UNITED STATES TARIFF COMMISSION

SUMMARIES OF TRADE AND TARIFF INFORMATION

Prepared in Terms of the Tariff Schedules of the United States (TSUS)

Schedule 2

Wood and Paper; Printed Matter
(In 5 volumes)

Volume 1

Wood and Related Products I

TC Publication 201
Washington, D.C.
1967

UNITED STATES TARIFF COMMISSION

SUMMARIES OF TRADE AND TARIFF INFORMATION

Prepared in Terms of the Tariff Schedules of the United States (TSUS)

Schedule 2

Wood and Paper; Printed Matter
(In 5 volumes)

Volume 1

Wood and Related Products I

TC Publication 201
Washington, D.C.
1967

SUMMARIES OF TRADE AND TARIFF INFORMATION BY SCHEDULES

Schedule 1 - Animal and Vegetable Products
(In 14 volumes)
Schedule 2 - Wood and Paper; Printed Matter
(In 5 volumes)
Schedule 3 - Textile Fibers and Textile Products
(In 6 volumes)
Schedule 4 - Chemicals and Related Products
(In 12 volumes)
Schedule 5 - Nonmetallic Minerals and Products
(In 5 volumes)
Schedule 6 - Metals and Metal Products
(In 11 volumes)
Schedule 7 - Specified Products; Miscellaneous and Nonenumerated Products
(In 8 volumes)
Schedule 8 - Special Classification Provisions
(In 1 volume)

SCHEDULE 2 VOLUMES

1 - Wood and Related Products I
2 - Wood and Related Products II
3 - Paper and Related Products I
4 - Paper and Related Products II
5 - Books and Other Printed Matter

FOREWORD

In an address delivered before a Boston audience on May 18, 1917, Frank W. Taussig, the distinguished first chairman of the Tariff Commission, delineated the responsibility of the recently established Commission to operate as a source of objective factual information on all aspects of domestic production and trade. As an initial step in meeting this obligation, the chairman stated, the Commission was preparing--

> a handy source of reference . . . designed to have on hand, in compact and simple form, all available data on the growth, development, and location of industries affected by the tariff, on the extent of domestic production, on the extent of imports, on the conditions of competition between domestic and foreign products.

The first such report was issued in 1920, and subsequent general issues of tariff summaries were published in 1921, 1929, and 1948-50.

In the 50 years since its establishment the Commission has been assigned many duties by the Congress, but the primary obligation for factfinding and production of information has remained a continuous major responsibility. Through its professional staff of commodity specialists, economists, lawyers, statisticians, and accountants, the Commission maintains constant surveillance of trade in the thousands of articles provided for in the Tariff Schedules of the United States. In its files and in the accumulated knowledge of its staff, the Commission has, therefore, built up a large reservoir of data and understanding not only with respect to imports but also with regard to significant developments affecting individual products and their uses and to processing and manufacturing techniques, business practices, and world trade. The publication of the present Summaries of Trade and Tariff Information will make available a current broad cross section of this information and understanding.

Every effort has been made to include all pertinent information in the summaries so that they will meet the needs of wide and varied interests that include the Congress, the courts, Government agencies, importers, business concerns, trade associations, research organizations, and many others. The structure of the individual summaries conforms generally with the earlier admonition of Chairman Taussig that the work "be exhaustive in inquiry, and at the same time brief and discriminating in statement." The scope of the entire project is encyclopedic, requiring concise and accurate descriptions of thousands of products, with indications of their uses, methods of production, number of producers, world supplies, and appraisals of their importance in trade and in our economy. In a society such as ours that has become progressively more dynamic, the task of sifting the essential from the nonessential has become both more difficult and more

important. Nevertheless, the summaries include substantive analytical material with regard to the basic factors affecting trends in consumption, production, and trade, and those bearing on the competitive position and economic health of domestic industries.

The publication of tariff summaries is particularly appropriate at this time. On August 31, 1963, the 16 schedules in titles I and II of the Tariff Act of 1930, certain import-excise provisions, other provisions of law, and some administrative practices were superseded by the Tariff Schedules of the United States (abbreviated to TSUS in these volumes). These changes resulted in an extensive regrouping of imports under 8 new tariff schedules and in modifications of the nomenclature and rates of duty for many articles. The summaries present for the first time full information on tariff items under the new structure, including import data derived through use of the Tariff Schedules of the United States Annotated (which comprises the legal tariff text plus statistical annotations).

Commodities are generally identified in the summaries in nontechnical language, which will meet most requirements. As an aid where more complete information is desired, the applicable legal language from the TSUS is reproduced in each volume as appendix A, which includes the article description, together with the general headnotes and rules of interpretation, and the directly applicable headnotes. Thus each volume will permit convenient reference to the statutory tariff language pertinent to the summaries it contains.

Publication of the 62 volumes projected for the series is scheduled under a 3-year program. Individual volumes, however, will be released as rapidly as they are prepared. For practical reasons the sequence of the summaries in the volumes do not necessarily follow the numerical sequence of the TSUS; however, all item numbers of the tariff schedules will be covered. The titles of the volumes to be issued for a particular TSUS schedule are set forth on the inside cover of the volumes for that schedule.

We believe that the current series of summaries, when completed, will represent the most comprehensive publication of its kind and that the benchmark information it presents will serve the needs of many interests.

Paul Kaplowitz

Paul Kaplowitz,
Chairman.

SUMMARIES OF TRADE AND TARIFF INFORMATION

SCHEDULE 2

Volume 1

C O N T E N T S

Numerical List of TSUS Items in This Volume

INTRODUCTION

This volume (identified as volume 2:1) is the first of the five volumes on the wood and paper products classified under schedule 2 of the Tariff Schedules of the United States (TSUS). The summaries in this volume cover the wood products of a rough and primary nature that are provided for in subpart 1A of TSUS schedule 2 (except wood charcoal, pulpwood, and wood chips), as well as the semifinished or finished wood products used chiefly for construction and provided for in subpart 1B and part 3. Wood charcoal is included in volume 2:2 and pulpwood and wood chips in volume 2:3.

In terms of round wood, world output of wood (logs and other timber products including pulpwood) has been increasing at a moderate pace during the last 20 years. Today the wood resources of the accessible forest lands are being utilized more intensively than ever before. Most of the commercially important softwood forests are located in the North Temperate Zone. Commercially important hardwood forests are located in the North and South Temperate Zones and in the tropics (Torrid Zone), but vast forest areas in the tropics have barely been tapped.

The United States, richly endowed with timber resources of both softwood and hardwood, is one of the leading countries in the production of logs and other timber products. Inasmuch as 28 percent of the commercial forest land in the United States is publicly held (22 percent by the Federal Government and 6 percent by State and local governments), regulations controlling the disposal of public timber tend to affect the level of annual production of round wood and the domestic market for wood products. The quantities of timber offered for sale each year, particularly in the West, where the Federal ownership is concentrated, are determined by the objectives of Government conservation policies. Sales of timber from public lands are usually made through competitive bidding, with minimum selling prices established on the basis of appraised market values of the standing timber.

In the United States, as in many other countries, the harvesting and use of logs and other timber products have become more efficient, and techniques have been developed for increasing the utilization of low-quality logs and residues from the processing of wood, primarily in the production of panel products (e.g., hardboard and particle board). U.S. Bureau of the Census data indicate that in 1965 U.S. manufacturing activity in lumber and wood products, Major Group 24 of the Standard Industrial Classification (SIC), accounted for about

$4,388 million in value added by manufacture and $10,202 million in shipments, as indicated in the following tabulation:

SIC subgroup		Value added by manufacture	Value of shipments
Code	Description	Million dollars	Million dollars
241	Logging camps and contractors	585	1,255
242	Sawmills and planing mills	1,634	3,851
243	Millwork and related products	1,364	3,414
244	Wooden containers	206	472
249	Miscellaneous wood products	598	1,211
	Total 1/	4,388	10,202

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

The manufacturing activity covered in this volume is estimated to have accounted for $2,900 million in value added by manufacture and $6,700 million in shipments and thus comprises about two-thirds of the activity included in Major Group 24. The scope of this volume is approximately coextensive with the SIC subgroups as follows: Subgroup 241, except pulpwood; subgroup 242, except furniture parts and other fabricated hardwood dimension stock, cooperage stock, and wood chips; subgroup 243, only veneer and plywood; and part of subgroup 249, principally wood products treated with preservatives, hardboard (hard pressed wood fiberboard), particle board, dowels and dowel pins, and wood flour.

The range, as well as the volume, of wood products in international trade has expanded significantly in recent years, but exports still represent only a minor portion of world output. The United States is a leading producer of the important wood products included in this volume (e.g., softwood lumber, hardwood lumber, softwood plywood, hardwood plywood, and hardboard). Nevertheless, its total international trade in the products covered here is on an import basis in 1965, U.S. imports of such wood products were valued at $630 million, whereas the corresponding exports totaled about $265 million.

About half of the total value of the 1965 U.S. imports of the products covered in the following summaries was accounted for by softwood lumber, virtually all of which was supplied by Canada. Hardwood plywood accounted for a fifth of the total and came mainly from Japan, Taiwan, and the Philippine Republic. In terms of the ratio of imports to apparent consumption, brierroot (for smokers' pipes) ranks first (nearly 100 percent), followed by hardwood plywood (nearly 50 percent), shingles and shakes (nearly 50 percent), softwood lumber (15 percent), and hardwood veneer (15 percent).

About 44 percent of the value of 1965 exports of the wood products considered here consisted of logs, principally softwood logs, for which Japan was the chief market; exports of hardwood logs, principally to Europe, were also important. About 42 percent of the value of the 1965 exports was accounted for by lumber--principally of softwood; for both softwood and hardwood lumber, Canada was the largest market. Japan and Canada were about equally important as export markets for the wood products included in this volume.

November 1966
2:1

Commodity	TSUS item
Firewood, and fuel without added binder---	200.03
Fuel with added binder----------	200.06

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

In 1965 U.S. imports of fuelwood, valued at $50,000, were equivalent to less than 1 percent of domestic consumption. Exports are believed to account for a negligible portion of domestic production.

Description and uses

The products considered here include firewood, hogged-wood fuel, and compressed wood fuels, i.e., certain wood products chiefly used in the United States for fuel purposes. Wood waste, including sawdust and shavings (item 200.10), and wood charcoal (item 200.30), both of which are sometimes used for fuel, are discussed in separate summaries.

Firewood ordinarily consists of sections of trees sawed across the grain of the wood, and usually split along the grain, to a size convenient and suitable for use in a stove, fireplace, or furnace. Firewood also consists of pieces cut to appropriate size from such wood residues as the slabs, edgings, and trim of sawmills and planing mills, or from the unused cores of veneer bolts from veneer mills.

Firewood is made from all species of trees, but hardwoods are preferred because they generally provide more heat per unit of volume than softwoods. In the United States the amount of oak used for firewood probably exceeds that of any other kind of wood. Firewood is measured by the cord--128 cubic feet of stacked wood (8 feet long by 4 feet wide by 4 feet high). It is estimated that the average cord contains about 75 cubic feet of solid wood.

Hogged-wood fuel (in item 200.03) is a term applied to a product of wood waste (from milling or logging operations) which has been ground; such fuel may contain sawdust and shavings. It is usually used by industrial establishments situated near the source of supply for the production of heat or power. Such wood product is often measured by the "unit" of 200 cubic feet of gravity-settled chunks, which approximates a cord in quantity of solid-wood content.

Compressed wood fuels are usually made in briquette form from sawdust, wood shavings, and other wood scrap ground to small size. The most popular wood briquette in the United States is about 4 inches in diameter and 12 inches in length; it is generally used in fireplaces. Briquettes used for stoker furnace fuel are pellet size. Most of the wood briquettes produced in the United States do not require added binder because the heat generated by the extreme pressure employed in their formation makes the lignin in the wood sufficiently plastic to become a bonding agent. Furthermore, the added cost of a binder has generally made its use uneconomical. Briquettes are usually measured by weight.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
200.03	Firewood, and fuel not containing an added binder.	Free
200.06	Fuel containing an added binder--------	10% ad val.

These rates reflect concessions granted by the United States in the General Agreement on Tariffs and Trade. The duty-free treatment of most of the articles under item 200.03 was provided for in the original Tariff Act of 1930; legislation in 1948 amending paragraph 1803(2) of the 1930 Tariff Act provided for the free entry of fuel made by compression from bark, sawdust, or other wood waste of the saw or planing mill. The rate for the fuel in item 200.06 has been in effect since October 7, 1951.

U.S. consumption and production

The annual domestic consumption of fuelwood, which was virtually identical with domestic production, declined from an estimated 33 million cords in 1958 to 25 million cords in 1965 (see accompanying table). The decline continued a downward trend observable since the 1870's, when the U.S. consumption of more efficient and convenient fuels (first coal, and later gas, petroleum, and electricity) began to increase appreciably. In recent years the annual rate of decline has tapered as the use of fireplace wood in suburban areas has increased.

U.S. consumption of fuelwood in recent years has consisted primarily of roundwood (wood as cut from the tree), which comprised 60

percent of the total consumption in 1958 and 54 percent in 1964. The remainder of consumption has been composed almost entirely of the wood residues of wood-processing plants; consumption of compressed fuel containing an added binder has been negligible.

The production of firewood is not in the ordinary sense a distinct industry in the United States. A major portion of the output is cut by farmers and others as a part-time occupation. Other producers of fuelwood include (1) the cutters who sell to woodyards and (2) sawmills and planing mills which use their own hogged-wood fuel and mill-waste firewood or sell it to others for the production of heat or power. Firewood is, of course, cut wherever trees grow--mostly in the heavily forested parts of the Northeast, the South, and the West, and least in the central Plains. For most producers it is relatively unimportant as a source of income; for a few it is highly important.

About 20 U.S. concerns, mostly in the West, produce briquettes compressed from wood residue without, so far as is known, the use of an added binder. These concerns are chiefly sawmills and planing mills, whose lumber production is of considerably greater value than their briquette production.

Because of the low value per unit of weight and volume, most forms of fuelwood are not transported great distances. The compressed fuels are generally distributed farther from their source of production than are other forms of fuelwood.

The total quantity of fuelwood produced in the United States in 1962 was less than half as much as that produced in 1952 (26.8 million cords, compared with 58.6 million). The production of softwood fuel declined more rapidly between these years than did that of hardwood because so much softwood "waste" formerly used as fuel is now converted into pulp for paper products. Production of fuelwood declined more in the South than in the North, but the South is still the leading producing region for fuelwood. The U.S. Forest Service reported production of fuelwood, by regions and kinds, for 1952 and 1962 as follows (in millions of cords):

Region	Hardwood		Softwood		Total	
	1952	1962	1952	1962	1952	1962
South	15.1	7.5	12.6	3.2	27.7	10.8
North	12.2	8.1	1.7	1.0	13.9	9.0
West	.3	.1	16.8	7.0	17.1	7.1
Total	27.5	15.7	31.1	11.2	58.6	26.8

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

November 1966
2:1

In the 5 years 1958-62, the annual production of wood fuel briquettes, all without added binder, averaged about 90,000 tons, according to trade sources.

U.S. exports

U.S. exports of fuelwood are not separately reported in the official statistics. Small quantities are known to be exported to Japan and to Mexico; those exported to Japan are believed to consist in major part of compressed wood fuel. Also, small quantities of fuelwood are probably exported to Canada.

U.S. imports

Annual U.S. imports of fuelwood, almost entirely from Canada, declined from 142,000 cords, valued at $377,000, in 1958 to 74,000 cords, valued at $58,000, in 1963. Imports in 1965 (quantity not available) were valued at $50,000; only about 1 percent of the total consisted of fuelwood with added binder (item 200.06). The imports reported under item 200.03 in 1964 and 1965 are believed to have been chiefly of hogged-wood fuel, which sells at a low unit price as compared with the unit price of firewood, the type of fuelwood that probably accounted for the bulk of the imports in 1958. This change in composition of imports accounts in part for the decline in the value of imports noted above. In recent years a large share of the imports of fuelwood have been barged across Puget Sound from sawmills in British Columbia to sawmills and pulpmills in Washington State to produce heat and power.

The ratio of imports to domestic consumption has been less than 1 percent in all recent years.

Fuelwood: U.S. production, imports for consumption, and apparent consumption, 1958-65

(In thousands of cords)

Year	Production	Imports	Apparent consumption
1958	32,920	142	33,060
1959	31,430	98	31,530
1960	29,800	135	29,930
1961	28,270	132	28,400
1962	26,830	68	26,900
1963	26,130	74	26,200
1964	25,480	1/ 47	25,530
1965	24,870	1/ 64	24,930

1/ Estimated.

Source: Compiled from official statistics of the U.S. Departments of Agriculture and Commerce.

Note.--Exports, for which data were not separately reported, are believed to have been negligible.

Commodity	TSUS item
Wood waste	200.10

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. imports of wood waste, generally an insignificant article of international commerce, were valued at $39,000 in 1965 and accounted for less than 1 percent of domestic consumption.

Comment

This summary covers wood waste, which is defined in headnote 1 to part 1 of schedule 2 of the TSUS as--

> residual material other than firewood resulting from the processing of wood, including scraps, shavings, sawdust, veneer clippings, chipper rejects and similar small wood residues, and also larger or coarser solid types of residual wood such as slabs, edgings, cull pieces, and veneer log cores.

Wood waste is widely utilized as a raw material in the manufacture of a variety of products, such as wood pulp, particle board, wood flour, charcoal, and chemicals. However, some types of wood waste, such as sawdust and shavings, are often used without further processing for livestock and poultry bedding, packing material, and insulation.

Firewood, hogged-wood fuel, and wood waste made into fuel by compression are covered in the summary on fuelwood (items 200.03 and 200.06).

The current duty-free treatment of the wood waste provided for under item 200.10 became effective on August 31, 1963. Before that date such wood waste was dutiable at 4 percent ad valorem as "Waste, not specially provided for" under paragraph 1555 of the Tariff Act of 1930. The imposition of a duty on wood waste was anomalous in view of the fact that logs and timber in the rough and many other primary forest products were free of duty. Since January 1, 1966, the duty-free treatment of wood waste has been bound in a concession granted by the United States in the General Agreement on Tariffs and Trade.

U.S. consumption of wood waste has been increasing in recent years. It has become an important raw material in certain manufacturing processes. For example, sawdust, shavings, and chips processed from scrap wood are increasingly being used in the manufacture of wood pulp (see summaries on wood pulp and on pulpwood and wood chips, in vol. 2:3); wood waste is also being converted into chips and flakes for the production of particle board.

The quantity of wood waste consumed in the United States, however, is substantially smaller than that produced. On the basis of a U.S. Forest Service survey for the year 1962, it is believed that the solid-wood equivalent of the waste produced in that year by wood-manufacturing plants exceeded 3 billion cubic feet, of which about two-thirds was utilized, chiefly for conversion into wood pulp and for fuel. The remaining third was not utilized, principally because handling and transportation costs made its use uneconomical.

Domestic producers of wood waste include virtually all manufacturers of forest products, ranging in size from small sawmill operators to large wood-processing concerns. There are many thousands of such producers situated in all parts of the country.

U.S. exports of wood waste are not reported separately but are believed to be negligible.

U.S. imports of wood waste all come from Canada. In 1964 they were valued at about $61,000 and in 1965, at about $39,000. The 1965 imports entered chiefly through ports in the States of Washington and Vermont.

Commodity	TSUS item
Wood flour	200.20

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

In 1961-65, U.S. imports, with an annual average value of about $4,000, were equivalent to less than 1 percent of domestic consumption. Exports are believed to be small but larger than imports.

Comment

Wood flour, which consists of finely ground wood resembling cereal flours in appearance and texture, is obtained by recovery from sander dust or sawdust, or is made by grinding, beating, or crushing wood. Screening is generally an essential step in the process. Wood flour is made from either hardwood or softwood; it must be light in color, low in density, low in resin content, and free of bark, dirt, or other impurities.

Wood flour is used chiefly as a filler in the manufacture of linoleum and plastics, although it may at the same time modify the physical properties of the product. In other uses, such as in the production of explosives, it contributes to and assists in controlling a chemical reaction. It is also used as an absorbent, as a mild abrasive, and at times for decorative effect (e.g., on wallpapers). Recently it has been used as an ingredient in the manufacture of a wood-flour polyurethane foam for use in insulation, construction, and packaging.

The current column 1 rate of duty applicable to imports (see general headnote 3 in appendix A) is as follows:

TSUS item	Commodity	Rate of duty
200.20	Wood flour	12.5% ad val.

This rate, which reflects a concession granted by the United States in the General Agreement on Tariffs and Trade, has been in effect since January 1, 1948.

U.S. consumption of wood flour is approximately the same as production. Total U.S. shipments (including interplant transfers) of wood flour in 1958 were valued at $3.2 million; they increased to $3.6 million, or by 15 percent, in 1963, and were probably somewhat higher in 1965.

Approximately 15 concerns in the United States, situated mostly in the Northern States, produce wood flour. Ample raw material is available domestically, since wood flour is usually made from the residual material from other wood products operations.

U.S. exports of wood flour, which are not separately reported in official statistics, are believed to have been small, but larger than imports in recent years.

U.S. imports of wood flour in 1960-64--all from Canada--were reported in the official statistics of the U.S. Department of Commerce as follows:

Year	Quantity (short tons)	Value
1960	84	$2,839
1961	17	513
1962	30	1,042
1963	287	10,204
1964	181	6,363

There were no imports in 1965.

Commodity	TSUS item
Wood excelsior, pads, and wrappings----	200.25

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

Both U.S. imports and exports of wood excelsior are negligible. In 1965, U.S. production was valued at about $10 million, and imports, at only $10,000.

Description and uses

Wood excelsior consists of thin, narrow, flexible, thread-like strands of wood which tend to curl and form a loosely packed, tough mass; it is produced by shredding wood blocks of species such as aspen, cottonwood, basswood, and southern pine. The more desirable excelsior is low in weight, light in color, soft, absorbent, and free from objectionable odor and staining substances. Resilience, the ability to expand readily after compression, is the principal characteristic which makes excelsior desirable for use in packing glassware and other easily breakable articles. Very fine grades of excelsior are usually referred to as "wood wool."

Excelsior is marketed in bulk, in bales, and in the form of pads and wrappings which consist of excelsior covered with paper or similar material. Among the important uses of excelsior are the following: As a protective cushion placed within boxes and crates for shipping fragile items and general merchandise; as a filling or padding material in low-priced mattresses and upholstery and in caskets, hassocks, athletic equipment, and toys; as a filter and vapor-dispersing agent for evaporative coolers; in the filtration of crude oil and petroleum products; and as a basic raw material in the manufacture of structural building board.

U.S. tariff treatment

The current column 1 rate of duty applicable to imports (see general headnote 3 in appendix A) is as follows:

TSUS item	Commodity	Rate of duty
200.25	Wood excelsior, pads, and wrappings.	16-2/3% ad val.

This rate, which reflects a concession granted by the United States in the General Agreement on Tariffs and Trade, has been in effect since May 30, 1950.

U.S. consumption, production, and exports

Annual U.S. production of wood excelsior, which approximates domestic consumption, was valued at $12.6 million in 1958, declined to $10.9 million in 1963, and was probably about $10.0 million in 1965. The decline occurred in spite of an increased demand for packing and stuffing materials in those years and resulted from competition from such substitutes as straw, grass, bagasse, shredded paper, cotton waste, cellulose wadding and padding, and foamed plastic, particularly the last two.

Excelsior can be manufactured economically from many of the wood species grown in the forested regions of the United States. Consequently, productive facilities are well distributed and tend to be located near centers of heavy consumption. Excelsior was produced in about 40 mills in 1958; however, the number of producing mills is believed to have declined somewhat.

Exports of wood excelsior are negligible compared with domestic production, but small amounts are exported to Canada and Central and South America.

U.S. imports

Imports of wood excelsior, not separately reported in the official statistics prior to August 31, 1963, are estimated to have averaged about $3,000 annually in the period 1958-62. In the following 2 years, imports increased and, in 1964, they amounted to almost $15,000; in 1965, however, they dropped to $9,500. All imports in recent years have come from Canada.

Commodity	TSUS item
Logs and timber, except pulpwood----------	200.35 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

Although the United States is a leading world producer of logs and timber, it is not a major factor in the international trade in such products. In 1963-65, U.S. exports of logs and timber were equivalent in quantity to about 2 percent of domestic production and increased in annual value from about $75 million to $116 million. U.S. imports, which are much smaller than exports, consist principally of tropical hardwoods required for certain uses important to the U.S. economy.

Description and uses

Logs are cut from the trunks of softwood (coniferous) or hardwood (broad-leaved) trees and are ordinarily 8 to 40 feet long. Tree sections of less than 8 feet in length are often called bolts. The term "timber" in this text refers to sections of trees that have been split lengthwise, or hewn into various shapes, or roughly sided (slabbed) or squared by sawing or other means, but which have not been sawed into lumber (e.g., boards and planks). Hereafter, in the text of this summary, the term "logs," unless otherwise qualified, includes timber and bolts, as described above.

Such round or split products as firewood bolts (item 200.03), and poles, piles, and posts (item 200.60) are included in other summaries of this volume.

The principal uses for logs in the United States are, first, for making lumber (such logs are termed "saw logs"); second, for producing pulp to be used in papermaking (such logs are called "pulpwood" and are covered in volume 2:3 in the summary on items 200.15 and 200.35 (pt.)); and third, for conversion into veneer and plywood. Other uses include cooperage stock, shingles, excelsior, turnery stock, handle stock, bobbin blocks, match blocks, charcoal wood, and mine timbers.

Logs are distinguished in the trade according to use, which is determined by the characteristics of their species and by their size and freedom from defects, as well as by current market conditions for

end products. Location and ownership of the standing timber from which logs are cut are also important determinants of outlet. Veneer logs tend to be larger and of better quality than saw logs, and pulp logs tend to be of the poorest quality. In recent years improved processing techniques have permitted smaller and poorer logs to be used for veneer production.

U.S. tariff treatment

The current duty-free treatment of logs and timber, in the rough, split, hewn, or roughly sided or squared but not made into lumber was derived principally from duty-free provisions in paragraph 1803 of the original Tariff Act of 1930. Those provisions were bound in concessions granted by the United States in the General Agreement on Tariffs and Trade, effective January 1, 1948.

In minor degree the scope of item 200.35 includes logs and timber formerly dutiable at the trade-agreement rate of 50 cents per thousand board feet under paragraph 401 and "unmanufactured wood" formerly dutiable at the trade-agreement rate of 8 percent ad valorem under paragraph 405.

U.S. consumption

The annual domestic consumption of logs is estimated to have risen with some fluctuation from 39.5 billion board feet in 1958 to 44.0 billion board feet in 1965 (table 1). The increase, which has taken place mostly since 1961, reflects the concurrent rising production of lumber and plywood, predominantly from domestic logs. Imports of logs have amounted to no more than 0.3 percent of annual consumption in recent years.

Most logs are milled in the West and the South, the chief forest regions of the United States, where most of the sawmills and veneer mills are located.

U.S. producers

Logs are produced domestically by more than 10,000 logging operators or concerns. These include the logging divisions of forest-products companies, independent logging contractors, and farmers and other part-time woods workers. The great bulk of the output, however, is accounted for by the first two types of producers, operating in the heavily forested regions of the Western, Southern, North Central, and Northeastern States.

U.S. production

Official statistics on the domestic production of logs are published only about once every decade by the U.S. Department of Agriculture in connection with its Forest Service studies of national timber cutting. Forest Service data on such production for 1952 and 1962, together with estimates by the U.S. Tariff Commission for 1964 and 1965, are as follows (in millions of board feet):

Product	1952	1962	1964	1965
Saw logs	39,480	34,130	37,620	37,990
Veneer logs	2,470	4,850	5,810	6,180
Other logs (except pulpwood)	1,060	990	970	960
Total	43,010	39,970	44,400	45,130

Domestic production of logs in 1965 reached a new high point, which was about 2 percent above the level in 1964 and 5 percent above that in 1952. Veneer logs, which have accounted for an increasing share of total log production in recent years, comprised about 14 percent of the 1965 output. The high production of saw logs in 1952 reflected a boom in building construction.

Of the total production of saw logs in 1962, 80 percent was softwood, of which almost three-fourths (principally Douglas-fir, ponderosa pine, fir, and hemlock) was produced in the West (table 2). Most of the remaining softwood saw logs, chiefly southern pine, were produced in the South.

Of the total output of veneer logs in 1962, 83 percent was of softwood, chiefly Douglas-fir, produced in the West. Production of veneer logs in the South was predominantly of hardwood, chiefly gum and yellow-poplar. However, 1964-65 marked the beginning of significant production of softwood (pine) veneer logs in the South.

In 1962, about 200 million board feet of cooperage logs (chiefly oak) was produced--almost half in the Central States region. In the same year about 48 million cubic feet of mine timbers (equivalent to about 65 million board feet), 1/ predominantly hardwood, was produced--chiefly in the Middle Atlantic region.

1/ Includes round mine timbers.

U.S. exports

Exports of logs 1/ increased substantially in 1958-65 but in no year constituted as much as 3 percent of domestic production. Nearly all of the increase in exports of logs from 170 million board feet in 1958 to 1,190 million in 1965 consisted of softwood logs, chiefly of hemlock, spruce, and fir. Douglas-fir, although by far the first-ranking species of logs produced, has comprised only about 10 percent of exports in recent years.

Japan has been the recipient of most of the increased U.S. exports of softwood logs in recent years (table 3). That country's resources have been inadequate to supply its requirements for building materials during its postwar economic boom. Exports of softwood logs to Canada also increased somewhat, despite the vast Canadian supply of softwood timber. The increase in such exports occurred because the required kinds and grades of logs were more readily obtainable from U.S. producers than from Canadian producers.

U.S. exports of hardwood logs have also increased in recent years, with Canada, West Germany, and Italy being the chief recipients (table 4). Exports of walnut logs, principally to West Germany and Italy, have risen more than exports of other kinds of hardwood logs--from about 5 percent of total quantity in 1958 to 15 percent in 1962 and to 24 percent in 1965--because of the demand for walnut for use in furniture and decorative panels. Exports of walnut logs received an abrupt although brief setback when an export quota was imposed by the U.S. Department of Commerce in February 1964. Such exports resumed their upward trend when the quota was lifted in February 1965. For the full year of 1965, exports of walnut logs exceeded the total for any previous year.

The domestic consumers of both softwood and hardwood logs have objected to the recently increased exports because of the rise in U.S. prices resulting from the smaller supply of logs available for the domestic market.

U.S. imports

Imports of logs totaled 85 million board feet in 1958, rose to 112 million board feet in 1960, and afterwards decreased nearly every year to 69 million board feet in 1965 (table 1). Although the decrease

1/ Exports of timber (defined in section on description and uses), which were not separately reported in the official statistics before 1965, are believed to have been negligible.

has been reflected in the imports of logs of most species, the share of hardwood logs to total imports has risen.

Imports of softwood logs, almost all from Canada, dropped sharply in 1964 and 1965 from earlier levels, reflecting tighter Canadian export restrictions which affect logs but not lumber. Species imported consist chiefly of fir, spruce, hemlock, and cedar. The average unit value for imports of softwood logs rose from $37 per thousand board feet in 1958 to $52 in 1965 (table 5).

Hardwood logs imported during 1963-65 averaged about 55 million board feet annually--representing a decided drop from the level of the years 1958-62--and were equivalent to less than 1 percent of domestic production. Those imported from the tropics in recent years, chiefly from Colombia, the Ivory Coast, Ghana, and the Philippines (table 6), are kinds not produced in the United States, and those imported from other countries, principally birch and maple from Canada, although like the U.S. product, are imported principally to supplement the decreasing supply of similar logs in the United States.

The quantity of hardwood logs imported annually is far less than the log equivalent of the annual imports of hardwood lumber, veneer, and plywood. Ordinarily, it is advantageous pricewise to import such products into the United States rather than to import the logs and process them here. Sawing of imported tropical logs in this country tends to be confined to well-established concerns that produce for customers requiring exact specifications.

The average unit value of imports of hardwood logs rose from $90 per thousand board feet in 1958 to $110 in 1965. Whereas many species showed some increase in unit value between these years, the unit value of cativo (from Colombia) more than doubled (table 7).

Foreign production and trade

The United States and the U.S.S.R. are the leading producers of logs, and in the years 1962-64 (world data for 1965 are not yet available) they were about equal in this respect. Canada ranked third and Japan fourth, but the output of these two combined was less than half that of either the United States or the U.S.S.R. Each of these four producing countries exports only a very small portion of its log output, but the United States and the U.S.S.R. are important exporters of softwood logs. International trade in logs consists largely of hardwood logs cut in the developing areas of the tropics and shipped to the industrially developed nations of the North Temparate Zone (e.g., from the Philippine Republic and Malaysia (Sabah) to Japan, and from the central African countries to Europe). Such trade is an especially important source of foreign exchange for the exporting countries.

Canada.--Logs produced in Canada, about 95 percent of which are softwood logs, are used chiefly in its mills for the production of lumber and veneer. The annual production of logs and timber, which has moved upward in recent years, amounted in 1962 (the latest year for which data are available) to about 10 billion board feet, valued in Canadian currency at $485 million, equivalent to about one-fourth of the quantity produced in the United States in that year.

Canada's exports of logs and timber in recent years have constituted about 1 percent of total production, and about one-third of such exports have been shipped to the United States. Export controls may be applied by the Department of Trade and Commerce to logs originating on crown lands upon the specific request of the Province in which they originated. The Canadian Provinces appear to request such controls whenever logs are needed for their industries. Operation of these controls has resulted in declining and recently very limited Canadian exports of softwood logs to the United States.

Tropical countries.--Virtually all logs produced in the tropics are cut from hardwood trees. In the period 1960-63, the average annual production of hardwood logs in Colombia was about 540 million board feet, and that in the Ivory Coast and Ghana, about 310 and 370 million, respectively, while production in the Philippine Republic was much greater, averaging annually about 1,500 million board feet.

During those years, Colombia exported only about 4 percent of its production of hardwood logs; the Ivory Coast, about 80 percent; Ghana, about 45 percent; and the Philippine Republic, about 60 percent.

The United States was the major export market for logs from Colombia, taking 75 to 90 percent of its annual exports in 1960-63. From the Ivory Coast, Ghana, and the Philippine Republic, the United States took only 1 to 3 percent of the log exports of each in the same period; the combined quantities, however, represented an important share of U.S. imports. Japan was the leading importer of Philippine logs, and several European countries were the chief importers of African logs.

Table 1.--Logs and timber (except pulpwood): U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1958-65

(In millions of board feet)

Year	Production 1/	Imports 2/	Exports	Apparent consumption
1958	39,630	3/ 85	170	39,540
1959	43,580	99	205	43,470
1960	39,160	112	266	39,010
1961	38,560	107	482	38,180
1962	39,970	101	522	39,550
1963	42,000	99	952	41,150
1964	44,400	66	1,087	43,380
1965	45,130	69	4/ 1,190	44,010

1/ Estimated from statistics of the U.S. Department of Agriculture.

2/ For each of the years 1958-62, data include an estimated 1 million board feet of timber other than logs.

3/ Estimated; less than official statistics, in which an error is apparent.

4/ Includes 3 million board feet of timber not classified as to species and therefore not included in either table 3 or table 4.

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

Table 2.--Saw logs: U.S. production, by geographic areas and principal producing States and by types of wood, 1962

(In millions of board feet)

Geographic area and State	Softwood	Hardwood	Total
U.S. total	27,335	6,798	34,133
North, 1/ total	1,089	2,880	3,970
South, 2/ total	6,486	3,773	10,259
North Carolina	1,124	476	1,600
Arkansas	760	446	1,206
Georgia	792	308	1,100
Virginia	553	547	1,100
Alabama	750	342	1,092
West, 3/ total	19,759	144	19,903
Oregon	7,656	56	7,712
California	4,990	12	5,002
Washington	3,415	58	3,473
Idaho	1,416	1	1,417
Montana	1,160	8	1,168

1/ Includes the New England, Middle Atlantic, Lake States, and Central States regions.

2/ Includes the South Atlantic, East Gulf, Central Gulf, and West Gulf regions.

3/ Includes the Pacific Northwest, Pacific Southwest, Northern Rocky Mountain, and Southern Rocky Mountain regions.

Source: Timber Trends in the United States, U.S. Department of Agriculture, February 1965.

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

Table 3.--Softwood logs, bolts, and hewn timber (except pulpwood): U.S. exports of domestic merchandise, by principal markets, 1958 and 1962-65

Country	1958	1962	1963	1964	1965
	Quantity (million board feet)				
Japan	44	326	689	752	800
Canada	81	124	169	245	304
Republic of Korea	1/	1	18	22	3
All other	2	2	4	4	4
Total	127	453	880	1,023	1,111
	Value (1,000 dollars)				
Japan	4,249	22,849	44,128	53,145	65,574
Canada	4,043	7,318	9,543	12,113	16,064
Republic of Korea	25	28	1,117	1,148	233
All other	254	221	473	379	558
Total	8,571	30,416	55,261	66,785	82,429
	Unit value (per 1,000 board feet) 2/				
Japan	$97	$70	$64	$71	$82
Canada	50	59	57	49	53
Republic of Korea	83	63	64	53	84
All other	115	105	103	104	121
Average	67	67	63	65	74

1/ Less than 500,000 board feet.
2/ Calculated from the unrounded figures.

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

Table 4.--Hardwood logs, bolts, and hewn timber (except pulpwood): U.S. exports of domestic merchandise, by principal markets, 1958 and 1962-65

Country	1958	1962	1963	1964	1965
	Quantity (million board feet)				
West Germany	2.8	13.2	12.8	8.3	10.4
Italy	2.7	5.3	8.3	4.3	6.8
Canada	31.5	43.2	40.7	43.5	48.3
Switzerland	.1	.5	1.4	1.3	2.6
Japan	4.3	2.9	2.4	3.0	4.1
All other	1.1	4.4	6.2	3.3	3.6
Total	42.5	69.5	71.8	63.7	75.8
	Value (1,000 dollars)				
West Germany	1,011	5,702	6,162	6,490	12,546
Italy	1,477	4,431	5,392	3,655	7,803
Canada	2,042	4,551	4,612	3,894	5,100
Switzerland	119	224	957	944	2,905
Japan	484	924	1,095	930	2,426
All other	435	1,289	1,760	1,647	2,585
Total	5,568	17,121	19,978	17,560	33,365
	Unit value (per 1,000 board feet) 1/				
West Germany	$359	$431	$481	$781	$1,205
Italy	550	840	647	859	1,148
Canada	65	105	113	90	106
Switzerland	827	436	682	734	1,115
Japan	113	316	455	307	589
All other	395	293	284	499	709
Average	131	246	278	276	440

1/ Calculated from the unrounded figures.

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

Table 5.--Softwood logs: U.S. imports for consumption, by principal species, 1958 and 1962-65 1/

Species	1958	1962	1963	1964	1965
	Quantity (million board feet)				
Fir, spruce, and hemlock	14.7	17.5	21.7	4.5	7.9
Douglas-fir	.9	2.6	10.0	2/	-
All other 3/	5.9	17.6	11.9	4.2	5.6
Total	21.5	37.7	43.6	8.7	13.5
	Value (1,000 dollars)				
Fir, spruce, and hemlock	555	750	900	215	425
Douglas-fir	39	109	505	2/	-
All other 3/	201	693	507	208	281
Total	795	1,552	1,912	424	706
	Unit value (per 1,000 board feet) 4/				
Fir, spruce, and hemlock	$38	$43	$41	$48	$54
Douglas-fir	47	41	51	2/	-
All other 3/	34	39	42	49	50
Average	37	41	44	49	52

1/ Virtually all imports were from Canada.
2/ It is believed that published data are incorrect.
3/ Chiefly cedar.
4/ Calculated from the unrounded figures.

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

Table 6.--Hardwood logs: U.S. imports for consumption, by principal sources, 1958 and 1962-65

Country	1958	1962	1963	1964	1965
	Quantity (million board feet)				
Colombia	13.7	16.9	16.5	11.7	11.5
Canada	6.3	6.0	8.1	9.4	6.8
Ivory Coast	1/ 9.5	2/ 6.0	2/ 7.9	9.7	7.9
Philippine Republic	17.6	12.7	7.0	6.7	8.6
Ghana	7.8	3.7	4.2	6.6	2.8
Brazil	1.4	3.3	2.4	1.0	1.6
Nicaragua	1.1	2.7	1.1	1.8	1.8
Ecuador	-	-	.5	3.7	3.4
All other	3/ 5.4	10.8	6.5	5.7	10.2
Total	3/62.8	62.1	54.2	56.3	54.6
	Value (1,000 dollars)				
Colombia	620	1,389	1,715	1,125	1,174
Canada	1,008	923	940	1,165	1,008
Ivory Coast	1/ 955	2/ 558	2/ 731	862	688
Philippine Republic	1,037	876	498	510	598
Ghana	763	446	638	922	366
Brazil	170	534	435	250	261
Nicaragua	148	304	138	239	255
Ecuador	-	-	58	255	250
All other	952	1,418	981	955	1,392
Total	5,653	6,448	6,134	6,283	5,992
	Unit value (per 1,000 board feet) 4/				
Colombia	$45	$82	$104	$96	$102
Canada	159	155	117	124	149
Ivory Coast	101	94	93	88	87
Philippine Republic	59	69	71	77	70
Ghana	98	121	154	139	129
Brazil	118	163	177	262	161
Nicaragua	132	112	130	134	140
Ecuador	-	-	110	68	75
All other	176	131	151	168	136
Average	90	104	113	112	110

1/ Reported as French West Africa, believed chiefly Ivory Coast.
2/ Reported as "other" West Africa, believed chiefly Ivory Coast.
3/ Estimated because of an apparent error in the published statistics.
4/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 7.--Hardwood logs: U.S. imports for consumption, by principal species, 1958 and 1962-65

Species	1958	1962	1963	1965	1965
	Quantity (million board feet)				
Mahogany	21.2	16.6	13.7	16.1	12.8
Cativo	1/ 10.9	1/ 16.8	1/ 16.5	10.0	11.4
Birch and maple	2/	2/	2/	6.9	6.2
Lauan	17.9	15.4	8.7	7.5	11.0
Teak and lignum-vitae	.5	.4	.3	.3	.2
All other	3/ 12.3	12.9	15.0	15.5	13.0
Total	3/ 62.8	62.1	54.2	56.3	54.6
	Value (1,000 dollars)				
Mahogany	2,337	2,167	1,665	2,000	1,526
Cativo	1/ 510	1/ 1,379	1/ 1,712	956	1,171
Birch and maple	2/	2/	2/	1,090	946
Lauan	1,055	1,052	614	570	740
Teak and lignum-vitae	278	232	233	184	165
All other	1,473	1,618	1,910	1,483	1,442
Total	5,653	6,448	6,134	6,283	5,992
	Unit value (per 1,000 board feet) 4/				
Mahogany	$110	$130	$122	$124	$119
Cativo	47	82	104	96	102
Birch and maple	2/	2/	2/	158	154
Lauan	59	68	71	76	68
Teak and lignum-vitae	564	648	744	662	795
All other	120	125	127	95	111
Average	90	104	113	112	110

1/ Estimated.
2/ Included in "All other."
3/ Estimated because of an apparent error in the published statistics.
4/ Calculated from the unrounded figures.

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

November 1966
2:1

Commodity	TSUS item
Wood sticks in the rough	200.40
Wood blocks, blanks, or sticks, rough-shaped:	
For gunstocks	200.50
Other	200.55

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. consumption of the materials considered here is supplied almost entirely by domestic producers. Annual U.S. exports, which are believed to account for a small part of total domestic output, have been valued at approximately $4 million in recent years, whereas annual imports have been valued at $1 million or less.

Description and uses

The sticks under item 200.40 include natural (unprocessed) pieces of wood (except bamboo or rattan) and those cut into lengths suitable for sticks for umbrellas, parasols, sunshades, whips, fishing rods, or walking canes. Some of the imports under this provision have probably been rough-sawn sticks. In recent years, wood sticks for umbrellas and the other specified articles have been used in diminishing quantities, especially in the United States. In the production of umbrellas, parasols, and sunshades, for example, wood sticks have been almost entirely replaced by metal tubing, and in the production of fishing rods, by fiber glass.

Wood blocks or blanks which have been rough shaped so as to be dedicated to the manufacture of finished gunstocks are known in the trade as gun blocks or gunstock blanks. These blanks are usually produced on a bandsaw from rough-sawn unedged lumber. In a ruling abstracted in T.D. 56369(12), the Bureau of Customs determined that imports of gunstock blanks surfaced on one side are further advanced than the blanks provided for in 200.50 and are therefore classified under item 207.00. Most gunstock blanks are made of walnut wood because of its easy workability, stability after seasoning, and pleasing color and grain; some are made of other hardwoods, especially birch or maple.

The wood blocks, blanks, or sticks provided for in item 200.55 are rough shaped by boring, hewing, or sawing so as to be dedicated to

finishing into a variety of specific articles (other than gunstocks), such as shoe lasts, heels, handles, shuttles, archery bows, or billiard cues. Other applications for the wood pieces considered here include bobbins, caps for bottle stoppers, chopping blocks, hockey sticks, musical instruments, broom handles, and bowling-pin blanks. Cane or reed (Arundo donax) strips used for making musical-instrument reeds, formerly entered under item 200.55, are classifiable in item 222.64 and are covered in the summary on that item in volume 2:2.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
200.40	Wood sticks in the rough	Free
	Wood blocks, blanks, or sticks, rough-shaped:	
200.50	For gunstocks	Free
200.55	Other	0.5% ad val.

The duty-free treatment of wood sticks (item 200.40) and gunstock blanks (item 200.50) was provided for in the original Tariff Act of 1930 and has not been subject to a trade-agreement concession. The 0.5-percent rate for the wood blocks, blanks, and sticks provided for in item 200.55 was derived from the rate which became effective on July 1, 1963, as a result of a concession granted by the United States in the General Agreement on Tariffs and Trade.

U.S. consumption and production

In the United States there are no known operations that produce for sale to others the wood sticks provided for in item 200.40, and there is no information on domestic consumption.

U.S. requirements for gunstock blanks are supplied principally by domestic producers. Domestic consumption of such blanks, which generally fluctuates from year to year, is substantially larger in periods of heavy military procurement. Four firms--situated in Iowa, Kansas, Missouri, and Ohio--produce such blanks from walnut, and at least one firm--in Maine--produces them from birch. Each of these manufacturers also produces other articles of wood. The production of walnut gunstock blanks amounted to 2.3 million pieces, valued at $2.8 million, in 1963 and to 2.5 million pieces, valued at $1.8 million, in 1964. The decline in the value of production that accompanied the increase

in quantity reflects changes in the sizes and types of gunstock blanks produced. Corresponding data for birch gunstock blanks are not available.

Official statistics on domestic consumption and production of the wood blocks, blanks, and sticks provided for in item 200.55 are not available. Such articles are usually produced in the United States as part of an integrated operation in the manufacture of a wide variety of finished products. Several hundred small firms located in the hardwood timber regions of the eastern United States are engaged in such operations. Their finished products are estimated to have a value of more than $100 million annually. There is also substantial production of wood blocks for sale as such, but their value is not known.

U.S. exports

Annual exports of wood blocks and blanks in the period 1958-65 ranged in value from $3.2 million (in 1958) to $4.3 million (in 1961) and amounted to $4.1 million in 1965. Such exports are believed to represent a small portion of the domestic output. The exports are usually of hardwood species available only in the United States, or more readily available here than elsewhere (e.g., hickory). U.S. exports of hardwood blocks and blanks, by product description, in 1965 were as follows:

Description	Quantity	Value	Unit value
	1,000 bd. ft.	1,000 dollars	Per 1,000 bd. ft.
Ski blocks and billets	3,961	1,513	$382
Handle blanks	3,520	1,055	300
Shuttle-block blanks	843	679	806
Miscellaneous small dimension stock	2,342	837	357
Total or average	10,666	4,084	383

Shuttle-block blanks, which are usually of dogwood or persimmon, have an average unit value more than twice that of the other types of products shown above. The miscellaneous group includes such articles as baseball-bat blanks, bobbin blocks, hockey-stick blanks, picker-stick blanks, spool blanks, and wheel blocks; exports, if any, of gunstock blanks and wood sticks are small.

U.S. exports of wood blocks and blanks have gone to more than 25 countries in recent years. The leading export markets (table 1) have been the United Kingdom (chiefly for handle and shuttle-block blanks,

and miscellaneous small dimension stock), Canada (chiefly for handle blanks and miscellaneous small dimension stock), West Germany and Austria (chiefly for ski blocks and billets), and India (chiefly for shuttle-block blanks).

U.S. imports

U.S. imports of the wood sticks and blocks here considered fluctuate from year to year both in total value and in composition, and usually account for less than 1 percent of annual domestic consumption. The combined value of such imports was lower in 1965 (about $690,000) than in any other recent year.

The "other" wood blocks, blanks, and sticks (entered under item 200.55) have accounted for most of the imports in recent years (table 2). Such imports, principally from Canada, included a wide variety of rough-shaped blocks used for making shoe lasts, caps for bottle stoppers broom handles, bobbins, hockey sticks, brushes, and similar articles. The imports from West Germany consisted chiefly of granadilla wood blocks used in the manufacture of musical instruments, and those from other countries consisted chiefly of wood blocks of other exotic wood species not available in the United States.

Reported imports of the wood sticks provided for under item 200.40 show larger shipments from Canada in 1964 than in any other recent year. The reported imports for 1964 included pine "pickets" for use in shade rollers (from Canada); sticks from tree fern roots (from Mexico); and cane or reed sticks 1/ for use in woodwind musical instruments (from France and Spain).

Imports of wood blocks for gunstocks (item 200.50) were equivalent to not more than 2 percent of domestic production in 1963 and 1964 and probably consisted in part of gunstock blanks of wood species not available in the United States.

1/ The Bureau of Customs in a 1965 ruling abstracted as T.D. 56475 (12) held cane and reed sticks to be classifiable in item 222.64.

Table 1.--Wood blocks and blanks: U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965
	Quantity (1,000 board feet)				
United Kingdom	2,474	3,252	2,292	2,368	2,548
Canada	2,099	1,112	1,338	1,640	3,389
West Germany	845	1,173	994	992	1,063
Austria	276	355	407	673	637
India	552	702	570	520	415
Norway	305	449	448	566	515
Australia	717	437	800	506	449
Sweden	310	558	509	587	421
All other	1,394	1,812	1,435	1,191	1,229
Total	8,972	9,850	8,793	9,043	10,666
	Value (1,000 dollars)				
United Kingdom	896	1,268	906	873	937
Canada	410	340	480	449	737
West Germany	332	504	402	396	491
Austria	150	183	170	317	358
India	299	528	380	379	325
Norway	113	174	214	248	262
Australia	249	186	280	198	181
Sweden	104	215	153	203	154
All other	673	872	691	666	639
Total	3,226	4,270	3,676	3,729	4,084

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

Note.--Data shown here are for the following export classes of hardwood dimension stock: (1) Handle blanks, including squares; (2) shuttle-block blanks; (3) ski blanks and billets; and (4) miscellaneous small dimension stock.

Table 2.--Wood sticks, wood blocks for gunstocks, and other wood blocks: U.S. imports for consumption, by principal sources, specified years 1958 to 1965

(In thousands of dollars)

Country	1958	1961	1963	1964	1965
	Wood sticks				
West Germany	-	3	-	-	21
Mexico	-	3	10	21	19
Portugal	-	-	35	19	19
Spain	9	16	36	9	10
Canada	7	4	-	90	7
France	11	66	87	30	-
All other	5	11	11	1	7
Total	32	103	179	170	83
	Wood blocks for gunstocks				
Canada	-	3	1/	-	5
Austria	-	10	-	9	5
France	27	10	45	7	4
All other	6	2	5	6	1
Total	33	25	50	22	15
	Other wood blocks				
Canada	735	857	493	503	544
West Germany	20	26	45	85	29
All other	46	20	49	40	19
Total	801	903	587	628	592

1/ Less than $500.

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

Note.--Imports from France consisted of cane or reed strips for making musical instrument reeds; such strips were reported under item 222.64 in 1965. Some imports from Spain and Portugal were also known to be of such cane or reed.

Commodity	TSUS item
Brierroot, rough or in blocks--------	200.45

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

Domestic consumption of brierroot in recent years has consisted almost entirely of imports, which averaged $1.2 million annually in 1961-63, and amounted to about $2.9 million in 1965.

Description and uses

Brierroot is the wood obtained from the root crown (the swollen burllike portion at the ground surface) of several species of treelike shrubs of the heath family of plants (Ericaceae). White or tree heath (Erica arborea), the species most widely used for tobacco pipes, is harvested commercially in northern Africa and southern Europe. It also grows in Asia Minor, the Caucasus, and the high mountains of central Africa. Block cut from the root of this shrub is known commercially as brier (or briar) block and is designed for the manufacture of tobacco pipe bowls. Brierroot is marketed as rough root wood or as rough-cut blocks of various sizes, shapes, and grades but is imported almost exclusively in block form.

Tobacco pipes and pipe bowls of brier (items 756.20 and 756.25) are discussed in a summary in volume 7:6.

Brierroot is hard and durable when properly seasoned, takes a high polish, is highly resistant to the heat of burning tobacco, and gives off no odor of its own at high temperatures; in the production of smokers' articles, it has no serious competition from other kinds of wood.

U.S. tariff treatment

The current column 1 rate of duty applicable to imports (see general headnote 3 in appendix A) is as follows:

TSUS item	Commodity	Rate of duty
200.45	Brierroot, rough or in blocks----------	2% ad val.

This rate, in effect since July 1, 1963, reflects a concession granted by the United States in the General Agreement on Tariffs and Trade. The concession became operative in two annual stages.

U.S. consumption and imports

The U.S. consumption of brier blocks consists almost entirely of imports because brierroot of the kind preferred in the pipe trade is not produced in the United States. Such imports, though variable from year to year, have exhibited no marked upward or downward trend. The bulk of the imported brierroot is manufactured into pipes in the New York metropolitan area, where most of the pipe-producing concerns are situated.

During World War II the domestic pipe industry survived on its stockpile of imported brier blocks and on blocks from such native woods as laurel, rhododendron, and manzanita. These woods (also of the family Ericaceae) are not equal to brier in performance because they are softer and less heat resistant, take less polish, develop tiny cracks after processing, or have other deficiencies. Consequently, with the end of the war, commercial production of pipes from these substitutes for brierroot virtually ceased.

In 1965, U.S. imports of brierroot amounted to 132,600 gross of blocks, valued at $2,855,000 (see accompanying table). That year was the highest for value and the second highest for quantity in the period 1958-65. Only 1960 was higher for quantity. From 1961 to 1965 the unit values more than doubled, indicating an increasing scarcity of, and a greater demand for, brier blocks.

Italy is the principal supplier of brier blocks to the United States, a position it has maintained for many years. Spain has been the second most important supplier for about the past decade, with Greece in third place. Occasional suppliers in recent years included France, Algeria, and Morocco.

Brier blocks from Greece have had a markedly higher unit value than those from most other countries in recent years, whereas Spanish blocks have been the lowest in unit value. The unit values are believed to be indicative of the quality of the brier blocks.

The United States is one of the principal export markets for brier blocks from Italy as well as for those from Spain. Information on the production of brierroot in these two countries is not available.

Brierroot: U.S. imports for consumption, by principal sources, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965
	Quantity (1,000 gross of blocks)				
Italy	72.1	97.1	70.1	76.9	86.5
Spain	13.4	22.9	21.2	24.1	32.3
Greece	3.0	4.3	5.0	7.5	13.2
All other	3.9	1.1	.9	4.9	.6
Total	92.4	125.4	97.2	113.4	132.6
	Value (1,000 dollars)				
Italy	451	1,053	847	1,455	1,924
Spain	101	177	222	351	530
Greece	43	61	100	188	384
All other	45	15	21	32	17
Total	640	1,305	1,190	2,026	2,855
	Unit value (per gross) 1/				
Italy	$6.26	$10.84	$12.08	$18.91	$22.26
Spain	7.50	7.75	10.45	14.57	16.41
Greece	14.39	14.20	19.89	25.24	29.14
All other	11.51	12.19	24.54	2/6.53	27.28
Average	6.92	10.41	12.24	17.86	21.54

1/ Calculated from the unrounded figures.
2/ The low unit value indicates probability of an error in the data on the imports from Portugal.

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

November 1966
2:1

Commodity	TSUS item
Wood piles and poles	200.60 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

In 1964 and 1965, in contrast to earlier recent years, U.S. foreign trade in wood piles and poles combined was on an export basis in terms of value. Total exports in those 2 years, valued at $6.1 million and $5.5 million, respectively, consisted principally of poles. Exports probably accounted for less than 3 percent of the domestic output of wood poles and about 6 percent of the domestic output of wood piles.

Description and uses

Piles and poles are long, slender, cylindrical sections of tree trunks ranging from 16 to 90 feet in length, and all but the largest are 22 inches or less in diameter at the butt end. They are generally cut from trees which grow tall, straight, and slender with a minimum of taper and from species that produce wood which is strong in relation to its weight. Southern pines and Douglas-fir are the principal species used for both piles and poles; western redcedar and lodgepole pine are also important species for poles, and the oaks are sometimes used for piles.

Pile and pole timber is debarked and usually seasoned (dried) before treatment with a preservative (commonly creosote or its mixtures). Piles and poles are often "shaved" mechanically to remove bark and irregularities in the outer wood and, if shaved, may be incised with slitlike holes to permit better entry of the preservative.

Most commercial wood poles are treated with a preservative before use; some, particularly of species with naturally durable heartwood, such as cedar, are treated only at the butt end. Wood piles are usually treated full length, if at all; those which are to be completely submerged either in fresh water or in soil below the water table, or which are only for temporary use, usually are not treated.

Piles may be classed as marine, construction, or foundation pilings, according to their use. Marine pilings are used as supports in the construction of docks, wharves, or bridges over water. Construction pilings are used in railway bridges and in other heavy

construction on land. Foundation pilings are driven into the ground as footings under large buildings or as bridge footings in low-lying or unstable terrain. Wood piles compete with steel and concrete piles, but wood piles (whether treated or not) are generally preferred by some consumers because of elasticity, strength, durability, versatility, and low cost.

Poles are used for telephone, telegraph, and electric power distribution lines. They are also used for the light construction of farm and industrial buildings, a use which has found increasing favor in recent years. Although steel towers are generally used for high-voltage electric transmission lines, treated wood poles are favored for low-voltage electric distribution lines and for telephone lines because of their low electric conductivity, high strength and durability, and low installation cost.

Posts, also provided for in TSUS item 200.60, are covered in the summary on wood fencing in this volume.

U.S. tariff treatment

Imports of wood piles and poles, whether or not treated with creosote or other wood preservatives, are free of duty. The existing duty-free treatment was derived from duty-free provisions of paragraphs 1803 and 1804 of the original Tariff Act of 1930, which were bound in concessions granted by the United States in the General Agreement on Tariffs and Trade (GATT), effective January 1, 1948.

Prior to August 31, 1963, the effective date of the TSUS, piles ("round timber") of fir, hemlock, larch, pine, or spruce used for building wharves were dutiable under paragraph 401 of the Tariff Act of 1930 at the trade-agreement rate of 50 cents per 1,000 board feet, a duty equivalent to less than 1 percent ad valorem. This nominal duty was discontinued when all wood piles were made duty free under item 200.60 of the TSUS. Since January 1, 1966, the duty-free treatment of all piles provided for in item 200.60 has been bound in a GATT concession.

U.S. consumption

U.S. apparent consumption of wood piles and poles combined amounted to 117 million cubic feet in 1962 (the latest year for which comprehensive production data are available), compared with 118 million cubic feet consumed in 1952 (table 1). Poles accounted for 94 million cubic feet of the total in 1962, and 90 million cubic feet in 1952.

Wood poles are used in most areas of the United States, whereas wood piles are utilized chiefly in cities and along waterfronts. In the period 1958-65, the number of wood poles erected annually, most of which were treated, followed a generally upward trend, with 1965 the highest year of the period. Well over half of the poles erected in those years were utility poles, mostly for maintenance of established lines; the remainder were used in building construction, an outlet of increasing importance since the 1950's. The annual U.S. consumption of piles, both treated and untreated, declined from 28 million cubic feet in 1952 to 23 million cubic feet in 1962, and may have declined further in more recent years because of increased use of steel and concrete piles in heavy construction on land. In contrast, the annual use of treated wood piles rose by almost 20 percent from 1952 to 1962, then dropped somewhat in 1963-64, but in 1965 was almost at the 1962 level.

U.S. producers

Hundreds of individuals, some working for contract loggers, engage in the production of piles and poles. Most of the large-volume producers of piles and poles restrict their operations to such products, which require special production equipment and skills.

In 1965, 215 plants reported treating poles, and 137 reported treating piles. These figures include considerable duplication, inasmuch as most plants which treat poles also treat piles. Poles and piles accounted for about 40 percent of the volume of wood products treated. A few public utility companies operate treating plants; the others purchase the treated poles they install. More than half of the plants treating piles and poles are located in the South, a region where there is much young southern pine of suitable size.

U.S. production

Official data on the U.S. production of piles and poles--data usually based on U.S. Forest Service studies of timber cut--are available about once every decade. Annual production, which approximates apparent domestic consumption, is shown in table 1 for 1952 and 1962. Since 1962, the increase in annual production of wood poles has been commensurate with the aggregate increase in domestic demand and exports. With respect to wood piles, however, the recent trend of production, like that of consumption and exports, may have been slightly downward.

Most of the poles and piles were produced in the South, with the West as the second-ranking region (table 2). U.S. Forest Service data

show the quantities of wood poles and wood piles treated in 1958 and 1962-65, as follows (in millions of cubic feet):

Product	1958	1962	1963	1964	1965
Poles	73.8	78.7	77.0	80.6	83.9
Piles	16.2	17.8	15.9	16.5	17.8
Total	90.0	96.5	92.9	97.1	101.7

U.S. exports

Total exports of wood piles and poles, which fluctuate from year to year, were valued at $5.5 million in 1965, compared with $5.2 million in 1958 (table 3). In terms of quantity, exports of wood piles accounted for 9.4 percent of domestic production in 1962, compared with 2.5 percent in 1952; the corresponding percentages for exports of wood poles were 1.5 percent of domestic production in 1962 and 2.0 percent in 1952 (table 1).

The principal foreign markets for U.S. wood piles have been Japan and Canada; and for poles, Canada and Mexico. Most of the piles going to Canada were treated, but most of those going to Japan were untreated. The poles exported to Mexico are believed to have consisted mostly of small treated poles.

U.S. imports

In recent years, annual U.S. imports of wood poles and piles have fluctuated within a range of 2.5 to 2.9 million cubic feet, valued at $4.8 million to $5.3 million. The value of annual imports of poles has been 10 to 20 times the value of imports of wood piles (table 4).

The imported poles, chiefly from Canada, are of softwood and comparable to the U.S. product. Imported piles entered chiefly from Canada and British Guiana.1/ The latter outranked Canada as a supplier in the years 1960-62. Nearly all the piles from Canada are of softwood and are similar to the U.S. product; those from British Guiana, which are of a hardwood named "greenheart," a species not produced in the United States, are very durable, and have a considerably higher unit value than the piles from Canada. The greenheart piles are chiefly used in wharf and dock installations.

1/ On May 26, 1966, when British Guiana became an independent nation, its name was changed to Guyana.

Foreign production and trade

Canada.--Poles and piles are produced in Canada in much the same manner as in the United States; little published information is available about this phase of the Canadian timber industry. Production of wood poles and piles in Canada has been increasing in recent years. Annual production increased by about 50 percent from 1958 to 1962 according to the following published by the Dominion Bureau of Statistics:

Year	Production (1,000 cu. ft.)
1958	16,823
1959	14,622
1960	18,875
1961	24,820
1962	25,887

In recent years one-half to two-thirds of Canada's annual output of wood piles and poles has been utilized domestically, and the United States has been the principal market for exports, which have consisted mostly of poles. Japan has been the chief export market for Canadian piles. The following tabulation (based on official Canadian statistics) shows Canada's exports of wood piles and poles, total and to the United States, in 1958 and 1962-65:

Year	Total	To the United States	
		Amount	Percent of total
	1,000 Canadian dollars	1,000 Canadian dollars	
1958	4,164	3,930	94
1962	6,546	5,275	81
1963	6,077	5,442	90
1964	5,424	4,970	92
1965	5,185	4,903	95

British Guiana.--Data on the production of piles in British Guiana are not readily available. Official data (from the British Guiana Department of Customs and Excise) on exports of piles, which are believed to account for most of domestic output, are as follows:

Year	Total	To the United States	
		Amount	Percent of total
	1,000 cubic feet	1,000 cubic feet	
1958	314	136	43
1959	285	170	60
1960	450	298	66
1961	326	219	67

Although the level of Guiana's exports of piles was about the same in 1955-57 as in 1958-61, the share to the United States, which was 80 percent in 1955-57, was much smaller in 1958-61. Other important customers for British Guiana's piling were Denmark, Panama, West Germany, Trinidad, and Venezuela.

Table 1.--Wood piles and poles: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1952 and 1962

Item	Piles		Poles		Total	
	1952	1962	1952	1962	1952	1962
	Quantity (1,000 cubic feet)					
Production	27,999	25,003	87,637	92,491	115,636	117,494
Imports 1/	847	268	3,978	2,636	4,825	2,904
Exports 1/	711	2,349	1,772	1,372	2,483	3,721
Apparent consumption	28,135	22,922	89,843	93,755	117,978	116,677
	Value (1,000 dollars)					
Imports	551	300	4,721	5,033	5,272	5,333
Exports	865	1,145	2,583	2,351	3,448	3,496
	Percent (based on quantity)					
Ratio of--						
Exports to production	2.5	9.4	2.0	1.5	2.1	3.2
Imports to consumption	3.0	1.2	4.4	2.8	4.1	2.5

1/ Quantities reported in the official statistics were converted to cubic feet on the basis of 1,471 linear feet of piles, or 73.91 poles, to 1,000 cubic feet.

Source: Compiled from official statistics of the U.S. Departments of Agriculture and Commerce.

Note.--Value of production and consumption is not available.

Table 2.--Wood piles and poles: U.S. production, by regions and types of wood, 1962

Region	Piles			
	Softwood	Hardwood	Total	
			1,000 linear ft.	1,000 cu. ft.
	1,000 linear ft.	1,000 linear ft.		
South 1/	30,870	1,693	32,563	18,951
West 2/	3,529	64	3,593	3,094
North 3/	1,773	3,601	5,374	2,958
Total	36,172	5,358	41,530	25,003
	Poles			
	Softwood	Hardwood	Total	
			1,000 pieces	1,000 cu. ft.
	1,000 pieces	1,000 pieces		
South 1/	5,359	7	5,366	74,233
West 2/	883	-	883	15,476
North 3/	374	33	407	2,782
Total	6,616	40	6,656	92,491

1/ Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Texas, and Oklahoma.

2/ Montana, western South Dakota, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon, California, Hawaii, and Alaska.

3/ Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, Ohio, Indiana, Michigan, Wisconsin, Illinois, Kentucky, Missouri, Iowa, Minnesota, North Dakota, eastern South Dakota, Nebraska, and Kansas.

Source: Compiled from official statistics of the U.S. Department of Agriculture, Forest Service, Timber Trends in the United States, Forest Resource Report No. 17, 1965.

Table 3.--Wood piles and poles: U.S. exports of domestic merchandise, by principal markets, 1958 and 1962-65

Country	Piles				
	1958	1962	1963	1964	1965
	Quantity (1,000 linear feet)				
Canada	197	202	255	332	700
Japan	3,115	2,670	544	1,159	938
Mexico	127	134	100	301	28
All other	221	448	318	573	106
Total	3,660	3,454	1,217	2,365	1,772
	Value (1,000 dollars)				
Canada	225	116	203	260	541
Japan	749	591	168	241	289
Mexico	149	97	48	121	31
All other	213	341	221	498	86
Total	1,336	1,145	640	1,111	947
	Poles				
	1958	1962	1963	1964	1965
	Quantity (1,000 pieces)				
Mexico	25	11	26	83	66
Greece	1	25	1/	86	36
Canada	49	30	30	18	29
Jamaica	12	9	4	11	23
All other	81	27	45	28	44
Total	168	102	105	226	198
	Value (1,000 dollars)				
Mexico	621	439	654	2,237	1,485
Greece	40	468	3	1,221	873
Canada	1,202	545	584	578	833
Jamaica	120	160	68	268	270
All other	1,912	739	723	640	1,068
Total	3,895	2,351	2,032	4,944	4,529

1/ Less than 500 pieces.

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

November 1966
2:1

Table 4.--Wood piles and poles: U.S. imports for consumption, 1958 and 1962-65

Year	Piles		Poles		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 linear ft.	1,000 dollars	1,000 pieces	1,000 dollars	1,000 cu. ft.	1,000 dollars
1958--	714	343	157	3,673	2,611	4,016
1962--	431	300	195	5,033	2,904	5,333
1963--	1/ 254	1/ 237	1/ 181	1/ 4,591	1/ 2,533	4,828
1964--	2/	3/ 270	2/	3/ 4,552	3/ 2,561	4/ 4,822
1965--	2/	3/ 265	2/	3/ 4,510	2/	4/ 4,775

1/ Partly estimated.
2/ Not available.
3/ Estimated.
4/ Includes posts other than fenceposts, valued at about 1 thousand dollars.

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

Commodity	TSUS item
Posts	200.60 (pt.)
Laths	200.65
Pickets, palings, and rails	200.75

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

In recent years at least 95 percent of the wood fencing materials consumed in the United States have been obtained from domestic producers. Exports are believed to have been much smaller than imports. In both 1964 and 1965, imports were valued at about $3.5 million.

Description and uses

Currently the wood posts, laths, pickets, palings, and rails considered here are used principally as fencing materials. The products covered by this summary include the articles treated with creosote or other wood preservative, as well as those not so treated.

The posts provided for under item 200.60, which may be round, sawed, hewed, or split, are used chiefly for fencing on farms, highways, and railroads but also have other uses, such as for supporting signs and guardrails. To be durable, posts must be made either from the naturally durable heartwood of certain tree species (e.g., cedar, redwood, black locust, or catalpa) or from other woods which have been treated with a wood preservative (e.g., pine, Douglas-fir, red oak, or gum).

Fenceposts are most commonly 4 to 5 inches in diameter or across a side and 6-1/2 to 7 feet long; some are tapered. Standard sizes for treated fenceposts, according to commercial standards published by the U.S. Department of Commerce, vary according to type of use. Treated line posts (ordinary fenceposts) range from 6 to 10 feet in length and from 2-1/2 to 4 inches in diameter or across a side at the smaller end. Treated posts used as end, corner, or gate posts are from 7 to 14 feet in length and from 4 to 8 inches in diameter or across a side.

Wood laths (item 200.65) are flat strips of rough-sawed wood usually 1-1/2 or 1-5/8 inches wide, about 3/8 inch thick, and most commonly 32 or 48 inches long; they are rectangular in cross section. Laths are usually made from the slabs or edgings resulting from lumber manufacture; they consist chiefly of sapwood (wood from the outer portion of a tree), which is not durable in prolonged contact with the ground.

Although presently used principally for snow fences, laths are still used to some extent as a wall base for plaster in repairing old houses (formerly their chief use was in lath-wall construction), and as staves in baling bulky goods.

The pickets (also called palings) and rails provided for in item 200.75 are articles which have been so processed physically as to dedicate them to fence construction. Pickets are narrow pieces of sawed or split wood used as uprights in the fabrication of wood fences. Pickets generally range from 2 to 6 feet in length; some have pointed or sloped tops. In cross section, which may be round, half round, or rectangular, pickets are usually larger than laths but smaller than fenceposts. Rails generally do not exceed 4 inches in diameter (or width) or 11 feet in length. Rails may be round, half round, or quartered, or rectangular in cross section.

Pickets and rails last longer when made from treated wood or from the heartwood of a durable species. The kind of wood is of less importance for rails used horizontally in the fabrication of post-and-rail-type fences than for pickets or rails in contact with the ground or where dampness is a factor.

Posts and rails are usually sold by the piece, although they are sometimes sold in unassembled lots consisting of the exact number required for a given length of fence. Lath is usually distributed in bundles of 50 pieces each. Pickets (or palings) are distributed both in unassembled lots and in the form of assembled fencing section or panels.

U.S. tariff treatment

Imports of wood posts, laths, and fence pickets, palings, and rails, whether or not treated with creosote or other wood preservatives, and of fence pickets, palings, and rails, whether or not assembled into sections, are currently free of duty. The existing treatment was derived principally from duty-free provisions in paragraphs 1803, 1804, and 1805 of the original Tariff Act of 1930, which were bound in concessions granted by the United States in the General Agreement on Tariffs and Trade (GATT), effective January 1, 1948.

Prior to August 31, 1963, the effective date of the TSUS, lathe-turned wooden rails were classified as manufactures of wood not specially provided for, under paragraph 412 of the 1930 act and were dutiable at 16-2/3 percent ad valorem. The inconsistency of assessing duties on such rails when other wood fencing was duty free was discontinued under the TSUS. Since January 1, 1966, the duty-free treatment of all rails provided for in item 200.75 has been bound in a GATT concession.

U.S. consumption, production, and exports

It is believed that aggregate domestic consumption of the wood fencing materials considered here, which has been supplied almost entirely by domestic producers, has declined in recent years; complete statistics are not available for production or exports. Other materials, chiefly steel, have long been widely used for utilitarian fencing of the types used on farms and for commercial and industrial purposes. There has been some increase in the use of decorative wood fencing in the past decade, particularly in suburban developments, but this increase has not been sufficient to offset the decline in purely utilitarian wood fencing.

There are many domestic producers of wood fencing materials. They include farmers, woods workers, sawmills, and some commercial fencing concerns. Laths and pickets (or palings) are frequently byproducts of sawmills. Round or split posts, rails, and pickets are usually produced by individual farmers or woods workers, or by commercial fencing companies. Sawn or turned posts and rails, and sawn pickets are produced at sawmills or planing mills, or at special fencing facilities.

The wood fencing concerns located in the Northeast specialize in the production of fencing made of northern white-cedar; while those on the Pacific coast utilize western redcedar or redwood.

The farmers who produce posts do so mostly for their own use. The cash receipts from sales of posts, though small, may be important to some farmers as supplementary income. Nearly all fencing produced by woods workers is for sale, some under contract to fencing concerns. Wood fencing is highly important as a source of income to the independent woods workers, as well as to the fencing concerns; such concerns seldom engage in other types of wood-products operations. Fencing production in sawmills and planing mills is probably of minor importance. Wood lath production, however, does provide sawmills and planing mills with an outlet for otherwise waste material.

Information obtained chiefly from the U.S. Forest Service indicates that annual production of fenceposts declined to 169 million posts in 1962 from 272 million in 1958 and 306 million in 1952. The trend in

the output of pickets and rails, however, is believed to have been upward in recent years.

Exports of wood fencing, which are not separately reported in the official statistics, are probably much smaller than comparable imports and account for an insignificant portion of U.S. output.

U.S. imports

The following tabulation, compiled from official statistics of the U.S. Department of Commerce, shows imports of the various types of wood fencing materials in 1964 and 1965:

Year	Fenceposts		Laths		Pickets (palings) and rails	Total value
	Quantity	Value	Quantity	Value		
	1,000 pieces	1,000 dollars	1,000 pieces	1,000 dollars	1,000 dollars	1,000 dollars
1964	2,445	618	98,511	1,278	1,604	3,500
1965	2,079	603	103,705	1,346	1,612	3,561

It is believed that total annual imports of wood fencing were somewhat larger in 1964 and 1965 than in the immediately preceding years, but continued to account for less than 5 percent of the value of annual consumption. In 1958, imports of wood posts (consisting almost entirely of fenceposts) had amounted to 1,343,000 pieces, valued at $281,000 (table 1), and imports of laths, to 80,100,000 pieces, valued at $932,000 (table 2).

Canada, the chief supplier of U.S. imports of wood fencing, has been virtually the only foreign supplier of posts and laths and the principal supplier of pickets and rails. France has been a minor, though consistent, supplier of pickets assembled into sections. The imports from Canada generally compete with the comparable domestic products.

Foreign production and trade

Canadian production of fenceposts increased from 9.4 million pieces in 1958 to 13.5 million pieces in 1962, according to official Canadian statistics. From one-fifth to one-fourth of the annual output in the 1958-62 period was exported, practically all to the United States.

The following tabulation, compiled from official Canadian statistics, shows Canadian production and exports of wood laths (virtually all of which went to the United States) in 1958 and 1960-63:

Year	Production	Exports	
		Quantity	Ratio to production
	Million pieces	Million pieces	Percent
1958	107	94	88
1960	137	101	74
1961	1/ 121	109	90
1962	1/ 145	113	78
1963	1/ 128	109	85

1/ Shipments by the sawmill industry; there may also be shipments by associated industries.

November 1966
2:1

Table 1.--Wood posts: U.S. imports for consumption, specified years 1958 to 1965

Year	Quantity	Value	Unit value 1/
	1,000 pieces	1,000 dollars	Per piece
1958	1,343	281	$0.21
1961	1,716	389	.23
1963	2,290	535	.23
1964 2/	2,445	618	.25
1965 2/	2,079	603	.29

1/ Calculated from the unrounded figures.
2/ Includes only fenceposts, but data are essentially comparable with those for previous years.

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

Table 2.--Wood laths: U.S. imports for consumption, specified years 1958 to 1965

Year	Quantity	Value	Unit value 1/
	Million pieces	1,000 dollars	Per 1,000 pieces
1958	80	932	$11.64
1961	88	1,181	13.42
1963	88	1,131	12.88
1964	99	1,278	12.98
1965	104	1,346	12.98

1/ Calculated from the unrounded figures.

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

Commodity	TSUS item
Wood railroad ties (except switch or bridge ties)--	200.80

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

The United States has historically been self-sufficient in railroad cross ties of wood. In 1963-65, exports were equivalent in quantity to about 4 percent of domestic output and had an annual average value of $2.5 million, an amount many times the value of annual imports.

Description and uses

Wood railroad ties, except switch or bridge ties, are termed "cross ties"; they consist of short timbers that are laid crosswise in the railroad bed to support the steel rails and keep them in position. Most cross ties are rectangular in cross section. Those used for U.S. standard-gage railroad track are 8 to 9 feet long, 6 to 10 inches wide, and 6 to 7 inches thick; about 99 percent of all railroad track in the United States is standard gage.

Switch ties and bridge ties, classified for tariff purposes as lumber (in items 202.03-202.43, 202.52, or 202.54), are sawed. Most cross ties are sawed, but some are hewed. Switch ties are longer, and bridge ties wider and thicker and usually longer, than cross ties. Switch ties, like cross ties, are laid in ballast, but bridge ties are used to form part of the structure of a bridge, trestle, or viaduct.

About 80 percent of the ties produced in the United States are of hardwood species, principally oak, with gum of second importance; those of softwood species are primarily made from Douglas-fir. The best quality ties are generally used for common-carrier track, whereas the lower quality ties, often known as "industrial type," are used in tracks in switch yards or on spur lines, where speeds are slower or the trains lighter in weight. In recent years cross ties have generally been treated with a preservative, principally creosote, in order to reduce rot and insect attack and to prolong their utility. Despite the development of many new synthetic materials, wood--because of its low cost, convenience, and serviceability when treated--has virtually no competitor as a raw material for railroad ties. However,

ties of other materials (e.g., concrete and steel) have been used, and tests of such ties are currently underway; hence, an expansion in the use of substitutes may develop.

U.S. tariff treatment

Wood railroad ties (except switch or bridge ties), whether or not treated with creosote or other wood preservatives (see headnote 2 to pt. 1A of schedule 2 of the TSUS), are free of duty under item 200.80 of the TSUS. This duty-free treatment was provided for in the original Tariff Act of 1930 and has been bound since January 1, 1948, in a concession granted by the United States in the General Agreement on Tariffs and Trade.

U.S. consumption

In 1965 the apparent U.S. consumption of wood cross ties amounted to 759 million board feet (table 1). Despite a rise in annual consumption from 1962 to 1965, consumption in 1965 was below that in 1958, when 871 million board feet was utilized.

The decline in the volume of cross ties used in recent years is attributable to the following factors: (1) The conversion from double to single track made possible by improvements in communication systems; (2) the abandonment of spur lines and industrial rail lines, owing to increased truck hauling; (3) the abandonment of most city streetcar lines; (4) an increase in the use-life of ties from 5-10 to 20-30 years because of preservative treatment; and (5) an increased use of various devices, such as tie plates which cushion the impact of the rail upon the tie under load-bearing conditions.

U.S. producers

In 1966, hundreds of mills in the United States were producing cross ties, whereas once there were thousands. Currently most of the mills are in the South and the North Central States, where the supply of oak is greatest.

Facilities for producing cross ties range in size from small, portable sawmills with only two or three employees to large, permanent installations with several hundred employees. While many of the portable mills may specialize in sawing ties, most of the permanent mills saw lumber primarily and saw ties only as a sideline. Hewed ties are made by small numbers of forest workers (known as tie hacks), farmers, and others; they usually work singly and often on a part-time basis.

November 1966
2:1

The mill operators sell their ties to concentration yards or treating plants, or directly to the railroads. A few treating plants are owned and operated by the railroads. Some of the concentration yards specialize in marketing ties, and these yards sort the ties by size, drill spike holes to order, treat the ties, and keep inventories of a number of sizes.

U.S. production

In 1965 the U.S. production of wood cross ties totaled 773 million board feet, an amount significantly larger than production in other recent years, but 16 percent smaller than that in 1958. (table 1). The 1965 output was valued at about $80 million, including the value added by treatment. Treated ties increased from 95 percent of estimated total production in 1958 to 99 percent in 1965 (table 2) Of the cross ties treated in 1963, 99 percent were sawed, compared with 77 percent sawed in 1951. Thus production of hewed ties has declined almost to the vanishing point in recent years.

U.S. exports

U.S. exports of wood cross ties amounted to 17 million board feet, valued at $2.1 million, in 1965, compared with 53 million board feet, valued at $5.2 million, in 1958 (table 3). The exports in recent years (principally of hardwood species) have been equivalent in terms of quantity to 2-6 percent of annual domestic production. In 1958 about half of the ties exported were of treated wood, and in 1964, about four-fifths.

Spain was the principal foreign market for U.S. railroad ties in 1958 (table 3) and also in the 3-year period 1961-63, but in 1959, 1960, and 1965 Canada was the principal market, and in 1964, Egypt. Numerous other countries, mostly nations with limited wood resources, receive small quantities of ties from the United States.

U.S. imports

U.S. imports of wood cross ties amounted to 3.0 million board feet, valued at $257,000, in 1965 and to 4.8 million board feet, valued at $342,000, in 1964. Imports in 1958 were 2.6 million board feet, valued at $242,000. In recent years the imports, almost entirely from Canada, have been equivalent to 1 percent or less of domestic consumption. A large part of the imports are used by Canadian railroads on their connecting lines in the United States.

In 1963 (the latest year for which production data are available), Canada produced 2.4 million wood cross ties, or the equivalent of about 94 million board feet, and exported 135,000 such ties, all of which went to the United States. In 1965, however, Canada exported 331,000 ties, of which 86,000 went to the United States. In the period 1961-65, 62 percent of Canada's exports of ties went to the United Kingdom and most of the remainder to the United States.

Table 1.--Wood railroad ties (except switch and bridge ties): U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1958 and 1961-65

(In millions of board feet)

Year	Production 1/	Imports 2/	Exports	Apparent consumption
1958	921	3	53	871
1961	691	2	40	653
1962	518	5	28	495
1963	575	5	32	548
1964	675	5	24	656
1965	773	3	17	759

1/ Estimated.
2/ Chiefly from Canada.

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

Table 2.--Wood railroad ties (except switch and bridge ties): Estimated U.S. production, by types, specified years 1958 to 1965

Type	1958	1961	1963	1964	1965
	Quantity (million board feet)				
Treated hardwood:					
Oak	459	326	272	351	357
Gum	88	48	57	59	63
All other and mixed	191	164	136	144	223
Subtotal	738	538	465	554	643
Treated softwood:					
Douglas-fir	83	52	37	36	47
All other and mixed	57	67	50	77	77
Subtotal	140	119	87	113	124
Untreated	43	34	23	8	6
Total	921	691	575	675	773
	Percent of total				
Treated hardwood:					
Oak	50	47	47	53	46
Gum	9	7	10	9	8
All other and mixed	21	24	24	20	29
Subtotal	80	78	81	82	83
Treated softwood:					
Douglas-fir	9	7	6	5	6
All other and mixed	6	10	9	12	10
Subtotal	15	17	15	17	16
Untreated	5	5	4	1	1
Total	100	100	100	100	100

Source: Treated ties from Wood Preservation Statistics (annual), U.S. Department of Agriculture, Forest Service, in cooperation with the American Wood-Preservers' Association. Untreated ties from data on Class I railroads, Association of American Railroads.

Table 3.--Wood railroad ties (except switch and bridge ties): U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965
	Quantity (million board feet)				
Canada	5.9	4.0	2.0	1.7	7.0
Peru	.6	.7	.5	.5	4.2
Saudi Arabia	3.0	.1	.3	.9	2.3
Jamaica	-	.4	1.2	1.0	1.4
Venezuela	1.6	1.2	2.5	1.4	.9
Egypt	4.1	1.4	-	12.6	.4
Spain	19.6	18.8	9.8	4.4	-
All other	1/ 18.4	2/ 13.7	3/ 15.3	1.1	.5
Total	53.2	40.3	31.6	23.6	16.7
	Value (1,000 dollars)				
Canada	564	489	253	152	836
Peru	48	61	51	45	424
Saudi Arabia	375	16	39	119	286
Jamaica	-	47	166	132	240
Venezuela	213	188	472	208	173
Egypt	623	152	-	1,724	55
Spain	1,289	1,141	639	247	-
All other	1/ 2,042	2/ 1,311	3/ 1,066	141	91
Total	5,154	3,405	2,686	2,768	2,105
	Unit value (per 1,000 board feet) 4/				
Canada	$95	$122	$125	$92	$120
Peru	82	86	96	100	100
Saudi Arabia	125	154	133	127	125
Jamaica	-	133	144	137	178
Venezuela	135	162	187	149	197
Egypt	151	108	-	137	141
Spain	66	61	65	56	-
All other	111	96	70	128	142
Average	97	84	85	117	126

1/ Includes Union of South Africa, 8.4 million board feet, valued at 1,146 thousand dollars.

2/ Includes Pakistan, 9.6 million board feet, valued at 757 thousand dollars.

3/ Includes Republic of Korea, 6.7 million board feet, valued at 450 thousand dollars.

4/ Calculated from the unrounded figures.

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

November 1966

2:1

Commodity	TSUS item
Wood shingles and shakes	200.85

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

Annual U.S. consumption of wood shingles and shakes combined has increased significantly in recent years. Imports supplied almost half of domestic consumption in 1961-65, whereas exports were very small.

Description and uses

The wood shingles and shakes considered here are thin, rectangular pieces of wood that may be stained, painted, or treated with a wood preservative; most shingles and shakes are applied without such treatment. Shakes are generally longer, narrower, and thicker than shingles. Standard shingles range from 16 to 24 inches in length, 3 to 14 inches in width, and 0.40 to 0.50 inch in thickness at the butt end; standard shakes range from 18 to 32 inches in length and from 3/8 to 1-1/4 inches in thickness at the butt end, and are mostly 8 inches or less in width. Nearly all shingles and most shakes taper in thickness from butt to tip.

Used chiefly as a covering for the roof or sides of a building, shingles and shakes are laid in courses or rows which overlap each other so that only a portion near the butt end is exposed to the weather. The usual commercial unit of measure is the "square," the quantity required to cover 100 square feet of roof or of wall surface. Shingles and shakes are packed for sale in bundles. In the commercial standards published by the U.S. Department of Commerce, four bundles of shingles comprise a roof square; in the trade, four or five bundles of shakes--depending on the size and thickness--usually comprise a roof square. Because the exposed portion of shingles (or shakes) is greater on walls than on roofs, fewer bundles comprise a wall square. The roof square, however, is generally the standard measure.

Shingles and shakes are made from blocks of wood that have been cut from logs or bolts, shakes ordinarily being made by splitting and shingles, by sawing. Tapered shakes, however, usually have one split flat surface and one sawed flat surface. "Machine-grooved shakes" are actually sawed shingles that have one face milled with striations or grooves parallel to the vertical edges.

Most shingles and shakes are made from western redcedar because of its durability, light weight, even grain, and nail-holding qualities; small quantities are made from redwood, northern white-cedar, and other softwoods. Hardwoods are not used commercially for making shingles and shakes. In the trade, redcedar shingles and shakes are generally graded according to the specifications established by the Red Cedar Shingle & Handsplit Shake Bureau, of Seattle, Wash., an organization to which most of the major producers of both the United States and Canada belong.

Wood shingles and shakes compete with such materials as composition roofing (paper felts impregnated with asphalt), asbestos cement, galvanized steel, slate, and tile. Composition materials and asbestos cement are generally lower priced than wood shingles; the prices of the other types of roofing mentioned above are about the same as, or higher than, those of wood.

U.S. tariff treatment

Wood shingles and shakes, whether or not treated with a wood preservative (see headnote 2 to part 1A of schedule 2 of the TSUS), are free of duty under item 200.85. The duty-free status was provided for in the original Tariff Act of 1930 and, except for shingles of redcedar, has been bound since January 1, 1948, in a concession granted by the United States in the General Agreement on Tariffs and Trade.

During the years 1940 through 1947 (except from October 25, 1946, to August 15, 1947), imports of redcedar shingles in excess of a duty-free quota 1/ were subject, under the Shingles Quota Act of 1940 (54 Stat. 708; 19 U.S.C. 1332a), to a duty of 25 cents per square. That 1940 act required the quota to be operative so long as imports of redcedar shingles were subject to a trade-agreement concession. Accordingly, the quota was not continued when the 1938 bilateral trade agreement between the United States and Canada (including a U.S. concession on redcedar shingles) was suspended, effective January 1, 1948.

U.S. consumption

The quantity of wood shingles and shakes consumed annually in the United States averaged about 8 million squares in the years immediately preceding World War II, 5.5 million squares in the period 1948-53, and

1/ The duty-free quota for a calendar year, in effect, equaled 30 percent of the annual average of the combined total of domestic shipments and imports for the preceding 3 calendar years.

5.2 million squares in the period 1958-63. In contrast to the long-term decline, U.S. consumption increased from 5.9 million squares in 1963 to an estimated 6.3 million squares in 1964, and was slightly less in 1965 (table 1). The long-term contraction of the market for wood shingles and shakes is due in large part to the low cost of competing materials, chiefly composition roofing, which is available in rolls and strips and in many colors and shapes. Moreover, as a fire-preventive measure, the building codes of many cities now prohibit or restrict the use of wood shingles; in some areas, fire insurance rates are higher for buildings with roof coverings of wood.

Since 1958 the use of shakes has increased, whereas the use of shingles has been more or less stable. The annual consumption of shakes almost doubled between 1958 and 1963, in part because of changes in architectural styles.

In the period 1961-63 about 58 percent of the wood shingles and shakes consumed domestically consisted of redcedar shingles; about 40 percent, of redcedar shakes; and about 2 percent, of shingles and shakes of other species. The following tabulation, based on data furnished by the Red Cedar Shingle & Handsplit Shake Bureau, shows the percentage distribution of domestic consumption of wood shingles and shakes in 1964, by Census regions:

Census region	Shingles (including machine-grooved shakes)	Shakes (all types of split shakes)
New England	13.8	1.6
Middle Atlantic	12.8	4.7
East North Central	5.0	2.8
West North Central	8.8	3.7
South Atlantic	2.2	1.3
East South Central	.8	.5
West South Central	26.0	3.2
Mountain	2.2	5.1
Pacific	28.4	77.1
Total United States	100.0	100.0

Although shingles and shakes are used throughout the United States, consumption is highest in the Pacific Region and next highest in the West South Central Region. In 1964, these two regions accounted for more than 50 percent of the U.S. consumption of shingles, with two States--California and Texas--accounting for 22 percent each. California alone accounted for more than 70 percent of the U.S. consumption of shakes in 1964.

November 1966
2:1

U.S. producers

The number of domestic mills producing shingles and/or shakes declined from 219 in 1958 to about 175 in 1963 (latest year for which data are available). Of the 175 mills, 154 were in the Northwestern States; most of the remaining mills were in California, and a few were in the Eastern States.

Most of the mills are small, independent concerns that purchase logs, bolts, or blocks exclusively for the production of shingles and shakes; they sell the chipped wood residues from their operations to pulpmills and particle-board plants. Such mills tend to be sporadic producers, depending on the availability of raw materials and on the market for construction materials. Some independently owned mills, as well as some mills owned by lumber companies, produce shingles and shakes on a full-time basis.

According to data obtained from the U.S. Bureau of the Census, 13 mills, each with 50 or more employees, accounted for 40 percent of the total value added in the manufacture of shingles and shakes in 1958, whereas 155 mills, each with 9 employees or fewer, accounted for 19 percent of the value added in that year, as shown in the following tabulation:

Size category (employees per plant)	Number of plants	Total number of employees	Value added by manufacture
			1,000 dollars
1 to 9	155	515	3,250
10 to 49	51	1,170	7,010
50 to 249	13	1,045	6,900
Total	219	2,730	17,160

U.S. production

Although the number of active shingle and shake mills has decreased in recent years, annual output has increased. Production rose from 2.7 million squares of shingles and shakes in 1958 to 3.2 million squares in 1965 (table 2). While the production of shingles declined from about 2.2 million squares in 1958 to an estimated 1.8 million in 1965, the production of shakes increased from 0.5 to about 1.4 million squares.

U.S. exports

In recent years, 1 percent or less of the U.S. production of shingles and shakes has been exported. Exports of these articles amounted to 18,600 squares, valued at $238,000, in 1964, compared with 30,500 squares valued at $235,000, in 1958 (table 3). In 1965, when exports of shingles and shakes were not separately reported in the official statistics, an estimated 19,000 squares was exported. Beginning in 1960 the Bahamas replaced Canada as the chief export market. U.S. exports to Canada (nearly all to the Maritime Provinces) have long been very small compared with the imports of comparable articles from that country (principally from British Columbia).

U.S. imports

U.S. imports of wood shingles and shakes amounted to about 3.0 million squares, valued at $29 million, in 1965, compared with 2.1 million squares, valued at $19 million, in 1958 (table 4). Virtually all of the U.S. imports of shingles came from Canada, chiefly through ports of entry for the States of Washington and North Dakota, but most were consumed elsewhere in the United States. Imports (more than 95 percent of redcedar) were equivalent to about 48 percent of the apparent U.S. consumption in 1961-64, compared with about 42 percent in 1957-60. In 1963 (the latest year for which separate data are available), about two-thirds of the imported articles were shingles, compared with about three-fourths in 1958. In imports, as in production, shingles have declined and shakes have increased in importance.

Redcedar shingles and shakes imported from Canada are, grade for grade, of the same quality as those made in the United States because in both countries these articles are graded by rules established by the Red Cedar Shingle & Handsplit Shake Bureau. The major producers of redcedar shingles and shakes in both the United States and Canada are members of this organization that functions for all interests of the trade; moreover, imports of these products are duty free in both countries.

Foreign production and trade

Canada is virtually the only foreign country with a large commercial production of shingles and shakes. In 1963 (the latest year for which data are available), 73 Canadian mills reported their major activity to be the manufacture of shingles. Of these, 60 were in British Columbia and 13 were in eastern Canada (7 of them in Quebec). A total of 33 mills owned by corporations accounted for most of the output. The 6 largest mills accounted for almost three-fifths of the total value of Canadian shipments.

November 1966
2:1

The supply of redcedar timber in Canada is estimated at three to four times that in the United States. Moreover, the redcedar timber in the U.S. forests now generally consists of trees that are smaller and more scattered than those in Canada, since large-scale cutting has been going on for a longer time in the United States. Therefore, the costs of producing shingle logs tend to be higher in the United States than in Canada.

The annual output of shingles and shakes in Canada was fairly stable in 1957-61 and averaged about 2.3 million squares, an amount equivalent to approximately four-fifths of the annual average U.S. output in those years. However, the consumption of shingles in Canada, unlike that in the United States, took only a small share of domestic production. In 1962, Canadian shipments (equivalent to production) increased to 2.5 million squares, and in 1963, to 2.9 million squares (about the same as the annual average for 1948-56).

Canada's exports of shingles increased between 1958 and 1963 proportionately more than did Canadian output. Canadian exports of shingles and shakes (according to Canada's official statistics) in selected recent years, total and to the United States, were as follows:

Year	Total		To the United States	
	Quantity	Ratio to production	Quantity	Ratio to total exports
	1,000 squares	Percent	1,000 squares	Percent
1958	1,846	79	1,799	97
1961	2,058	93	2,014	98
1963	2,565	90	2,515	98
1964	2,559	1/	2,503	98
1965	2,527	1/	2,489	98

1/ Not available.

The Canadian figures on exports to the United States, as shown above, were consistently lower than the United States figures on imports from Canada because Canadian exports (both shingles and shakes) are reported in roof squares, at four bundles per square, whereas United States imports of shingles are reported in roof squares at four bundles per square and imports of shakes are reported in wall squares, at three and four bundles per square. The reported values of Canada's exports were virtually the same as the reported values of U.S. imports.

Table 1.--Wood shingles and shakes: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

(Quantity in thousands of squares; 1/ value in thousands of dollars)

Year	Production	Imports	Exports	Apparent consumption	Ratio (percent) of imports to consumption
	Quantity				
1958	2,710	2,135	30	4,815	44
1961	2,570	2,339	31	4,880	48
1963	3,020	2,851	16	5,855	49
1964	2/ 3,300	2,977	19	2/ 6,260	48
1965	2/ 3,250	3,006	2/ 20	2/ 6,230	48
	Value				
1958	31,000	19,281	235	3/	3/
1961	27,100	20,811	265	3/	3/
1963	42,200	29,379	205	3/	3/
1964	4/	31,012	238	3/	3/
1965	4/	29,037	4/	3/	3/

1/ A square is the quantity of shingles or shakes necessary to cover 100 square feet of roof or wall surface.
2/ Estimated.
3/ Not meaningful.
4/ Not available.

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

Table 2.--Wood shingles and shakes: U.S. production, by kinds, specified years 1958 to 1965

Kind	1958	1961	1963	1964 1/	1965 1/
	Quantity (1,000 squares 2/)				
Redcedar:					
Shingles	2,027	1,632	1,780	1,850	1,700
Shakes 3/	530	806	1,099	1,320	1,450
Other 1/ 4/	153	132	141	130	100
Total 1/	2,710	2,570	3,020	3,300	3,250
	Value (1,000 dollars)				
Total 1/	31,000	27,100	42,200	5/	5/
	Unit value (per square)				
Average	$11.44	$10.54	$13.97	5/	5/

1/ Estimated.
2/ See footnote 1 to table 1.
3/ Shakes produced from logs and bolts.
4/ Principally shingles.
5/ Not available.

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

Note.--In 1964, annual official statistics on the production and shipments of redcedar shingles and shakes were discontinued.

Table 3.--Wood shingles and shakes: U.S. exports of domestic merchandise, by principal markets, 1958 and 1961-64 1/

Market	1958	1961	1962	1963	1964
	Quantity (1,000 squares 2/)				
Bahamas	8.6	16.8	12.5	11.8	13.0
Canada	18.8	8.2	5.7	2.3	1.9
Mexico	2.6	4.6	2.8	1.1	1.5
All other	.5	1.5	.6	1.1	2.1
Total	30.5	31.2	21.7	16.3	18.6
	Value (1,000 dollars)				
Bahamas	90	163	141	144	182
Canada	122	57	31	31	25
Mexico	19	38	21	13	10
All other	4	7	5	18	21
Total	235	265	197	205	238
	Unit value (per square) 4/				
Bahamas	$10.47	$9.70	$11.27	$12.16	$13.93
Canada	6.49	6.91	5.37	13.40	13.04
Mexico	7.26	8.23	7.40	11.44	6.81
All other	7.71	3/	7.47	3/	10.05
Average	7.70	8.51	9.11	12.60	12.82

1/ Exports of shingles and shakes were not separately reported for 1965.

2/ See footnote 1 to table 1.

3/ Omitted because of an apparent error in the official statistics.

4/ Calculated from the unrounded figures.

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

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

Table 4.--Wood shingles and shakes: U.S. imports for consumption, by kind, all from Canada, specified years 1958 to 1965

Kind	1958	1961	1963	1964	1965
	Quantity (1,000 squares 1/)				
Redcedar:					
Shingles	1,521	1,644	2/ 1,797	2,899	2,908
Shakes	587	654	2/ 984		
All other	27	41	70	78	98
Total	2,135	2,339	2,851	2,977	3,006
	Value (1,000 dollars)				
Redcedar:					
Shingles	13,475	14,103	2/ 18,360	30,197	28,080
Shakes	5,577	6,358	2/ 10,282		
All other	229	350	737	815	957
Total	19,281	20,811	29,379	31,012	29,037
	Unit value (per square) 3/				
Redcedar:					
Shingles	$8.86	$8.58	2/ $10.21	$10.42	$9.66
Shakes	9.50	9.73	2/ 10.45		
All other	8.51	8.63	10.54	10.44	9.81
Average	9.03	8.90	10.30	10.42	9.66

1/ See footnote 1 to table 1.
2/ Partly estimated.
3/ Calculated from the unrounded figures.

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

Commodity	TSUS item
Wood dowel rods and pins:	
Plain	200.90
Advanced in condition	200.95

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

The value of U.S. imports of wood dowel rods and pins, which has been rising in recent years, was $3.3 million in 1965, an amount equivalent to 12 percent of the value of domestic consumption. Exports are negligible.

Description and uses

Dowel rods and pins, referred to collectively as dowels or doweling, are cylindrical pieces of wood usually made in diameters ranging from 1/8 inch to 1 inch and in lengths varying from 1 inch to 6 feet. Dowel pins or pegs are ordinarily only a few inches in length in contrast with dowel rods or sticks, which are generally a foot or more in length.

Dowel rods are typically of uniform diameter throughout their lengths and are made of softwoods, such as pine and fir, and hardwoods, such as oak, ash, and hickory. Softwood rods are produced as a step in the manufacture of broom and mop handles, shade rollers, and similar products. Rods are also used as component parts in the manufacture of such articles as clothes-drying racks, ladders, containers, and furniture, and as stock in the making of dowel pins.

Dowel pins are chiefly made of hardwoods and used in reinforcing wood joints in the assembly of furniture and other woodworking products such as doors, door frames, and window sash.

Wood dowels are ordinarily sold in the domestic market in the form of rods and pins--straight cylinders of wood, just as they are produced from the turning machines--of various diameters and lengths, and with each dowel square cut on the ends. Dowel rods are finished for sale by sanding or by a combination of sanding and waxing, staining, or enameling. Wood dowels are also commercially available with rounded, chamfered (beveled), or slotted ends; or with the surface tapered, grooved spirally or lengthwise, or having drill holes.

For tariff purposes, wood dowel rods and pins which are not further advanced than machine turned to a straight cylinder (with both ends square cut and in lengths of 6 feet or less) are considered to be plain dowels (item 200.90). This same tariff classification applies to dowels made from smaller pieces of wood jointed and glued together, the product being no further advanced than machine turned to a cylinder. Dowels which have been sanded, grooved, tapered, slotted, or otherwise worked are considered to be advanced in condition (item 200.95

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Wood dowel rods and pins:	
200.90	Plain	2.5% ad val.
200.95	Advanced in condition	16-2/3% ad val.

The rate of duty for plain dowels (item 200.90), established by the TSUS on August 31, 1963, is the estimated weighted average of the assessments on the imports of such dowels during a preceding representative period when the assessments had ranged, depending on species of wood, from 75 cents to $3 per 1,000 board feet, under provisions of the previous tariff schedules (paragraphs 401 or 1803) and of the Internal Revenue Code (section 4551(2)). None of these assessments were subject to trade-agreement concessions. The rate for dowels advanced in condition (item 200.95), which has been in effect since May 30, 1950, reflects a concession on manufactures of wood, not specially provided for (former tariff paragraph 412), granted by the United States in the General Agreement on Tariffs and Trade.

Since August 31, 1963, the unit of quantity for reporting imports of both plain and advanced dowels has been the linear foot. Previously, when advanced dowels were not separately reported, the unit for plain dowels was the board foot.

U.S. consumption

It is estimated that the value of all types of wood dowels, both plain and advanced, consumed in the United States amounted to $20.9 million in 1958, and to $20.4 million in 1960. During the next 5 years, annual consumption increased, reaching approximately $26.7 million in 1965 (table 1).

The large domestic output of plain dowels, usually in lengths of 4 feet or more and chiefly of softwoods, has accounted for about 56 percent of the estimated annual value of all types of dowels used in the United States in recent years. The remainder of the annual consumption, supplied principally by U.S. producers, consisted of dowel rods and pins advanced in condition.

U.S. producers

There are probably about 100 domestic concerns that produce wood dowel rods and pins for sale as such, usually in conjunction with the output of other wood products, such as millwork and furniture. Manufacturers are located in various parts of the country but are concentrated in the Southern States and the Pacific Northwest.

About 10 known producers specialize in the manufacture of broom and mop handles, which, in the primary stage of manufacture, are plain dowel rods about 3/4 inch in diameter and 4 feet or more in length. These captive dowels are made chiefly of domestic softwoods of the pine and fir species and are comparable to imports of plain mopstick dowels. The plants so specializing are about equally divided between the Pacific Northwest and the Southern States.

U.S. production

U.S. production of wood dowels is estimated to have supplied more than 85 percent of domestic consumption in recent years. During the period 1958-63 the value of domestic production of dowels of all types is estimated to have averaged about $20 million annually, and for 1964-65 the average annual output was valued at about $23 million (table 1).

During 1958-65 the only official data available on the production of wood dowels are those given on the value of domestic shipments of wood dowels and dowel pins (advanced in condition), which amounted to $8.7 million in 1958 and to $9.4 million in 1963. For the same years, estimated total shipments of plain dowels were valued at $11.6 million and $11.7 million, respectively. For the years 1960, 1964, and 1965, annual shipments of plain dowels averaged about 54 percent of the value of total output of all types of dowels.

U.S. exports

Data are not available on U.S. exports of wood dowels. However, it is believed that in recent years annual exports of dowels of all

types have been very small relative to domestic production. Estimated annual exports of dowels of all types are shown in table 1.

The principal export markets for wood dowels include Canada, the United Kingdom, West Germany, France, and other European countries.

U.S. imports

Most of the wood dowels imported into the United States during the past decade have been of the plain type. In 1964 and 1965 about 98 percent of the imported dowels were of that type. Imports of plain dowels increased from 5.1 million board feet, valued at $0.7 million, in 1958 to an estimated 13.8 million board feet, valued at $2.0 million, in 1963. In 1965, when the unit of quantity for measuring imports of dowels was linear feet, 523 million linear feet of plain dowels, valued at $3.3 million, was imported (table 2).

Imported plain dowels are made chiefly from pine and fir in types and grades comparable to those produced domestically. The majority of these imports consist of handle material which competes directly with domestic rough handle stock. Although Mexico, Canada, and Japan were the leading sources of imported plain dowels in the period 1958-65, Malaysia and Hong Kong also became important sources of such dowels after 1960, and these two countries were the second and third leading suppliers, respectively, in 1965. These new sources of U.S. dowel imports are noted for their supply of plain dowel rods, chiefly of hardwood and in sizes required for making broom and mop handles. From 1964 to 1965 the ratio of imports of plain hardwood dowels to total imports of plain dowels increased from 65 to 70 percent based on quantity and from 35 to 37 percent based on value.

Based on either value or quantity, about 2 percent of the dowels imported in 1964 and 1965 were advanced in condition. Although imports of such advanced dowels consisted of both rods and pins, the shipments comprised principally rods, particularly in the form of sanded rods used in the manufacture of window-shade rollers. For the most part, the grade and quality of these imports compare favorably with those of the U.S. product.

Table 1.--Wood dowel rods and pins: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

Year	Production	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	Percent
1958	20,302	798	175	20,900	4
1960	19,400	1,203	220	20,400	6
1963	21,129	2,130	255	23,000	9
1964	23,000	2,168	290	24,900	9
1965	23,700	3,341	310	26,700	12

Source: Compiled from official statistics of the U.S. Department of Commerce and from data supplied by industry sources.

Note.--Except for imports in 1964 and 1965, all figures in this table are estimated.

Table 2.--Wood dowel rods and pins: U.S. imports for consumption, by kinds and by principal sources, 1964 and 1965

Source	Plain		Advanced in condition	
	1964	1965	1964	1965
	Quantity (1,000 linear feet)			
Mexico	90,788	114,396	1,313	2,984
Malaysia	10,808	56,224	-	-
Hong Kong	10,424	30,694	19	107
Canada	15,169	15,700	395	795
Japan	335,347	273,997	5,925	6,025
All other	35,644	32,070	459	63
Total	498,180	523,081	8,111	9,974
	Value (1,000 dollars)			
Mexico	1,233	1,605	21	49
Malaysia	157	824	-	-
Hong Kong	283	372	5	1
Canada	201	184	9	23
Japan	153	158	11	11
All other	95	113	1	2
Total	2,122	1/ 3,255	1/ 46	86

1/ Because of rounding, figures do not add to the total shown.

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

November 1966
2:1

Commodity	TSUS item
Softwood:	
Lumber including flooring, not drilled or treated	202.03, -.06, -.09, -.12, -.15, -.18, -.21, -.24, -.27, -.30, -.31
Siding, not drilled or treated	202.45 (pt.), -.48, -.50 (pt.)
Lumber and siding, drilled or specifically treated	202.52
Other lumber and siding, and edge-glued or end-glued wood, whether or not drilled or treated	202.54 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

The United States ranks second in world production of softwood lumber, exceeded only by the U.S.S.R. Nevertheless U.S. foreign trade in softwood lumber, chiefly with Canada, is on an import basis. In recent years, the quantity of imports has been many times that of exports, and equivalent to about 15 percent of domestic consumption.

Description and uses

This summary covers softwood lumber, whether rough, dressed, or worked, of one-piece stock and of edge-glued or end-glued pieces over 6 feet in length and not over 15 inches in width, and such related softwood products as flooring, siding, and glued-up wood of dimensions not within those prescribed above. Hardwood lumber, hardwood flooring, and related hardwood products are included in separate summaries in this volume. Such articles as siding and flooring, referred to separately in the TSUS, are generally considered to be types of lumber.

Items 202.03 through 202.31 cover softwood lumber of the different species, whether rough, dressed, or worked, including edge-glued or end-glued stock over 6 feet long and not over 15 inches wide. Softwood flooring that has the characteristics of lumber as set forth in headnote 2(a) to part 1B of schedule 2 of the TSUS is provided for under these same items; other softwood flooring, which currently is not a common article of commerce, is provided for under item 202.60 (included in another summary of this volume).

Softwood siding (weatherboards and clapboards) not drilled or treated is provided for as follows: If resawn bevel siding, under item number 202.45; if Western redcedar siding other than resawn bevel siding, under item 202.48; and if other siding, under item 202.50. Softwood lumber and siding, if drilled at intervals for nails, screws, or bolts, or if pressure-treated with a wood preservative, or both, are provided for under item 202.52. Softwood lumber which has been treated with sealers, waxes, oils, stains, varnishes, paints, or enamels, or sanded or otherwise surface processed in lieu of, or in addition to, planing or working is provided for under item 202.54. Glued-up wood (i.e., edge-glued and end-glued softwood 6 feet or less in length or more than 15 inches in width), whether or not drilled or treated, is provided for under item 202.54.

The treatment of any of the lumber or other wood products included in this summary with antistain or other temporary applications (see headnote 4 to pt. 1B of schedule 2) does not affect the tariff classification of such products; products so treated are classified according to their other characteristics.

Lumber of one-piece stock is the product of a sawmill or sawmill and planing mill and is not further manufactured than by sawing, resawing, and passing lengthwise through a planing machine, crosscut to length and matched (tongued and grooved). In its original sawed condition, lumber has at least two approximately parallel, flat, longitudinal surfaces. According to the stage of manufacture, lumber is produced and marketed as follows:

1. Rough--just as it comes from the saw, whether in the original sawed size or edged, resawn, crosscut, or trimmed to smaller sizes. Such lumber has rough-sawed sides or faces and usually rough-sawed edges.

2. Dressed or surfaced--rough lumber that has been machine-planed to produce a smooth surface on one or more sides or edges.

3. Worked--lumber that has been machined to a uniform pattern or form along its entire length, thus being matched, shiplapped (to provide an overlapping joint), or otherwise patterned. Ceiling and stepping are typical examples of worked softwood lumber.

Softwood lumber is produced from coniferous species of trees, as distinguished from hardwood lumber, produced from broad-leaved species. The distinction is botanical and not based on the actual hardness of the wood. Hardwoods are generally harder and heavier than softwoods, but some hardwood species, such as balsa, are among the softest known woods. Even within the same species there is considerable variation in density, depending on locality and climatic conditions; the wood of

trees that have grown slowly (with closely spaced annual rings) is heavier and harder than that of trees of faster growth.

In the United States, the most important tree species from which softwood lumber is produced are Douglas-fir (Pseudotsuga), pine (chiefly southern and ponderosa), fir (Abies), spruce, hemlock, larch, cypress, and redwood. Many of these species are also native to Canada and Mexico.

Edge-glued or end-glued lumber is glued-up from short or narrow pieces of lumber, including pieces salvaged from slabs or edgings, or from short pieces obtained by sawing out knots and other imperfections from low-grade lumber, thereby upgrading such lumber. Edge-glued lumber is dressed before gluing, since exact machining provides a tight joint for the abutting pieces. End-glued lumber is usually dressed after gluing since the pressure applied in making the joint (usually a "finger joint") causes a swelling, or increase in thickness, at this point. Some end-glued siding is produced, but little, if any, edge-glued siding.

Laminated beams and timbers, formed by face-gluing together two or more boards (including edge-gluing and end-gluing) to make pieces of larger dimensions, is not considered to be lumber for tariff purposes but is provided for under TSUS item 207.00 as articles of wood, not specially provided for (see summary in volume 2:2).

Softwood lumber is produced in various dimensions. According to dimension, the principal lumber classes are (1) boards, usually 1 inch thick and 4 to 12 inches in width; (2) "dimension" stock for structural purposes (including planks), usually 2 inches thick when intended for ordinary construction, but up to 4 inches thick for special structural needs; and (3) sawed "timbers," ordinarily 5 inches or more in the smallest surface dimension, for use where strength is required for supporting weight or loads.

Lumber is measured by the board foot, a three-dimensional unit; for tariff purposes,

> a board foot is the quantity of lumber contained in, or derived (by drying, dressing, or working, or any combination of these processes) from, a piece of rough green lumber 1 inch in thickness, 12 inches in width, and 1 foot in length, or the equivalent of such piece in other dimensions.

According to the American Lumber Standards for Softwood Lumber, 1/ for example, a board which is approximately 1 inch thick by 6 inches wide in its rough green condition (a 1 by 6 in the trade) will be no less than 3/4 by 5-1/2 inches after drying and dressing, and a rough green 2 by 4 will be no less than 1-5/8 by 3-5/8 inches after drying and dressing; the actual dimensions of other sizes in dressed dry condition are similarly less than their rough green (nominal) measurements. A revision of the aforementioned standards is now in process.

The measurement of siding is usually based on the square foot area of its broadest surface, being referred to as surface measure, and is the nominal (rough green), rather than the actual (dressed dry), measurement.

According to its moisture content, lumber is classed as green or dry. More than half the weight of green lumber may consist of moisture. Some lumber is used green; to prevent warping, most lumber is seasoned by drying before retail sale. Lumber may be either air dried at the sawmill yard or a separate "concentration" yard over a period of months by exposure to sun and wind, or kiln dried in days under controlled conditions of heat and humidity at a dry kiln operated in connection with a sawmill-planing mill or at an independent dry kiln. Most of the moisture is removed in seasoning, with some shrinkage in size.

Softwood lumber is usually graded at the sawmill on characteristics which affect its strength, durability, utility, or appearance--such as knots, splits, and pitch pockets. "Standard rules" for the grading of lumber, which are formulated and published by regional lumber manufacturing or marketing organizations, vary according to region of production and/or species of wood. In general, softwood lumber of the best grades is known as selects or uppers; medium grades, as shop or factory lumber; and the poorer grades, as commons or lowers.

Glued-up lumber, as well as glued-up wood in sizes that for tariff purposes do not qualify as lumber, has become increasingly accepted for many purposes. Glued-up softwood lumber can be used interchangeably with one-piece lumber for some purposes in building construction and for factory-produced articles, particularly where the joint is hidden from view or where the joint will be covered, such as by painting. Glued-up softwood other than lumber is used particularly for furniture, household and store fixtures, and other factory-produced articles.

Normally, about three-fourths of all softwood lumber consumed in the United States is used directly in construction; the remainder is

1/ Published by the U.S. Department of Commerce in cooperation with manufacturers, distributors, and users.

used chiefly for industrial purposes, such as the manufacture of boxes, crates, pallets, sash, doors, and other products.

Softwood lumber in many of its important uses has competition from other wood or wood-based products, such as plywood, hardwood lumber, hardboard, wood particle board, and certain paperboards, as well as nonwood products, such as metal, plastics, and bricks.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty 1/
	Softwood lumber including flooring, not drilled or treated:	
202.03	Spruce	35¢ per M bd. ft.
202.06	Eastern white and red pine	25¢ per M bd. ft.
202.09	Other pine	$1 per M bd. ft.
202.12	Parana pine	$1 per M bd. ft.
202.15	Douglas-fir	$1 per M bd. ft.
202.18	Fir	$1 per M bd. ft.
202.21	Hemlock	$1 per M bd. ft.
202.24	Larch	$1 per M bd. ft.
202.27	Cedar	75¢ per M bd. ft.
202.30	Other	$1.50 per M bd. ft.
202.31	If product of Cuba	$1.20 per M bd. ft.
	Softwood siding, not drilled or treated:	
202.45 (pt.)	Resawn bevel	50¢ per M sq. ft.
	Other:	
202.48	Western redcedar	75¢ per M sq. ft.
202.50 (pt.)	Other	$1 per M sq. ft.
	Softwood lumber and siding, drilled or treated; glued-up softwood:	
202.52	Lumber and siding, drilled or specifically treated	1.5% ad val.
202.54 (pt.)	Other	9.0% ad val.

1/ As used here, "M bd. ft." means 1,000 feet, board measure (see definition in headnote 3 to pt. 1B of schedule 2 of the TSUS); "M sq. ft." means 1,000 square feet, surface measure.

The scope of items 202.03 through 202.31 varies to some extent from that of the provisions for softwood lumber in the former tariff schedules. Essentially, however, the tariff rates in the TSUS are based on, or derived from, the lumber rates (including the import taxes imposed under the Internal Revenue Code) that had become effective on January 1, 1948, pursuant to concessions granted by the United States under the General Agreement on Tariffs and Trade (GATT).

The preferential rate $1.20 per thousand board feet on "other" softwood lumber from Cuba was suspended May 24, 1962 (Public Law 87-456); imports from Cuba have been prohibited since February 7, 1962.

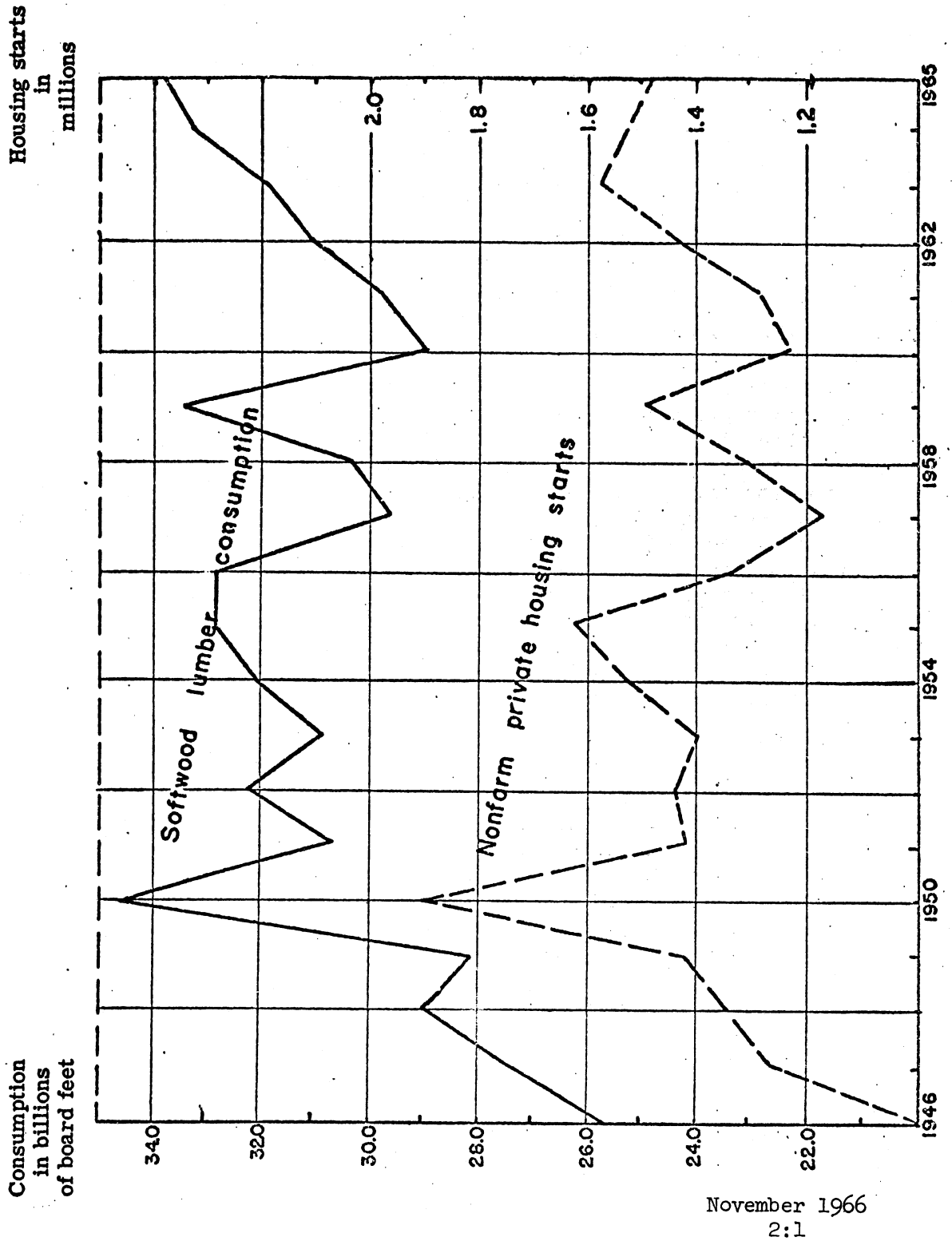
The rates of duty for items 202.45 through 202.52 were established by the TSUS. The rate of 9 percent ad valorem for item 202.54 became effective on January 1, 1966, and represents the first stage of a U.S. concession in the GATT, which is to become fully effective in five annual stages, the last (5 percent ad valorem) on January 1, 1970 (see Presidential Proclamation No. 3694, dated December 27, 1965). The previous rate (10 percent ad valorem) was established by the TSUS.

On the U.S. imports entered in 1965 under items 202.03 to 202.30 inclusive, the ad valorem equivalents of the applicable rates of duty ranged from 0.3 percent for eastern white and red pine lumber to 1.7 percent for hemlock lumber. On imports of spruce and Douglas-fir, which together have comprised approximately three-fifths of the total imports of softwood lumber in recent years, the ad valorem equivalents of the applicable rates were 0.6 percent and 1.6 percent, respectively. In general, the ad valorem equivalents were higher for dressed or worked lumber than for rough lumber of the same species, indicating lower unit values for the dressed or worked lumber. Such values are lower because most of the imported dressed or worked lumber is of the common (low-quality) grades.

In February 1963 the Tariff Commission reported to the President on its findings in Investigation No. 7-116 (TEA-I-4), relating to softwood lumber, under section 301(b) of the Trade Expansion Act of 1962 (76 Stat. 884). The Commission found that softwood lumber was not, as a result in major part of concessions granted under trade agreements, being imported into the United States in such increased quantities as to cause, or threaten to cause, serious injury to the domestic industry producing the like article.

U.S. consumption

The annual domestic consumption of softwood lumber after World War II increased rapidly to 1950, when it reached its postwar peak; from 1950 to 1960 it fluctuated substantially but with a declining trend (see chart). Domestic consumption of softwood lumber (including



November 1966
2:1

siding and glued-up wood) increased each year from 1961 to 1965, as indicated in the following tabulation (in billions of board feet):

Year	Consumption
1961	29.3
1962	30.6
1963	31.7
1964	33.3
1965 (estimated)	33.8

The 1964-65 level was about the same as the 1955 and 1959 peaks.

The trend in softwood lumber consumption is similar to that in the number of nonfarm private housing starts (as shown in the chart), because about three-fourths of the softwood lumber consumed is used in construction, chiefly of housing. The data on the distribution of such housing starts, by standard Census regions, indicate that in the period 1960-64 approximately 39 percent of the softwood lumber consumed was used in the North (including the Northeast and North Central regions); 36 percent, in the South (including the South Atlantic and South Central divisions); and 25 percent, in the West (including the Pacific and Mountain divisions).

In 1963 the composition of softwood lumber consumption, by species, was as follows:

Species	Percent of total
Pine	35
Douglas-fir	29
Hemlock	10
Fir	7
Spruce	7
Other (chiefly redwood and cedar)	12
Total	100

In that year, imports supplied about three-fourths of the spruce lumber consumed, about one-fourth of the hemlock, and one-eighth of the Douglas-fir, virtually all such imports coming from Canada.

Annual U.S. consumption of softwood lumber per capita rose from 1960 to 1964, but did not reach the level attained during the years

immediately after World War II, as indicated in the following figures (in board feet) based on annual Census estimates of total population:

Year	Per capita consumption
1946	182
1950	225
1958	173
1960	160
1961	162
1962	166
1963	170
1964	174

Factors working against greater use of softwood lumber include the competitive advantages in certain uses of (1) softwood plywood and other wood-derived panels and (2) nonwood materials, such as steel, aluminum, glass, and plastics.

Imported softwood lumber, particularly that from Canada, competes with domestic softwood lumber in many of its uses, but especially in construction. Also competing to some degree are certain imports of hardwood lumber, plywood, and hardboard. For example, lauan hardwood plywood from Japan and Taiwan competes with knotty pine (softwood) lumber for use as interior paneling.

U.S. producers

In 1963 there were about 25,000 sawmill establishments in the United States engaged wholly or partly in softwood lumber manufacture. Although the Census of Manufactures does not distinguish between softwood and hardwood lumber in most of its published data, some idea of the size of the softwood industry is gained from a consideration of the 1963 data for the sawmill and planing mill industry (SIC code 2421) in the West, where virtually all lumber output is of softwood, and in the East (consisting of the North and South Census regions), where a little more than half of the output was of softwood.

In 1963 about 2,000 western sawmill and planing mill establishments with social security accounts (i.e., with hired employees) reported to the Bureau of the Census; of these establishments about 750 (38 percent) had 20 or more employees each. In the East about 10,200 such establishments reported, of which about 1,400 (14 percent) had 20

or more employees each. In 1963 the western mills had 86,000 employees, a payroll of $465 million, and an average wage of about $5,400. The eastern mills had 121,000 employees, a payroll of $347 million, and an average wage of about $2,850. A difference in total days of employment, as well as in wage scales, may account for most of the differential in the average wages. The value added by manufacture in the western mills was $777 million ($392,000 per establishment) and that added by manufacture in the eastern mills, $599 million ($59,000 per establishment); the value of shipments was $1,797 million ($906,000 per establishment) and $1,360 million ($133,000 per establishment), respectively.

In both the West and the East there are small mills operated by individuals, partners, and their relatives, without hired employees. Their aggregate output, however, is small. In the East such mills are probably equal in number to the mills which maintain social security accounts.

U.S. production

The annual domestic production of softwood lumber increased from 26 billion board feet in 1961 to nearly 30 billion in 1965 (table 1). However, production was slightly smaller in 1965 than in 1959. The Pacific division has dominated softwood lumber production in recent years, accounting for three-fifths of the national production. In fact, this dominance has existed for about four decades. In the period between 1958 and 1963, the Mountain division gained slightly in importance at the expense of the South and North regions.

The percentages of the 1958 and 1963 output of softwood lumber accounted for by principal species were as follows:

Species	1958	1963
Douglas-fir	34	30
Southern pine	24	22
Ponderosa, sugar, and white pine	16	18
Hemlock and white fir 1/	14	17
Miscellaneous 2/	12	13
Total	100	100

1/ White fir includes all western firs of the genus Abies.
2/ Includes chiefly redwood, cedar, and spruce.

With the exception of southern pine, the species listed above are produced either solely or chiefly in the West. The production of the leading species, Douglas-fir, as well as that of southern pine, was

slightly reduced in relative importance between 1958 and 1963 because of the increases in the output of the ponderosa-sugar-white pine and hemlock-fir groups. Although the output of Douglas-fir rose from 8.3 billion board feet in 1963 to 8.8 billion in 1964 (table 2), its share of total softwood lumber production was unchanged.

An important factor influencing the level of annual production of softwood lumber is the predominance of public ownership of merchantable sawtimber (trees 11 inches or more in diameter at 4-1/2 feet above ground level). In 1963, two-thirds of the board-foot volume of softwood sawtimber in the United States was owned by Federal, State, or local government. The public timber is usually managed for continuous production (i.e., for long-term sustained yield); hence the amount offered for cutting to private industry under the bidding procedures of various public agencies in any one year is limited. In times of high demand, this practice usually results in rising prices for lumber and its products.

In the period 1961-65, when the trend of production was upward, the trend of producers' yearend inventories was downward because annual shipments exceeded production in every year except 1964. Yearend inventories (including small amounts of railroad cross ties) declined from 5.2 billion board feet in 1961 to 4.5 billion in 1965, as shown in the following tabulation compiled from data of the National Forest Products Association:

Year	Million board feet
1961	5,178
1962	4,851
1963	4,614
1964	4,898
1965	4,548

These figures, which represent stocks at concentration yards as well as at sawmills, are higher than the published census figures for sawmill stocks. The census figures do not include the stocks held in concentration yards without sawmills.

Annual average wholesale prices of softwood lumber fluctuated within a narrow range during 1963-65 and were higher in that period than in 1961. The wholesale price index for softwood lumber in specified years, as published by the Bureau of Labor Statistics, was as follows (1957-59=100):

Year	Index
1958	96.6
1961	93.5
1963	98.1
1964	99.3
1965	99.1

Separate data on the production of wood siding, drilled and/or treated lumber, and glued-up lumber or wood are not available from either Government or trade sources. The quantities of all of these are included in the official production figures shown in tables 1 and 2.

U.S. exports

The trend of U.S. exports of softwood lumber (including siding and glued-up wood) was upward from 1961 to 1964, and in the latter year they amounted to about 796 million board feet, valued at $94 million; then in 1965 they decreased to 777 million board feet, also valued at $94 million (table 3). Douglas-fir has been by far the chief species exported in recent years, accounting for about half the total both of quantity and of value; southern pine was second; and other pines, redwood, spruce, cedar, and hemlock made up most of the remaining exports. Redwood has been the highest in unit value, with southern pine usually second, and Douglas-fir occasionally third.

In recent years, Canada has been the chief foreign market in terms of value and usually in terms of quantity. Other countries of importance as buyers include Japan, Australia, West Germany, and Italy (table 4).

Exports rose from about 2 percent of domestic production in 1958 to about 3 percent in 1965 and have been equivalent to about one-sixth of the annual quantity of imports. At least part of the rise can be attributed to the Government's efforst to increase the total exports. The species, sizes, and grades of softwood lumber that are not readily available abroad comprised the bulk of the exports, but these, as well as other kinds, shared in the increase.

U.S. imports

Annual U.S. imports of softwood lumber increased almost without interruption from 1958 to 1963, then dropped slightly in 1964 and again in 1965, when they amounted to 4.9 billion board feet, valued at $315 million. In relation to domestic consumption, imports of softwood lumber increased from 11 percent in 1958 to 16 percent in 1963, and were 15 percent in both 1964 and 1965 (table 1).

In recent years, spruce has increasingly been the chief species imported, and in 1965 it represented slightly more than one-third of the total both of quantity and of value; Douglas-fir and hemlock each comprised between one-fifth and one-fourth of the total in that year (table 5), when, for the first time, imports of hemlock lumber exceeded those of Douglas-fir in quantity, although not in value. These three leading species accounted for about 80 percent of the quantity and value of all softwood lumber imports in 1965. Pine and cedar were next in importance and made up most of the remainder. About one-fifth of the cedar has consisted of cedar siding in recent years.

About 95 percent of both the quantity and value of softwood lumber imports have been classified as dressed or worked in recent years.

In 1965, Canada provided 99 percent of the softwood lumber imported into the United States, and Brazil, Honduras, and Mexico provided most of the remainder (table 6). Brazil supplied Parana pine, and the other two Latin American countries, several kinds of pine.

Foreign production and trade

World production of softwood lumber for the year 1963, estimated at about 115 billion board feet, 1/ was accounted for, by geographic divisions, as follows:

Division	Percent of total
Union of Soviet Socialist Republics	33
United States	24
Europe	20
Japan	9
Canada	8
Mainland Asia and the East Indies	3
All other	3
Total	100

1/ Reported by the Food and Agriculture Organization of the United Nations at 271,927,000 cubic meters and converted (1,000 cubic meters x 0.424) to 115,297 million board feet.

In Europe (excluding the U.S.S.R.), the chief producing countries in 1963 were Sweden, West Germany, Finland, and Poland; in Asia, Japan and mainland China were the chief producers. Sweden and Finland are the chief softwood-lumber-exporting countries in Western Europe, shipping to many countries, chiefly European, but principally to the United Kingdom. Most of Japan's production of softwood lumber is consumed within that country, and exports averaged only 0.5 percent of production in 1960-62 inclusive. Japanese imports increased from less than 1 percent of consumption in 1960 to almost 4 percent in 1963, the United States and Canada being major sources of supply. Mainland China's production of softwood lumber is consumed internally for the most part.

The U.S.S.R.--Most of the softwood-lumber production of the U.S.S.R. is consumed internally; in 1963 only about 7 percent of its output was exported. Nevertheless, in absolute terms, its exports, second only to Canada's, are substantial (2.2 billion board feet in 1961 and 2.8 billion in 1963), going to numerous European countries but chiefly to the United Kingdom and East Germany. Imports of softwood lumber into the U.S.S.R. are usually negligible--less than 1 percent of its annual consumption.

Canada.--In 1963 the Canadian lumber industry reportedly consisted of 2,911 establishments with about 45,000 employees. In Canadian dollars, salaries and wages totaled $181 million, of which $147 million was wages paid to production and related workers. The value of shipments of goods manufactured in these establishments was $691 million, and of this amount the value added by manufacture was $313 million. These figures, together with comparable figures for specified earlier years (compiled from published data of the Dominion Bureau of Statistics, Ottawa) are shown in the following tabulation:

Year	Establishments	Employees	Salaries and wages	Value of shipments 1/	Value added by manufacture
	Number	Number	1,000 dollars	1,000 dollars	1,000 dollars
1958	4,004	43,484	134,346	480,674	209,454
1960	3,719	43,886	145,450	530,187	224,857
1961	3,252	42,249	149,823	535,887	222,007
1962	3,053	42,938	161,888	612,144	273,602
1963	2,911	45,271	180,621	690,715	313,078

1/ In 1958 and 1960, gross selling value of products; in 1961-63, value of shipments of goods of own manufacture.

November 1966
2:1

In 1963, Canadian lumber production amounted to 9.9 billion board feet of lumber, of which 9.4 billion (95 percent) was softwood. Of the total softwood lumber, 7.1 billion board feet was produced in western Canada (Alberta, British Columbia, and Yukon Territory)--6.7 billion of it in the Province of British Columbia.

Canadian production of softwood lumber (total and in British Columbia) in 1958 and 1961-64 was as follows:

Year	Canada, total	British Columbia	
		Quantity	Percent of total
	Million bd. ft.	Million bd. ft.	
1958	6,825	4,847	71
1961	7,807	5,617	72
1962	8,410	5,999	71
1963	9,410	6,730	72
1964	1/ 10,000	1/ 7,200	72

1/ Estimated.

Although Canada is the world's fourth largest producer of softwood lumber, it is first in exports, both in actual amount and in relation to production. In 1961-64, Canadian exports of such lumber averaged 5.5 billion board feet annually or almost two-thirds of its production; about three-fourths of these exports went to the United States. Canada's imports of softwood lumber come principally from the United States, and have consisted usually of species and grades not available in Canada.

Table 1.--Softwood lumber: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

Year	Production 1/	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	Million bd. ft.	Million bd. ft.	Million bd. ft.	Million bd. ft.	Percent
1958	27,239	3,139	540	29,838	11
1961	25,947	3,979	613	29,313	14
1963	27,465	4,961	740	31,686	16
1964	29,171	4,910	796	33,285	15
1965	2/ 29,670	4,894	777	33,787	15

1/ Excludes estimates of production of sawed cross ties; such output is included in census figures on lumber production, but railroad cross ties are covered in another summary in this volume.

2/ Estimated on basis of data supplied by the National Forest Products Association.

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

Table 2.--Softwood lumber: U.S. production, by principal species, specified years 1958 to 1964 1/

(In millions of board feet)

Species and most nearly corresponding TSUS item number	1958	1961	1963	1964
Southern, ponderosa, sugar, and western white pine (202.09)	10,274	9,429	10,334	10,987
Douglas-fir (202.15)	9,246	8,326	8,316	8,832
White, red, and all other western fir (genus Abies) (202.18)	2,473	2,200	2,158	2,540
Hemlock (202.21)	1,385	2,022	2,469	2,473
Eastern white, red, and jack pine (202.06)	2/ 502	2/ 823	607	733
Incense cedar and western redcedar (202.27)	507	561	556	651
Engelmann and Sitka spruce (202.03)	550	548	527	624
Larch (202.24)	533	437	389	430
Other softwood (various item numbers) 3/	1,769	1,601	2,109	1,901
Total 4/	27,239	25,947	27,465	29,171

1/ Estimated production for 1965 amounted to 29,670 million board feet, valued at $2,170 million; detail by species is not yet available.

2/ Estimated.

3/ Mostly redwood; also includes species of cedar, fir, and spruce not named above, cypress, lodgepole pine, and tamarack.

4/ Estimated value figures for the years shown are as follows (in millions of dollars):

	1958	1961	1963	1964
Total	1,971	1,790	1,988	2,137

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

Note.--The estimated production of railroad cross ties (included in census data on lumber production) has been omitted because it is covered in a separate summary.

Table 3.--Softwood lumber: U.S. exports of domestic merchandise, by principal species, specified years 1958 to 1965

Species	1958	1961	1963	1964	1965
	Quantity (million board feet)				
Douglas-fir	238	273	367	368	388
Southern pine	78	70	77	103	101
Redwood	10	29	37	59	45
Spruce	15	35	51	80	82
Cedar	11	19	26	42	30
Ponderosa pine	54	31	27	35	31
Western hemlock	41	68	71	48	45
White pine	39	23	14	25	25
All other	54	64	69	36	29
Total	540	613	740	796	777
	Value (1,000 dollars)				
Douglas-fir	22,194	26,999	42,933	45,024	48,250
Southern pine	8,957	9,133	10,838	14,873	14,637
Redwood	1,857	6,193	7,853	10,971	8,740
Spruce	1,150	2,814	3,486	5,074	5,714
Cedar	1,171	2,172	2,851	4,228	3,732
Ponderosa pine	5,959	3,398	3,885	4,195	3,681
Western hemlock	2,398	4,850	4,884	3,531	3,650
White pine	4,056	2,974	2,119	2,774	2,662
All other	4,677	3,950	6,229	2,996	3,028
Total	52,420	62,483	85,078	93,666	94,194
	Unit value (per 1,000 board feet) 1/				
Douglas-fir	$93	$99	$117	$122	$124
Southern pine	114	131	141	145	146
Redwood	187	216	212	185	193
Spruce	79	79	68	64	70
Cedar	102	116	108	100	123
Ponderosa pine	111	108	144	118	118
Western hemlock	59	71	68	73	80
White pine	103	128	151	111	108
All other	86	61	90	83	103
Average	97	102	115	118	121

1/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 4.--Softwood lumber: U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965
	Quantity (million board feet)				
Canada	153	149	107	179	188
Italy	9	28	65	47	79
West Germany	13	31	53	69	62
Australia	59	50	92	92	88
Japan	34	147	113	128	107
Netherlands	2	9	18	25	21
France	7	10	18	20	19
Peru	19	25	36	35	39
Republic of Korea	60	37	100	25	7
All other	184	127	138	176	167
Total	540	613	740	796	777
	Value (1,000 dollars)				
Canada	16,584	17,514	17,369	22,598	22,414
Italy	1,271	3,684	9,771	7,603	12,407
West Germany	1,927	4,082	8,063	11,255	10,303
Australia	5,267	4,763	9,974	10,276	9,833
Japan	2,517	10,652	7,503	7,995	7,434
Netherlands	284	1,233	2,336	4,173	3,665
France	844	1,238	2,476	3,226	3,122
Peru	1,422	1,808	2,804	2,564	2,733
Republic of Korea	4,590	2,873	7,559	2,054	817
All other	17,714	14,636	17,223	21,922	21,466
Total	52,420	62,483	85,078	93,666	94,194
	Unit value (per 1,000 board feet) 1/				
Canada	$108	$118	$162	$126	$119
Italy	135	132	149	162	157
West Germany	146	134	152	163	166
Australia	89	94	109	111	111
Japan	73	73	67	62	69
Netherlands	145	143	133	167	173
France	128	121	141	159	164
Peru	74	73	78	74	70
Republic of Korea	77	78	76	81	110
All other	96	115	125	125	129
Average	97	102	115	118	121

1/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 5.--Softwood lumber: U.S. imports for consumption, by principal species, specified years 1958 to 1965

Species	1958	1961	1963	1964	1965 1/
	Quantity (million board feet)				
Spruce	957	1,323	1,729	1,789	1,766
Douglas-fir	978	1,110	1,145	1,175	1,063
Hemlock	277	421	796	955	1,098
Cedar	258	296	358	385	414
Pine, except eastern white and red	131	189	324	353	336
Pine, eastern white and red	22	30	45	50	53
Fir	83	45	68	81	52
Larch	14	5	4	4	25
All other 2/	419	560	482	88	87
Total	3,139	3,979	4,961	4,910	4,894
	Value (1,000 dollars)				
Spruce	72,975	94,972	105,154	109,725	111,516
Douglas-fir	59,380	68,248	69,746	72,760	66,921
Hemlock	19,209	26,863	47,339	57,977	65,474
Cedar	26,039	23,388	28,083	28,127	31,314
Pine, except eastern white and red	12,105	15,550	19,446	22,566	22,363
Pine, eastern white and red	2,530	3,163	4,307	4,801	5,065
Fir	5,000	2,871	4,420	5,281	3,317
Larch	840	300	877	2,076	1,546
All other 2/	22,625	31,156	27,505	7,205	7,142
Total	220,703	266,511	306,877	310,518	314,658
	Unit value (per 1,000 board feet) 3/				
Spruce	$76	$72	$61	$61	$63
Douglas-fir	61	62	61	62	63
Hemlock	69	64	59	61	60
Cedar	101	79	78	73	76
Pine, except eastern white and red	92	82	60	64	66
Pine, eastern white and red	115	106	96	96	95
Fir	60	64	65	65	64
Larch	61	57	61	61	62
All other 2/	54	56	57	81	82
Average	70	67	62	63	64

1/ Includes unpublished corrections of the official statistics.

2/ Mixed and unspecified kinds of lumber through August 1963; unspecified kinds of lumber, siding, and glued-up wood, beginning September 1963.

3/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 6.--Softwood lumber: U.S. imports for consumption, by principal sources, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965 1/
	Quantity (million board feet)				
Canada	3,087	3,938	4,920	4,868	4,855
Brazil	12	11	15	18	16
Honduras	3	13	11	12	15
Mexico	31	16	10	7	6
Nicaragua	2	1	3	2	1
All other	4	2/	2	3	1
Total	3,139	3,979	4,961	4,910	4,894
	Value (1,000 dollars)				
Canada	215,174	262,023	302,660	306,465	310,795
Brazil	1,256	971	1,496	1,623	1,414
Honduras	379	1,267	1,087	1,103	1,356
Mexico	3,121	2,014	1,180	874	901
Nicaragua	343	152	314	208	79
All other	430	83	140	245	113
Total	220,703	266,511	306,877	310,518	314,658
	Unit value (per 1,000 board feet) 3/				
Canada	$70	$67	$62	$63	$64
Brazil	104	90	97	93	91
Honduras	109	101	95	93	90
Mexico	101	129	120	125	153
Nicaragua	141	137	104	96	124
All other	127	111	92	82	98
Average	70	67	62	63	64

1/ Includes unpublished corrections of the official statistics.
2/ Less than 500,000 board feet.
3/ Calculated from the unrounded figures.

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

Commodity	TSUS item
Hardwood:	
Lumber, not drilled or treated	202.36, -.39, -.41, -.43
Siding, not drilled or treated	202.45 (pt.), -.50 (pt.)
Edge-glued or end-glued, not drilled or treated	202.53
Lumber and siding and edge-glued or end-glued wood, drilled or treated	202.54 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

Domestic production has accounted for about 95 percent of U.S. consumption of hardwood lumber in recent years. Imports, generally two to three times as large as exports in terms of quantity, were valued at $56 million in 1965.

Description and uses

This summary covers hardwood lumber, whether rough, dressed, or worked, of one-piece stock and of edge-glued or end-glued pieces over 6 feet in length and not over 15 inches in width, and such related hardwood products as siding, and glued-up wood of dimensions not within those prescribed above. Hardwood flooring, and softwood lumber and related softwood products are included in separate summaries in this volume. Although lumber, siding, and flooring are referred to separately in the TSUS, such articles as siding and flooring are generally considered to be types of lumber.

Items 202.36 through 202.43 cover hardwood lumber of the different species, whether rough, dressed, or worked, including edge-glued or end-glued stock over 6 feet long and not over 15 inches wide. Virtually no hardwood siding (in items 202.45, 202.50, and 202.54) is produced domestically, and only small amounts are imported. Hardwood consisting of edge-glued and end-glued wood that is 6 feet or less in length or more than 15 inches in width, not drilled or treated, is provided for under item 202.53. Hardwood lumber and siding, as well as edge-glued and end-glued hardwood of the dimensions stated in the preceding sentence, drilled at intervals for nails, screws, or bolts, sanded or otherwise surface processed in lieu of, or in addition to, planing or working, or treated with creosote or other wood preservatives or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels is provided for under item 202.54. The treatment of any of the lumber

or other wood products included in this summary with antistain or other temporary applications (see headnote 4 to pt. 1B of schedule 2) does not affect the tariff classification of such products; products so treated are classified according to their other characteristics.

Lumber of one-piece stock is the product of a sawmill or sawmill and planing mill and is not further manufactured than by sawing, resawing, and passing lengthwise through a planing machine, crosscut to length, and matched (tongued and grooved). In its original sawed condition, lumber has at least two approximately parallel, flat, longitudinal surfaces. According to the stage of manufacture, lumber is produced and marketed as follows:

1. Rough--just as it comes from the saw, whether in the original sawed size or edged, resawn, crosscut, or trimmed to smaller sizes. Such lumber has rough-sawed sides or faces and usually rough-sawed edges.

2. Dressed or surfaced--rough lumber that has been machine-planed to produce a smooth surface on one or more sides or edges.

3. Worked--lumber that has been machined to a uniform pattern or form along its entire length, thus being matched, shiplapped (to provide an overlapping joint), or otherwise patterned. Stair treads and risers are typical examples of worked hardwood lumber.

Normally, most hardwood lumber is produced at, and sold from, the sawmill in rough condition; much of such lumber, known as hardwood dimension stock, is produced in certain sizes suitable for making such products as furniture. Other hardwood lumber is used in the manufacture of paneling, flooring, cabinets, and other finished or semi-finished products, including millwork, boxes, crates, pallets, woodenware and novelties, fixtures, handles, and caskets and burial boxes, and in the construction and repair of railroad freight cars.

Hardwood lumber is produced from broad-leaved species of trees, as distinguished from softwood lumber, which is produced from coniferous species. The distinction is botanical and not based on the actual hardness of the wood. Hardwoods are generally harder and heavier than softwoods, but some hardwood species, such as balsa, are among the softest known woods. Even within the same species there is considerable variation in density, depending on locality and climatic conditions; the wood of trees that have grown slowly (with closely spaced annual rings) is heavier and harder than that of trees of faster growth.

In the United States, the most important tree species from which hardwood lumber is produced are oak, yellow-poplar, gum (sweet and tupelo), maple, beech, brich, elm, cottonwood (poplar), and ash. Many of these species are also native to Canada and a few to Mexico. Tropical species of hardwood lumber imported into the United States include mahogany, lauan (Philippine mahogany), virola, obeche, balsa, and teak.

Lumber is measured by the board foot, a three-dimensional unit; for tariff purposes--

> a board foot is the quantity of lumber contained in, or derived (by drying, dressing, or working, or any combination of these processes) from, a piece of rough green lumber 1 inch in thickness, 12 inches in width, and 1 foot in length, or the equivalent of such piece in other dimensions.

Hardwood lumber, like softwood lumber, is produced in many dimensions, which are generally grouped according to thickness. Boards are most commonly about an inch in thickness but may vary from 3/8 inch to 1-3/4 inch in the rough and somewhat less when surfaced; dimension stock is 2 inches or more in thickness and sawed timbers are 6 inches or more. However, the distinction between dimension and timbers is not as clear for hardwood lumber as for softwood lumber. Hardwood dimension is used largely in the manufacture of products such as furniture, while softwood dimension is used chiefly in the construction of buildings; hence these two classes are not entirely comparable. The specifications for the many standard sizes of hardwood lumber are found in the Rules for Measurement and Inspection of Hardwood Lumber . . . established by the National Hardwood Lumber Association, Chicago, Ill.

Hardwood lumber is usually graded on the number of clear cuttings (those without defects such as knots, splits, and worm holes) which can be obtained from a given piece. "Standard rules" for the grading of hardwood lumber, formulated and published by regional lumber manufacturing or marketing organizations, vary according to region of production and/or species of wood. In general, the best grades of hardwood lumber are known as "No. 1 common and better" and include "Firsts and seconds" and "Selects"; the medium grades, as "No. 2 common"; and the poorer grades, as "No. 3 common" (which includes grades 3A and 3B).

According to its moisture content, lumber is classed as green or dry. More than half the weight of green lumber may consist of moisture, most of which is removed in seasoning, with some shrinkage in size, particularly across the grain. To prevent warping, virtually all hardwood lumber is seasoned by drying before retail sale or use in manufacture. Such lumber may be either air-dried at the sawmill yard or

a separate "concentration" yard over a period of months by exposure to sun and wind or kiln-dried in days under controlled conditions of heat and humidity at a dry kiln operated in connection with a sawmill-planing mill or at an independent dry kiln. Often the lumber is partially air-dried then kiln-dried.

Edge-glued or end-glued lumber is glued-up from short or narrow pieces of lumber, including pieces salvaged from slabs or edgings, or from short pieces obtained by sawing out knots and other imperfections from low-grade lumber, thereby upgrading such lumber. Edge-glued lumber is dressed before gluing, since exact machining provides a tight joint for the abutting pieces. End-glued lumber is usually dressed after gluing, since the pressure applied in making the joint (usually a "finger joint") causes a swelling, or increase in thickness, at this point.

Glued-up lumber, as well as glued-up wood in sizes that for tariff purposes do not qualify as lumber, has become increasingly accepted for many purposes. Glued-up hardwood lumber can be used interchangeably with one-piece lumber for some factory-produced articles, particularly where the joint is hidden from view or where the joint will be covered, such as by painting. Glued-up hardwood other than lumber is used particularly for furniture, household and store fixtures, and other factory-produced articles.

Laminated beams and timbers, formed by face-gluing together two or more boards (including edge-gluing and end-gluing) to make pieces of larger dimensions, is not considered to be lumber for tariff purposes but is provided for under TSUS item 207.00 as articles of wood, not specially provided for (see summary in volume 2:2).

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty 1/
	Hardwood lumber, not drilled or treated:	
202.36	Balsa and teak	$3 per M bd. ft.
202.39	Mahogany	$1.60 per M bd. ft.
202.41	Spanish cedar, boxwood, ebony, lancewood, Japanese maple, Japanese white oak, and lignum-vitae	2.5% ad val.
202.43	Other	$1.50 per M bd. ft.
	Hardwood siding, not drilled or treated:	
202.45 (pt.)	Resawn bevel siding	50¢ per M sq. ft.
202.50 (pt.)	Other siding	$1 per M sq. ft.
202.53	Hardwood, edge-glued or end-glued, not drilled or treated	5% ad val.
202.54 (pt.)	Hardwood, drilled or treated, including lumber and siding and edge-glued or end-glued hardwood	9% ad val.

1/ As used here, "M bd. ft." means 1,000 feet, board measure (see definition in headnote 3 to pt. 1B of schedule 2 of the TSUS); "M sq. ft." means 1,000 square feet, surface measure.

For products of the Philippine Republic, which supplied about 8 percent of the total quantity of hardwood lumber imported in 1965, the current rates of duty are (as indicated in pt. c of general headnote 3 mentioned above) 40 percent of the appropriate column 1 rates.

Public Law 89-392 suspended the duty on certain tropical hardwood lumber imported in the period after April 14, 1966, through December 31, 1967. The species affected included balsa, teak, mahogany, Spanish cedar, ebony, lignumvitae, obeche, virola, and many others (see items 916.20 to 916.23, in appendix A). The tropical hardwoods that have remained dutiable include almon, bagtikan, red lauan, white lauan, mayapis, meranti, red seraya, white seraya, tangile, and tiaong. Logs of these species are exported in substantial quantity from producing countries and sawed into lumber in temperate-zone countries.

November 1966
2:1

The scope of items 202.36 through 202.43 varies to some extent from that of the provisions for hardwood lumber in the former tariff schedules. Essentially, however, the tariff rates in the TSUS are based on, or derived from, the lumber rates (including the import taxes imposed under the Internal Revenue Code) that had become effective (except for balsa and teak) pursuant to concessions granted by the United States under the General Agreement on Tariffs and Trade (GATT). Currently, the rate for balsa and teak lumber, which was previously imposed as an import tax, has been in effect for more than 10 years; it is not a trade-agreement rate. The rates for the lumber covered in items 202.39 through 202.43 are the subject of GATT concessions.

The rates of duty for items 202.45, 202.50, and 202.53 were established by the TSUS. The rate of 9 percent ad valorem, for item 202.54, became effective on January 1, 1966, and represents the first stage of a U.S. concession in the GATT, which is to become effective in five annual stages, the last (5 percent ad valorem) on January 1, 1970 (see Presidential Proclamation No. 3694, dated December 27, 1965). The previous rate (10 percent) was established by the TSUS.

On the U.S. imports entered in 1965 under items 202.36, 202.39, and 202.43, the ad valorem equivalents of the applicable column 1 rates of duty were 1.0 percent, 0.8 percent, and 0.9 percent, respectively. On the 1965 imports of balsa and teak (in item 202.36), the ad valorem equivalents of the duty were 2.0 percent and 0.4 percent, respectively. On imports of maple (except Japanese maple), birch, and beech (in item 202.43) in 1965, which together accounted for 44 percent of the quantity of hardwood lumber imported in that year, the ad valorem equivalent of the duty was 0.8 percent. Lauan (Philippine mahogany), entered under item 202.43, comprised nearly all the imports of products of the Philippines considered here which were subject to the preferential rates of duty mentioned above. The ad valorem equivalents of the preferential rate (60 cents per thousand board feet) applicable to such imports in 1965 were 0.5 percent on rough lumber and 0.4 percent on dressed lumber. On U.S. imports in 1965 of lauan from Japan, generally the leading supplier, the ad valorem equivalents of the column 1 rate of duty ($1.50 per thousand board feet) were 0.9 percent and 0.7 percent for rough and dressed lumber, respectively.

U.S. consumption

U.S. consumption of hardwood lumber, which increased from 5.4 billion board feet in 1958 to an estimated 7.2 billion in 1965 (table 1), has been supplied chiefly by domestic production. Oak is the major species of hardwood lumber consumed, accounting for nearly half of the total quantity. Imported lumber, although supplying a small share of total consumption, has been very important for specialized uses or to meet particular demands not satisfied by domestic lumber.

The principal factor affecting the consumption of hardwood lumber is the demand for furniture and flooring; the demand for pallets, boxes and crates, and millwork is also important. These markets rise and fall with such other factors as the level of house construction, rates of family formation, and general economic activity. Softwood lumber, plywood, hardboard, particle board, and paper products are competitive in many of the uses of hardwood lumber, as are many nonwood products.

U.S. producers

Most of the domestic producers of hardwood lumber, estimated at 18,000 in 1963, are situated in the eastern half of the United States, particularly in the South, and range in size from small sawmills with intermittent output to large integrated mills operating most of the year and producing a variety of forest products. Only a few of the hardwood mills are custom plants that produce lumber to order.

U.S. production

The annual U.S. output of hardwood lumber has been rising in recent years (table 2). In 1965 it amounted to an estimated 6.9 million board feet--almost 30 percent more than in 1958--and was equivalent to about one-fifth of world production. Most of the domestic production was sold to furniture factories, flooring plants, manufacturers of other articles, and to lumber dealers.

Production is concentrated in the South, which accounted for 68 percent of the U.S. total in 1963. The four highest ranking States for that year--Virginia, North Carolina, Tennessee, and Arkansas--accounted for 28 percent of U.S. production and 42 percent of production in the South. Pennsylvania, the chief producing State in the North, ranked fifth in the Nation in 1963.

Oak made up a greater part of domestic output than any other species, accounting for 46 percent of the total in 1964, while yellow-poplar, gum, and maple accounted for 10 percent each. Other species of importance included cottonwood and aspen, elm, beech, ash, and birch.

The prices for hardwood lumber climbed rather steadily from 1962 to 1965, as indicated by the wholesale price index (1957-59=100) of the Bureau of Labor Statistics for the years 1958 and 1961-65 shown below:

Year	Index
1958	98.6
1961	98.5
1962	98.3
1963	101.5
1964	105.4
1965	111.3

U.S. exports

In 1958-65, annual U.S. exports of hardwood lumber, small relative to domestic production, ranged between 86 million and 118 million board feet. In 1965, they amounted to 106 million feet, valued at $17.6 million (table 3).

Oak, the leading species exported, accounted for 65 percent of the total quantity and 57 percent of the total value of all hardwood lumber exports in 1965. Exports of walnut lumber, which more than doubled in both quantity and value from 1958 to 1965, accounted for 7 percent of the total quantity and 16 percent of the total value of hardwood lumber exports in 1965. Exports of the maple-birch-beech group declined in quantity in the period 1958-65 but remained at about the same level in terms of value. All the species mentioned above accounted for 80 percent of the total value and 82 percent of the total quantity of hardwood lumber exports in 1965.

Canada is the chief recipient of U.S. hardwood lumber exports, and in 1965 accounted for 80 percent of the total quantity and 72 percent of the total value (table 4). Other chief markets include the United Kingdom, Japan, Mexico, Norway, Ireland, and Spain.

U.S. imports

U.S. imports of hardwood lumber, which have been generally rising since 1958, reached 324 million board feet, valued at $56 million, in 1965--the highest level in the period covered (table 5). Maple, birch, and beech as a group led the species imported in recent years, and in 1965 accounted for 48 percent of the total value; lauan (Philippine mahogany) ranked second, and mahogany, third. Together these leading species accounted for 71 percent of the total quantity and 74 percent of the total value in 1965.

November 1966
2:1

Canada was the chief source of U.S. hardwood lumber imports throughout the period, and in 1965 accounted for 47 percent of the quantity and 50 percent of the value (table 6). Canada, Japan, and the Philippine Republic together accounted for about two-thirds of all imports in 1965. Other leading sources in recent years have been Colombia, Taiwan, Malaysia, and Ghana.

The chief foreign supplier of maple, birch, and beech lumber is Canada; of lauan lumber, Japan, the Philippine Republic, and Taiwan; and of other hardwood lumber entered under item 202.43, Colombia, Ghana, and Malaysia. Mahogany comes from several Latin American and African countries, of which British Honduras ranked first in 1965. The imports from Canada tend to compete with the U.S. product, but those from other countries mostly complement the domestic supply.

Foreign production and trade

The world production of hardwood lumber in 1963 amounted to about 32 billion board feet. Of this total, the United States and the U.S.S.R. each accounted for almost 21 percent, Europe for about 19 percent, Southeast Asia for 11 percent, and Latin America and Japan for 8 percent each. Mainland China, Canada, Africa, and Australia produced most of the remaining 12 percent.

The leading exporting countries of Europe in 1963--Rumania (which led the world), Yugoslavia, and France--exported chiefly to other European countries. Malaysia, second to Rumania as an exporter, shipped primarily to Europe and Australia; Ghana, the major African exporter, chiefly to Europe; Canada, principally to the United States; and Latin American countries, to all parts of the world.

Among the countries importing hardwood lumber, the United Kingdom was first, and the United States second, with the next ranking countries well behind.

Table 1.--Hardwood lumber: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

Year	Production 1/	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	Million bd. ft.	Million bd. ft.	Million bd. ft.	Million bd. ft.	Percent
1958	5,270	231	98	5,400	4.3
1961	5,420	240	97	5,560	4.3
1963	6,690	298	86	6,900	4.3
1964	6,720	296	118	6,900	4.3
1965	2/ 6,930	324	106	7,150	4.5

1/ Excludes estimates of production of sawed cross ties; such output is included in census figures on lumber production, but railroad cross ties are covered in another summary in this volume.

2/ Estimated on basis of data supplied by the National Forest Products Association.

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

Table 2.--Hardwood lumber: U.S. production, by principal species, specified years 1958 to 1964 1/

(In millions of board feet)

Species	1958	1961	1963	1964
Oak	2,411	2,491	2,898	3,066
Gum	671	549	759	702
Yellow-poplar	615	541	644	645
Maple	552	526	556	642
Cottonwood and aspen	156	167	192	205
Elm	160	181	200	204
Beech	198	166	166	176
Ash	114	103	143	136
Birch	156	103	107	121
Basswood	101	63	92	69
All other 2/	134	525	932	755
Total 3/	5,268	5,415	6,689	6,721

1/ Estimated production for 1965 amounted to 6,930 million board feet, valued at $856 million; detail by species is not yet available.

2/ Includes all western species as well as eastern species not separately listed.

3/ Estimated value of figures for the years shown are as follows (in millions of dollars):

	1958	1961	1963	1964
Total	568	592	754	786

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

Note.--The estimated production of railroad cross ties (included in census data on lumber production) has been omitted because it is covered in a another summary in this volume.

Table 3.--Hardwood lumber: U.S. exports of domestic merchandise, by principal species, specified years 1958 to 1965

Species	1958	1961	1963	1964	1965
	Quantity (million board feet)				
Oak	58.3	59.0	58.3	77.0	69.0
Walnut	3.1	4.6	5.3	7.6	7.5
Maple, birch, beech	14.3	14.8	8.9	11.1	10.4
Ash	2.1	3.5	2.6	3.5	1/
Balsa, mahogany, teak	1.2	1.1	.9	1.1	1/
Basswood, yellow-poplar	5.3	3.5	1.7	2.7	1/
Hickory	.5	.5	.8	.9	1/
Gum	5.1	1.6	1.9	1.4	1/
All other	8.5	8.6	5.3	13.0	19.0
Total	98.4	97.3	85.9	118.3	105.9
	Value (1,000 dollars)				
Oak	7,797	8,199	8,205	10,615	10,016
Walnut	998	1,949	2,303	3,041	2,766
Maple, birch, beech	1,104	1,473	1,264	931	1,181
Ash	391	607	518	616	1/
Balsa, mahogany, teak	432	419	332	373	1/
Basswood, yellow-poplar	705	432	268	289	1/
Hickory	83	111	210	274	1/
Gum	462	165	205	153	1/
All other	1,075	1,416	994	1,261	3,593
Total	13,047	14,780	14,300	17,553	17,556
	Unit value (per 1,000 board feet) 2/				
Oak	$134	$139	$141	$138	$145
Walnut	323	420	435	398	371
Maple, birch, beech	77	100	143	84	113
Ash	189	172	196	178	1/
Balsa, mahogany, teak	363	367	362	349	1/
Basswood, yellow-poplar	133	123	154	107	1/
Hickory	180	233	257	304	1/
Gum	91	106	105	112	1/
All other	121	160	188	97	189
Average	133	152	166	148	166

1/ Included in "All other."
2/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 4.--Hardwood lumber: U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965
	Quantity (million board feet)				
Canada	77.3	69.0	67.9	90.2	84.9
United Kingdom	3.7	6.4	5.5	6.3	5.0
Japan	.1	.3	1.5	1.9	2.1
Mexico	3.1	3.8	1.6	2.6	4.8
Norway	1.0	.9	1.3	1.5	1.3
Ireland	.9	1.4	1.2	1.2	.9
Spain	.9	2.5	1.7	2.4	.8
All other	1/ 11.4	2/ 13.0	5.2	12.2	6.1
Total	98.4	97.3	85.9	118.3	105.9
	Value (1,000 dollars)				
Canada	10,058	10,537	10,685	12,726	12,616
United Kingdom	749	1,290	1,163	1,327	1,115
Japan	49	59	355	765	804
Mexico	345	440	251	373	636
Norway	180	168	216	272	255
Ireland	159	272	268	256	224
Spain	70	272	252	294	163
All other	1/ 1,437	2/ 1,742	1,110	1,540	1,743
Total	13,047	14,780	14,300	17,553	17,556
	Unit value (per 1,000 board feet) 3/				
Canada	$130	$153	$157	$141	$149
United Kingdom	200	201	212	211	223
Japan	330	233	229	413	380
Mexico	110	117	152	146	134
Norway	179	182	171	182	192
Ireland	183	195	219	219	249
Spain	82	108	152	121	209
All other	126	134	213	126	286
Average	133	152	166	148	166

1/ Includes 4.8 million board feet, valued at 401 thousand dollars, from Cuba, and 3.1 million board feet, valued at 372 thousand dollars, from West Germany.

2/ Includes 1.7 million board feet, valued at 273 thousand dollars, from West Germany.

3/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 5.--Hardwood lumber: U.S. imports for consumption, by principal species, specified years 1958 to 1965

Species	1958	1961	1963	1964	1965 1/
	Quantity (million board feet)				
Maple, 2/ birch, beech	84.5	92.7	122.4	122.6	142.3
Lauan (Philippine mahogany)	86.3	73.5	75.7	70.8	68.8
Mahogany	18.2	21.2	25.2	21.6	18.1
Teak	.8	2.0	1.7	1.6	2.1
Balsa	8.3	4.6	8.0	4.3	4.7
Spanish cedar 3/	.6	1.2	1.8	2.3	3.4
All other 4/	32.5	44.4	63.2	73.3	84.9
Total	231.2	239.6	298.0	296.5	324.3
	Value (1,000 dollars)				
Maple, 2/ birch, beech	14,759	17,725	22,134	22,912	26,743
Lauan (Philippine mahogany)	12,190	10,856	11,579	11,052	10,834
Mahogany	3,386	4,189	5,008	4,158	3,763
Teak	483	1,330	1,089	1,074	1,465
Balsa	1,070	673	1,052	646	696
Spanish cedar 3/	145	292	351	442	672
All other 4/	3,803	5,528	7,732	9,662	11,857
Total	35,836	40,593	48,945	49,946	56,030
	Unit value (per 1,000 board feet) 5/				
Maple, 2/ birch, beech	$175	$191	$181	$187	$188
Lauan (Philippine mahogany)	141	148	153	156	157
Mahogany	186	197	198	193	207
Teak	590	663	650	687	691
Balsa	129	148	131	149	147
Spanish cedar 3/	234	242	196	195	198
All other 4/	117	124	122	132	140
Average	155	169	164	168	173

1/ Includes unpublished corrections of the official statistics.
2/ Except Japanese maple.
3/ Also included are boxwood, ebony, lancewood, lignumvitae, Japanese maple, Japanese white oak, and (before Aug. 31, 1963) granadilla, rosewood, and satinwood.
4/ Includes many other species of hardwood lumber, also siding and glued-up wood, for which species are not reported.
5/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 6.--Hardwood lumber: U.S. imports for consumption, by principal sources, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965 1/
	Quantity (million board feet)				
Canada	85.9	94.8	123.9	124.6	151.2
Japan	48.9	42.7	41.1	37.1	34.2
Philippine Republic	44.8	30.6	30.9	31.8	27.5
Taiwan	1.3	4.1	9.5	11.8	13.8
Ghana	4.0	5.1	8.8	12.5	13.6
Malaysia 2/	1.7	4.9	8.6	9.8	15.4
Ecuador	8.3	4.7	9.2	7.4	9.4
Brazil	.2	1.9	5.0	4.9	9.7
British Honduras	3.3	4.8	5.7	6.5	5.1
Colombia	13.2	17.0	22.6	21.7	12.4
All other	19.6	29.0	32.7	28.4	32.0
Total	231.2	239.6	298.0	296.5	324.3
	Value (1,000 dollars)				
Canada	14,396	17,868	21,934	23,194	28,042
Japan	8,076	7,366	7,534	6,834	6,357
Philippine Republic	5,537	3,656	3,877	3,971	3,599
Taiwan	148	562	1,418	1,909	2,193
Ghana	670	863	1,251	1,845	2,060
Malaysia 2/	210	573	1,047	1,228	1,911
Ecuador	1,070	686	1,144	1,021	1,284
Brazil	34	243	721	566	1,238
British Honduras	693	1,068	1,153	1,449	1,215
Colombia	1,094	1,489	1,894	2,026	1,133
All other	3,908	6,219	6,972	5,903	6,998
Total	35,836	40,593	48,945	49,946	56,030
	Unit value (per 1,000 board feet) 3/				
Canada	$168	$188	$177	$186	$185
Japan	165	172	184	184	186
Philippine Republic	124	120	125	125	131
Taiwan	118	136	149	161	158
Ghana	166	171	142	148	152
Malaysia 2/	124	116	122	125	124
Ecuador	128	144	124	138	136
Brazil	155	129	144	115	128
British Honduras	207	222	243	222	239
Colombia	83	88	84	93	91
All other	199	214	213	208	219
Average	155	169	164	168	173

1/ Includes unpublished corrections of the official statistics.
2/ Includes Singapore. 3/ Calculated from the unrounded figures.

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

November 1966
2:1

Commodity	TSUS item
Hardwood flooring in strips and planks	202.57
Other wood flooring (except softwood flooring classifiable as lumber)	202.60

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

The United States is virtually self-sufficient in hardwood flooring. Both imports and exports are small relative to production. Imports in 1965, unlike those in most recent years, exceeded exports; the 1965 imports were valued at about $2.8 million.

Description and uses

Hardwood flooring in strips and planks (item 202.57) comprises by far the most important flooring material considered in this summary. Strip hardwood flooring is made both tongued-and-grooved and square-edged in random lengths ranging from 9 inches to as long as 16 feet. According to standards published by the U.S. Department of Commerce, the thickness of the tongued-and-grooved ranges from 11/32 to 25/32 inch and that of the square-edged is 5/16 inch, whereas the width of the former ranges from 1-1/2 to 3-1/4 inches, and that of the latter, from 7/8 to 2 inches. Plank flooring is similar to strip, but generally wider, and the edges are commonly beveled. Softwood flooring in strips and planks is classifiable for tariff purposes as lumber (see summary on items 202.03 et al.); softwood flooring not classifiable as lumber is provided for under item 202.60 and is currently not a common article of commerce.

The flooring provided for in item 202.60 includes block flooring, which is generally of two types, unit or laminated. Unit block flooring is made from short pieces of strip flooring (usually of hardwood) tightly fastened together (principally by splines) to form a square, customarily 9 x 9 inches and 25/32 inch thick with tongued-and-grooved edges. Laminated block flooring is essentially a small square of plywood (i.e., laminated veneers), often 9 x 9 inches and 15/32 inch thick. Assembled sections or units of block flooring, also provided for in item 202.60, consist of (1) sets of an even number of squares (unit or laminated) fastened together so that the grain of each square forms a checkerboard or parquetry pattern in the completed panel, and (2) sets

of "slat-block" flooring, each set made up of four or more smaller squares formed from narrow slats or strips.

The floorings provided for in items 202.57 and 202.60 may be factory-finished by sanding, filling, and applying coats of wax so that they are ready for use immediately after installation. They are rarely drilled at intervals for nails or screws. Flooring is graded according to the number, size, and location of the defects in the wood. The best grade is practically free of all defects.

Hardwood flooring, valued for its wearing quality, resiliency, and natural grain, is used as the exposed surface on the floors of homes, gymnasiums, schools, office buildings, and other structures. Hardwood flooring is also used to floor some types of railroad boxcars, motor trucks, and boats.

Oak, which is abundant in the United States, is the predominant kind of hardwood flooring. Maple, birch, beech, pecan, and sometimes ash and hickory are also used. In the more decorative parquet or block flooring, cherry, mahogany, teak, walnut, or other expensive or exotic woods are sometimes used.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
202.57	Hardwood flooring in strips and planks--	4% ad val.
202.60	Other wood flooring (except softwood flooring classifiable as lumber)------	16-2/3% ad val.

The rate of duty for the hardwood flooring in item 202.57 is the same as the rate provided in paragraph 402 of the former tariff schedules for flooring of maple (except Japanese maple), birch, and beech, The 4-percent rate on such flooring reflected a concession that was granted by the United States in the General Agreement on Tariffs and Trade (GATT) and became effective on January 1, 1948. Other kinds of strip and plank flooring were dutiable, prior to the TSUS, at various concession rates provided for under the former tariff schedules (pars. 404 and 1803) and the Internal Revenue Code (sec. 4551(1)). Since January 1, 1966, the 4-percent rate has reflected a GATT concession on all the hardwood flooring provided for in item 202.57.

The rate for the flooring in item 202.60, reflecting a concession on "manufactures of wood, not specially provided for" (par. 412) granted by the United States in the GATT, became effective May 30, 1950.

U.S. consumption

The annual consumption of hardwood flooring in the United States, which averaged slightly more than 900 million board feet in 1961-65, was approximately the same in 1965 as in 1961 (table 1). The 1965 level of consumption--890 million board feet--however, continues a long-term decline from the record high in 1955 of almost 1,300 million board feet.

The use of hardwood flooring does not appear to be keeping pace with construction activity, probably because of increasing competition from other materials such as hardboard, wood particle board, and plywood. These materials provide adequate subsurfaces for wall-to-wall carpeting, linoleum, and the other floor coverings that are currently popular. About 95 percent of the hardwood flooring consumed in the United States in recent years has been oak, and the remainder, chiefly maple; about 90 percent of the total has consisted of strip and plank.

U.S. producers

Early in 1966 there were at least 130 hardwood-flooring producers active in the United States. About 110 of these produced oak strip flooring and were situated in many States in the area extending from New York to Texas. Tennessee, with 18 strip-flooring producers (more than any other State), was the geographic center of the oak flooring industry. About a dozen concerns produced flooring from maple, birch, and beech, chiefly in Michigan and Wisconsin. The remainder consisted of 4 or 5 eastern producers of laminated block flooring of several species and a few western producers of all types of hardwood flooring. The total number of producers has declined since 1963, when 155 were in operation. The number producing maple, birch, and beech flooring declined proportionately more than the number producing oak flooring.

U.S. production

The domestic production of hardwood flooring amounted to about 889 million board feet in 1965 (table 1), valued at about $150 million. This quantity was virtually the equivalent of consumption because imports and exports were about equal. The 1965 annual production represented a decrease from the annual level of approximately 950 million

board feet in 1963-64, but was about the same as that in 1961-62. For production, as for consumption, the annual average for 1961-65 was considerably below the figure for the peak year of 1955, when production reached nearly 1,300 million board feet.

In recent years oak has accounted for about 95 percent of total production of hardwood flooring, with other species, chiefly maple, birch, beech, and pecan, making up the remainder. The production of maple, birch, and beech flooring has experienced a sharper decline than that of oak flooring. Not only is oak more abundant than maple, but the price of maple, grade for grade, has been consistently higher than that of oak. The relative price levels of maple and oak flooring are illustrated by the following average annual wholesale prices (per thousand board feet) for specified years 1958 to 1965, computed by the U.S. Bureau of Labor Statistics:

Kind of flooring	1958	1961	1963	1964	1965
Maple	$214	$204	$206	$207	$211
Red oak, select	168	169	169	183	188

U.S. exports

U.S. exports of hardwood flooring are small, amounting to less than 2 percent of domestic production. Such exports declined from 26 million board feet in 1958 to about 9 million in 1965. Canada and the United Kingdom were the leading export markets (table 2). Exports of oak flooring declined from 1958 to 1965 both in absolute amount and in the share of total exports of hardwood flooring. In 1958, exports of oak flooring amounted to 25 million board feet, representing 97 percent of the total, whereas in 1965 they totaled 7 million board feet, representing 80 percent of the total.

U.S. imports

U.S. imports of hardwood flooring, though very small relative to domestic production, have doubled in recent years and in 1965 were equivalent to 10 million board feet, valued at $2.8 million. Imports,

which have consisted mainly of maple in strip and plank form, were as follows in 1964 and 1965:

Form and kind	1964		1965	
	Quantity	Value	Quantity	Value
	Million bd. ft.	1,000 dollars	Million bd. ft.	1,000 dollars
Strips and planks:				
Maple, birch, and beech	5.14	806	5.79	1,011
Other (chiefly oak)	2.24	271	2.50	399
Blocks or other forms	1/ 1.33	1,263	1/ 1.64	1,348
Total	8.71	2,340	9.93	2/ 2,757

1/ Estimated.
2/ Because of rounding, figures do not add to total shown.

The unit values of the imported maple strip flooring exceed those of imported oak strip flooring by a difference comparable to that for domestic flooring. The unit values of imported block, parquet, and related forms of flooring average higher than those of strip flooring, partly owing to the use of expensive tropical woods in making the former.

Canada was the chief supplying country for flooring in 1964-65 (tables 3 and 4). Other leading supplying countries of strip and plank flooring were Australia and Thailand (table 3); and of block and other forms, Rhodesia, Thailand, and Japan (table 4).

With respect to oak flooring, which, as previously stated, accounts for about 95 percent of U.S. flooring consumption, imports (chiefly from Canada) have supplied less than 1 percent of domestic consumption in recent years. Competition from imported flooring, however, is evident in the Northeastern States and in some other States where Canadian maple and birch flooring enter the market. U.S. imports of maple, birch, and beech flooring (also chiefly from Canada), which in 1958-62 accounted for 9 percent of domestic consumption of these kinds of flooring, made up 16 percent and 18 percent of such consumption in 1964 and 1965, respectively. Flooring imported from countries other than Canada consists chiefly of specialty types in small amounts, hence is competitive only with the small volume of domestic specialty flooring.

Foreign production and trade

Hardwood flooring is produced in many countries. Production of hardwood flooring in Canada (the chief source of U.S. imports) totaled

about 93 million board feet in 1964, valued at about $16 million (Canadian), slightly exceeding the previous peak year of 1956. The 1964 output consisted of about 78 million board feet of strip flooring and about 15 million of block flooring. During the 9-year period 1956-64, Canadian output of oak flooring increased both in absolute amount and in percent of total hardwood flooring, whereas birch decreased on both counts, and maple varied from year to year. The percentage distribution of total Canadian shipments in 1956 and 1964 was as follows:

Species	1956	1964
Red oak, plain	28	51
Maple	21	24
Birch	46	23
Beech and other 1/	5	2
Total	100	100

1/ Includes white oak, quarter-sawed red oak, ash, and elm.

While there has been no pronounced upward trend in Canadian flooring production in the past decade, total exports have about doubled, increasing from 10 million board feet in 1956 to 20 million in 1965. Annual exports of flooring to the United States varied little in the period 1958-62, averaging 5.4 million board feet, and thereafter increased each year to 9.7 million in 1965.

Table 1.--Hardwood flooring: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

(In millions of board feet)

Year	Production 1/	Imports	Exports	Apparent consumption
1958	999	2/ 5	26	978
1961	894	2/ 5	11	888
1963	952	2/ 8	10	950
1964	954	9	13	950
1965	889	10	9	890

1/ Derived from industry figures.
2/ Partly estimated.

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

Table 2.--Hardwood flooring: U.S. exports of domestic merchandise by principal markets, specified years 1958 to 1965

Country	1958	1961	1963	1964	1965
	Quantity (million board feet)				
Canada	23.3	8.8	7.6	9.2	6.1
United Kingdom	1.7	2.2	1.5	1.8	1.0
All other	1.1	.5	1.2	2.3	1.5
Total	26.1	11.5	10.3	13.3	8.6
	Value (1,000 dollars)				
Canada	3,303	1,492	1,335	1,369	1,080
United Kingdom	295	412	282	360	191
All other	207	117	268	451	327
Total	3,805	2,021	1,885	2,180	1,598
	Unit value (per 1,000 board feet) 1/				
Canada	$142	$170	$175	$149	$176
United Kingdom	176	184	193	203	193
All other	180	248	213	196	219
Average	146	176	182	165	185

1/ Calculated from the unrounded figures.

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

Table 3.--Hardwood flooring in strips and planks: U.S. imports for consumption, by principal sources, 1964 and 1965

Year and country	Quantity	Value	Unit value 1/
	Million bd. ft.	1,000 dollars	Per 1,000 bd. ft.
1964:			
Canada	6.29	940	$149
Thailand	.11	13	114
Australia	.91	110	122
All other	.07	14	183
Total or average	7.38	1,077	146
1965:			
Canada	7.78	1,260	162
Thailand	.15	72	493
Australia	.18	41	229
All other	.18	37	196
Total or average	8.29	1,410	170

1/ Calculated from the unrounded figures.

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

Table 4.--Wood flooring in blocks and other forms: 1/ U.S. imports for consumption, by principal sources, 1964 and 1965

Year and country	Quantity	Value	Unit value 2/
	Million sq. ft.	1,000 dollars	Per 1,000 sq. ft.
1964:			
Canada	1.24	965	$778
Rhodesia	.48	130	273
Thailand	.34	73	214
Japan	.42	48	114
All other	.18	47	254
Total or average	2.66	1,263	475
1965:			
Canada	2.09	1,109	530
Rhodesia	.62	110	177
Thailand	.34	75	218
Japan	.09	15	171
All other	.14	39	297
Total or average	3.28	1,348	411

1/ Does not include hardwood flooring in strips and planks, or softwood flooring classifiable as lumber.
2/ Calculated from the unrounded figures.

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

Commodity	TSUS item
Wood moldings, and certain wood carvings and ornaments:	
Standard moldings not drilled or treated	202.63
Other	202.66

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

Domestic production accounts for about 95 percent of U.S. consumption of the articles covered by this summary. Imports, which have been increasing in recent years, were valued at nearly $14 million in 1965. Exports have been negligible.

Description and uses

Standard wood moldings are defined in headnote 2(e) to part 1B of schedule 2 of the TSUS as "wood moldings worked to a pattern and having the same profile in cross section throughout their length." Such moldings are produced by one pass of a piece of lumber (usually rough) through a molding machine or a planing machine; they are used chiefly in the finish and trim of houses and other buildings, and are usually in patterns described or illustrated in molding-pattern books published by molding or lumber trade associations. 1/ Standard moldings are ordinarily long narrow strips of wood, either in one piece or end-glued (as by finger-jointing), used to cover the joints around doors and windows, at the juncture of the walls with floors and ceilings, and otherwise. Some examples of such moldings are casing, crowns and beds, coves, baseboard, picture molding (a separate article from picture-frame molding), chair rail, rounds, quarter rounds, and door jambs not dadoed. The chair rail here mentioned is not a chair part, but a type of molding applied on a wall at chair-back height. For tariff purposes, rounds longer than 6 feet are classified as molding; those 6 feet and shorter, as dowels (item 200.90). Jambs, if dadoed, are classified under item 207.00 as "Articles, not specially provided for, of wood."

Standard wood moldings, not drilled or treated, are provided for in item 202.63, whereas other wood moldings, and wood carvings and ornaments suitable for architectural or furniture decoration are

1/ The latest and most inclusive of such pattern books is WP/Series Molding Patterns, A.I.A. File No. 19-E-3, published by Western Wood Molding Producers, 1966.

provided for in item 202.66. Included in item 202.66 are standard wood moldings drilled at intervals for nails, screws, or other fasteners and those treated by sanding, painting, staining, or otherwise, and all other wood moldings not described above, including picture-frame moldings, whether or not drilled or treated. The wood carvings and ornaments suitable for architectural or furniture decoration are produced by such processes as carving, embossing, stamping, or turning, and consist of such products as moldings and fretwork for band and frieze decoration, and medallions, rosettes, scrolls, and similar appliques and overlays. Most other wood carvings and ornaments are provided for in item 207.00, as "Articles, not specially provided for, of wood," and are covered in another summary (in vol. 2:2).

Standard moldings are made from a variety of softwoods (chiefly ponderosa, white, and southern pines, and Douglas-fir) and also from a number of hardwoods. One of the important hardwoods for imported molding is lauan (Philippine mahogany). Picture-frame moldings are made from such woods as oak, birch, and gum. The carvings and ornaments here considered are manufactured from such commonly used furniture woods as walnut, maple, cherry, and mahogany.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Wood moldings, and certain wood carvings and ornaments:	
202.63	Standard wood moldings, not drilled or treated----------	1.5% ad val.
202.66	Other----------	17.0% ad val.

Prior to the effective date of the TSUS, August 31, 1963, standard wood moldings were dutiable as lumber, at various rates, under paragraphs 401 and 1803(1) of the Tariff Act of 1930 and section 4551 of the Internal Revenue Code. The rate for item 202.63 represents the estimated weighted average of assessments on imports for a representative period prior to 1963. As a result of a concession granted by the United States in the General Agreement on Tariffs and Trade (GATT), effective January 1, 1966, the 1.5-percent rate is a trade-agreement rate. The rate for item 202.66, which reflects a concession granted by the United States under the GATT on wood moldings and carvings under paragraph 412, has been in effect since June 30, 1958.

U.S. consumption

Domestic consumption of wood moldings and certain wood carvings and ornaments is related chiefly to the rate of new home construction. The use of wood carvings and ornaments for furniture decoration is closely related to furniture production. The value of total consumption of the wood products considered here increased from about $161 million in 1958 to about $213 million in 1965 (table 1). Approximately 95 percent of consumption consisted of standard moldings; the remainder was composed principally of picture-frame moldings, only a small portion being accounted for by decorative carvings and ornaments.

U.S. producers

Standard or stock moldings are produced by more than a thousand lumber and millwork concerns distributed throughout the United States. Such concerns usually manufacture other types of millwork, which they customarily sell, together with their standard moldings, to the construction trade.

Picture-frame moldings are made by approximately a dozen concerns located principally in the Central and Northeastern States. Architectural carvings and ornaments are produced by about five concerns located in the major centers of furniture manufacture in California, Michigan, and North Carolina. Many furniture producers also manufacture carvings and ornaments for their own use. Such carvings and ornaments, which may not have been reported in the official production (shipments) figures reported elsewhere in this summary, may be significant.

U.S. production

Domestic production (shipments) of wood moldings and certain wood carvings and ornaments was valued at $156 million in 1958 and increased to $199 million in 1965 (table 2). Of the 1965 total, standard moldings accounted for $189 million, or 95 percent; the remainder was composed of picture-frame moldings, valued at $9 million, and various types of carvings and ornaments, valued at $1 million.

U.S. exports

In 1965, U.S. exports of "wooden beadings and moldings" (the statistical class of exports that is roughly equivalent in scope to the TSUS items covered in this summary) were valued at $502,000. The chief export market was Canada ($274,000); other markets included the

Bahamas ($83,000), Mexico ($43,000), and Saudi Arabia ($29,000). Official statistics on exports of wood moldings and related products were not published for the years 1958 through 1964, but in 1957 the value of comparable exports (described as "trim and moldings") totaled $114,000.

U.S. imports

Total imports of wood moldings and certain wood carvings and ornaments increased in value from $4.5 million in 1958 to $13.7 million in 1965 (table 3). The increase reflects the rising trend in domestic building construction and furniture manufacture in 1958-65. Imports increased from 3 to 6 percent of consumption during the period 1958-64.

Imported standard moldings are similar to the domestic product. In 1964 and 1965, standard moldings were imported chiefly from Mexico and Japan (table 4). Such moldings from Mexico, Canada, and Brazil were chiefly of softwood and those from other countries, chiefly of hardwood. In 1964 and 1965, imports of other moldings and carvings came chiefly from Sweden, Belgium, and West Germany (table 5).

Table 1.--Wood moldings, and wood carvings and ornaments suitable for architectural or furniture decoration: U.S. production, imports for consumption, and apparent consumption, specified years 1958 to 1965

Year	Production 1/	Imports	Apparent consumption 2/	Ratio of imports to consumption
	1,000 dollars	1,000 dollars	1,000 dollars	Percent
1958	156,200	4,540	160,700	2.8
1961	148,100	5,060	153,200	3.3
1963	176,200	9,830	186,000	5.3
1964	194,100	13,000	207,100	6.3
1965	199,500	13,740	213,200	6.4

1/ Shipments; partly estimated.

2/ Approximates production plus imports; exports, which are believed to be small, have not been deducted.

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

Note.--Exports, not shown in this table, amounted to less than 1/2 of 1 percent of average annual production for the years shown.

Table 2.--Wood moldings, and wood carvings and ornaments suitable for architectural or furniture decoration: U.S. production (shipments), by types, specified years 1958 to 1965

(In thousands of dollars)

Type	1958	1961 1/	1963	1964 1/	1965 1/
Standard moldings, not drilled or treated	148,100	140,700	166,600	183,900	189,100
Other	1/ 8,100	7,400	1/ 9,600	10,200	10,400
Total	156,200	148,100	176,200	194,100	199,500

1/ Estimated.

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

Table 3.--Wood moldings, and wood carvings and ornaments suitable for architectural or furniture decoration: U.S. imports for consumption, by types, specified years 1958 to 1965

(In thousands of dollars)

Type	1958 1/	1961 1/	1963 1/	1964	1965
Standard moldings, not drilled or treated	3,840	4,950	8,180	10,760	10,315
Other	700	110	1,650	2,240	3,425
Total	4,540	5,060	9,830	13,000	13,740

1/ Estimated.

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

November 1966
2:1

Table 4.--Standard wood moldings, not drilled or treated: U.S. imports for consumption, by principal sources, 1964 and 1965

(In thousands of dollars)

Country	1964	1965
Mexico	7,540	7,391
Japan	1,204	1,009
Canada	720	624
Philippine Republic	589	439
Colombia	363	347
Brazil	102	208
Australia	236	202
All other	5	96
Total	10,759	10,316

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

Table 5.--Other wood moldings, and wood carvings and ornaments suitable for architectual or furniture decoration: U.S. imports for consumption, by principal sources, 1964 and 1965

(In thousands of dollars)

Country	1964	1965
Sweden	714	951
Belgium	529	821
West Germany	444	628
Finland	172	226
Japan	106	192
Italy	21	131
Philippine Republic	36	101
Norway	62	81
Canada	18	75
Netherlands	33	65
All other	104	154
Total	2,239	3,425

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

Commodity	TSUS item
Hardwood veneers, whether or not face finished:	
Not reinforced or backed:	
Birch and maple	240.00
Other	240.01 (pt.)
Reinforced or backed:	
Decorative, not face finished, or face finished clear	240.04 (pt.)
Other	240.06 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. foreign trade in hardwood veneers is on an import basis. In 1965, imports of 1.9 billion square feet were equivalent to 15 percent of domestic consumption. In recent years exports have accounted for about 1 percent of domestic production.

Description and uses

The term "wood veneers" is defined in the Tariff Schedules of the United States (headnote 1(a), pt. 3, schedule 2) as "wood sheets or strips, regardless of thickness, quality or intended use, produced by the slicing or rotary cutting of logs or flitches; and wood sheets, not over 1/4 inch in thickness, produced by sawing and of a type used to overlay inferior material". The tariff provisions for wood veneers include veneers that have been reinforced or backed on one or both sides with paper, cloth, or other flexible material.

Hardwood veneers are derived from broad-leaved, or deciduous, species of trees, in contrast to softwood veneers (discussed in another summary in this volume), which are derived from coniferous, or evergreen, trees.

The hardwood veneers included in items 240.00 and 240.01 are not reinforced or backed; however, they may be face finished on one or both surfaces with wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels.

The hardwood veneers included in items 240.04 and 240.06 are reinforced or backed with paper, cloth, or other flexible material. Item 240.04 includes decorative veneers as initially produced and

those face finished with a clear or transparent material that does not obscure the grain, texture, or markings of the wood. Item 240.06 includes all other reinforced or backed veneers.

Hardwood veneers, in demand most particularly for their decorative qualities, are made from many different species of domestic and imported hardwoods offering a large variety of color and fancy or figured grain. Such veneers are made in various types, grades, and sizes (ranging from strips smaller than letter size to sheets 4 feet by 8 feet, and in thickness from 1/100 to 5/16 inch). These veneers are broadly classed by the domestic producing industry as follows:

1. Special type--veneers made to meet certain definite requirements, such as those for aircraft veneers, marine veneers, and precision instruments. Special veneers are cut as thick as 3/8 inch and as thin as 1/110 inch.

2. Face type--fancy and figured veneers used in cabinet and furniture manufacture and the veneers used for faces on plywoods for wall paneling, doors, and furniture. Common thicknesses for rotary-cut face veneers are 1/20, 1/24, and 1/28 inch.

3. Commercial and utility type--all veneers manufactured for use in container and packaging type plywood, and the inner plies (cores and crossbands) and backs for other plywoods. These veneers are cut more or less in thicknesses ranging from 1/12 to 3/16 inch.

4. Container type--veneers especially produced for the fabrication of wirebound and nailed veneer boxes and other containers such as berry cups, tills, hampers, and baskets. These veneers are cut to thicknesses ranging from 1/12 to 3/16 inch; basket veneers are commonly cut 1/18 and 1/14 inch thick.

5. Flat type--veneers produced for the manufacture of such articles as ice cream spoons and sticks, tongue depressors, matches, broom splints, and other woodenware products. These veneers are commonly cut 1/16 and 1/12 inch thick.

In this summary, as in the official statistics, all data on quantities of hardwood veneer are expressed in terms of square feet, regardless of the many different thicknesses involved.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Hardwood veneers, whether or not face finished:	
	Not reinforced or backed:	
240.00	Birch and maple	8% ad val.
240.01 (pt.)	Other	10% ad val.
	Reinforced or backed:	
240.04 (pt.)	Decorative, not face finished, or face finished clear.	16-2/3% ad val.
240.06 (pt.)	Other	10% ad val.

The rates provided in items 240.00, 240.01, and 240.06 are the same as those applicable to the imports of comparable kinds of veneer under the provisions of paragraph 405 of the former tariff schedules, and the rate provided in item 240.04 is the rate formerly applicable to miscellaneous manufactures of wood under the provisions of paragraph 412. These rates, which reflect concessions granted by the United States in the General Agreement on Tariffs and Trade (GATT), became effective as follows:

TSUS item	Effective date
240.00	July 1, 1963
240.01	Jan. 1, 1948
240.04	May 30, 1950
240.06	Jan. 1, 1948

For products of the Philippine Republic, an important supplier of U.S. imports, the current rates of duty are--as indicated in part c of general headnote 3 mentioned above--40 percent of the column 1 rates, e.g., 4 percent for item 240.01.

U.S. consumption

Domestic consumption of hardwood veneer increased from an estimated 6.2 billion square feet in 1958 to 12.2 billion in 1965 (table 1). Annual domestic production of hardwood plywood, the outlet for most of the U.S. supply of hardwood veneer, likewise nearly doubled from 1958 to 1965.

During 1958-65 almost half of U.S. consumption of hardwood veneer consisted of special and face types, a slightly smaller portion consisted of commercial and utility types, and the small remainder (less than 10 percent of the total) consisted of container and flat types. Annual consumption of container veneer was less in the first half of the 1960's than before World War II, and its decline can be traced to increased competition from paperboard containers.

U.S. producers

In 1966 approximately 450 U.S. plants were producing hardwood veneer. About 200 of these plants produced both hardwood plywood and hardwood veneer for sale; the remaining 250 plants used the bulk of their veneer output to manufacture other wood products (e.g., furniture and containers), but some produced hardwood veneer for sale. Plants producing hardwood veneer were situated chiefly in the eastern half of the United States; only a few were in the States along the Pacific coast.

U.S. production

Domestic production of hardwood veneer for all purposes increased from an estimated 5.7 billion square feet in 1958 to an estimated 10.4 billion in 1965 (table 1). Detailed production data are available for 1961 only because of a special survey made by the Bureau of the Census in cooperation with the Tariff Commission. In that year U.S. output of hardwood veneer amounted to 7.1 billion square feet, valued at $183 million, of which nearly half (3.4 billion square feet) was produced in the South Atlantic States. About 36 percent of 1961 production consisted of special and face types; 35 percent, of commercial and utility type; 26 percent, of container type; and 3 percent, of flat type. Total production was about equally divided between thin veneers (not over 1/20 inch) and thick veneers (over 1/20 inch). Production, by species, in that year was as follows:

Species	Million square feet
Gum	2,567
Yellow poplar	998
Oak	584
Walnut	537
Birch	510
Maple	348
All other	1,514
Total	7,058

U.S. exports

Annual U.S. exports of hardwood veneer increased from 53 million square feet, valued at $2.6 million, in 1961 to 144 million square feet, valued at $8.2 million, in 1965 (table 2). In 1961-65, exports were equivalent to about 1 percent of production. Chief recipient countries in recent years in descending order of importance have been Canada, West Germany, the United Kingdom, Switzerland, Sweden, and Japan.

The average unit value of exports of hardwood veneer, which ranged from $55 to $58 per thousand square feet in 1963-65, was about 20 percent higher in 1965 than in 1961. The shipments to the various export markets differ widely in composition and, therefore, in average unit value. In 1965, for example, the exports to Canada, the principal market, consisted largely of walnut veneers and averaged $52 per thousand square feet, while those to Sweden, chiefly of mixed hardwoods that may have included special sliced-grain veneers, averaged $103 per thousand square feet. The average for shipments to all countries in 1965 was $57 per thousand square feet.

Exports of hardwood veneer in 1965 consisted of the following types and amounts:

Type	Quantity (million sq. ft.)	Value (1,000 dollars)
Special and face types:		
Walnut	80.6	4,431
Other hardwood	18.3	873
Subtotal	98.9	5,304
Other types	44.8	2,882
Total	143.7	8,186

Exports of walnut veneer increased from 57 percent of the total quantity in 1961 to 72 percent of the total in 1964, then dropped to 56 percent of the total in 1965. Contributing to the decline in this ratio from 1964 to 1965 was the increase in exports of other hardwood veneers and the removal in February 1965 of a quota which had limited the exports of walnut logs during the preceding 12 months. Such logs are generally made into veneer in the importing countries.

U.S. imports

Annual U.S. imports of hardwood veneer tripled from 1958 to 1965, amounting in the latter year to 1,872 million square feet, valued at $45 million (table 3). Imports represented 15 percent of consumption in 1965, compared with 10 percent in 1958. As indicated in table 4, birch and maple comprised 44 percent of the imports in 1965; lauan, 34 percent; and other species, 22 percent. Principal supplying countries in recent years have been Canada--which provided chiefly birch and maple; the Philippine Republic--which sent chiefly lauan; and Malaysia, the Republic of Congo (Leopoldville 1/), Gabon, and Brazil.

Imported hardwood veneers, which are consumed principally in making plywood, are comparable to domestically produced hardwood veneers with respect to type, quality, and grade.

Foreign production and trade

Statistics on world production of hardwood veneer are not available. Data published by the Food and Agriculture Organization (FAO) on the quantity of exports of wood veneer, however, show that the leading exporting nations in 1964 were the Philippine Republic, Canada, West Germany, the Congo (Leopoldville 1/), the United States, and France. Exports from Canada and the United States included substantial quantities of softwood veneer, but exports from the other countries listed above were virtually all of hardwood. These same countries are also undoubtedly among the world leaders in production of wood veneer. The United States, which consumes most of its own production of hardwood veneer, is probably the world's largest producer.

FAO statistics reveal that in recent years the United States has been the world's leading importer of veneer, based on quantity. In 1964 the United States was followed by the United Kingdom, West Germany, South Africa, and Canada. The proportions of hardwood and softwood veneers imported by each of these countries were not reported, but the bulk of such imports were probably of hardwood.

1/ Name changed to Kinshasa on July 1, 1966.

Table 1.--Hardwood veneer: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

Year	Production	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	Million sq. ft.	Million sq. ft.	Million sq. ft.	Million sq. ft.	Percent
1958	1/ 5,674	623	2/ 50	2/ 6,250	10
1961	7,058	895	53	7,900	11
1963	1/ 8,633	1,399	74	9,958	14
1964	1/ 9,555	1,709	117	11,147	15
1965	1/ 10,440	1,872	144	12,168	15

1/ Estimated on the basis of the ratio of the production of hardwood plywood to that of hardwood veneer in 1961, the only recent year for which production of hardwood veneer was reported.

2/ Estimated.

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

November 1966
2:1

Table 2.--Hardwood veneer: U.S. exports of domestic merchandise, by principal markets, 1961 and 1963-65

Country	1961	1963	1964	1965
	Quantity (million square feet) 1/			
Canada	46.5	63.9	87.3	85.4
West Germany	1.2	4.8	18.5	40.8
Switzerland	-	.6	4.0	5.5
Sweden	-	.4	1.3	2.3
Japan	.3	.1	.6	1.5
United Kingdom	2.3	1.4	1.0	2.7
Mexico	.7	.6	.6	1.2
All other	2.0	1.9	3.3	4.4
Total	53.1	73.8	116.7	143.7
	Value (1,000 dollars)			
Canada	2,210	3,662	4,164	4,444
West Germany	66	333	1,485	2,570
Switzerland	-	44	316	401
Sweden	-	32	128	236
Japan	21	17	62	135
United Kingdom	149	94	48	134
Mexico	39	43	57	81
All other	84	73	125	185
Total	2,569	4,298	6,385	8,186
	Unit value (per 1,000 square feet) 2/			
Canada	$48	$57	$48	$52
West Germany	53	69	80	63
Switzerland	-	80	78	73
Sweden	-	76	97	103
Japan	69	123	110	90
United Kingdom	64	68	47	50
Mexico	55	67	100	69
All other	41	39	38	42
Average	48	58	55	57

1/ Because of rounding, figures may not add to the totals shown.
2/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 3.--Hardwood veneer: U.S. imports for consumption, by principal sources, 1961 and 1963-65

Country	1961	1963	1964	1965
	Quantity (million square feet) 1/			
Canada	515.9	684.0	781.7	852.2
Philippine Republic	223.7	391.9	557.3	527.0
Malaysia 2/	3.8	58.6	104.4	154.1
Congo (Leopoldville)	91.4	96.5	76.5	136.6
Gabon 3/	4.6	46.3	76.3	59.1
Brazil	13.0	23.6	21.9	31.2
West Germany	9.5	11.2	16.5	15.7
Costa Rica	8.8	14.5	20.9	18.2
All other	24.8	72.4	53.6	77.6
Total	895.4	1,399.0	1,709.1	1,871.8
	Value (1,000 dollars)			
Canada	16,938	21,389	25,051	26,308
Philippine Republic	4,279	8,384	10,096	9,983
Malaysia 2/	43	781	1,169	2,015
Congo (Leopoldville)	1,423	1,487	1,228	1,851
Gabon 3/	62	538	853	673
Brazil	244	477	472	662
West Germany	415	505	724	586
Costa Rica	234	430	549	472
All other	961	2,140	1,935	2,393
Total	24,599	36,131	42,077	44,943
	Unit value (per 1,000 square feet) 4/			
Canada	$33	$31	$32	$31
Philippine Republic	19	21	18	19
Malaysia 2/	11	13	11	13
Congo (Leopoldville)	16	15	16	14
Gabon 3/	13	12	11	11
Brazil	19	20	22	21
West Germany	44	45	44	37
Costa Rica	27	30	26	26
All other	39	30	36	31
Average	27	26	25	24

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

2/ Includes Singapore.

3/ Data for 1961 are for "French Equatorial Africa" and those for 1963, for "Other West Equatorial Africa."

4/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 4.--Hardwood veneer: U.S. imports for consumption, by principal species, specified years 1958 to 1965

Species	1958	1961	1963	1964	1965
	Quantity (million square feet) 1/				
Birch and maple	376.5	514.7	664.6	751.8	817.1
Lauan	151.8	230.2	447.6	655.5	629.0
All other	94.9	150.5	286.7	301.8	425.7
Total	623.2	895.4	1,399.0	1,709.1	1,871.8
	Value (1,000 dollars)				
Birch and maple	11,816	16,940	20,783	24,170	25,311
Lauan	3,359	4,439	9,148	11,325	11,300
All other	1,743	3,220	6,200	6,582	8,332
Total	16,918	24,599	36,131	42,077	44,943
	Unit value (per 1,000 square feet) 2/				
Birch and maple	$31	$33	$31	$32	$31
Lauan	22	19	20	17	18
All other	18	21	22	22	20
Average	27	27	26	25	24

1/ Because of rounding, figures may not add to the totals shown.
2/ Calculated from the unrounded figures.

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

Commodity	TSUS item
Softwood veneers, whether or not face finished:	
Not reinforced or backed	240.01 (pt.)
Reinforced or backed:	
Decorative, not face finished, or face finished clear	240.04 (pt.)
Other	240.06 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

In the United States, the world's largest producer of softwood veneer, production amounted to 47.4 billion square feet in 1965. U.S. foreign trade in these products, which is on an import basis, has been negligible.

Description and uses

The term "wood veneers" is defined in the Tariff Schedules of the United States (headnote 1(a), pt. 3, schedule 2) as "wood sheets or strips, regardless of thickness, quality or intended use, produced by the slicing or rotary cutting of logs or flitches; and wood sheets, not over 1/4 inch in thickness, produced by sawing and of a type used to overlay inferior material". The tariff provisions for wood veneers include veneers that have been reinforced or backed on one or both sides with paper, cloth, or other flexible material.

Softwood veneers are derived from coniferous, or evergreen, species of trees such as Douglas-fir and pine, in contrast to hardwood veneers (discussed in another summary in this volume), which are derived from broad-leaved, or deciduous, trees.

The softwood veneers included in item 240.01 are not reinforced or backed; however, they may be face finished on one or both surfaces with wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels.

The softwood veneers included in items 240.04 and 240.06 are reinforced or backed with paper, cloth, or other flexible material. Item 240.04 includes decorative veneers as initially produced and those face finished with a clear or transparent material that does not

obscure the grain, texture, or markings of the wood. Item 240.06 includes all other reinforced or backed veneers.

Softwood veneers are produced in the United States from a limited number of species of softwood trees, but largely from Douglas-fir, and are used for their structural and utilitarian qualities. Such veneers are produced, chiefly by rotary cutting, in sizes up to about 4 feet by 8 feet and in thickness from 1/16 to 3/16 inch. Almost the entire domestic output of softwood veneers is converted into the manufacture of softwood plywood (discussed in a separate summary in this volume); the remainder is consumed primarily in the manufacture of single-ply shipping containers and shooks.

In this summary all data on quantities of softwood veneer are expressed in terms of square feet, regardless of the different thicknesses involved.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Softwood veneers, whether or not face finished:	
240.01 (pt.)	Not reinforced or backed--------	10% ad val.
	Reinforced or backed:	
240.04 (pt.)	Decorative, not face finished, or face finished clear.	16-2/3% ad val.
240.06 (pt.)	Other----------	10% ad val.

The rates provided in item 240.01 and 240.06 are the same as those applicable to the imports of comparable kinds of veneer under the provisions of paragraph 405 of the former tariff schedules, and the rate provided in item 240.04 is the rate formerly applicable to miscellaneous manufactures of wood under the provisions of paragraph 412. These rates reflect concessions granted by the United States in the General Agreement on Tariffs and Trade (GATT). For the veneers in items 240.01 and 240.06, the 10-percent rate has been in effect since January 1, 1948; and for that in item 240.04, the 16-2/3-percent rate has been in effect since May 30, 1950.

U.S. consumption

Domestic consumption of softwood veneer almost doubled in recent years--increasing from 24.3 billion square feet in 1958 to 47.5 billion in 1965 (table 1). Since about 99 percent was used to make softwood plywood, the increase in veneer consumption paralleled that in plywood production. The remaining 1 percent of softwood veneer consumption was used in the production of containers. Virtually all of the consumption was supplied by domestic production; imports have amounted to less than 1 percent of consumption in all recent years. Most of the softwood veneer was consumed in the Pacific Coast States, where most of the softwood plywood is made.

U.S. producers and production

Late in 1965 there were between 190 and 200 mills producing softwood veneer. About 30 percent of these produced only veneer, which was sold to plants manufacturing plywood. The remaining mills, which have accounted for 60 to 65 percent of the softwood veneer output in recent years, produced both veneer and plywood.

The veneer mills are predominantly situated in the Pacific Coast States, with 105 in Oregon, 40 in Washington, and 30 in California. Inasmuch as 70 percent of the veneer mills are also plywood establishments, additional information regarding veneer producers is found in the summary on softwood plywood.

Estimated annual production of softwood veneer, like annual consumption, almost doubled--increasing from 24.3 billion square feet in 1958 to 47.4 billion in 1965 (table 1).

U.S. exports

Annual U.S. exports of softwood veneer increased from about 2 or 3 million square feet in 1961-63 to 24 million in 1964 and to 26 million in 1965. Total exports in 1965 were valued at $803,000 and went principally to Canada (table 2). In recent years, U.S. exports of softwood veneer have constituted less than 1 percent of domestic production, and have probably consisted largely of container or other special type veneers which are higher priced than plywood veneers.

U.S. imports

Annual U.S. imports of softwood veneer increased irregularly from 27 million square feet in 1958 to 87 million in 1965, when they were valued at $841,000 (table 3). Canada was by far the chief

source of imports, and Mexico was a consistent though small supplier. Imports in 1958-65 amounted to less than 1 percent of consumption.

Imported softwood veneers, used chiefly to make plywood, are comparable to domestically produced plywood veneers.

Table 1.--Softwood veneer: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

(In millions of square feet)

Year	Production 1/	Imports	Exports	Apparent consumption
1958	24,300	1/ 27	2/	24,300
1961	31,900	49	3	31,900
1963	38,900	70	3	39,000
1964	43,000	28	24	43,000
1965	47,400	87	26	47,500

1/ Estimated.
2/ Not available.

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

November 1966
2:1

Table 2.--Softwood veneer: U.S. exports of domestic merchandise to Canada and to all other countries, 1961 and 1963-65

Country	1961	1963	1964	1965
	Quantity (1,000 square feet)			
Canada	2,366	3,375	24,002	25,658
All other	170	65	119	484
Total	2,536	3,440	24,121	26,142
	Value (1,000 dollars)			
Canada	106	137	546	777
All other	8	3	4	26
Total	114	140	550	803
	Unit value (per 1,000 square feet) 1/			
Canada	$45	$41	$23	$30
All other	50	44	28	54
Average	45	41	23	31

1/ Calculated from the unrounded figures.

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

Table 3.--Softwood veneer: U.S. imports for consumption from Canada and from all other countries, 1961 and 1963-65

Country	1961	1963	1964	1965
	Quantity (1,000 square feet)			
Canada	44,651	68,702	27,182	86,830
All other	4,000	1,118	984	83
Total	48,651	69,820	28,166	86,913
	Value (1,000 dollars)			
Canada	636	1,087	331	839
All other	63	54	20	2
Total	699	1,141	351	841
	Unit value (per 1,000 square feet) 1/			
Canada	$14	$16	$12	$10
All other	16	48	20	20
Average	14	16	12	10

1/ Calculated from the unrounded figures.

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

November 1966
2:1

Commodity	TSUS item
Plywood and wood-veneer panels (hardwood faced):	
Not face finished, or finished clear:	
Spanish cedar	240.10, -.30, -.50
Birch	240.14, -.34. -.54
Other	240.18 (pt.), -.38 (pt.), -.58 (pt.)
Other (face finished, not clear)	240.20 (pt.), -.40 (pt.), -.60 (pt.)
Cellular panels (hardwood faced)	245.60 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. trade (both domestic and foreign) in the articles considered here has been expanding in recent years. In 1965, imports were equivalent to nearly 50 percent of the volume of domestic consumption and exports accounted for a negligible share of domestic production.

Description and uses

The articles considered here have certain features in common in that they are rigid, usually flat, wood-ply assemblies, bonded together with adhesive substances, have hardwood facing, and are produced in the same plants. Notwithstanding these similarities, plywood, wood-veneer panels, and cellular panels are separately provided for in the TSUS. Hardwood plywood is by far the most important product included in this summary. Softwood plywood and similar products having softwood facing are covered in another summary in this volume.

For tariff purposes, "plywood" (items 240.10 to 240.20) consists of rigid wood-veneer assemblies, bonded together with adhesive substances and having a central ply or core of wood veneer or lumber with the same number of plies (one or more) of wood veneer on each side thereof. Such assemblies, therefore, have an odd number of plies (three, five, seven, etc.); the grain of at least one ply is at an angle (usually a right angle) to the grain of the other plies. This type of balanced construction (an equal number of comparable plies on both sides of a central ply) results in a product of an exceedingly high strength-to-weight ratio and of approximately uniform strength throughout its horizontal plane.

Wood-veneer panels are similar in appearance and construction to plywood, but generally lack the balanced assembly of plywood. For tariff purposes, "wood-veneer panels" (except plywood) consist of a veneer ply on one side of a backing (items 240.50 to 240.60), or on both sides of a core (items 240.30 to 240.40), the backing or core being composed of lumber, veneer, hardboard, wood particle board, or other material. Such panels do not include single-ply veneers or veneers reinforced or backed with a flexible material; hardwood and softwood veneers are discussed in separate summaries in this volume.

"Cellular panels" (in item 240.60) are rigid, thick, sandwich-type assemblies bonded together with adhesive substances and ordinarily having the balanced construction of plywood. The core of such panels consists of a light, rigid material (usually ranging from 3/4 inch to 5 or 6 inches in thickness) of hollow, honeycomb, or sponge-like construction made of paperboard, rubber, plastics, or other cellular material. The core construction may have interstices filled with loose or loosely matted fibrous materials. Plywood sheets (typically of identical thickness, number of plies, and species of wood) bonded with adhesives to both sides of the core material form a completed cellular panel. Currently, hardwood plywood is rarely used for the facing material of cellular panels; softwood plywood is the principal facing used, but other material, such as veneer, wood-veneer panels, lumber, hardboard, wood particle board, or board composed of vegetable fibers, may also be used. Most cellular panels have three layers, those on either side of the core being of the same material and thickness so as to make a product of balanced construction.

The exterior surfaces of plywood, wood-veneer panels, and cellular panels are generally known as faces, but for some purposes, where only one side of a panel is to be exposed, these surfaces are referred to as a face (of high quality) and a back (of low quality). Plywood and the related panels here considered that have veneer faces are identified in the trade as hardwood- or softwood-panel products, according to the species of wood in the face ply. For example, birch plywood (item 240.14) and walnut plywood (in item 240.18) are hardwood plywoods in the trade, regardless of the species of wood comprising the interior plies or the back. Most hardwood plywood, however, is made of hardwood throughout.

The surfaces of the panels considered here may be plain ("in the white"), including sanded. In recent years substantial quantities of prefinished (factory finished) hardwood plywood have been marketed by the larger domestic and foreign plywood producers. Such plywood may have the face ply (or plies) mechanically scored, striated, or similarly processed to produce distinctive decorative effects, or may be "face finished" on one or both surfaces with wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or

enamels, or may be overlaid with paper, fabric, plastics, base metal, or other material. Currently, the most popular face-finishing materials are sealers and lacquers (to show the natural wood grain) and overlays of paper or other materials on which wood grains are printed.

Plywood with a plain face ply of birch, for example, or a face ply of that species finished with a clear or transparent material that does not obscure the grain, texture, or markings of the wood is classifiable for duty purposes under item 240.14, whether or not the faces are mechanically scored. On the other hand, plywood having a face ply of birch coated with paint or overlaid with materials so as to obscure the grain, texture, or markings of the wood is classifiable for duty purposes under item 240.20.

Hardwood plywood is made from many native and foreign species of wood, but chiefly from birch, gum, lauan (Philippine mahogany), and oak. Other species of importance include walnut, maple, genuine mahogany (African and Honduras), poplar, beech, ash, elm, teak, cherry, rosewood, sen, obeche, and virola. Hardwood plywood is made in various types, grades, and sizes, according to standard specifications, chiefly to meet requirements for particular uses, either decorative or functional. The most popular size is 4 feet by 8 feet, with a range in thickness of 1/8 to 3/4 inch.

Depending upon the kind of adhesive used (such as phenolic resins, urea resins, soybean, casein, and tapioca), hardwood plywood is generally produced in four types of bonds specified by Commercial Standard CS35-61, a recorded voluntary standard published by the U.S. Department of Commerce. These types are as follows: Technical Type and Type I, both waterproof--the bonds must withstand full weather exposure and should be unaffected by micro-organisms; Type II, water resistant--the bond should retain practically all of its strength when occasionally subjected to a thorough wetting and drying; and Type III, dry bond--is suitable for use where it will not be subjected to water, dampness, or high humidities.

More than 90 percent of domestically produced hardwood plywood is made according to industry or commercial standards and is known as ordinary hardwood plywood; it is used in the manufacture of furniture, cabinets, paneling, home and store fixtures, mobile homes, pleasure boats, transportation equipment, and industrial articles. Most of the remainder of the domestic output is made especially as container and packaging plywood for use in the manufacture of boxes and shipping containers.

In recent years an increasing portion of the ordinary hardwood plywood has been prefinished for installation (without further treatment) as wall panels or door faces and for use in the production of furniture.

November 1966
2:1

In accordance with official statistics, all data on quantities reported in this summary are in terms of square feet (surface measure), regardless of the many different thicknesses involved.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Plywood (hardwood faced):	
	Not face finished, or finished clear:	
240.10	Spanish cedar	40% ad val.
240.14	Birch	15% ad val.
240.18 (pt.)	Other	20% ad val.
240.20 (pt.)	Other (face finished, not clear)	20% ad val.
	Wood-veneer panels (hardwood faced):	
	Veneer faces on both sides:	
	Not face finished, or finished clear:	
240.30	Spanish cedar	40% ad val.
240.34	Birch	15% ad val.
240.38 (pt.)	Other	20% ad val.
240.40 (pt.)	Other (face finished, not clear)	20% ad val.
	Veneer face on one side only:	
	Not face finished, or finished clear:	
240.50	Spanish cedar	40% ad val.
240.54	Birch	15% ad val.
240.58 (pt.)	Other	20% ad val.
240.60 (pt.)	Other (face finished, not clear)	20% ad val.
245.60 (pt.)	Cellular panels (hardwood faced)	20% ad val.

The 40-percent rate (for items 240.10, 240.30, and 240.50) is the same as the statutory rate provided for comparable articles of Spanish cedar plywood under paragraph 405 of the original Tariff Act of 1930; this rate has not been the subject of a trade-agreement concession. For the other items considered here, the current rates, which reflect concessions granted by the United States in the General Agreement on Tariffs and Trade (GATT), are the same as the rates applicable under paragraph 405 of the former schedules to nearly all the imports of comparable articles during a representative period. The 15-percent GATT rate (for items 240.14, 240.34, and 240.54) and the 20-percent GATT rate (for the remaining items) have been in effect since June 6, 1951.

For products of the Philippine Republic, an important supplier of U.S. imports, the current rates of duty are--as indicated in part c of general headnote 3 mentioned above--40 percent of the column 1 rates, e.g., 8 percent for item 240.18.

In June 1959 the Tariff Commission completed an escape-clause investigation pursuant to section 7 of the Trade Agreements Extension Act of 1951, as amended, with respect to hardwood plywood other than plywood of Spanish cedar. 1/ As a result of its investigation, the Commission found that hardwood plywood was not being imported into the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry producing like or directly competitive products. The Commission therefore made no recommendation to the President for the establishment of quotas or other action respecting the withdrawal or modification of the concessions applicable to such plywood.

U.S. consumption

U.S. consumption of hardwood plywood 2/ has expanded considerably since World War II. In 1951 it was about 1.2 billion square feet (surface measure); in 1958, 2.2 billion; and in 1965, 4.4 billion (table 1). Since 1951, the expansion in construction, including homes and motels, has generated increased uses for hardwood plywood, particularly in the production of flush doors, furniture, and cabinets (chiefly TV and kitchen cabinets). The market for hardwood plywood has been favorably influenced by the style trends toward broad, flat, decorative surfaces in wall paneling, doors, and furniture.

One of the most significant factors in the increased use of hardwood plywood has been the availability of lauan (Philippine mahogany) plywood, substantially supplied by imports. Because of its attractive natural appearance, good physical characteristics, and low price (not only in relation to the prices of other hardwood plywoods but also to those of other building materials), a large market has developed for its use in wall paneling and flush doors for homes and motels.

1/ See U.S. Tariff Commission, Hardwood Plywood: Report on Escape-Clause Investigation No. 77 . . ., 1959 (processed).

2/ Because separate data are not generally available, any official or estimated data for hardwood plywood given in this report include data for wood-veneer panels and cellular panels with hardwood facing, unless otherwise specifically noted.

U.S. producers

In 1966, the domestic hardwood plywood industry comprised at least 220 mills in actual operation. About three-fourths of these mills produced hardwood plywood primarily for sale as such; they are referred to as market producers. The other mills produced hardwood plywood primarily for their own use in making such products as furniture, cabinets, and doors; they are referred to as captive producers. An estimated one-third of total industry output in 1964 and 1965 is accounted for by 11 known concerns (including 5 or 6 large corporate organizations), operating 16 market plants. The remaining hardwood plywood market plants (about 150) are relatively small and many are owned by individuals. Since 1960, industry shipments (sales) of market hardwood plywood have averaged nearly 75 percent of total hardwood plywood production annually.

Plants producing hardwood plywood are located chiefly in the eastern half of the United States, particularly in the States of North Carolina, South Carolina, Georgia, Wisconsin, Indiana, and Virginia. A small but increasing share of hardwood plywood is produced in the Pacific Northwest by some 50 mills that are primarily producers of softwood plywood.

U.S. production

Annual U.S. production of hardwood plywood increased from 1.2 billion square feet in 1958 to 2.2 billion in 1965 (table 1). The production in 1965 was valued at an estimated $435 million.

Market shipments of hardwood plywood in 1965 amounted to 1.8 billion square feet, or 82 percent of production for all purposes in that year. The remainder of production is assumed to have been for captive uses. According to construction types, total production for all purposes in that year consisted of 1.9 billion square feet of ordinary veneer core plywood, 0.2 billion feet of ordinary "other" core plywood (core of lumber, particle board, etc.), and 0.1 billion feet of container and packaging type.

Birch plywood has been the leading type of hardwood plywood produced domestically in recent years, with lauan plywood occupying an increasingly important second position and gum plywood a decreasingly important third (table 2). Walnut plywood exceeded oak in 1964 to become the fourth-ranking species in domestic production.

Since 1958 an increasing share of total domestic output of hardwood plywood has been processed to a prefinished (i.e., factory-finished) condition. Such prefinished plywood is made, at additional cost, in the last stages of production by applying stains, finishes,

and protective coats of lacquer, varnish, and waxes to the face ply. Without further processing, the plywood is ready for immediate installation, mostly as wall paneling. In recent years domestic producers have also been processing increasing amounts of imported hardwood plywood.

In 1961, the first year for which data are available, prefinished plywood panels accounted for 34 percent of total domestic shipments (including interplant transfers) of hardwood plywood. This share increased to 69 percent in 1964, and to 85 percent in 1965. Total hardwood plywood shipments, and the amounts prefinished in 1961-65 (from data of the U.S. Bureau of the Census) were as follows (in millions of square feet):

Year	Total	Prefinished
1961---------	1,237	422
1962---------	1,348	684
1963---------	1,534	810
1964---------	1,721	1,186
1965---------	1,842	1,556

Of the prefinished hardwood plywood shipped in 1965, 804 million square feet was processed in the same plant in which the plywood was made, 532 million was processed domestically from imported unfinished plywood, 86 million was processed domestically using purchased domestic unfinished plywood, and 134 million was owned by other than the shipper and not classified as to origin. There were 40 plants engaged in prefinishing plywood in 1965.

U.S. exports

Annual U.S. exports of hardwood plywood, principally to Canada and the United Kingdom, increased from 1.1 million square feet, valued at $316,000, in 1958 to 5.6 million square feet, valued at $935,000, in 1965 (table 3). The quantity for 1965 represented 0.3 percent of domestic production in that year--up from 0.1 percent in 1958. The increased exports were evidently of lower priced grades, since there was a downward trend in average unit value from 1958 to 1965.

U.S. imports

U.S. imports of hardwood plywood have risen substantially since 1951, when they supplied about 5 percent of domestic consumption. Such imports amounted to 0.9 billion square feet, valued at $63 million, in 1958 and to 2.1 billion, valued at $124 million,

in 1965 (table 4). Imports accounted for 42 percent of consumption in 1958, 41 percent in 1961, 48 percent in 1964, and 49 percent in 1965. The expansion of imports was stimulated chiefly by the demand for hardwood plywood in building construction and in the manufacture of furniture and other products.

Lauan (Philippine mahogany) plywood, the lowest in unit value of the major kinds of imported plywood (table 5), has been the predominant kind of hardwood plywood imported in recent years, accounting for 76 percent of the total quantity and 59 percent of the total value in 1965. Birch plywood was second and sen plywood was third, accounting for 13 and 5 percent, respectively, of the total quantity of imports in 1965.

Imports in general have the same characteristics as the domestic product; the cheaper grades of imported hardwood plywood are generally used in the lower priced building construction and manufactures of wood.

U.S. imports of hardwood plywood during 1958-65 were supplied by nearly 60 countries, but more than half came regularly from only a few countries. Japan was the predominant supplier, shipping chiefly lauan, but also birch and sen. Taiwan, the Philippines, and the Republic of Korea were all important suppliers of lauan plywood; Finland and Canada provided chiefly birch plywood.

Foreign production and trade

Except in the United States and Canada, production of plywood is mostly from hardwoods. On the basis of statistics published by the Food and Agriculture Organization, Japan was apparently the world's largest producer of hardwood plywood in 1963 (86 percent of its output was produced from imported logs); the United States was second; and the other important producing countries were the U.S.S.R., West Germany, Finland, France, Italy, and the Philippine Republic. The chief exporting countries in 1963 were Finland, Japan, the Philippine Republic, and Taiwan--all suppliers of U.S. imports. By far the chief importing countries were the United Kingdom and the United States.

Table 1.--Hardwood plywood: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

(Quantity in millions of square feet; value in thousands of dollars)

Year	Production	Imports	Exports	Apparent consumption	Ratio (percent) of imports to consumption
	Quantity				
1958	1/ 1,250	907	1	2,156	42
1961	1,555	1,097	2	2,650	41
1963	1,902	1,620	4	3,518	46
1964	2,105	1,947	3	4,049	48
1965	2,236	2,131	6	4,361	49
	Value				
1958	1/ 226,760	62,980	316	2/	2/
1961	1/ 312,500	71,670	557	2/	2/
1963	1/ 366,760	107,868	602	2/	2/
1964	1/ 410,900	122,582	793	2/	2/
1965	1/ 435,150	124,077	935	2/	2/

1/ Estimated.
2/ Not meaningful.

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

Note.--Data shown here include data for wood-veneer panels and cellular panels with hardwood facing.

Table 2.--Hardwood plywood: U.S. production, by species, specified years 1958 to 1965

(In millions of square feet)

Species	1958 1/	1961	1963	1964	1965 2/
Birch	391	387	571	635	687
Philippine hardwoods 3/	62	183	247	315	329
Gum	401	332	310	298	282
Walnut	4/	125	172	195	219
Oak	4/	154	173	183	178
Maple	4/	74	93	95	121
Other:					
Domestic woods	5/ 395	211	226	275	308
Imported woods		88	109	111	113
Total	1,251	1,555	1,902	2,105	2,236

1/ Production by species estimated on the basis of reported shipments in 1961.

2/ Production by species estimated on the basis of reported shipments in 1964.

3/ Chiefly lauan derived from imported logs or veneer.

4/ Included in "Other."

5/ Includes walnut, oak, and maple.

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

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

Table 3.--Hardwood plywood: U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Market	1958	1961	1963	1964	1965
	Quantity (million square feet)				
United Kingdom	0.03	0.29	0.44	0.85	1.50
Canada	.86	.89	2.91	1.71	2.08
Mexico	.06	.07	.05	.18	.58
Bahamas	.03	.09	.08	.17	.27
Sweden	.03	.01	.01	.04	.27
All other	.12	.21	.18	.39	.93
Total	1.13	1.56	3.67	3.34	5.63
	Value (1,000 dollars)				
United Kingdom	10	78	169	323	327
Canada	218	354	294	184	266
Mexico	16	20	26	26	86
Bahamas	5	33	28	41	54
Sweden	8	2	4	13	45
All other	59	70	81	206	157
Total	316	557	602	793	935
	Unit value (per 1,000 square feet) 1/				
United Kingdom	$400	$269	$380	$378	$217
Canada	252	397	101	108	128
Mexico	246	291	507	142	147
Bahamas	173	346	368	235	203
Sweden	281	330	371	352	168
All other	508	341	457	533	169
Average	280	358	164	237	166

1/ Calculated from the unrounded figures.

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

Table 4.--Hardwood plywood: U.S imports for consumption, by principal sources, specified years 1958 to 1965

Source	1958	1961	1963	1964	1965
	Quantity (million square feet)				
Japan	1/ 670	660	740	681	768
Taiwan	23	109	273	461	469
Philippine Republic	97	153	247	356	308
Republic of Korea	-	16	121	205	337
Finland	24	43	78	93	103
Canada	42	42	72	67	63
Nansei-Nanpo	2/	20	37	34	43
Surinam	5	14	16	10	8
All other	46	40	36	40	32
Total	907	1,097	1,620	1,947	2,131
	Value (1,000 dollars)				
Japan	1/ 44,231	44,035	55,606	50,905	50,420
Taiwan	944	4,706	10,908	19,275	18,983
Philippine Republic	5,863	8,556	15,419	21,566	18,056
Republic of Korea	-	688	5,592	9,414	14,653
Finland	2,529	4,207	7,337	8,877	10,103
Canada	4,627	4,237	7,201	6,967	6,488
Nansei-Nanpo	2/	730	1,504	1,394	1,769
Surinam	514	1,082	1,475	1,039	870
All other	4,272	3,429	2,826	3,145	2,735
Total	62,980	71,670	107,868	122,582	124,077
	Unit value (per 1,000 square feet) 3/				
Japan	1/ $66	$67	$75	$75	$66
Taiwan	40	43	40	42	41
Philippine Republic	60	56	62	61	59
Republic of Korea	-	43	46	46	44
Finland	105	98	95	96	98
Canada	110	101	101	103	104
Nansei-Nanpo	2/	36	40	41	41
Surinam	98	78	91	100	106
All other	93	86	76	81	85
Average	69	65	67	63	58

1/ Includes imports from Nansei-Nanpo.
2/ Included with imports from Japan.
3/ Calculated from the unrounded figures.

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

November 1966
2:1

Table 5.--Hardwood plywood: U.S. imports for consumption, by principal species, specified years 1958 to 1965

Species	1958	1961	1963	1964	1965
	Quantity (million square feet) 1/				
Lauan	2/ 617	777	1,168	1,434	1,611
Birch	98	132	196	227	270
Sen	2/ 90	95	134	120	104
Walnut	3/	3/	3/	2	6
Mahogany	3/	3/	3/	5	5
All other	2/ 103	93	123	158	135
Total	907	1,097	1,620	1,947	2,131
	Value (1,000 dollars)				
Lauan	2/ 32,290	41,136	59,346	69,857	72,811
Birch	10,795	14,284	22,020	24,961	29,075
Sen	2/ 11,400	8,675	16,477	14,469	10,596
Walnut	3/	3/	3/	435	997
Mahogany	3/	3/	3/	550	684
All other	2/ 8,495	7,575	10,025	12,310	9,915
Total	62,980	71,670	107,868	122,582	124,077
	Unit value (per 1,000 square feet) 4/				
Lauan	$52	$53	$51	$49	$45
Birch	110	108	112	110	108
Sen	127	91	123	121	102
Walnut	3/	3/	3/	181	166
Mahogany	3/	3/	3/	121	131
All other	82	81	82	78	74
Average	69	65	67	63	58

1/ Because of rounding, figures may not add to the totals shown.
2/ Estimated.
3/ Not separately reported; included in "All other."
4/ Calculated from the unrounded figures.

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

November 1966
2:1

Commodity	TSUS item
Plywood and wood-veneer panels (softwood faced):	
Not faced finished, or finished clear:	
Parana pine	240.12, -.32, -.52
European red pine	240.16, -.36, -.56
Other	240.18 (pt.), -.38 (pt.), -.58 (pt.)
Other (face finished, not clear)	240.20 (pt.), -.40 (pt.), -.60 (pt.)
Cellular panels (except hardwood faced)	245.60 (pt.)

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. foreign trade in the articles considered here is on an export basis. Exports, which have accounted for less than 1 percent of rising annual production in recent years, were valued at $4.7 million in 1965.

Description and uses

The articles considered here have certain features in common in that they are rigid, usually flat, wood-ply assemblies, bonded together with adhesive substances, have softwood facing, and are produced in the same plants. Notwithstanding these similarities, plywood, wood-veneer panels, and cellular panels are separately provided for in the TSUS. Softwood plywood is by far the most important product included in this summary. Hardwood plywood and similar products having hardwood facing are covered in another summary in this volume.

For tariff purposes, "plywood" (items 240.10 to 240.20) consists of rigid wood-veneer assemblies, bonded together with adhesive substances and having a central ply or core of wood veneer or lumber with the same number of plies (one or more) of wood veneer on each side thereof. Such assemblies, therefore, have an odd number of plies (three, five, seven, etc.); the grain of at least one ply is at an angle (usually a right angle) to the grain of the other plies. This type of balanced construction (an equal number of comparable plies on both sides of a central ply) results in a product of an exceedingly high strength-to-weight ratio and of approximately uniform strength throughout its horizontal plane.

Wood-veneer panels are similar in appearance and construction to plywood, but generally lack the balanced assembly of plywood. For

tariff purposes, "wood-veneer panels" (except plywood) consist of a veneer ply on one side of a backing (items 240.50 to 240.60), or on both sides of a core (items 240.30 to 240.40), the backing or core being composed of lumber, veneer, hardboard, wood particle board, or other material. Such panels do not include single-ply veneers or veneers reinforced or backed with a flexible material; hardwood and softwood veneers are discussed in separate summaries in this volume.

"Cellular panels" (in item 240.60) are rigid, thick, sandwich-type assemblies bonded together with adhesive substances, and ordinarily having the balanced construction of plywood. The core of such panels consists of a light, rigid material (usually ranging from 3/4 inch to 5 or 6 inches in thickness) of hollow, honeycomb, or spongelike construction made of paperboard, rubber, plastics, or other cellular material. The core construction may have interstices filled with loose or loosely matted fibrous materials. Plywood sheets (typically of identical thickness, number of plies, and species of wood) bonded with adhesives to both sides of the core material form a completed cellular panel. Currently, softwood plywood is the principal material used for both faces of cellular panels, but other material, such as hardwood plywood, veneer, wood-veneer panels, lumber, hardboard, wood particle board, or board composed of vegetable fibers, may also be used as facing material. Most cellular panels have three layers, those on either side of the core being of the same material and thickness so as to make a product of balanced construction.

The exterior surfaces of plywood, wood-veneer panels, and cellular panels are generally known as faces, but for some purposes, where only one side of a panel is to be exposed, these surfaces are referred to as a face (of high quality) and a back (of low quality). Plywood and the related panels here considered that have veneer faces are identified in the trade as hardwood- or softwood-panel products, according to the species of wood in the face ply. For example, Douglas-fir plywood (in item 240.18) and Parana pine plywood (item 240.12) are softwood plywoods in the trade, regardless of the species of wood comprising the interior plies or the back. Most softwood plywood, however, is made of softwood throughout.

The surfaces of the panels considered here may be plain ("in the white"), including sanded; sometimes, for decorative effect, the surfaces are mechanically scored, striated, or similarly processed. Occasionally softwood plywood and the other panel products may be "face finished" on one or both surfaces with wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels, or may be overlaid with paper, fabric, plastics, base metal, or other material.

Plywood with a plain face ply of Douglas-fir, for example, or a face ply of that species finished with a clear or transparent material

that does not obscure the grain, texture, or markings of the wood is classifiable for duty purposes under item 240.18, whether or not the faces are mechanically scored. On the other hand, plywood having a face ply of Douglas-fir coated with paint or overlaid with materials so as to obscure the grain, texture, or markings of the wood is classifiable for duty purposes under item 240.20.

Softwood plywood is made from a limited number of native and foreign species of wood, but chiefly from Douglas-fir. Other domestic species of importance include hemlock, pine, larch, spruce, and fir. Softwood plywood is made in various types, grades, and sizes, according to standard specifications, chiefly to meet requirements as a basic construction material where appearance is not a factor. The most popular size is 4 feet by 8 feet, with a range in thickness of 1/4 to 3/4 inch. Two basic types of softwood plywood produced are (1) exterior--made with waterproof hot-pressed phenolic resin adhesive which becomes permanent and insoluble under practically any exposure condition, and (2) interior--made for the most part with water-resistant protein glues, either hot- or cold-pressed, for application where permanent protection is provided from the elements.

Softwood plywood produced in the United States is chiefly used for general construction purposes in the building of homes, office buildings, industrial plants and other structures, trailers, railroad cars, truck bodies, pleasure boats, boxes and various other containers, built-in furniture and fixtures, concrete forms, and patterns, and for general maintenance and repair work of structures. A growing quantity, however, is being used for decorative purposes such as wall paneling.

Imported softwood plywood and related wood panels have been comparable as to price, quality, grade, type, and size to softwood plywood and related panels produced in the United States from the same species of wood.

In this summary all quantity data on domestic production and capacity, and most of those on exports are expressed in terms of square feet (surface measure) of plywood of 3/8-inch thickness. Quantity data on imports are presented here, as in the official statistics, in terms of square feet (surface measure), regardless of the different thicknesses involved.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Plywood (softwood faced):	
	Not face finished, or finished clear:	
240.12	Parana pine	40% ad val.
240.16	European red pine	17% ad val.
240.18 (pt.)	Other	20% ad val.
240.20 (pt.)	Other (face finished, not clear)	20% ad val.
	Wood-veneer panels (softwood faced):	
	Veneer faced on both sides:	
	Not face finished, or finished clear:	
240.32	Parana pine	40% ad val.
240.36	European red pine	17% ad val.
240.38 (pt.)	Other	20% ad val.
240.40 (pt.)	Other (face finished, not clear)	20% ad val.
	Veneer face on one side only:	
	Not face finished, or finished clear:	
240.52	Parana pine	40% ad val.
240.56	European red pine	17% ad val.
240.58 (pt.)	Other	20% ad val.
240.60 (pt.)	Other (face finished, not clear)	20% ad val.
245.60 (pt.)	Cellular panels (except hardwood faced)	20% ad val.

The 40-percent rate (for items 240.12, 240.32, and 240.52) is the same as the statutory rate provided for comparable articles of Parana pine under paragraph 405 of the original Tariff Act of 1930. During the period March 21, 1953, to February 28, 1963, however, the rate of duty on the imports of such articles was 25 percent ad valorem pursuant to a concession granted by the United States in the General Agreement on Tariffs and Trade (GATT). For the other items considered here, the current rates, which reflect GATT concessions, are the same as the rates applicable, under paragraph 405 of the former schedules, to nearly all the imports of comparable articles during a representative period. The 17-percent GATT rate (for items 240.16, 240.36, and 240.56) has been in effect since June 30, 1958, and the 20-percent GATT rate (for the remaining items) has been in effect since June 6, 1951.

U.S. consumption

Annual domestic consumption of softwood plywood 1/ has increased continually in recent years and almost doubled between 1958 and 1965. In the latter year, consumption amounted to 12.6 billion square feet (table 1). About 90 percent of such plywood was of Douglas-fir, and the remainder was chiefly of western hemlock, several kinds of pine, western larch, spruce, and fir.

The principal consuming areas are the major urban and suburban centers where building construction is generally increasing. They are chiefly the northeastern megalopolis extending from Boston to Washington; the central area, including Chicago, Detroit, Cleveland, and St. Louis; and the States of Florida, Texas, and California.

The principal reasons for the rapid rate of growth in consumption are (1) the wide acceptance of softwood plywood in all regions of the United States for many uses (e.g., in construction, manufacturing, and shipping); (2) the saving of labor costs from using large-sized panels in lieu of lumber; (3) the extensive trade association promotion; and (4) the decline in price as production increased and quality was maintained or improved. The extent of the price decline from 1958 to 1965 is demonstrated by the following Bureau of Labor Statistics wholesale price indexes (1957-59=100) for softwood plywood:

Year	Price index	Year	Price index
1958	98.1	1963	89.4
1960	92.9	1964	87.5
1962	87.3	1965	86.8

U.S. producers

In 1965 there were 167 softwood plywood plants operating in the United States, compared with 122 in 1958 and 35 in 1946. Although 15 new plants began producing during 1965, the net gain in that year over 1964 was 4, because 5 plants discontinued operation and 6 others

1/ Because separate data are not generally available, any official or estimated data for softwood plywood given in this report include data for wood-veneer panels and cellular panels with softwood facing, unless otherwise specifically noted.

converted primarily to production of hardwood plywood. In 1965 the plants were located as follows:

State	Number
Oregon	88
Washington	37
California	19
Other Western States	11
Southern States	12
Total	167

About 10 additional softwood plywood plants, all in the South, were being constructed in 1966. These will increase the estimated annual capacity of the industry from the 14.2 billion square feet in 1965 to about 15.5 billion square feet. In recent years, the fastest growing segment of the industry has been the production of southern-pine plywood in the South, where about 22 plants producing softwood plywood of various species will be operating by the end of 1966.

In 1963 almost 94 percent of the total shipments of softwood plywood were shipped from plants whose chief products were veneer and plywood, and most of the remainder, from sawmills and planing mills. Virtually all plywood-producing plants manufactured softwood plywood for sale; few, if any, had captive operations using most or all of their own output.

Of the 153 softwood plywood plants for which production capacity data are available for late 1965, 11 percent had annual capacities of less than 50 million square feet each, 54 percent had capacities of 50 to 99 million each, 33 percent had capacities of 100 to 199 million, and 2 percent had capacities of 200 million or more. The 10 largest plants (each with a capacity of 150 million square feet or more) were all in the West. Many of the producing concerns, particularly those with the larger plants, were multiproduct companies which also had plants producing lumber, pulp and paper, and other forest products.

U.S. production

The United States is the world's largest producer of softwood plywood, and its domestic production increased manyfold from 1946 to 1965. In 1946 the total output was 1.4 billion square feet; by 1958 it was 6.5 billion, and in 1965 it was 12.6 billion (table 2). The very large increase in production in the 19 years 1946-65 resulted primarily from the versatility of the product and its competitive price.

From 1958 to 1962, interior-type softwood plywood constituted 70 to 74 percent of total annual production; by 1964 the ratio declined to 64 percent. In 1958 Douglas-fir accounted for about 97 percent of total softwood plywood production, and in 1964, for 91 percent. Other species used for softwood plywood include hemlock, larch, fir, pine, and spruce; and since 1964 southern pine has become increasingly important.

Oregon has been the predominant State in the production of softwood plywood since the early 1950's (table 2). That State accounted for 65 percent of production in 1958 and has maintained about the same share in recent years; it accounted for 62 percent in 1965. During the past two decades, Washington was consistently the second-ranking State (19 percent in 1965), and California, third (10 percent in 1965). Three other Western States and six Southern States together accounted for 9 percent of production in 1965.

U.S. exports

Annual U.S. exports of softwood plywood (excluding wood-veneer and cellular panels) increased each year from 1961 to 1965, when they reached the highest annual level since 1959--30 million square feet, valued at $3.8 million (table 3). In 1964 and 1965 about two-thirds of the exports consisted of exterior type and one-third of interior type. In domestic production, however, the quantity of interior-type softwood plywood far exceeds that of exterior type.

During 1961-65 the average annual unit value of all exported softwood plywood was within the range of $121 to $137 per thousand square feet. The range of the average unit values of softwood plywood exported to the principal markets was considerably greater--from $109 to $142 per thousand square feet in 1965--indicating considerable variation in the kinds and grades exported to different countries. In recent years the chief foreign markets were the Bahama Islands, Mexico, Canada, and the United Kingdom; other important markets in 1964 and 1965 included Denmark, West Germany, and Saudi Arabia.

Exports in 1965 were equivalent to 0.2 percent of domestic production and were about five times as large as imports of softwood plywood. In 1961, exports also represented 0.2 percent of production, but were only slightly greater than imports in terms of quantity, though double in terms of value. In the past few years the U.S. industry has conducted trade missions abroad and made special efforts to increase export sales, activities which are reflected in the higher annual export levels for 1964 and 1965 compared with those for 1961-63.

Exports reported under the statistical class "wood panels, n.e.c., including wood-veneer and cellular panels" have also increased in recent years--from 1.1 million square feet, valued at $227,000, in 1958 to 1.8

million square feet, valued at $886,000, in 1965 (table 4). However, in terms of quantity, exports were smaller in both 1963 and 1964 than in 1958. In the period 1958-65 these exports of wood panels other than plywood, principally to Canada, are believed to have consisted chiefly of panels with softwood veneer facing; they may have included small quantities of panels with hardwood facing (see summary on hardwood plywood). The wood panels included in the statistical class considered here are considerably higher priced, because of their construction, than softwood plywood. In 1965, exports of wood panels other than plywood averaged $500 per thousand square feet, compared with $120 for the exports of plywood.

U.S. imports

The trend of annual U.S. imports of softwood plywood was downward from 1961 to 1965, partly because of the increased output and reduced prices of domestic softwood plywood. Imports in 1965, however, exceeded those in 1964 by 34 percent. The 1965 imports were valued at about $747,000 (table 5).

In recent years, imports have been equivalent to less than 0.2 percent of consumption and, therefore, have had relatively little effect on the domestic market. The imported softwood plywood is believed to have been principally of the interior type, although that from Canada was chiefly of the exterior type. Plywood from Mexico was chiefly of ponderosa pine; that from Canada, of Douglas-fir; and that from Brazil, of Parana pine. These countries have been the chief suppliers of the imported commodity in recent years; in 1961 and 1962 New Guinea supplied a substantial quantity of klinki pine plywood.

Foreign production and trade

World statistics published by the Food and Agriculture Organization make no distinction between softwood and hardwood plywood. The United States, however, has been by far the leading producer of softwood plywood, and Canada, with a 1965 output of almost 1.7 billion square feet (3/8-inch basis) of softwood plywood, 1/ appears to rank second. Smaller amounts have been produced in Mexico, Brazil, Sweden, Finland, and a few other countries.

1/ Dominion Bureau of Statistics, Ottawa.

Table 1.--Softwood plywood: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

Year	Production 1/	Imports	Exports	Apparent consumption
	Quantity (million square feet) 2/			
1958	6,487	4	13	6,478
1961	8,514	13	16	8,511
1963	10,375	10	18	10,367
1964	11,455	5	29	11,431
1965	12,646	6	32	12,620
	Value (1,000 dollars)			
1958	463,000	480	1,927	3/
1961	530,400	932	2,273	3/
1963	649,100	1,017	2,571	3/
1964	707,400	625	3,722	3/
1965	781,600	747	4,693	3/

1/ Value of production is estimated by use of Bureau of Labor Statistics wholesale prices and Census of Manufactures average value of shipments.

2/ The quantities for production and most of those for the exports are reported on the basis of 3/8-inch thickness; those for imports represent surface measure regardless of thickness.

3/ Not meaningful.

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

Note.--Data shown here include data for wood-veneer panels and cellular panels with softwood facing. Ratio of imports to consumption is less than 1 percent in all years shown.

Table 2.--Softwood plywood: U.S. production, by principal States, specified years 1958 to 1965

(In millions of square feet, 3/8-inch basis)

Year	Oregon	Washington	California	Other	Total
1958	4,233	1/ 1,402	852	1/	6,487
1961	5,564	1/ 1,738	1,212	1/	8,514
1963	6,822	1,880	1,323	2/ 350	10,375
1964	7,558	2,019	1,320	3/ 558	11,455
1965 4/	7,786	2,391	1,272	5/ 1,197	12,646

1/ "Other" States (Idaho and Montana) included with Washington to prevent disclosure.

2/ Idaho, Montana, Alabama, and Texas.

3/ Idaho, Montana, Alabama, Arkansas, Georgia, and Texas.

4/ Compiled from data in Forest Industries for January 1966.

5/ Colorado, Idaho, and Montana, 742 million square feet; Alabama, Arkansas, Louisiana, Mississippi, North Carolina, and Texas, 455 million square feet.

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

Table 3.--Softwood plywood: U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Market	1958	1961	1963	1964	1965
	Quantity (million sq.ft., 3/8-inch basis) 1/				
Bahamas	0.7	2.0	3.4	4.5	5.6
Mexico	1.1	1.1	1.6	2.8	2.8
United Kingdom	-	.6	3.1	1.0	1.7
Denmark	-	-	.6	1.8	2.1
West Germany	-	.4	.6	1.5	2.0
Canada	1.7	3.1	1.0	4.4	1.7
Belgium	1.4	.6	.6	.6	1.4
Pakistan	.8	.1	.2	.5	1.5
Saudi Arabia	.1	.6	.7	1.0	1.4
All other 2/	6.2	5.3	5.7	10.0	10.2
Total	11.8	13.7	17.5	28.2	30.3
	Value (1,000 dollars)				
Bahamas	111	276	524	640	793
Mexico	131	144	201	322	326
United Kingdom	-	68	311	114	234
Denmark	-	-	68	209	226
West Germany	-	30	57	168	223
Canada	269	482	181	413	193
Belgium	114	68	72	80	175
Pakistan	159	11	37	60	165
Saudi Arabia	13	78	70	101	156
All other 2/	903	721	807	1,377	1,316
Total	1,700	1,878	2,328	3,484	3,807
	Unit value (per 1,000 sq. ft.) 3/				
Bahamas	$166	$138	$154	$142	$142
Mexico	124	132	127	116	115
United Kingdom	-	115	100	116	141
Denmark	-	-	106	113	109
West Germany	-	84	101	109	113
Canada	156	154	178	94	115
Belgium	84	113	129	133	124
Pakistan	203	211	151	116	113
Saudi Arabia	243	139	106	101	111
All other 2/	146	136	141	137	130
Average	144	137	133	123	121

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

2/ Includes exports to Cuba, the Canal Zone, Peru, and the French Pacific Islands, in quantities and/or values exceeding some of those shown for countries listed.

3/ Calculated from the unrounded figures.

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

Note.--Data shown here exclude data for wood panels other than plywood which are shown in table 4.

November 1966
2:1

Table 4.--Wood panels other than plywood: 1/ U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Market	1958	1961	1963	1964	1965
	Quantity (million sq. ft., surface measure) 2/				
Canada	0.81	0.97	0.20	0.36	1.39
Bahamas	3/	.03	.04	.03	.12
Australia	-	-	-	-	.03
Ethiopia	-	-	-	-	.04
Italy	-	-	3/	-	.03
All other	.30	.98	.22	.41	.15
Total	1.12	1.97	.46	.80	1.78
	Value (1,000 dollars)				
Canada	151	190	132	131	662
Bahamas	2	11	8	8	50
Australia	-	-	-	-	32
Ethiopia	-	-	-	-	22
Italy	-	-	2	-	21
All other	74	194	101	99	99
Total	227	395	243	238	886
	Unit value (per 1,000 sq. ft.) 4/				
Canada	$186	$197	$670	$365	$477
Bahamas	271	422	218	288	406
Australia	-	-	-	-	1,141
Ethiopia	-	-	-	-	508
Italy	-	-	382	-	683
All other	251	197	459	239	660
Average	204	200	528	297	499

1/ Described in the official export statistics as "wood panels, n.e.c., including wood-veneer and cellular panels;" believed to consist chiefly of panels with softwood veneer facing.

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

3/ Less than 50,000 square feet.

4/ Calculated from the unrounded figures.

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

Table 5.--Softwood plywood: U.S. imports for consumption, by principal sources, specified years 1961 to 1965

Country	1961	1963 1/	1964 1/	1965 1/
	Quantity (million sq. ft., surface measure)			
Mexico	3.0	4.4	3.1	2.6
Canada	1.3	4.5	1.1	1.9
Republic of Korea	-	2/	.3	.8
Brazil	2.5	.5	.2	.6
All other	3/ 5.9	.3	2/	.4
Total	12.7	9.7	4.7	6.3
	Value (1,000 dollars)			
Mexico	435	642	466	404
Canada	86	339	138	255
Republic of Korea	-	1	12	39
Brazil	90	23	8	29
All other	3/ 321	12	1	20
Total	932	1,017	625	747
	Unit value (per 1,000 sq. ft.) 4/			
Mexico	$144	$146	$151	$155
Canada	67	75	126	132
Republic of Korea	-	30	48	50
Brazil	36	44	33	46
All other	54	40	53	40
Average	73	104	133	119

1/ Data include imports of wood-veneer panels with softwood facing; there were no imports of cellular panels.

2/ Less than 50,000 square feet.

3/ Includes 4.9 million square feet, valued at 270 thousand dollars, imported from New Guinea.

4/ Calculated from the unrounded figures.

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

Commodity	TSUS item
Hardboard:	
Not face finished; oil treated	245.00, -.10, -.20
Other	245.30

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

The United States is the world's largest producer and consumer of hardboard. In 1958-65, when annual U.S. production nearly doubled in quantity and exports were insignificant, the ratio of imports to domestic consumption rose from 9 percent to 16 percent.

Description and uses

Hardboard, a dense, grainless board of uniform appearance, is made from wood which has been defibered and re-formed. It is essentially interfelted lignocellulosic fibers consolidated under heat and pressure to form sheetlike panels. Mill residues such as edgings, trimmings, and cores, as well as round logs and timber, are used to make hardboard. Although the lignin in the wood acts as a binding agent in hardboard, some synthetic resin is added under certain manufacturing processes.

Other panel products made from wood, such as particle board (items 245.45 and 245.50) and plywood (items 240.10 to 240.20) are discussed in separate summaries in this volume. Particle board is manufactured from raw wood chips, flakes, or shavings, and plywood is essentially a rigid assembly of wood-veneer sheets bonded together with an adhesive substance.

The meaning, for tariff purposes, of the term "hardboard" under the TSUS is that which applied in the trade and commerce of the United States on August 31, 1963, the date on which the TSUS became effective. 1/ On that date Commercial Standard CS251-63, Hardboard, a recorded voluntary standard of the trade published by the U.S. Department of Commerce, indicated that hardboard had a general range in density of 50 to 80 pounds per cubic foot, in modulus of rupture of 3,000 to 7,000 pounds per square inch, and in tensile strength of 50 to 150 pounds per square inch perpendicular to the surface. In an administrative decision

1/ See T.D. 67-52(2).

of February 27, 1964 (T.D. 56124(14)), the Bureau of Customs, noting as evidence the meaning of the term "hardboard" in the cited publication on commercial standards, ruled that a board of fibrous wood pulp of a considerably lesser density, modulus of rupture, and tensile strength was classifiable under the provision for "Building boards not specially provided for" in item 245.90 (see separate summary in this volume) rather than as hardboard.

The term "face finished" as applied to hardboard means, for tariff purposes, that one or both surfaces have been treated with creosote or other wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels, or have been overlaid with paper, fabric, plastics, base metal, or other material. Hardboard which is not face finished and that which is oil treated (whether or not regarded as tempered) but not otherwise face finished is provided for in items 245.00, 245.10, and 245.20; and other hardboard, in item 245.30. The term "oil treated" means that special oils were used during or after the board-forming process, usually followed by a heating process, to improve the moisture resistance and related properties of the finished products. The term "tempered" refers to hardboard which has been impregnated with a siccative, usually a blend of a drying oil and an oxidizing resin, and then heat-treated. Tempered hardboard, with a density range of 62 to 75 pounds or more per cubic foot, has substantially greater moisture resistance, modulus of rupture, and tensile strength than untempered board.

Hardboard is used chiefly in construction and in the production of cabinet furniture, fixtures, and other fabricated products. A high-density type of hardboard is used for dies in spinning and forming light-gage metals, for jigs and templates, and for structural electrical-insulation material.

The standard type of hardboard is untempered and untreated; it ranges from blond to dark brown in color, depending primarily on the processing techniques, but also on the species of wood used; and it is manufactured in flat panels 4 to 5 feet in width, 8 to 16 feet in length, and 1/8 to 3/8 inch in thickness. Hardboard is also produced in a variety of special panels designed for convenience of installation, for decorative effect, and for particular end uses. These products are known in the trade as textured hardboard (decorated with an embossed or striated pattern); factory-finished hardboard (i.e., primed, coated, sealed, or printed with wood grain or other decorative designs); perforated board; core board for decorative laminates; hardboard siding; and concrete form hardboard. 1/

1/ For additional information on hardboard, see U.S. Tariff Commission, Hardboard: Report on Investigation Conducted Pursuant to a Resolution by the Committee on Finance of the United States Senate dated August 9, 1954, 1955 (processed).

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Hardboard:	
	Not face finished; and oil treated, whether or not regarded as tempered, but not otherwise face finished:	
245.00	Valued not over $48.33-1/3 per short ton.	15% ad val.
245.10	Valued over $48.33-1/3 but not over $96.66-2/3 per short ton.	$7.25 per short ton.
245.20	Valued over $96.66-2/3 per short ton---	7.5% ad val.
245.30	Other----------	28% ad val.

The rates for items 245.00, 245.10, and 245.20 are the same as the rates for hardboard under paragraph 1413 of the former tariff schedules and reflect concessions granted by the United States in the General Agreement on Tariffs and Trade (GATT) which have been in effect since January 1, 1948. The rate of 28 percent ad valorem for item 245.30 became effective on January 1, 1966, and represents the first stage of a GATT concession which is to become fully effective in five annual stages, the second (26 percent ad valorem) on January 1, 1967, and the last (20 percent ad valorem) on January 1, 1970 (see Presidential Proclamation No. 3694, dated December 27, 1965). The previous TSUS rate (30 percent ad valorem) was a compromise rate derived from the various rates applicable to face-finished hardboard under the former tariff schedules.

On August 26, 1954, in a "finding of dumping," under the Antidumping Act, 1921, the U.S. Treasury Department determined that the domestic hardboard industry was likely to be injured by sales here of Swedish hardboard at less than its fair value. Thus, special dumping duties were payable in addition to normal duties on imports of such products from Sweden. Thereafter, when it was ascertained that individual Swedish firms were no longer selling, or likely to sell, hardboard here at less than fair value, their names were published and the original finding appropriately modified. The "finding of dumping" was revoked on December 30, 1963 (T.D. 56084).

Most of the imports of hardboard in recent years have been dutiable at $7.25 per short ton. The average ad valorem equivalent of that rate on the 1965 imports reported under item 245.10 was about 10 percent.

November 1966
2:1

U.S. consumption

The United States has for many years maintained its position as the leading consumer of hardboard. Apparent consumption increased from 1,319 million pounds in 1958 to 2,714 million pounds in 1965 (table 1). Rising consumption of hardboard is attributable partly to the development of new uses in the building trades and in various basic industries and partly to the development of special types of boards suitable for decorative paneling and for other specialized construction and manufacturing uses.

U.S. producers

The manufacture of hardboard was originated by the Masonite Corp. in 1926. Masonite was virtually the only producer until 1946, when several other concerns entered production. At the end of 1965 there were 19 hardboard concerns with 24 plants, including 6 which were new in that year. The Masonite Corp. continues to be the leading producer. The number and estimated capacity of plants, by regions in 1965, according to data obtained from the trade, were as follows:

Region and State	Number of plants	Estimated capacity	
		Million sq. ft. (1/8-inch basis)	Million pounds 1/
Middle and South Atlantic--Florida, New York, North Carolina, and South Carolina	5	585	438
North Central--Michigan, Minnesota, and Wisconsin	5	750	563
South Central--Arkansas, Mississippi, and Oklahoma	4	1,380	1,035
Pacific--California, Oregon, and Washington	10	1,158	869
Total	24	3,873	2,905

1/ Area converted to weight on the basis of 750 pounds per 1,000 square feet of 1/8-inch board.

All of the 19 producing concerns manufactured hardboard primarily for sale rather than for their own use; 8 firms were engaged almost exclusively in hardboard manufacture, and 11 were diversified concerns which produced (in separate establishments) related products that include gypsum board, paper, wood particle board, plywood, and lumber. Hardboard constituted a relatively small proportion of total sales by the diversified concerns. At least two domestic producers have affiliated hardboard plants or licensees located in foreign countries, including Australia, Canada, Italy, South Africa, and Sweden.

U.S. production

The United States is the world's largest producer of hardboard. Annual production, amounting to 1,217 million pounds in 1958, increased 89 percent to an estimated 2,300 million pounds in 1965 (table 1). The unit value of producers' shipments (sales) amounted to 6.5 cents per pound in 1958 and increased to 7.5 cents per pound in 1963. The estimated value of production was $79 million in 1958 and $144 million in 1963.

During the 1950's, production of tempered board was usually greater than that of untempered, but in recent years this relationship has gradually been reversed. In 1964, tempered board accounted for about 40 percent of total production, and untempered board, for the remaining 60 percent.

The proportion of hardboard which is manufactured into special products before reaching consumer markets has increased. Such products are estimated to have amounted to one-fourth of total hardboard output in 1964. The conversion of basic hardboard into special products may be performed by the original producer or by another fabricator specializing in the particular type of operation.

Wholesale prices, reported by the Bureau of Labor Statistics, for two types of hardboard in January 1966 (per thousand square feet) are as follows:

Type	Description	Price
I	Standard, 1/8 inch by 4 feet by 8 feet-----	$53
II	Tempered, 1/8 inch by 4 feet by 8 feet-----	69

The average reported prices have changed less than 1 percent since 1958. The increase in the average unit value of sales, therefore, is attributable to an increase in the proportion of the total sales consisting of hardboard further manufactured or advanced in condition.

November 1966
2:1

U.S. exports

U.S. exports of hardboard accounted for about 1 percent of domestic production during the period 1958-65. Canada, Belgium-Luxembourg, and the United Kingdom were the principal export markets (table 2). Exports include a substantial portion of tempered and special-type boards, produced with a unique face design or finish, and sold at prices somewhat higher than those for standard board.

U.S. imports

U.S. imports of hardboard increased from 115 million pounds, valued at $5.1 million, in 1958 to 430 million pounds, valued at $17.2 million, in 1965 (table 3). Imported hardboards, both tempered and untempered, are directly competitive with comparable domestic grades. Imports are consumed principally in coastal areas near the important seaports. The ratio of imports to annual domestic consumption increased from 9 percent to 16 percent in the period 1958-65. The average unit value of imports declined from 4.4 cents per pound in 1958 to 4.0 cents per pound in 1965, representing a drop of about 9 percent. This decline in unit value was apparently an important factor contributing to increased imports. Sweden was by far the principal source of imports, followed by Finland and Canada.

Nearly all the hardboard imports reported in 1965 entered under items 245.00, 245.10, and 245.20. As indicated in table 4, a very large proportion (83.5 percent) entered as board valued over $48.33-1/3 but not over $96.66-2/3 per short ton (item 245.10).

Foreign production and trade

Before World War II, foreign production of hardboard was largely confined to Sweden, Finland, and Norway; during postwar years, however, production was undertaken in many other countries throughout the world. In recent years, the total output of foreign countries has increased faster than has that of the United States, the leading producing nation. The combined output of Sweden (which ranks second as a producer), Finland, and Norway accounts for about one-fourth of total world output and most of the world exports. The exports of those three northern countries go chiefly to other European countries; a significant amount goes to the United States.

Table 1.--Hardboard: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

Year	Production	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent
1958	1,217,000	114,808	12,366	1,319,442	9
1960	1,372,000	176,338	12,036	1,536,302	11
1963	1,918,000	313,945	15,515	2,216,430	14
1964	2,096,000	354,256	21,811	2,428,445	15
1965	1/ 2,300,000	429,907	16,373	2,714,000	16

1/ Estimated.

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

Table 2.--Hardboard: U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Country	1958	1960	1963	1964	1965
	Quantity (1,000 pounds)				
Canada	6,745	7,670	8,017	10,112	5,685
Belgium and Luxembourg	1,511	1,729	2,872	5,501	4,619
United Kingdom	9	72	715	1,495	1,230
Netherlands	148	-	174	766	816
Mexico	98	150	195	410	513
West Germany	40	3	371	421	707
All other	3,815	2,412	3,171	3,106	2,803
Total	12,366	12,036	15,515	21,811	16,373
	Value (1,000 dollars)				
Canada	669	879	930	979	879
Belgium and Luxembourg	136	143	308	650	560
United Kingdom	2	8	111	220	177
Netherlands	14	-	18	118	116
Mexico	22	13	30	68	89
West Germany	5	1/	42	47	84
All other	529	263	366	388	353
Total	1,377	1,306	1,805	2,470	2,258

1/ Less than $500.

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

November 1966
2:1

Table 3.--Hardboard: U.S. imports for consumption, by principal sources, specified years 1958 to 1965

Country	1958	1960	1963	1964	1965
	Quantity (1,000 pounds)				
Sweden	76,680	116,710	156,497	169,627	161,812
Finland	14,236	20,316	57,793	75,301	88,277
Canada	16,895	11,233	32,118	36,491	77,209
Brazil	1,224	5,625	199	4,515	21,147
Portugal	-	-	12,621	18,502	19,942
Norway	3,025	13,046	16,951	15,639	14,371
All other	2,748	9,408	37,766	34,181	47,149
Total	114,808	176,338	313,945	354,256	429,907
	Value (1,000 dollars)				
Sweden	3,201	4,799	6,190	6,836	6,786
Finland	583	813	2,165	2,853	3,431
Canada	994	388	1,223	1,466	3,287
Brazil	40	202	6	166	783
Portugal	-	-	441	604	665
Norway	120	492	749	687	619
All other	151	443	1,586	1,363	1,676
Total	5,089	7,137	12,360	13,975	17,247

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

November 1966
2:1

Table 4.--Hardboard: U.S. imports for consumption, by kinds, 1964 and 1965

Kind	1964	1965
	Quantity (1,000 pounds)	
Not face finished; and oil treated:		
Valued per short ton--		
Not over $48.33-1/3	1,337	2,688
Over $48.33-1/3 but not over $96.66-2/3	311,518	358,947
Over $96.66-2/3	39,351	65,776
Other	2,050	2,496
Total	354,256	429,907
	Value (1,000 dollars)	
Not face finished; and oil treated:		
Valued per short ton--		
Not over $48.33-1/3	28	59
Over $48.33-1/3 but not over $96.66-2/3	11,558	13,250
Over $96.66-2/3	2,276	3,800
Other	113	138
Total	13,975	17,247
	Unit value (cents per pound) 1/	
Not face finished; and oil treated:		
Valued per short ton--		
Not over $48.33-1/3	2.1	2.2
Over $48.33-1/3 but not over $96.66-2/3	3.7	3.7
Over $96.66-2/3	5.8	5.8
Other	5.5	5.5
Average	3.9	4.0

1/ Computed from the unrounded figures.

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

Commodity	TSUS item
Wood particle board, whether or not face finished	245.45, -.50

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. production (shipments) of wood particle board, which has been increasing rapidly in recent years, was valued at about $61 million in 1963 and substantially higher in 1965. Imports were equivalent to less than 1 percent of production in 1965, and exports were even smaller.

Description and uses

Wood particle board is made up of natural wood particles (chips, flakes, shavings, slivers, or similar particles) mixed with a synthetic resin or other binder and formed into panels by heat and pressure. The term "face finished" as applied to wood particle board means, for tariff purposes, that one or both surfaces of a panel have been treated with wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels, or have been overlaid with paper, fabric, plastics, base metal, or other material.

In particle board the physical identity of the wood particles used is retained throughout the entire forming process, a characteristic which accounts for the name of the panel and distinguishes it from other panel products made from wood, such as hardboard (items 245.00 to 245.30) and plywood (items 240.10 to 240.20), which are discussed in separate summaries in this volume. Hardboard is manufactured from wood which has been defibered and consolidated into panel form with heat and pressure, utilizing the natural bonding ingredients in the wood or other adhesive substances. Plywood is essentially a rigid assembly of wood-veneer sheets bonded together with adhesive substances.

Most wood particle board is made in flat rigid panels in sizes 4 feet by 8 feet or larger, and 3/8 to 3/4 inch in thickness. Other shapes and sizes are manufactured to meet specific requirements. Particle board is manufactured in two types, identified by the basic forming process as extruded or mat-formed (platen) type.

More than 90 percent of U.S. production of particle board at present consists of the mat-formed or platen type, which is generally produced for sale in the open market. It is manufactured by coating wood chips, flakes, or similar particles with an adhesive and forming them into mats which are then placed in a multiplaten, heated hydraulic press. The regulated application of heat and pressure produces a panel product, the characteristics of which vary considerably according to the type, size, and distribution of particles in the mat, as well as the type of adhesive used. Mat-formed wood particle board is covered by Commercial Standard CS236-66, a recorded voluntary standard of the trade published by the U.S. Department of Commerce. The average density of mat-formed board is about 42 to 45 pounds per cubic foot; however, panels of somewhat higher or lower density are manufactured for special uses. Mat-formed board is used chiefly as core stock in the manufacture of plywood or veneered panels for table tops, counter tops, flush doors, furniture components, and built-in cabinets. It is also used (just as it comes from the factory and without facing materials or overlays) for construction purposes such as floor underlayment, sheathing, partitions, shelving, siding, and wall panels, and for various other uses.

In manufacturing extruded board, the mixture of wood particles and binding material is forced through a long heated die of set width and thickness. The continuous length of board which emerges from the die is clipped into panels of desired length for the manufacture of veneered panels used in furniture assembly. Most of the extruded board is made and consumed by furniture manufacturers, utilizing wood residues from their own operations.

In this summary, unless otherwise stated, all quantities of domestic production or shipments of wood particle board are given in terms of square feet (surface measure) of board of 3/4-inch thickness. Import quantities are shown in square feet (surface measure), regardless of the different thicknesses involved, and also in pounds.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Wood particle board, whether or not face finished:	
245.45	If 90 percent or more by weight of the wood components consist of one, or any combination, of the following hardwoods: Pterocarpus spp., Triplaris spp., or Virola spp	12% ad val.
245.50	Other	20% ad val.

These provisions became effective December 7, 1965, pursuant to Public Law 89-241. From August 31, 1963 (the effective date of the TSUS), through December 6, 1965, the column 1 rate of duty applicable to all wood particle board, regardless of the species of the wood component, was 12 percent ad valorem. The status of wood particle board under the pre-TSUS tariff schedules had been contested and litigated. For several years during the 1950's when there were only small shipments of imported wood particle board, the classification controversy was concerned with whether such product was "wallboard" dutiable at 5 percent ad valorem under paragraph 1402 or a product "of which any synthetic resin or resin-like substance is the chief binding agent" dutiable at 21 cents per pound plus 17 percent ad valorem under paragraph 1539(b). The Court of Customs and Patent Appeals in C.A.D. 809 (petition for writ of certiorari denied by the U.S. Supreme Court on May 20, 1963) ruled that neither of those two tariff provisions applied but did not indicate the classification which should apply. Thereafter, the Bureau of Customs published a notice (28 F.R. 6300) indicating several possible classifications, which carried rates reflecting concessions granted by the United States in the General Agreement on Tariffs and Trade. The 12-percent rate for wood particle board in the original TSUS was largely a compromise rate based on the classifications mentioned in the Bureau's notice.

U.S. consumption and production

During 1958-65 U.S. consumption of wood particle board was approximately equivalent to domestic production, since exports and imports were small. Domestic production of particle board rose from 125 million square feet (3/4-inch basis) in 1958 to 780 million in 1965. The upward trend of output (and consumption) was attributable partly to rising

industrial and construction activity and partly to increased use by furniture manufacturers.

The average unit value of domestic shipments of particle board decreased from $138.51 per thousand square feet in 1958 to $123.67 in 1963 and to $109.06 in 1965. The decline in unit values reflected both reductions in costs resulting from improved manufacturing techniques and competition with other panel products, particularly hardboard and plywood. Annual consumption of hardboard and plywood, like that of wood particle board, increased substantially during 1958-65. Declining prices have no doubt been a factor in generating new outlets for particle board in recent years.

During 1965 there were 51 plants producing wood particle board operating in 19 States, with a reported annual production capacity of 1,180 million square feet. The States leading in production of particle board, based on data for 1965, were Oregon, California, and Virginia. The combined output of these States accounted for more than half of the total domestic production. The annual capacity per plant increased from an average of 10.0 million square feet in 1958 to 23.1 million square feet in 1965. Twelve new plants, with an estimated production capacity of 500 million square feet, were in the planning stages, or under construction, at the end of 1965. Details relating to the domestic production of wood particle board (surface measure, 3/4-inch basis) in specified years 1958 to 1965 are as follows:

Year	Number of plants	Production	Estimated production capacity 1/	
			Total	Average per plant
		Million sq. ft.	Million sq. ft.	Million sq. ft.
1958	44	125	440	10.0
1960	43	268	600	14.0
1963	43	496	700	16.3
1964	47	638	980	20.9
1965	51	780	1,180	23.1

1/ Published in "Annual Board Review" issues of Forest Industries.

U.S. exports

Exports of wood particle board were not separately reported before 1965 but are known to have been negligible. Exports in 1965 were valued at $85,000; Canada and Mexico were the principal export markets.

U.S. imports

Imports of wood particle board were not separately reported before August 31, 1963. Such imports, however, are believed to have been negligible before 1959 and are estimated to have had a total value of $21,000 in 1959 and $299,000 in 1960. Owing to the high rate of duty imposed in May 1961 under C.D. 2256 (21 cents per pound plus 17 percent ad valorem), there were no known commercial imports from May 1961 through August 1963. Imports rose from 4.0 million pounds (equivalent to 3.2 million square feet) in 1964 to 11.0 million pounds (equivalent to 7.1 million square feet) in 1965 and amounted to 2.4 million pounds (equivalent to 1.5 million square feet) in January-September 1966 (see accompanying table).

The increase in the rate of duty from 12 percent to 20 percent ad valorem, effective December 7, 1965, on wood particle board except that with 90 percent or more by weight of the wood components consisting of the hardwoods named in item 245.45, contributed to the decline in the level of imports from 1965 to 1966 (based on the data for the first 9 months of each year). The species of hardwoods named in item 245.45 are native to South and Central America and other tropical areas. In January-September 1966 slightly more than half of the quantity of wood particle board imported into the United States came from Surinam, whereas in 1965 four-fifths came from Canada.

Foreign production and trade

In recent years annual world production of wood particle board has increased substantially, but at a somewhat slower rate than in the United States. In 1964 Europe produced about 66 percent of world output; the United States, about 18 percent; the U.S.S.R., about 8 percent; and countries in South America and Asia, most of the remainder. Wood particle board is a commodity of growing importance in world trade, but it is not as yet of significance in U.S. foreign trade.

Wood particle board: U.S. imports for consumption, by principal sources, specified periods September 1, 1963, to September 30, 1966

Source	September-December 1963	1964	1965	January-September 1965	January-September 1966
	Weight (1,000 pounds)				
Canada	876	2,067	8,920	7,162	1,119
Surinam	1,611	1,902	1,821	1,307	1/ 1,305
All other	-	50	226	220	19
Total	2,487	4,019	10,967	8,689	2,443
	Surface measure (1,000 square feet)				
Canada	445	1,960	4,987	4,397	913
Surinam	844	1,195	1,096	832	1/ 626
All other	-	22	1,028	1,037	6
Total	1,289	3,177	7,111	6,266	1,545
	Value (1,000 dollars)				
Canada	41	111	396	348	66
Surinam	74	98	93	68	1/ 48
All other	-	3	40	39	1
Total	115	212	529	455	115

1/ Consists only of board of certain named hardwoods, dutiable at 12 percent ad valorem.

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

November 1966
2:1

Commodity	TSUS item
Gypsum board and lath	245.70

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. consumption of gypsum board and lath is virtually all derived from domestic production. High freight costs generally limit domestic and foreign trade to markets close to production centers.

Description and uses

The gypsum products included in this summary consist of a wide variety of laminated panels with a core essentially of gypsum. The core, which may be specially treated for resistance to water or fire, is covered with pulpboard (a type of paperboard) on both sides (or faces) and along its longitudinal edges; for special applications, additional layers, such as those of aluminum, may be required.

The principal kinds of gypsum board (also known as plasterboard) currently being fabricated in sheet form that are covered by this summary are wallboard, backing board, lath, formboard, and sheathing board. These products are manufactured most commonly in thicknesses of 1/4, 3/8, or 1/2 inch, in widths of 2 or 4 feet, and in lengths of 8, 10, or 12 feet, usually within a weight range of 900 to 2,000 pounds per thousand square feet.

Gypsum wallboard is one of the most common materials used as interior sheathing in building construction. The exposed face may be smooth paperboard suitable as a base for the application of paint or wallpaper, or for other decoration; or it may be factory-finished with simulated wood grain designs or other patterns. The unexposed face (back) of wallboard may be covered with aluminum foil to serve as a vapor barrier and reflective thermal insulator. For some purposes, the wallboard cores are specially treated to be "extra" fire resistant.

Gypsum backing board is used as a base layer for multi-ply construction; it is covered on both sides with a paperboard liner but may also be backed on one side with aluminum foil.

Gypsum lath, which may be plain, perforated, or backed with aluminum foil, serves as a base for the application of plaster, wallpaper, or other interior finishing material. This product has largely replaced wood lath (see summary on item 200.65) in plaster construction.

Gypsum formboard is surfaced on the exposed face with a specially treated paperboard to resist fungus growth and is used as a permanent form on which gypsum concrete roof decking is laid.

Gypsum sheathing board has a water-resistant paperboard surface and its gypsum core may also be treated for water resistance; it is used in frame buildings for insulation and structural support for direct application of exterior siding material.

The gypsum used in the production of gypsum board is discussed in the summary on items 512.21 and 512.24 (in vol. 5:1).

U.S. tariff treatment

The current column 1 rate of duty applicable to imports (see general headnote 3 in appendix A) is as follows:

TSUS item	Commodity	Rate of duty
245.70	Gypsum board and lath	12.5% ad val.

This rate was derived principally from the rates applicable to gypsum board under the provisions of paragraph 1413 of the former schedules, which rates reflected a concession granted by the United States in the General Agreement on Tariffs and Trade (GATT), effective June 30, 1958. The current 12.5-percent rate is also a GATT rate. During a representative period prior to the effective date of the TSUS, August 31, 1963, virtually all imports of gypsum board were dutiable at 12.5 percent.

U.S. consumption and production

During 1958-65, annual consumption of gypsum board products, which was equivalent to production (sales), increased about 30 percent. The

data for selected years of the period 1958-65, compiled from official statistics of the U.S. Bureau of Mines, are as follows:

Year	Quantity		Value
	1,000 square feet	1,000 short tons	(1,000 dollars)
1958	7,417,340	6,459	259,618
1960	7,982,442	7,120	290,768
1962	8,451,944	7,711	327,404
1963	8,906,272	8,214	348,027
1964	9,289,427	8,642	363,884
1965	9,711,452	8,998	353,242

Rising sales of wallboard, by far the principal kind of gypsum board produced, have been responsible for the upward trend of sales in recent years. The percentages of total sales value accounted for by individual gypsum products in selected years of the period 1958-64 are as follows:

Product	1958	1960	1962	1964
Wallboard	74.9	79.3	83.9	85.8
Lath	21.8	17.3	13.4	11.7
Sheathing	2.6	2.6	2.1	1.9
Formboard	.7	.7	.5	.5
All other	-	.1	.1	.1
Total	100.0	100.0	100.0	100.0

In 1965 about 15 U.S. concerns, operating 80 manufacturing plants, produced virtually all of the gypsum board and lath consumed in this country. Most of these plants were located in or near the more populated areas within continental United States. The industry employed an estimated 9,000 persons in 1965.

Production facilities have generally been adequate to supply domestic requirements; only in 1955 and 1956, when there was an increase in construction activity, were imports required to meet the demand. A subsequent expansion of domestic gypsum-board facilities met virtually all requirements during 1958-64.

U.S. exports and imports

The value of annual U.S. exports of gypsum board and lath is estimated to have been about $500,000 in 1958-62, $700,000 in 1963,

and $900,000 in each of the years 1964 and 1965. Exports accounted for less than 1 percent of the value of annual production in 1959-65. The principal markets were Canada and Mexico.

During 1955 and 1956, when temporary shortages of gypsum-board products occurred in the United States, imports--principally from Canada--are estimated to have accounted for about 1 percent of domestic requirements. Thereafter, imports were even smaller.

Commodity	TSUS item
Building boards, not elsewhere enumerated:	
Laminated with synthetic resins	245.80
Other, of vegetable fibers	245.90

Note.--For the statutory description, see the Tariff Schedules of the United States (pertinent sections thereof are reproduced in appendix A to this volume).

U.S. trade position

U.S. consumption of the building boards considered here consists almost entirely of domestic production. Exports, like imports, are negligible.

Description and uses

The building boards (including tiles) considered here are those not specially provided for elsewhere in the tariff schedules and hence do not include hardboard (items 245.00, 245.10, 245.20, and 245.30), wood particle board (items 245.45 and 245.50), cellular panels (item 245.60), and gypsum or plaster building boards (item 245.70). The building boards in this summary are rigid panels chiefly used in the construction of walls, ceilings, or other parts of buildings. For tariff purposes, they are of two types: (1) those laminated with a bonding agent wholly or in part of synthetic resins, or laminated boards impregnated with synthetic resins (item 245.80), and (2) those made from vegetable fibers, including wood fibers, where the component material of chief value is the fibers (item 245.90). The latter boards are made primarily from wood fibers or cane fibers, such as bagasse from sugar cane.

The building boards in chief value of vegetable fibers, the commercially important articles in this summary, are commonly known as insulation board, wall board, and fiber board or, according to their specific end uses, as plank, sheeting, shingle backer, and the like. Ordinarily, these vegetable-fiber boards are not suitable for use where exposure to the weather is a factor, and thus are not utilized for the exposed or exterior surface of buildings. The boards are generally characterized by a combination of structural strength and insulating properties--the insulation value being obtained from the millions of tiny air cells developed between the fibers during the felting process.

Building boards of the type covered by item 245.90 are made mostly on wallboard machines by a felting process very similar to papermaking, and then trimmed to desired sizes, usually 4 feet by 8 feet. Thicknesses range from 5/16 inch to 3 inches, the thicker boards frequently being produced by laminating thinner sheets, using animal or vegetable glue as bonding agents. If the lamination is accomplished wholly or in part by synthetic resins, however, the laminated boards would be classifiable, for tariff purposes, as building boards, laminated with synthetic resins (item 245.80). Tiles of the same materials, in thicknesses of 1/2, 5/8, 3/4 and 1 inch, are commonly 12 inches by 12 inches, or 12 inches by 24 inches. Both panels and tiles are frequently perforated, fissured, or slotted to increase sound absorption; they may be plain, or prefinished by such processes as coating, printing, or embossing. For certain end uses, some of these boards are made moisture resistant by impregnation with asphalt during manufacture or by coating with asphalt after the board-forming process.

The principal kinds of building boards covered by this summary, together with their end uses, are as follows:

Kind	Use
Ceiling tile	Decorative; insulating wall and ceiling panels.
Insulating roof deck	Insulation under flat, pitched, or shed-type roofs.
Roof insulation	Insulation under built-up roofing.
Sheathing	Wall covering for wood framed construction.
Shingle backer	Undercoursing for shingles.
Wallboard	General-purpose utility building board.

U.S. tariff treatment

The current column 1 rates of duty applicable to imports (see general headnote 3 in appendix A) are as follows:

TSUS item	Commodity	Rate of duty
	Building boards, not elsewhere enumerated:	
245.80	Laminated boards bonded, or impregnated, with synthetic resins.	5¢ per lb. + 9% ad val.
245.90	Other boards of vegetable fibers (including wood fibers).	4% ad val.

These rates reflect concessions granted by the United States in the General Agreement on Tariffs and Trade (GATT). The compound rate for item 245.80 is the same as that which became effective on July 1, 1963, for laminated products in plates or sheets under paragraph 1539 (b) of the former tariff schedules. The rate for item 245.90 became effective on January 1, 1966, and represents the first stage of a U.S. concession in the GATT which is to become fully effective in three stages, the second (3 percent ad valorem) on January 1, 1968, and the last (2.5 percent ad valorem) on January 1, 1970 (see Presidential Proclamation No. 3694, dated December 27, 1965). The previous rate (5 percent ad valorem), established by the TSUS on August 31, 1963, was the same as that which was applicable to wallboard under paragraph 1402 of the former tariff schedules and which had become effective on April 30, 1950.

U.S. consumption and production

The consumption of building boards, nearly equivalent to annual domestic production, is generally related to the level of building activity. Consumption of the building boards considered in this summary is especially sensitive to construction of new, private housing. Annual apparent U.S. consumption rose moderately from about 1.06 million tons in 1958 to about 1.28 million tons in 1965 (table 1). The largest gain during that period occurred in 1959, a peak year in private residential construction, when apparent consumption rose nearly 12 percent above the 1958 level. The increase from 1958 to 1965 was about 21 percent.

Although building boards are gaining acceptance in many new applications, they face keen competition from other materials, such as lumber, plywood, plastics, and ceramic tile.

Building boards of the types considered here are produced by 17 companies in 22 establishments, 1 of which is located in Hawaii. The greatest concentration of plants is in the South; others are located in the North Central States, the Pacific Northwest, and the Middle Atlantic States. Most of these establishments are operated by large, integrated companies, about half of which are not primarily producers of forest products. The individual plants, each of which represents a sizable capital investment, are designed to produce specific types of boards and are not readily convertible to other products, such as paper or paperboard.

Of total production in the period 1958-65, sheathing accounted for nearly 30 percent, and tiles and roof insulation, for about 20 percent each. The bulk of production is channeled through wholesale distributors to lumber yards and dealers in building construction

materials for resale to consumers. Panels are sold according to surface measure, whereas tiles are usually sold by units.

U.S. exports

Exports of building boards described in item 245.80 are not separately reported but are believed to be either nonexistent or negligible. During the period 1958-65 annual exports of board described under item 245.90 ranged from about 14,000 tons to nearly 16,000 tons except in 1964, when they totaled slightly more than 19,000 tons. In terms of value, these exports ranged from about $3.0 million to $3.7 million, except in 1964 and 1965, when they amounted to $4.7 million and $4.2 million, respectively. In 1958-65 the annual average unit value of the exported boards increased from $214 per ton to $267 and was about 35 to 60 percent higher than the corresponding unit value of domestic production. The rising unit value of the exports reflects the increasing share of the total accounted for by decorated, embossed, or otherwise advanced grades of boards. Most of the U.S. exports go to Canada and Western Europe (table 2).

U.S. imports

U.S. imports rose from about 15,000 tons, valued at $1.4 million, in 1958 to more than 23,000 tons, valued at $2.9 million, in 1965. The ratio of imports to annual domestic consumption during that period ranged from 1.4 percent to 2.3 percent. The average unit value of imported boards rose from $93 per ton in 1958 to $100 per ton in 1959 and $127 in 1962; in 1964 and 1965, imports averaged $120 and $124 per ton, respectively.

In contrast to U.S. exports (principally high-priced embossed, decorated, and otherwise improved panels), imports consisted largely of plain boards of low unit values. Although the share of total imports composed of high-priced grades increased between 1958 and 1965, the average unit values of imports in those years were only about half as much as the average unit values of exports. The quality of imported boards, grade for grade, is about equal to that of domestic products, and in areas close to points of import, the delivered prices of imported boards are generally somewhat lower than those of domestic boards.

Canada, by far the largest supplier of imported boards, accounted for more than three-fourths of total imports in 1964 and 1965 (table 3). It is followed, in declining order of their importance as suppliers, by Sweden, Finland, and Israel. Exports to the United States represent only a small proportion of the production capacity in the exporting

countries. U.S. consumption of imported boards is concentrated in the vicinity of the ports of entry situated along the Atlantic, gulf, and Pacific coasts.

Table 1.--Building boards, not elsewhere enumerated: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, specified years 1958 to 1965

Year	Production	Imports	Exports	Apparent consumption
	Quantity (tons)			
1958	1,056,946	1/ 15,000	14,139	1,058,000
1959	1,170,708	1/ 25,000	14,121	1,182,000
1962	1,080,415	1/ 15,000	15,719	1,062,000
1964	1,215,447	28,670	19,355	1,224,762
1965	1,268,304	23,193	15,646	1,275,851
	Value (1,000 dollars)			
1958	2/ 169,838	1,400	3,025	3/
1959	2/ 190,068	2,500	3,205	3/
1962	2/ 172,838	1,900	3,741	3/
1964	2/ 180,922	3,443	4,694	3/
1965	4/	2,870	4,183	3/
	Unit value (per ton)			
1958	$161	$ 93	$214	3/
1959	162	100	227	3/
1962	160	127	238	3/
1964	149	120	242	3/
1965	4/	124	267	3/

1/ Estimated from official statistics of the United States and Canada.
2/ Value of shipments.
3/ Not meaningful.
4/ Not available.

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

Note.--The ratio of imports to consumption was 2 percent or less for the years shown.

November 1966
2:1

Table 2.--Building boards, not elsewhere enumerated: U.S. exports of domestic merchandise, by principal markets, specified years 1958 to 1965

Country	1958	1959	1962	1964	1965
	Quantity (tons)				
Canada	8,488	7,318	6,519	5,011	5,401
United Kingdom	42	359	1,124	1,895	2,030
France	207	285	1,008	1,379	1,576
Belgium and Luxembourg	473	600	653	2,814	850
West Germany	38	74	203	1,186	599
Switzerland	73	58	435	529	342
Mexico	1,106	1,220	1,907	1,641	169
Netherlands	48	32	170	555	157
Venezuela	696	1,062	420	397	-
All other	2,968	3,113	3,280	3,948	4,522
Total	14,139	14,121	15,719	19,355	15,646
	Value (1,000 dollars)				
Canada	1,699	1,580	1,521	1,098	1,251
United Kingdom	13	94	231	350	444
France	98	113	392	364	551
Belgium and Luxembourg	120	136	187	971	228
West Germany	12	18	51	208	192
Switzerland	20	20	103	86	129
Mexico	170	195	312	294	45
Netherlands	18	8	52	125	45
Venezuela	145	199	78	99	-
All other	730	842	814	1,099	1,298
Total	3,025	3,205	3,741	4,694	4,183
	Unit value (per ton)				
Canada	$200	$216	$233	$219	$232
United Kingdom	321	261	206	184	219
France	473	397	388	264	350
Belgium and Luxembourg	254	226	286	345	268
West Germany	319	250	250	176	321
Switzerland	267	342	238	163	377
Mexico	153	160	163	179	266
Netherlands	372	260	305	225	238
Venezuela	209	187	186	249	-
All other	246	270	248	278	287
Average	214	227	238	242	267

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

November 1966
2:1

Table 3.--Building boards, not elsewhere enumerated: U.S. imports for consumption, by principal sources, 1964 and 1965

Country	1964	1965
	Quantity (tons)	
Canada	23,077	17,510
Sweden	2,459	1,638
Israel	1,038	1,138
Finland	1,145	620
Norway	556	199
All other	395	2,088
Total	28,670	23,193
	Value (1,000 dollars)	
Canada	2,747	2,224
Sweden	432	269
Israel	60	67
Finland	130	72
Norway	40	16
All other	34	222
Total	3,443	2,870
	Unit value (per ton)	
Canada	$119	$127
Sweden	176	164
Israel	58	59
Finland	113	115
Norway	72	83
All other	88	106
Average	120	124

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

APPENDIXES

Tariff Schedules of the United States: General Headnotes and Rules of Interpretation, and Excerpts Relating to the Items Included in This Volume

GENERAL HEADNOTES AND RULES OF INTERPRETATION

1. Tariff Treatment of Imported Articles. All articles imported into the customs territory of the United States from outside thereof are subject to duty or exempt therefrom as prescribed in general headnote 3.

2. Customs Territory of the United States. The term "customs territory of the United States", as used in the schedules, includes only the States, the District of Columbia, and Puerto Rico.

3. Rates of Duty. The rates of duty in the "Rates of Duty" columns numbered 1 and 2 of the schedules apply to articles imported into the customs territory of the United States as hereinafter provided in this headnote:

(a) Products of Insular Possessions.

(i) Articles imported from insular possessions of the United States which are outside the customs territory of the United States are subject to the rates of duty set forth in column numbered 1 of the schedules, except that all articles the growth or product of any such possession, or manufactured or produced in any such possession from materials the growth, product, or manufacture of any such possession or of the customs territory of the United States, or of both, which do not contain foreign materials to the value of more than 50 percent of their total value, coming to the customs territory of the United States directly from any such possession, and all articles previously imported into the customs territory of the United States with payment of all applicable duties and taxes imposed upon or by reason of importation which were shipped from the United States, without remission, refund, or drawback of such duties or taxes, directly to the possession from which they are being returned by direct shipment, are exempt from duty.

(ii) In determining whether an article produced or manufactured in any such insular possession contains foreign materials to the value of more than 50 percent, no material shall be considered foreign which, at the time such article is entered, may be imported into the customs territory from a foreign country, other than Cuba or the Philippine Republic, and entered free of duty.

(b) Products of Cuba. Products of Cuba imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty set forth in column numbered 1 of the schedules. Preferential rates of duty for such products apply only as shown in the said column 1. 1/

(c) Products of the Philippine Republic.

(i) Products of the Philippine Republic imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty which are set forth in column numbered 1 of the schedules or to fractional parts of the rates in the said column 1, as hereinafter prescribed in subdivisions (c)(ii) and (c)(iii) of this headnote.

(ii) Except as otherwise prescribed in the schedules, a Philippine article, as defined in subdivision (c)(iv) of this headnote, imported into the customs territory of the United States and entered on or before July 3, 1974, is subject to that rate which results from the application of the following percentages to the most favorable rate of duty (i.e., including a preferential rate prescribed for any product of Cuba) set forth in column numbered 1 of the schedules:

(A) 20 percent, during calendar years 1963 through 1964,
(B) 40 percent, during calendar years 1965 through 1967,
(C) 60 percent, during calendar years 1968 through 1970,
(D) 80 percent, during calendar years 1971 through 1973,
(E) 100 percent, during the period from January 1, 1974, through July 3, 1974.

1/ By virtue of section 401 of the Tariff Classification Act of 1962, the application to products of Cuba of either a preferential or other reduced rate of duty in column 1 is suspended. See general headnote 3(e), infra. The provisions for preferential Cuban rates continue to be reflected in the schedules because, under section 401, the rates therefor in column 1 still form the bases for determining the rates of duty applicable to certain products, including "Philippine articles".

(iii) Except as otherwise prescribed in the schedules, products of the Philippine Republic, other than Philippine articles, are subject to the rates of duty (except any preferential rates prescribed for products of Cuba) set forth in column numbered 1 of the schedules.

(iv) The term "Philippine article", as used in the schedules, means an article which is the product of the Philippines, but does not include any article produced with the use of materials imported into the Philippines which are products of any foreign country (except materials produced within the customs territory of the United States) if the aggregate value of such imported materials when landed at the Philippine port of entry, exclusive of any landing cost and Philippine duty, was more than 20 percent of the appraised customs value of the article imported into the customs territory of the United States.

(d) Products of Canada.

(i) Products of Canada imported into the customs territory of the United States, whether imported directly or indirectly, are subject to the rates of duty set forth in column numbered 1 of the schedules. The rates of duty for a Canadian article, as defined in subdivision (d)(ii) of this headnote, apply only as shown in the said column numbered 1.

(ii) The term "Canadian article", as used in the schedules, means an article which is the product of Canada, but does not include any article produced with the use of materials imported into Canada which are products of any foreign country (except materials produced within the customs territory of the United States), if the aggregate value of such imported materials when landed at the Canadian port of entry (that is, the actual purchase price, or if not purchased, the export value, of such materials, plus, if not included therein, the cost of transporting such materials to Canada but exclusive of any landing cost and Canadian duty) was --

(A) with regard to any motor vehicle or automobile truck tractor entered on or before December 31, 1967, more than 60 percent of the appraised value of the article imported into the customs territory of the United States; and

(B) with regard to any other article (including any motor vehicle or automobile truck tractor entered after December 31, 1967), more than 50 percent of the appraised value of the article imported into the customs territory of the United States.

(e) Products of Communist Countries. Notwithstanding any of the foregoing provisions of this headnote, the rates of duty shown in column numbered 2 shall apply to products, whether imported directly or indirectly, of the following countries and areas pursuant to section 401 of the Tariff Classification Act of 1962, to section 231 or 257(e)(2) of the Trade Expansion Act of 1962, or to action taken by the President thereunder:

Albania
Bulgaria
China (any part of which may be under Communist domination or control)
Cuba 1/
Czechoslovakia
Estonia
Germany (the Soviet zone and the Soviet sector of Berlin)
Hungary
Indochina (any part of Cambodia, Laos, or Vietnam which may be under Communist domination or control)
Korea (any part of which may be under Communist domination or control)
Kurile Islands
Latvia
Lithuania
Outer Mongolia
Rumania

1/ In Proclamation 3447, dated February 3, 1962, the President, acting under authority of section 620(a) of the Foreign Assistance Act of 1961 (75 Stat. 445), as amended, prohibited the importation into the United States of all goods of Cuban origin and all goods imported from or through Cuba, subject to such exceptions as the Secretary of the Treasury determines to be consistent with the effective operation of the embargo.

Southern Sakhalin
Tanna Tuva
Tibet
Union of Soviet Socialist Republics and the area in East Prussia under the provisional administration of the Union of Soviet Socialist Republics.

(f) Products of All Other Countries. Products of all countries not previously mentioned in this headnote imported into the customs territory of the United States are subject to the rates of duty set forth in column numbered 1 of the schedules.

(g) Effective Date; Exceptions - Staged Rates of Duty. Except as specified below or as may be specified elsewhere, pursuant to section 501(a) of the Tariff Classification Act of 1962 (P.L. 87-456, approved May 24, 1962), the rates of duty in columns numbered 1 and 2 become effective with respect to articles entered on or after the 10th day following the date of the President's proclamation provided for in section 102 of the said Act. If, in column numbered 1, any rate of duty or part thereof is set forth in parenthesis, the effective date shall be governed as follows:

(i) If the rate in column numbered 1 has only one part (i.e., 8¢ (10¢) per lb.), the parenthetical rate (viz., 10¢ per lb.) shall be effective as to articles entered before July 1, 1964, and the other rate (viz., 8¢ per lb.) shall be effective as to articles entered on or after July 1, 1964.

(ii) If the rate in column numbered 1 has two or more parts (i.e., 5¢ per lb. + 50% ad val.) and has a parenthetical rate for either or both parts, each part of the rate shall be governed as if it were a one-part rate. For example, if a rate is expressed as "4¢ (4.5¢) per lb. + 8% (9%) ad val.", the rate applicable to articles entered before July 1, 1964, would be "4.5¢ per lb. + 9% ad val."; the rate applicable to articles entered on or after July 1, 1964, would be "4¢ per lb. + 8% ad val.".

(iii) If the rate in column numbered 1 is marked with an asterisk (*), the foregoing provisions of (i) and (ii) shall apply except that "January 1, 1964" shall be substituted for "July 1, 1964", wherever this latter date appears.

4. Modification or Amendment of Rates of Duty. Except as otherwise provided in the Appendix to the Tariff Schedules --

(a) a statutory rate of duty supersedes and terminates the existing rates of duty in both column numbered 1 and column numbered 2 unless otherwise specified in the amending statute;

(b) a rate of duty proclaimed pursuant to a concession granted in a trade agreement shall be reflected in column numbered 1 and, if higher than the then existing rate in column numbered 2, also in the latter column, and shall supersede but not terminate the then existing rate (or rates) in such column (or columns);

(c) a rate of duty proclaimed pursuant to section 336 of the Tariff Act of 1930 shall be reflected in both column numbered 1 and column numbered 2 and shall supersede but not terminate the then existing rates in such columns; and

(d) whenever a proclaimed rate is terminated or suspended, the rate shall revert, unless otherwise provided, to the next intervening proclaimed rate previously superseded but not terminated or, if none, to the statutory rate.

5. Intangibles. For the purposes of headnote 1 --

(a) corpses, together with their coffins and accompanying flowers,
(b) currency (metal or paper) in current circulation in any country and imported for monetary purposes,
(c) electricity,
(d) securities and similar evidences of value, and
(e) vessels which are not "yachts or pleasure boats" within the purview of subpart D, part 6, of schedule 6,

are not articles subject to the provisions of these schedules.

General Headnotes and Rules of Interpretation

6. Containers or Holders for Imported Merchandise. For the purposes of the tariff schedules, containers or holders are subject to tariff treatment as follows:

(a) Imported Empty: Containers or holders if imported empty are subject to tariff treatment as imported articles and as such are subject to duty unless they are within the purview of a provision which specifically exempts them from duty.

(b) Not Imported Empty: Containers or holders if imported containing or holding articles are subject to tariff treatment as follows:

(i) The usual or ordinary types of shipping or transportation containers or holders, if not designed for, or capable of, reuse, and containers of usual types ordinarily sold at retail with their contents, are not subject to treatment as imported articles. Their cost, however, is, under section 402 or section 402a of the tariff act, a part of the value of their contents and if their contents are subject to an ad valorem rate of duty such containers or holders are, in effect, dutiable at the same rate as their contents, except that their cost is deductible from dutiable value upon submission of satisfactory proof that they are products of the United States which are being returned without having been advanced in value or improved in condition by any means while abroad.

(ii) The usual or ordinary types of shipping or transportation containers or holders, if designed for, or capable of, reuse, are subject to treatment as imported articles separate and distinct from their contents. Such holders or containers are not part of the dutiable value of their contents and are separately subject to duty upon each and every importation into the customs territory of the United States unless within the scope of a provision specifically exempting them from duty.

(iii) In the absence of context which requires otherwise, all other containers or holders are subject to the same treatment as specified in (ii) above for usual or ordinary types of shipping or transportation containers or holders designed for, or capable of, reuse.

7. Commingling of Articles. (a) Whenever articles subject to different rates of duty are so packed together or mingled that the quantity or value of each class of articles cannot be readily ascertained by customs officers (without physical segregation of the shipment or the contents of any entire package thereof), by one or more of the following means:

(i) sampling,

(ii) verification of packing lists or other documents filed at the time of entry, or

(iii) evidence showing performance of commercial settlement tests generally accepted in the trade and filed in such time and manner as may be prescribed by regulations of the Secretary of the Treasury,

the commingled articles shall be subject to the highest rate of duty applicable to any part thereof unless the consignee or his agent segregates the articles pursuant to subdivision (b) hereof.

(b) Every segregation of articles made pursuant to this headnote shall be accomplished by the consignee or his agent at the risk and expense of the consignee within 30 days (unless the Secretary authorizes in writing a longer time) after the date of personal delivery or mailing, by such employee as the Secretary of the Treasury shall designate, of written notice to the consignee that the articles are commingled and that the quantity or value of each class of articles cannot be readily ascertained by customs officers. Every such segregation shall be accomplished under customs supervision, and the compensation and expenses of the supervising customs officers shall be reimbursed to the Government by the consignee under such regulations as the Secretary of the Treasury may prescribe.

(c) The foregoing provisions of this headnote do not apply with respect to any part of a shipment if the consignee or his agent furnishes, in such time and manner as may be prescribed by regulations of the Secretary of the Treasury, satisfactory proof --

(i) that such part (A) is commercially negligible, (B) is not capable of segregation without excessive cost, and (C) will not be segregated prior to its use in a manufacturing process or otherwise, and

(ii) that the commingling was not intended to avoid the payment of lawful duties.

Any article with respect to which such proof is furnished shall be considered for all customs purposes as a part of the article, subject to the next lower rate of duty, with which it is commingled.

(d) The foregoing provisions of this headnote do not apply with respect to any shipment if the consignee or his agent shall furnish, in such time and manner as may be prescribed by regulations of the Secretary of the Treasury, satisfactory proof --

(i) that the value of the commingled articles is less than the aggregate value would be if the shipment were segregated;

(ii) that the shipment is not capable of segregation without excessive cost and will not be segregated prior to its use in a manufacturing process or otherwise; and

(iii) that the commingling was not intended to avoid the payment of lawful duties.

Any merchandise with respect to which such proof is furnished shall be considered for all customs purposes to be dutiable at the rate applicable to the material present in greater quantity than any other material.

(e) The provisions of this headnote shall apply only in cases where the schedules do not expressly provide a particular tariff treatment for commingled articles.

8. Abbreviations. In the schedules the following symbols and abbreviations are used with the meanings respectively indicated below:

$	-	dollars
¢	-	cents
%	-	percent
+	-	plus
ad val.	-	ad valorem
bu.	-	bushel
cu.	-	cubic
doz.	-	dozen
ft.	-	feet
gal.	-	gallon
in.	-	inches
lb.	-	pounds
oz.	-	ounces
sq.	-	square
wt.	-	weight
yd.	-	yard
pcs.	-	pieces
prs.	-	pairs
lin.	-	linear
I.R.C.	-	Internal Revenue Code

9. Definitions. For the purposes of the schedules, unless the context otherwise requires --

(a) the term "entered" means entered, or withdrawn from warehouse, for consumption in the customs territory of the United States;

(b) the term "entered for consumption" does not include withdrawals from warehouse for consumption;

(c) the term "withdrawn for consumption" means withdrawn from warehouse for consumption and does not include articles entered for consumption;

(d) the term "rate of duty" includes a free rate of duty; rates of duty proclaimed by the President shall be referred to as "proclaimed" rates of duty; rates of duty enacted by the Congress shall be referred to as "statutory" rates of duty; and the rates of duty in column numbered 2 at the time the schedules become effective shall be referred to as "original statutory" rates of duty;

(e) the term "ton" means 2,240 pounds, and the term "short ton" means 2,000 pounds;

(f) the terms "of", "wholly of", "almost wholly of", "in part of" and "containing", when used between the description of an article and a material (e.g., "furniture of wood", "woven fabrics, wholly of cotton", etc.), have the following meanings:

(i) "of" means that the article is wholly or in chief value of the named material;

(ii) "wholly of" means that the article is, except for negligible or insignificant quantities of some other material or materials, composed completely of the named material;

(iii) "almost wholly of" means that the essential character of the article is imparted by the named material, notwithstanding the fact that significant quantities of some other material or materials may be present; and

(iv) "in part of" or "containing" mean that the article contains a significant quantity of the named material.

With regard to the application of the quantitative concepts specified in subparagraphs (ii) and (iv) above, it is intended that the de minimis rule apply.

10. General Interpretative Rules. For the purposes of these schedules --

(a) the general, schedule, part, and subpart headnotes, and the provisions describing the classes of imported articles and specifying the rates of duty or other import restrictions to be imposed thereon are subject to the rules of interpretation set forth herein and to such other rules of statutory interpretation, not inconsistent therewith, as have been or may be developed under administrative or judicial rulings;

(b) the titles of the various schedules, parts, and subparts and the footnotes therein are intended for convenience in reference only and have no legal or interpretative significance;

(c) an imported article which is described in two or more provisions of the schedules is classifiable in the provision which most specifically describes it; but, in applying this rule of interpretation, the following considerations shall govern:

(i) a superior heading cannot be enlarged by inferior headings indented under it but can be limited thereby;

(ii) comparisons are to be made only between provisions of coordinate or equal status, i.e., between the primary or main superior headings of the schedules or between coordinate inferior headings which are subordinate to the same superior heading;

(d) if two or more tariff descriptions are equally applicable to an article, such article shall be subject to duty under the description for which the original statutory rate is highest, and, should the highest original statutory rate be applicable to two or more of such descriptions, the article shall be subject to duty under that one of such descriptions which first appears in the schedules;

(e) in the absence of special language or context which otherwise requires --

(i) a tariff classification controlled by use (other than actual use) is to be determined in accordance with the use in the United States at, or immediately prior to, the date of importation, of articles of that class or kind to which the imported articles belong, and the controlling use is the chief use, i.e., the use which exceeds all other uses (if any) combined;

(ii) a tariff classification controlled by the actual use to which an imported article is put in the United States is satisfied only if such use is intended at the time of importation, the article is so used, and proof thereof is furnished within 3 years after the date the article is entered;

(f) an article is in chief value of a material if such material exceeds in value each other single component material of the article;

(g) a headnote provision which enumerates articles not included in a schedule, part, or subpart is not necessarily exhaustive, and the absence of a particular article from such headnote provision shall not be given weight in determining the relative specificity of competing provisions which describe such article;

(h) unless the context requires otherwise, a tariff description for an article covers such article, whether assembled or not assembled, and whether finished or not finished;

(ij) a provision for "parts" of an article covers a product solely or chiefly used as a part of such article, but does not prevail over a specific provision for such part.

11. Issuance of Rules and Regulations. The Secretary of the Treasury is hereby authorized to issue rules and regulations governing the admission of articles under the provisions of the schedules. The allowance of an importer's claim for classification, under any of the provisions of the schedules which provide for total or partial relief from duty or other import restrictions on the basis of facts which are not determinable from an examination of the article itself in its condition as imported, is dependent upon his complying with any rules or regulations which may be issued pursuant to this headnote.

12. The Secretary of the Treasury is authorized to prescribe methods of analyzing, testing, sampling, weighing, gauging, measuring, or other methods of ascertainment whenever he finds that such methods are necessary to determine the physical, chemical, or other properties or characteristics of articles for purposes of any law administered by the Customs Service.

APPENDIX A

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Part 1 - Wood and Wood Products
- A. Rough and Primary Wood Products; Wood Waste
- B. Lumber, Flooring, and Moldings
- C. Densified Wood and Articles Thereof
- D. Wooden Containers
- E. Miscellaneous Products of Wood
- F. Articles Not Specially Provided For, of Wood

Part 2 - Cork and Cork Products; Bamboo, Rattan, Willow and Chip; Basketwork, Wickerwork, and Related Products of Fibrous Vegetable Substances
- A. Cork and Cork Products
- B. Bamboo, Rattan, Willow, and Chip; Basketwork, Wickerwork, and Related Products of Fibrous Vegetable Substances

Part 3 - Wood Veneers, Plywood and Other Wood-Veneer Assemblies, and Building Boards

Part 4 - Paper, Paperboard, and Products Thereof
- A. Papermaking Materials
- B. Paper and Paperboard, in Rolls and Sheets, Not Cut to Size or Shape
- C. Paper and Paperboard Cut to Size or Shape; Articles of Paper and Paperboard
- D. Articles Not Specially Provided for of Pulp, of Papier-Mache, of Paper, or of Paperboard

Part 5 - Books, Pamphlets, and Other Printed Matter

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 1. - WOOD AND WOOD PRODUCTS		
	Part 1 headnote:		
	1. For the purposes of subparts D, E, and F of this part, hardboard shall be deemed to be wood.		
	Subpart A. - Rough and Primary Wood Products; Wood Waste		
	Subpart A headnotes:		
	1. The term "wood waste", as used in this subpart, means residual material other than firewood resulting from the processing of wood, including scraps, shavings, sawdust, veneer clippings, chipper rejects and similar small wood residues, and also larger or coarser solid types of residual wood such as slabs, edgings, cull pieces, and veneer log cores.		
	2. The provisions for wood products in items 200.60 (poles, piles, and posts), 200.65 (laths), 200.75 (fence pickets, palings, and rails), 200.80 (railroad ties), and 200.85 (shingles and shakes) cover such products whether or not they have been treated with creosote or other wood preservatives.		
	Firewood, hogged-wood fuel and wood waste made into fuel by compression, whether or not containing an added binder:		
200.03	Firewood, and fuel not containing an added binder.....	Free	Free
200.06	Fuel containing an added binder.....	10% ad val.	20% ad val.
200.10	Wood waste.....	Free	Free
	* * * * * * *		
200.20	Wood flour.....	12.5% ad val.	25% ad val.
200.25	Wood excelsior, including excelsior pads and wrappings.....	16-2/3% ad val.	33-1/3% ad val.
	* * * * * * *		
200.35	Logs and timber, in the rough, split, hewn, or roughly sided or squared but not made into lumber.....	Free	Free

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 1. - WOOD AND WOOD PRODUCTS--Continued		
	Subpart A. - Rough and Primary Wood Products; Wood Waste--Continued		
200.40	Wood sticks (except bamboo and rattan sticks), in the rough, or cut into lengths suitable for sticks for umbrellas, parasols, sunshades, whips, fishing rods, or walking canes	Free	Free
200.45	Brierroot, in the rough or not further advanced than cut into blocks	2% ad val.	10% ad val.
	Wood blocks, blanks, or sticks, rough shaped by boring, hewing, or sawing so as to be dedicated to finishing into specific articles such as gunstocks, lasts, heels, handles, oars, shuttles, archery bows, or billiard cues:		
200.50	Blocks or blanks rough shaped for gunstocks	Free	Free
200.55	Other	0.5% ad val.	10% ad val.
200.60	Wood poles, piles, and posts	Free	Free
200.65	Wood laths	Free	Free
200.75	Wood fence pickets, palings, and rails, whether or not assembled into fence sections	Free	Free
200.80	Wood railroad ties (except switch or bridge ties)	Free	Free
200.85	Wood shingles and shakes	Free	Free
	Wood dowel rods and pins, plain, or sanded, grooved, or otherwise advanced in condition:		
200.90	Plain	2.5% ad val.	5% ad val.
200.95	Advanced in condition	16-2/3% ad val.	33-1/3% ad val.
	Subpart B. - Lumber, Flooring, and Moldings		
	Subpart B headnotes:		
	1. This subpart covers lumber, wood siding, wood flooring, wood moldings, and certain wood carvings and ornaments, including such products when they have been drilled or treated.		
	2. For the purposes of this part, the following terms have the meanings hereby assigned to them: (a) Lumber: A product of a sawmill or sawmill and planing mill derived from a log by lengthwise sawing which, in its original sawed condition, has at least 2 approximately parallel flat longitudinal sawed surfaces, and which may be rough, dressed, or worked, as set forth below: (i) rough lumber is lumber just as it comes from the saw, whether in the original sawed size or edged, resawn, crosscut, or trimmed to smaller sizes;		

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 1. - WOOD AND WOOD PRODUCTS--Continued Subpart B. - Lumber, Flooring, and Moldings--Continued Subpart B headnotes--Continued (ii) dressed lumber is lumber which has been dressed or surfaced by planing on at least one edge or face; and (iii) worked lumber is lumber which has been matched (provided with a tongued-and-grooved joint at the edges or ends), shiplapped (provided with a rabbeted or lapped joint at the edges), or patterned (shaped at the edges or on the faces to a patterned or molded form) on a matching machine, sticker, or molder. Edge-glued or end-glued wood over 6 feet in length and not over 15 inches in width shall be classified as lumber if such wood as a solid piece without glue joints would be deemed to be lumber as defined above. (b) Softwood: Wood from trees of coniferous species (order Coniferae). (c) Hardwood: Wood from trees of non-coniferous species. (d) Drilled or treated: Drilled at intervals for nails, screws, or bolts, sanded or otherwise surface processed in lieu of, or in addition to, planing or working, or treated with creosote or other wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels, but not including anti-stain or other temporary applications mentioned in headnote 4 of this subpart. (e) Standard wood moldings: Wood moldings worked to a pattern and having the same profile in cross section throughout their length. 3. Lumber, including certain flooring provided for in this subpart, is dutiable on the basis of "board measure" for which the unit of measurement is the board foot. For the purposes of this subpart, a board foot is the quantity of lumber contained in, or derived (by drying, dressing, or working, or any combination of these processes) from, a piece of rough green lumber 1 inch in thickness, 12 inches in width, and 1 foot in length, or the equivalent of such piece in other dimensions. 4. The treatment of lumber or other products provided for in this subpart with anti-stain or other temporary applications which serve only for the purpose of maintaining the products in their rough, dressed, or worked condition until installation or further manufacture shall not affect their classification under any of the provisions of this subpart.		

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 1. - WOOD AND WOOD PRODUCTS--Continued		
	Subpart B. - Lumber, Flooring, and Moldings--Continued		
	Lumber, rough, dressed, or worked (including softwood flooring classifiable as lumber, but not including siding, molding, and hardwood flooring):		
	Softwood:		
202.03	Spruce (Picea spp.)	35¢ per 1000 ft., board measure	$4.00 per 1000 ft., board measure
	Pine (Pinus spp.):		
202.06	Eastern white pine (Pinus strobus) and red pine (Pinus resinosa)	25¢ per 1000 ft., board measure	$1 per 1000 ft., board measure
202.09	Other pine	$1 per 1000 ft., board measure	$4 per 1000 ft., board measure
202.12	Parana pine (Araucaria angustifolia)	$1 per 1000 ft., board measure	$4 per 1000 ft., board measure
202.15	Douglas-fir (Pseudotsuga menziesii)	$1 per 1000 ft., board measure	$4 per 1000 ft., board measure
202.18	Fir (Abies spp.)	$1 per 1000 ft., board measure	$4 per 1000 ft., board measure
202.21	Hemlock (Tsuga spp.)	$1 per 1000 ft., board measure	$4 per 1000 ft., board measure
202.24	Larch (Larix spp.)	$1 per 1000 ft., board measure	$4 per 1000 ft., board measure
202.27	Cedar (Thuja spp., Juniperus spp., Chamaecyparis spp., Cupressus spp. and Libocedrus spp.)	75¢ per 1000 ft., board measure	$3 per 1000 ft., board measure
202.30	Other	$1.50 per 1000 ft., board measure	$3 per 1000 ft., board measure
202.31	If product of Cuba	$1.20 per 1000 ft., board measure (s)	
	Hardwood:		
202.36	Balsa (Ochroma lagopus) and teak (Tectona grandis)	$3 per 1000 ft., board measure 1/	$3 per 1000 ft., board measure
202.39	Mahogany (Swietenia spp. or Khaya spp.)	$1.60 per 1000 ft., board measure 1/	$3.10 per 1000 ft., board measure
202.41	Spanish cedar (Cedrela spp.), boxwood (Buxus spp.), ebony (Diospyros spp.), lancewood (Oxandra spp.), Japanese maple (Acer spp.), Japanese white oak (Quercus spp.) and lignumvitae (Guaiacum spp.)	2.5% ad val. 1/	15% ad val.
202.43	Other	$1.50 per 1000 ft., board measure 1/	$3 per 1000 ft., board measure

(s) = Suspended. See general headnote 3(b).

1/ For applicable suspension of duty, see items 916.20 through 916.23 of Appendix to the Tariff Schedules. /pp.226-227 of this volume/

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 1. - WOOD AND WOOD PRODUCTS--Continued		
	Subpart B. - Lumber, Flooring, and Moldings--Continued		
	Wood siding (weatherboards or clapboards), not drilled or treated:		
202.45	Resawn bevel siding	50¢ per 1000 sq. ft., surface measure	$2 per 1000 sq. ft., surface measure
	Other:		
202.48	Western redcedar (Thuja plicata)	75¢ per 1000 sq. ft., surface measure	$3 per 1000 sq. ft., surface measure
202.50	Other	$1 per 1000 sq. ft., surface measure	$4 per 1000 sq. ft., surface measure
	Lumber and wood siding, drilled or treated; and edge-glued or end-glued wood not over 6 feet in length or over 15 inches in width, whether or not drilled or treated:		
202.52	Softwood lumber and siding, drilled, or pressure treated with creosote or other wood preservative, or both, but not otherwise treated	1.5% ad val.	10% ad val.
202.53	Hardwood, edge-glued or end-glued, not drilled or treated	5% ad val.	10% ad val.
202.54	Other	9% ad val. 1/	20% ad val.
	Wood flooring, whether in strips, planks, blocks, assembled sections or units, or other forms, and whether or not drilled or treated (except softwood flooring classifiable as lumber):		
202.57	Hardwood flooring in strips and planks, whether or not drilled or treated	4% ad val.	8% ad val.
202.60	Other	16-2/3% ad val.	33-1/3% ad val.
	Wood moldings, and wood carvings and ornaments suitable for architectural or furniture decoration, whether or not drilled or treated:		
202.63	Standard wood moldings, not drilled or treated	1.5% ad val.	5% ad val.
202.66	Other	17% ad val.	40% ad val.
	* * * * * * *		

1/ This rate, effective Jan. 1, 1966, reflects the first stage of a concession granted by the United States in the General Agreement on Tariffs and Trade. The concession is to become fully effective in five annual stages, the second (8% ad val.) on Jan. 1, 1967, and the last (5% ad val.) on Jan. 1, 1970 (see Presidential Proclamation No. 3694, dated Dec. 27, 1965).

APPENDIX A

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 3. - WOOD VENEERS, PLYWOOD AND OTHER WOOD-VENEER ASSEMBLIES, AND BUILDING BOARDS Part 3 headnotes: 1. For the purposes of this part, the following terms have the meanings hereby assigned to them: (a) Wood veneers: Wood sheets or strips, regardless of thickness, quality or intended use, produced by the slicing or rotary cutting of logs or flitches; and wood sheets, not over 1/4 inch in thickness, produced by sawing and of a type used to overlay inferior material; (b) Plywood: Rigid wood-veneer assemblies bonded together with adhesive substances having a central ply or core of wood veneer or lumber with one or more plies of wood veneer on each side thereof, the grain of at least one ply being at an angle (usually a right angle) with the grain of one or more of the other plies, including such assemblies the face ply (or plies) of which has been mechanically scored, striated, or similarly processed; (c) Wood-veneer panels: Rigid wood-veneer assemblies, bonded together with adhesive substances, except plywood, with a wood-veneer ply on one side of a backing, or on both sides of a core, which backing or core may be composed of lumber, veneer, hardboard, wood particle board, or other material, including such assemblies the face ply (or plies) of which has been mechanically scored, striated, or similarly processed; (d) Cellular panels: Rigid assemblies bonded together with adhesive substances with both sides or faces consisting of veneer, plywood, lumber, wood-veneer panels, hardboard, wood particle board, or other board composed of vegetable fibers, and with a core of hollow, honeycomb, or sponge-like construction, whether or not the interstices are filled with loose or loosely matted fibrous materials; and (e) Building board: Panels of rigid construction, including tiles and insulation board, chiefly used in the construction of walls, ceilings, or other parts of buildings. 2. The term "face finished", as applied to the boards and panels provided for in this part, means that one or both surfaces of a panel or board have been treated with creosote or other wood preservatives, or with fillers, sealers, waxes, oils, stains, varnishes, paints, or enamels, or have been overlaid with paper, fabric, plastics, base metal or other material.		

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 3. - WOOD VENEERS, PLYWOOD AND OTHER WOOD-VENEER ASSEMBLIES, AND BUILDING BOARDS--Continued		
	Wood veneers, whether or not face finished, including wood veneers reinforced or backed with paper, cloth, or other flexible material:		
	Not reinforced or backed:		
240.00	Birch and maple	8% ad val.	20% ad val.
240.01	Other	10% ad val.	20% ad val.
	Reinforced or backed:		
240.04	Decorative wood veneers, not face finished, or face finished with a clear or transparent material which does not obscure the grain, texture, or markings of the wood	16-2/3% ad val.	33-1/3% ad val.
240.06	Other	10% ad val.	20% ad val.
	Plywood, whether or not face finished:		
	Not face finished, or face finished with a clear or transparent material which does not obscure the grain, texture, or markings of the face ply:		
240.10	With a face ply of Spanish cedar (Cedrela spp.)	40% ad val.	40% ad val.
240.12	With a face ply of Parana pine (Araucaria angustifolia)	40% ad val.	40% ad val.
240.14	With a face ply of birch (Betula spp.)	15% ad val.	50% ad val.
240.16	With a face ply of European red pine (Pinus sylvestris)	17% ad val.	40% ad val.
240.18	Other	20% ad val.	40% ad val.
240.20	Other	20% ad val.	40% ad val.
	Wood-veneer panels, whether or not face finished:		
	With veneer faces on both sides:		
	Not face finished, or face finished with a clear or transparent material which does not obscure the grain, texture, or markings of the face ply:		
240.30	With a face ply of Spanish cedar (Cedrela spp.)	40% ad val.	40% ad val.
240.32	With a face ply of Parana pine (Araucaria augustifolia)	40% ad val.	40% ad val.
240.34	With a face ply of birch (Betula spp.)	15% ad val.	50% ad val.
240.36	With a face ply of European red pine (Pinus sylvestris)	17% ad val.	40% ad val.
240.38	Other	20% ad val.	40% ad val.
240.40	Other	20% ad val.	40% ad val.

SCHEDULE 2. - WOOD AND PAPER; PRINTED MATTER

Item	Articles	Rates of duty	
		1	2
	PART 3. - WOOD VENEERS, PLYWOOD AND OTHER WOOD-VENEER ASSEMBLIES, AND BUILDING BOARDS--Continued		
	Wood-veneer panels, whether or not face finished--Continued		
	With veneer face on one side only:		
	Not face finished, or face finished with a clear or transparent material which does not obscure the grain, texture, or markings of the face ply:		
240.50	With face ply of Spanish cedar (Cedrela spp.)	40% ad val.	40% ad val.
240.52	With face ply of Parana pine (Araucaria angustifolia)	40% ad val.	40% ad val.
240.54	With face ply of birch (Betula spp.)	15% ad val.	50% ad val.
240.56	With face ply of European red pine (Pinus sylvestris)	17% ad val.	40% ad val.
240.58	Other	20% ad val.	40% ad val.
240.60	Other	20% ad val.	40% ad val.
	Hardboard, whether or not face finished:		
	Not face finished; and oil treated, whether or not regarded as tempered, but not otherwise face finished:		
245.00	Valued not over $48.33-1/3 per short ton	15% ad val.	30% ad val.
245.10	Valued over $48.33-1/3 but not over $96.66-2/3 per short ton	$7.25 per short ton	30% ad val.
245.20	Valued over $96.66-2/3 per short ton	7.5% ad val.	30% ad val.
245.30	Other	28% ad val. 1/	45% ad val.
	Wood particle board, whether or not face finished:		
245.45	If 90 percent or more by weight of the wood components consist of one, or any combination, of the following hardwoods: Pterocarpus spp., Triplaris spp., or Virola spp	12% ad val.	40% ad val.
245.50	Other	20% ad val.	40% ad val.
245.60	Cellular panels, whether or not face finished	20% ad val.	40% ad val.
245.70	Gypsum or plaster building boards and lath	12.5% ad val.	30% ad val.
	Building boards not specially provided for, whether or not face finished:		
245.80	Laminated boards bonded in whole or in part, or impregnated, with synthetic resins	5¢ per lb. + 9% ad val.	15¢ per lb. + 25% ad val.
245.90	Other boards, of vegetable fibers (including wood fibers)	4% ad val. 2/	20% ad val.

1/ This rate, effective Jan. 1, 1966, reflects the first stage of a concession granted by the United States in the General Agreement on Tariffs and Trade. The concession is to become fully effective in five annual stages, the second (26% ad val.) on Jan. 1, 1967, and the last (20% ad val.) on Jan. 1, 1970 (see Presidential Proclamation No. 3694, dated Dec. 27, 1965).

2/ This rate, effective Jan. 1, 1966, reflects the first stage of a concession granted by the United States in the General Agreement on Tariffs and Trade. The concession is to become fully effective in three stages, the second (3% ad val.) on Jan. 1, 1968, and the third (2.5% ad val.) on Jan. 1, 1970 (see Presidential Proclamation No. 3694, dated Dec. 27, 1965).

APPENDIX TO THE TARIFF SCHEDULES

Appendix Headnotes:

1. The provisions of this Appendix relate to legislation and to executive and administrative actions pursuant to duly constituted authority, under which --

(a) one or more of the provisions in schedules 1 through 8 are temporarily amended or modified, or

(b) additional duties or other import restrictions are imposed by, or pursuant to, collateral legislation.

2. Unless the context requires otherwise, the general headnotes and rules of interpretation and the respective schedule, part, and subpart headnotes in schedules 1 through 8 apply to the provisions of this Appendix.

APPENDIX TO THE TARIFF SCHEDULES

Item	Articles	Rates of Duty 1	Rates of Duty 2	Effective Period
	PART 1. - TEMPORARY LEGISLATION			
	* * * * * * *			
	Subpart B. - Temporary Provisions Amending the Tariff Schedules			
	Subpart B headnotes:			
	1. Any article described in the provisions of this subpart, if entered during the period specified in the last column, is subject to duty at the rate set forth herein in lieu of the rate provided therefor in schedules 1 to 8, inclusive.			
	* * * * * * *			
916.20	Hardwood lumber, rough, dressed, or worked, provided for in item 202.36.....	Free	$3 per 1000 ft., board measure	On or before 12/31/67
916.21	Hardwood lumber, rough, dressed, or worked, provided for in item 202.39.....	Free	$3.10 per 1000 ft., board measure	On or before 12/31/67
916.22	Hardwood lumber, rough, dressed, or worked, provided for in item 202.41, except Boxwood (Buxus spp.) Japanese maple (Acer spp.), and Japanese white oak (Quercus spp.).....	Free	15% ad val.	On or before 12/31/67

APPENDIX TO THE TARIFF SCHEDULES

Item	Articles	Rates of Duty		Effective Period
		1	2	
	PART 1. - TEMPORARY LEGISLATION--Continued Subpart B. - Temporary Provisions Amending the Tariff Schedules--Continued			
916.23	Hardwood lumber, rough, dressed, or worked, provided for in item 202.43, except Alder (Alnus spp.), Almon (Shorea almon), Ash (Fraxinus spp.), Aspen and cottonwood (Populus spp.), Bagtikan (Parashorea plicata), Basswood (Tilia spp.), Beech (Fagus spp.), Birch (Betula spp.), Black or tupelo gum (Nyssa spp.), Buckeye (Aesculus spp.), Cherry (Prunus spp.), Elm (Ulmus spp.), Eucalyptus (Eucalyptus spp.), Hickory (Carya spp.), Lauan, red (Shorea negrosensis), Lauan, white (Pentacme contorta and P. mindanensis), Magnolia (Magnolia spp.), Maple (Acer spp.), Mayapis (Shorea squamata), Meranti (Shorea spp.), Oak (Quercus spp.), Sen (Kalopanax spp.), Seraya, red (Shorea spp.), Seraya, white (Parashorea spp.), Sweet (red or sap) gum (Liquidamber spp.), Sycamore (Platanus spp.), Tangile (Shorea polysperma), Tiaong (Shorea spp.), Walnut (Juglans spp.), Willow (Salix spp.), and Yellow poplar (Liriodendron spp.).....	Free	$3 per 1000 ft., board measure	On or before 12/31/67

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1965

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

TSUS item	All countries		First supplier		Second supplier		Third supplier	
	Amount in 1965	Percent change from 1964	Country	Value	Country	Value	Country	Value
Fuelwood (p. 5)								
200.03	49	+39.8	Canada	49	-	-	-	-
200.06	1	-72.7	Canada	1	-	-	-	-
Wood waste (p. 11)								
200.10	39	-36.1	Canada	39	-	-	-	-
Wood flour (p. 13)								
200.20	-	-100.0	-	-	-	-	-	-
Wood excelsior (p. 15)								
200.25	10	-35.7	Canada	10	-	-	-	-
Logs and timber (p. 17)								
200.35 (pt.):	1/ 6,756	+0.6	Canada	1,763	Colombia	1,174	Ivory Coast:	688
Wood sticks and blocks (p. 31)								
200.40	83	-51.1	W. Germany	21	Mexico	19	Portugal	19
200.50	15	-31.7	Canada	5	Austria	5	France	4
200.55	592	- 5.7	Canada	544	W. Germany	29	Yugoslavia	13
Brierroot (p. 37)								
200.45	2,855	+40.9	Italy	1,924	Spain	530	Greece	384
Wood piles and poles (p. 41)								
200.60 (pt.):	2/ 4,775	-1.0	Canada	4,586	Br. Guiana	186	Leeward & Windward Is.	2
Wood fencing (p. 51)								
200.60 (pt.):	3/ 603	-2.4	Canada	603	-	-	-	-
200.65	1,346	+5.3	Canada	1,346	U.K.	4/	-	-
200.75	1,612	+0.5	Canada	1,601	France	8	Japan	3
Railroad cross ties of wood (p. 57)								
200.80	257	-24.9	Canada	211	Dom. Rep.	46	-	-
Wood shingles and shakes (p. 63)								
200.85	29,037	-6.4	Canada	29,037	Netherlands:	4/	-	-
Wood dowel rods and pins (p. 73)								
200.90	3,255	+53.4	Mexico	1,605	Malaysia	824	Hong Kong	372
200.95	86	+87.4	Mexico	49	Canada	23	Japan	11
Softwood lumber (p. 79)								
202.03	111,516	+1.6	Canada	111,497	U.K.	9	W. Germany	6
202.06	5,065	+5.5	Canada	5,065	-	-	-	-
202.09	20,949	+0.2	Canada	18,704	Honduras	1,227	Mexico	898
202.12	1,414	-13.4	Brazil	1,414	-	-	-	-
202.15	66,921	-8.0	Canada	66,920	U.K.	1	-	-
202.18	3,317	-37.2	Canada	3,317	-	-	-	-

See footnotes at end of table.

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1965--Continued

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

TSUS item	All countries		First supplier		Second supplier		Third supplier	
	Amount in 1965	Percent change from 1964	Country	Value	Country	Value	Country	Value
Softwood lumber--Con. (p. 79)								
202.21	65,474	+12.9	Canada	65,474	-	-	-	-
202.24	1,546	-25.5	Canada	1,546	-	-	-	-
202.27	22,206	+15.5	Canada	22,205	Japan	1	-	-
202.30	101	+46.0	Canada	51	Japan	38	W. Germany	4
202.31	-	-	-	-	-	-	-	-
202.45 (pt.)	5/ 8,503	-2.8	Canada	8,500	Honduras	3	-	-
202.48	877	+86.6	Canada	877	-	-	-	-
202.50 (pt.)	6/ 3,062	+16.5	Canada	2,936	Honduras	126	-	-
202.52	3,696	-12.7	Canada	3,696	-	-	-	-
202.54 (pt.)	6/ 11	-7.5	Canada	11	-	-	-	-
Hardwood lumber (p. 101)								
202.36	2,161	+25.6	Thailand	807	Ecuador	694	Burma	621
202.39	3,763	-9.7	Br. Hond.	1,017	Ghana	874	Mexico	514
202.41	672	+51.4	Br. Hond.	190	Nicaragua	136	Japan	119
202.43	48,411	+13.0	Canada	27,345	Japan	6,234	Phil. Rep.	3,525
202.45 (pt.)	7/ 82	-40.9	Phil. Rep.	72	Taiwan	10	-	-
202.50 (pt.)	6/ 2	-73.6	Phil. Rep.	2	-	-	-	-
202.53	883	+29.2	Canada	658	Ecuador	177	Mexico	40
202.54 (pt.)	6/ 56	+17.7	Ecuador	37	Canada	11	Japan	8
Hardwood flooring (p. 117)								
202.57	1,410	+30.9	Canada	1,260	Thailand	72	Australia	41
202.60	1,348	+6.7	Canada	1,109	Zambia/Rhodesia/Malawi	110	Thailand	75
Wood moldings, carvings, and ornaments (p. 127)								
202.63	10,316	-4.1	Mexico	7,391	Japan	1,009	Canada	624
202.66	3,425	+52.9	Sweden	951	Belg. & Lux.	821	W. Germany	628
Hardwood veneer (p. 135)								
240.00	25,311	+4.7	Canada	25,311	-	-	-	-
240.01 (pt.)	8/19,587	+9.6	Phil. Rep.	9,983	Malaysia	2,015	Congo	1,851
240.04 (pt.)	6/ 28	+53.1	Japan	20	Canada	7	W. Germany	1
240.06 (pt.)	6/ 17	+12.4	W. Germany	8	Brazil	6	Italy	2
Softwood veneer (p. 145)								
240.01 (pt.)	9/ 841	+139.4	Canada	839	Mexico	2	-	-
240.04 (pt.)	-	-	-	-		-	-	-
240.06 (pt.)	-	-	-		-	-	-	-
Hardwood plywood (p. 151)								
240.10	-	-	-	-	-	-	-	-
240.14	29,037	+17.0	Japan	12,631	Finland	10,100	Canada	6,303
240.18 (pt.)	10/93,483	-2.6	Japan	36,890	Taiwan	18,827	Phil. Rep.	17,922
240.20 (pt.)	6/ 1,334	-15.2	Japan	827	Taiwan	152	Phil. Rep.	134
240.30	-	-	-	-	-	-	-	-
240.34	38	-63.1	Japan	25	Canada	13	-	-
240.38 (pt.)	6/ 119	+366.7	Canada	89	Japan	18	Israel	6
240.40 (pt.)	6/ 25	+240.1	Canada	25	France	4/	-	-

See footnotes at end of table.

Value of U.S. imports for consumption, by TSUS items included in the individual summaries of this volume, total and from the 3 principal suppliers, 1965--Continued

(In thousands of dollars. The dollar value of imports shown is defined generally as the market value in the foreign country and therefore excludes U.S. import duties, freight, and transportation insurance)

TSUS item	All countries		First supplier		Second supplier		Third supplier	
	Amount in 1965	Percent change from 1964	Country	Value	Country	Value	Country	Value
Hardwood plywood--Con. (p. 151)								
240.50	-	-	-	-	-	-	-	-
240.54	-	-	-	-	-	-	-	-
240.58 (pt.)	6/ 4	-70.8	Israel	3	Taiwan	1	-	-
240.60 (pt.)	6/ 37	+38.8	Japan	29	Canada	8	France	4/
245.60 (pt.)	-	-	-	-	-	-	-	-
Softwood plywood (p. 165)								
240.12	28	+236.9	Brazil	28	-	-	-	-
240.16	-	-	-	-	-	-	-	-
240.18 (pt.)	11/ 719	+16.5	Mexico	404	Canada	255	Korea Rep.	39
240.20 (pt.)	-	-	-	-	-	-	-	-
240.32	-	-	-	-	-	-	-	-
240.36	-	-	-	-	-	-	-	-
240.38 (pt.)	-	-	-	-	-	-	-	-
240.40 (pt.)	-	-	-	-	-	-	-	-
240.52	-	-	-	-	-	-	-	-
240.56	-	-	-	-	-	-	-	-
240.58 (pt.)	-	-	-	-	-	-	-	-
240.60 (pt.)	-	-	-	-	-	-	-	-
245.60 (pt.)	4/	12/	Canada	4/	-	-	-	-
Hardboard (p. 179)								
245.00	59	+106.1	France	23	Australia	19	Norway	7
245.10	13,250	+14.6	Sweden	5,248	Finland	3,114	Canada	1,677
245.20	3,800	+67.0	Canada	1,512	Sweden	1,507	Finland	313
245.30	138	+22.2	Canada	99	Sweden	30	Australia	8
Wood particle board (p. 189)								
245.45	-	-	-	-	-	-	-	-
245.50	529	+149.4	Canada	397	Surinam	93	Norway	39
Gypsum board (p. 195)								
245.70	4	-11.2	Canada	3	Australia	1	-	-
Building boards not elsewhere enumerated (p. 199)								
245.80	9	+184.5	Canada	6	Israel	3	-	-
245.90	2,861	-16.8	Canada	2,218	Sweden	269	Brazil	179

1/ Includes imports reported under 200.3505 through 200.3550 and 200.3595.
2/ Includes imports reported under 200.6040.
3/ Includes imports reported under 200.6020.
4/ Less than $500.
5/ Includes imports reported under 202.4520 and estimated imports of other softwood siding (under 202.4540).
6/ Estimated.
7/ Estimated imports of hardwood siding (under 202.4540).
8/ Includes imports reported under 240.0120 and 240.0140.
9/ Includes imports reported under 240.0160.
10/ Includes imports reported under 240.1830 through 240.1870.
11/ Includes imports reported under 240.1810.
12/ No imports reported for 1964.

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