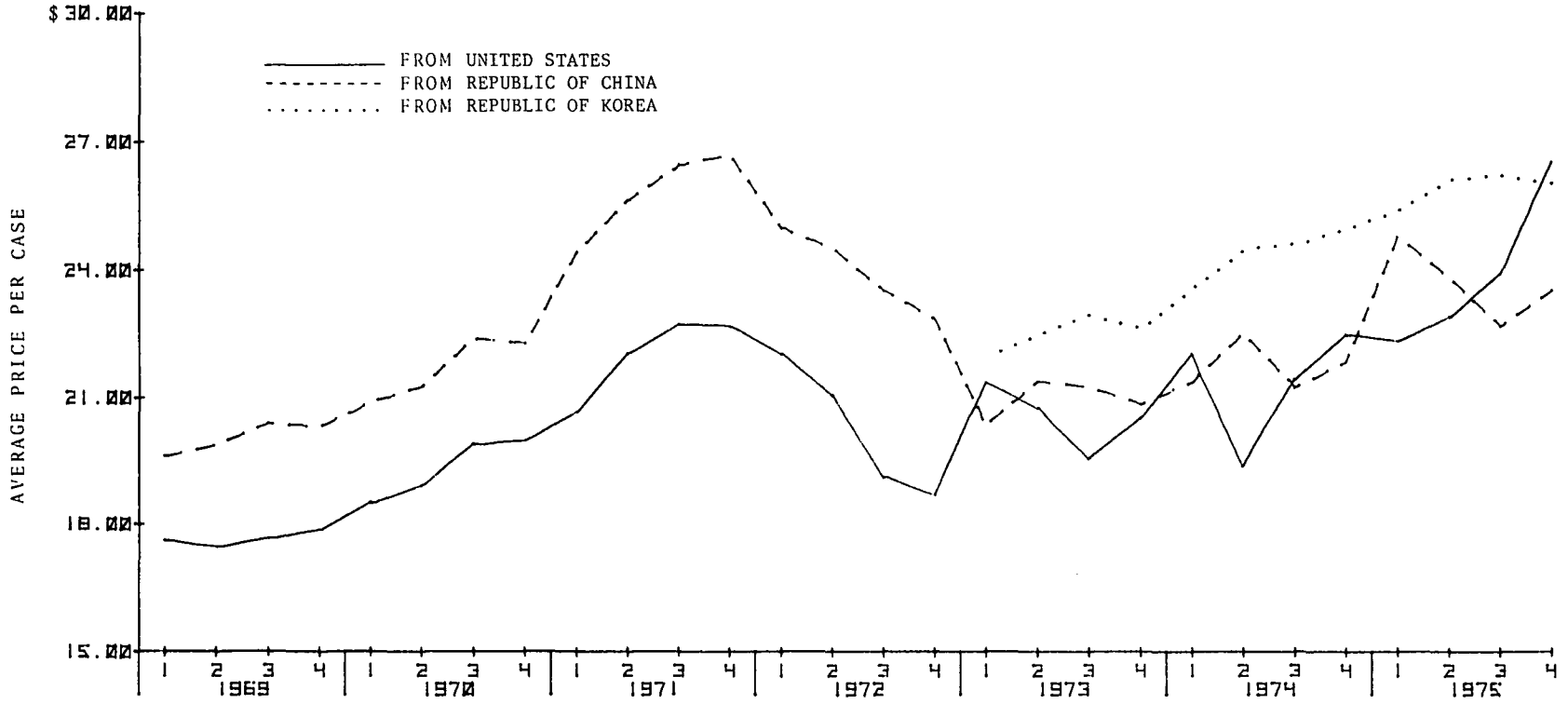
Period	Stems and pieces from--			Slices and/or buttons from--		
	United States	Taiwan	Korea	United States	Taiwan	Korea
1969:						
January-March	$15.59	$16.95	2/	$17.62	$19.60	2/
April-June	15.71	16.99	2/	17.48	19.87	2/
July-September	16.12	16.77	2/	17.68	20.39	2/
October-December	16.55	17.19	2/	17.87	20.29	2/
1970:						
January-March	17.98	17.58	2/	18.51	20.91	2/
April-June	18.63	17.70	2/	18.92	21.28	2/
July-September	19.14	18.13	2/	19.89	22.42	2/
October-December	20.72	18.59	2/	19.98	22.29	2/
1971:						
January-March	22.29	20.41	2/	20.65	24.44	2/
April-June	22.91	21.29	2/	22.06	25.66	2/
July-September	23.11	21.59	2/	22.74	26.48	2/
October-December	22.78	23.07	2/	22.72	26.73	2/
1972:						
January-March	22.77	22.39	2/	22.08	25.02	2/
April-June	22.09	21.85	2/	21.09	24.55	2/
July-September	21.44	21.26	$19.71	19.15	23.57	2/
October-December	19.60	19.00	19.85	18.72	22.90	2/
1973:						
January-March	3/ 19.47	3/ 19.55	3/ 19.07	3/ 20.80	3/ 21.97	2/
	4/ 20.09	4/ 17.83	4/ 19.49	4/ 21.98	4/ 18.77	4/ 22.00
April-June	19.50	17.69	19.37	20.78	21.42	22.52
July-September	18.81	17.11	19.62	19.59	21.29	23.00
October-December	19.10	18.27	19.13	20.51	20.88	22.67
1974:						
January-March	19.16	18.17	19.97	22.06	21.41	23.59
April-June	19.21	19.95	20.04	19.41	22.56	24.52
July-September	20.27	20.07	21.05	21.47	21.30	24.66
October-December	21.77	21.09	21.54	22.52	21.88	25.01
1975:						
January-March	21.23	21.06	21.87	22.39	24.83	25.44
April-June	21.74	21.52	21.89	22.94	23.88	26.16
July-September	22.24	21.22	22.42	23.96	22.74	26.27
October-December	24.91	22.39	22.26	26.57	23.57	26.08

1/ A No. 10 can holds 68 ounces of mushrooms.
2/ Not available.
3/ Computed during investigation No. 332-72.
4/ Computed during investigation No. TA-201-10.

Source: Compiled from data submitted to the U.S. International Trade Commission (both under its present name and under its former name--U.S. Tariff Commission) by domestic canners and importers.

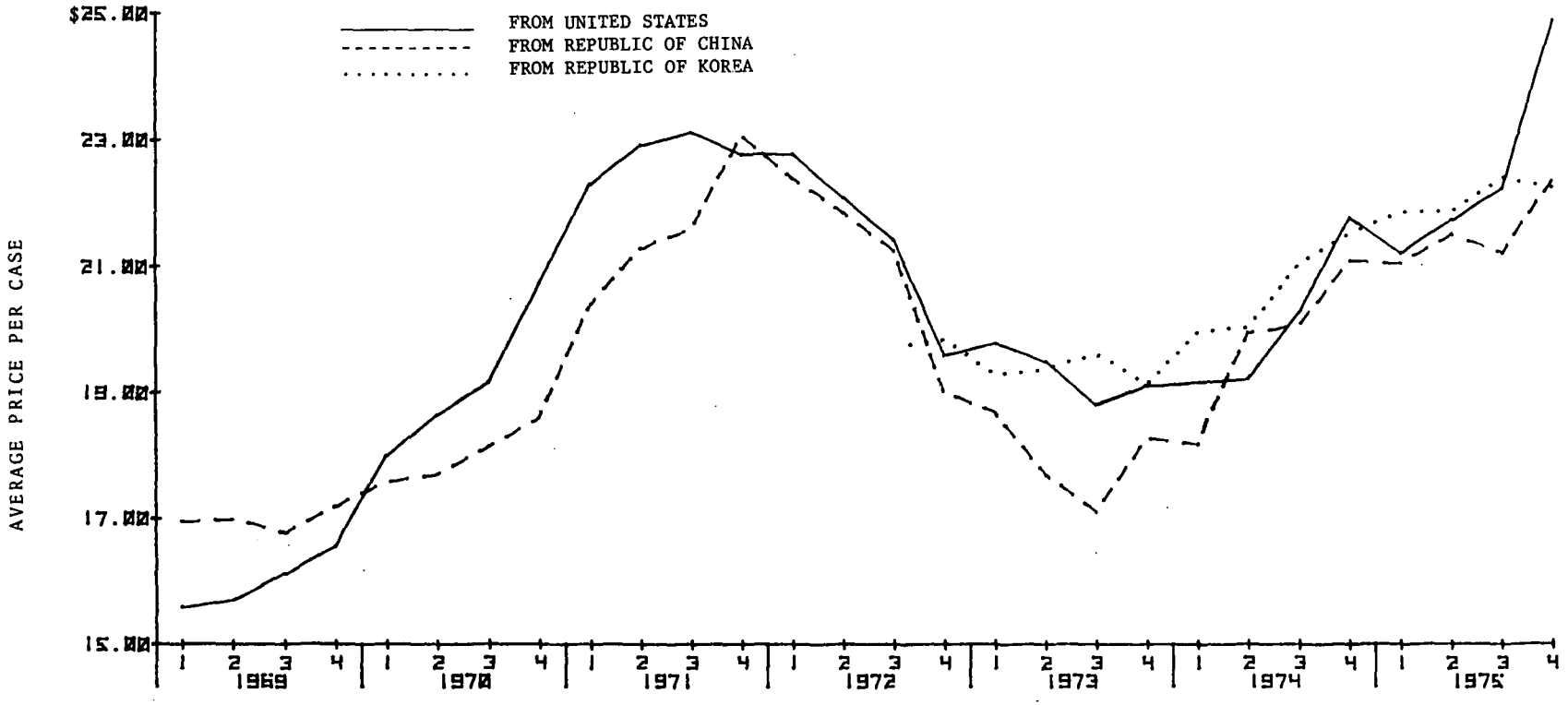
Note.--Prices are f.o.b. point of shipment to customer and net of all discounts allowances, brokers' fees, and freight paid by canner or importer.

Figure 6.--Mushrooms, canned: Average prices per case of 6/No. 10 cans of mushroom slices and/or buttons received by U.S. producers and by firms importing from the Republic of China (Taiwan) and the Republic of Korea, by quarters, 1969-75.



Source: Based on data in table 33.

Figure 7.--Mushrooms, canned: Average prices per case of 6/No. 10 cans of mushroom stems and pieces received by U.S. producers and by firms importing from the Republic of China (Taiwan) and the Republic of Korea, by quarters, 1969-75



Source: Based on data in table 33.

Prices received by U.S. importers

Generally, U.S. importers' net selling prices moved upward during 1969-75 for buttons and/or slices as well as for stems and pieces. In order to avoid repetition of data, import prices are discussed in the following section in relation to domestic prices.

Price relationship between imported and domestic canned mushrooms

Slices and/or buttons in 4-ounce cans.--No distinction is made between No. 1 and No. 2 grades in the domestic and Korean price data. Consequently, the weighted average net selling prices of the U.S.-produced and Korean buttons in 4-ounce cans include both No. 1 and No. 2 grades and are lower than they would be if all domestic and Korean canners sold only the No. 1 grade to United States purchasers. By contrast, the canners in Taiwan use only the No. 1 grade mushrooms in canning slices and buttons for exportation to the United States. During calendar years 1969-75, the prices of the United States and Taiwanese products trended upward. The prices of the Korean product trended downward in 1972 and upward during 1973-75. 1/ In every quarter for which comparisons of weighted average prices can be made, the net selling prices of the domestic producers were higher than the net selling prices of the importers of Taiwanese and Korean slices and/or buttons in

1/ The weighted average prices of the Korean product are not available for 1969-71.

4-ounce cans. The prices for the Korean product were generally lower than those for the Taiwanese product. In October-December 1975, the domestic slices and/or buttons had a weighted average selling price that was $1.49 per case higher than that charged by United States importers of the Taiwanese product, and $1.47 per case higher than the importers' selling prices for the Korean product (see table 32).

Stems and pieces in 4-ounce cans.--There is a lack of uniformity of grade in the stems and pieces that compete in the United States. It is a common practice for U.S. canners to cut stems and pieces from No. 2-grade mushrooms. However, at least one canner, which also sells to the fresh market, blends Nos. 1 and 2 if he has a surplus of No. 1's. Some domestic canners offer stems and pieces that are a mixture of Nos. 2 and 3, and some pack a brand consisting solely of the No. 3 grade. On the other hand, all of the stems and pieces from Taiwan are believed to consist of the No. 2 grade. All three grades are represented in the imports from Korea.

Prior to the last quarter of 1974, the weighted average prices of the domestic product were higher than the prices of the Taiwanese or Korean products or both in some quarters and lower in other quarters. During the five most recent quarters, however, the weighted average prices of the domestic product were consistently higher than those of the products from Taiwan and Korea. In October-December 1975, the weighted average prices were $6.77 (United States origin), $6.32 (Taiwanese origin), and $6.04 (Korean origin) (see table 32).

Slices and/or buttons in No. 10 cans.--During most of the quarters in the 1969-75 period, the weighted average prices of slices and/or buttons in No. 10 cans of United States origin were lower than the weighted average prices of the Taiwanese product. Prices of the Korean product are available for 1973-75 only. With the exception of prices in October-December 1975, the Korean prices were higher than either the United States or the Taiwanese prices. In October-December 1975, the weighted average net selling price charged by United States producers was $26.57 (the highest on record); that charged by importers of the Taiwanese product was $23.57 (lower than the price of the Taiwanese product in the first quarter of 1975); and that charged by importers of the Korean product was $26.08 (slightly lower than the prices in the previous two quarters)(see table 33).

Stems and pieces in No. 10 cans.--During 1969-75, the trend in the weighted average price of Taiwanese stems and pieces in No. 10 cans was similar to that for the competing product of United States origin. The price of the Taiwanese product peaked in October-December 1971. After subsequent price declines for almost 2 years, the Taiwanese price began an irregular upward movement. In October-December 1975 the weighted average price for the Taiwanese product was $22.39 per case, $2.52 below the price of the United States product during the same quarter of 1975.

The first period for which price data on the Korean product are available is July-September 1972. In that quarter the price was $19.71 per case, lower than the prices of the United States and Taiwanese products (table 33). The Korean price remained reasonably stable until

1974, while the United States and Taiwanese prices tended to decline. Beginning in 1974, the Korean price increased for seven consecutive quarters through July-September 1975, when it amounted to $22.42. In October-December 1975, the Korean product had a price of $22.26, compared with $22.39 for the Taiwanese product and $24.91 for the domestic product.

APPENDIX

U.S. FOOD AND DRUG ADMINISTRATION'S LIST OF FIRMS IN WHOSE CANNED MUSHROOM PRODUCT THE BACTERIUM CLOSTRIDIUM BOTULINUM SPORE AND/OR TOXIN WAS FOUND IN 1973-74

AND

COPY OF A 1973 FOOD AND DRUG ADMINISTRATION PRESS RELEASE CONCERNING CANNED MUSHROOMS.

List of Firms

1. United Canning Corp.
   East Palestine, Ohio

2. Fred Mushroom Products Co.
   South Lebanon, Ohio

3. Fran Mushroom Co.
   Ravena, N. Y.

4. Wirth Food Products
   Lawrence, Mass.

5. Avondale Industries
   Avondale, Pa.

6. The Oxford Corp.
   Oxford, Pa.

7. Mt. Laurel Canning Corp.
   Temple, Pa.

8. Grocery Store Products Co.
   Kennett Square, Pa.

9. American Mushroom Co.
   Ecuador, South America

10. Ricou and Co.
    Samour, France

Source: U.S. Food and Drug Administration

A-90

NEW NEWS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

73-40
September 25, 1973

(Food and Drug Administration)
Donald A. Berreth 301/443-3285
Home Phone: 301/869-1795

The Food and Drug Administration today ordered a nationwide examination on all canned mushrooms. FDA's field staff will work with State and local officials to examine mushrooms in more than 5,000 warehouses throughout the country within the next two months.

Dr. Alexander M. Schmidt, Commissioner of Food and Drugs, said: "We have recently completed thorough investigations of all known mushroom processing plants. We have worked with the companies to make necessary processing improvements and have instituted new mandatory production safeguards. We are, therefore, confident that mushroom processors can now produce a safe product. However, because of a series of recent recalls caused by botulinum contamination, we believe it is necessary to expand our examination to all outstanding mushroom stocks canned before industry-wide corrective measures were instituted."

"This will require a major commitment of FDA resources," said Commissioner Schmidt. "Fully half of our food inspection resources may be devoted to this fact-finding effort. We hope to find no problems. If we do find problems, additional recalls will be sought."

"In any case, we are convinced that the effort is necessary to end the sporadic problems we have encountered with canned mushrooms this year," Dr. Schmidt concluded.

--MORE--

During 1973 so far, five mushroom processors recalled products because of contamination with C. botulinum. No deaths have been reported from these products. The most recent recall involved a manufacturer who had made processing changes on May 3, 1973. The contaminated product was produced prior to that time.

FDA inspections of the 42 known processing plants revealed that half had inadequate operating procedures or equipment deficiences. FDA recommendations and requirements for appropriate corrective measures were made, and most of these changes have been acted upon. FDA is now following up to see that necessary actions are taken by all firms. Included are procedures for precise record keeping of such critical functions as cooking time, filled weight, and can seam examinations. Any deviation from accepted procedures must be justified before the product can be released for sale to the public. FDA is also requiring that plant supervisors attend a training school.

To survey mushrooms produced prior to the corrective program, FDA will make detailed visual examinations of warehouse stocks, followed by laboratory analysis of suspected products. Visual examination is a reliable inspection tool in this situation because cans containing the botulinum toxin would virtually always be swollen or leaking or otherwise abnormal.

FDA also urged consumers who encounter abnormal cans not to open them or eat the contents, but to advise their nearest FDA office.

# # # #

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1. Mushrooms. I. Title.

UNITED STATES
INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C. 20436

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