

UNITED STATES TARIFF COMMISSION

**WILTON, BRUSSELS, VELVET, AND
TAPESTRY CARPETS AND RUGS**

**Report to the President
on Investigation No. TEA-I-EX-5
Under Section 351(d) (3) of the Trade Expansion Act of 1962**



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UNITED STATES TARIFF COMMISSION

Glenn W. Sutton, *Chairman*

Penelope H. Thunberg

Bruce E. Clubb

Will E. Leonard, Jr.

Herschel D. Newsom

George M. Moore

Kenneth R. Mason, *Secretary*

**Address all communications to
United States Tariff Commission
Washington, D. C. 20436**

C O N T E N T S

	<u>Page</u>
Introduction-----	1
Probable economic effect of the termination of the increase in the duty-----	6
U.S. tariff treatment-----	10
Description and uses-----	11
Wilton (and Brussels) carpets and rugs-----	12
Velvet (and tapestry) carpets and rugs-----	12
Machine-tufted carpets and rugs-----	13
General developments-----	16
U.S. consumption-----	17
The U.S. industry-----	18
Production-----	19
Sales and inventories-----	20
Employment and earnings-----	21
Prices-----	22
U.S. imports-----	24
Composition-----	24
Principal sources-----	26
Profit-and-loss experience of U.S. producers on their Wilton and velvet operations-----	28
Statistical appendix-----	29

TABLES

1. Machine-woven and machine-tufted pile carpets and rugs: U.S. production, by types, 1958-68-----	30
2. Wilton and velvet carpets and rugs: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, calendar years 1958-68, fiscal years ending June 30, 1962-69, and January-June 1962-69----	31
3. Wilton and velvet carpets and rugs: Indexes of U.S. production, 1957-68-----	32
4. Wilton and velvet carpets and rugs: Indexes of U.S. net sales and inventories, 1957-68-----	33
5. Employment and earnings of production and related workers in Wilton and velvet plants in the United States, 1963-68-----	34
6. Wilton and velvet floor coverings: U.S. imports for consumption, by specified sources, 1964-68 and January-June 1969-----	35
7. Financial experience of 15 U.S. producers on their Wilton and velvet operations, 1967 and 1968-----	36

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

REPORT TO THE PRESIDENT

U.S. Tariff Commission,
November 18, 1969.

To the President:

This report is made pursuant to section 351(d)(3) of the Trade Expansion Act of 1962 (76 Stat. 900), which provides that--

Upon petition on behalf of the industry concerned, filed with the Tariff Commission not earlier than the date which is 9 months, and not later than the date which is 6 months, before the date any increase or imposition referred to in paragraph (1) or (2) of subsection (c) is to terminate by reason of the expiration of the applicable period prescribed in paragraph (1) or an extension thereof under paragraph (2), the Tariff Commission shall advise the President of its judgment as to the probable economic effect on such industry of such termination.

Introduction

In 1962, in response to a Tariff Commission finding of serious injury to the domestic Wilton and velvet carpet industry, the President proclaimed an increase in the rate of duty applicable to imported Wiltons and velvets from 21 percent to 40 percent ad valorem. Thereafter the Commission made several annual reports to the President on developments in the trade and a report (in 1967) on the probable economic effect on the industry of restoring the 21-percent rate of duty. Following receipt of the latter report, the President extended the period for which the 40-percent rate would remain in effect to December 31, 1969. Detailed information respecting the Tariff Commission investigations and reports and Presidential actions on Wiltons and velvets is given in the following paragraphs.

Following an investigation by the Tariff Commission and reports to the President on August 3, 1961, and on December 1, 1961, 1/ under section 7 of the Trade Agreements Extension Act of 1951, as amended, the President, by proclamation dated March 19, 1962, 2/ increased the rate of duty applicable to Wilton, Brussels, velvet, and tapestry carpets, rugs, and mats, and carpets, rugs, and mats of like character or description (hereinafter referred to as Wiltons and velvets), effective after the close of business on April 18, 1962. By proclamation dated March 27, 1962, 3/ the President deferred the effective date of the increased rate to after the close of business on June 17, 1962.

On September 13, 1963, the Commission made its first report to the President pursuant to section 351(d)(1) of the Trade Expansion Act of 1962, which provides that--

So long as any increase in, or imposition of, any duty or other import restriction pursuant to this section or pursuant to section 7 of the Trade Agreements Extension Act of 1951 remains in effect, the Tariff Commission shall keep under review developments with respect to the industry concerned, and shall make annual reports to the President concerning such developments.

Four annual reports were made pursuant to this section of the act. 4/

1/ U.S. Tariff Commission, Wilton, Brussels, Velvet, and Tapestry Carpets and Rugs: Report to the President on Escape-Clause Investigation No. 7-104 . . . , TC Publication 28, 1961; Wilton, Brussels, Velvet, and Tapestry Carpets and Rugs: Report in Response to the President's Request for Information Supplemental to the Report on Escape-Clause Investigation No. 7-104, TC Publication 41, 1961.

2/ Proclamation No. 3454 (3 CFR, 1959-63 Comp., p. 164).

3/ Proclamation No. 3458 (3 CFR 1959-1963 Comp., p. 171).

4/ These four reports are as follows:

(1) Wilton, Brussels, Velvet, and Tapestry Carpets and Rugs: Report to the President (No. TEA-IR-5-63) Under Section 351(d)(1) of the Trade Expansion Act of 1962, TC Publication 107, 1963.

(2) TC Publication 137 (No. TEA-IR-5-64), 1964.

(3) TC Publication 160 (No. TEA-IR-5-65), 1965.

(4) TC Publication 187 (No. TEA-IR-5-66), 1966.

An investigation was instituted, pursuant to section 351(d)(3), on January 18, 1967, upon a petition filed, on behalf of the domestic industry, by the American Carpet Institute, Inc., New York, New York. The Commission transmitted its report on this investigation to the President on September 5, 1967. The Commission stated that in its judgment the producers of Wiltons and velvets, in the aggregate, would be little affected by the termination of the duty increase, although there were a few firms, employing less than 10 percent of the workers involved, which were at the margin of profitability and which would suffer from any increase in competition that might follow a duty reduction.

After consultation with the Secretary of Commerce and the Secretary of Labor, the President, on October 11, 1967, proclaimed an extension of the increased duty rate to be effective during the period beginning on October 12, 1967, and ending at the close of December 31, 1969. 1/ In a press release dated October 12, 1967, the President stated that he had reluctantly concluded that a temporary extension was warranted. He also stated that he was appointing a Task Force of representatives of the Departments of Commerce and Labor, the Small Business Administration, and other appropriate agencies to make a comprehensive study of the industry involved and of the small communities in which many of its plants are located. The mission of the Task Force was to inventory the Government assistance programs available to these areas, to search for alternate employment, and to take other

1/ Pursuant to section 351(c)(2) of the Trade Expansion Act of 1962, Proclamation No. 3815 (32 F.R. 14195).

steps which would work out long-term solutions to the problems created by job dislocation. It was the President's belief that the Task Force could develop solutions which would enable the Wilton and velvet industry to make the necessary adjustments to the domestic and world market conditions within the time provided by the extension of the increased rate of duty.

On September 5, 1968, the Commission made a report to the President pursuant to section 351(d)(1) of the Trade Expansion Act of 1962 in which it advised the President as to developments with respect to the Wilton and velvet industry subsequent to the extension of the increased duty rate. 1/

The current investigation was instituted on June 27, 1969, upon a petition filed on behalf of the domestic industry concerned, pursuant to section 351(d)(3) of the Trade Expansion Act of 1962, with respect to Wilton (including Brussels) and velvet (including tapestry) floor coverings, and floor coverings of like character or description of the kinds described in item 922.50 in part 2A of the appendix to the Tariff Schedules of the United States (TSUS). Public notice of the institution of the investigation and of a public hearing to be held in connection therewith was given by the publication of the notice in the Federal Register (34 F.R. 11397). The hearing was scheduled to begin on August 27, 1969, but at the request of counsel for certain

1/ U.S. Tariff Commission, Wilton, Brussels, Velvet, and Tapestry Carpets and Rugs: Report to the President (No. TEA-IR-5-68) Under Section 351(d)(1) of the Trade Expansion Act of 1962, TC Publication 261, 1968.

importers, was rescheduled for October 22, 1969 (34 F.R. 12802). The hearing was held October 22, 23, and 24, 1969, at which time all interested parties were afforded opportunity to be present, to produce evidence, and to be heard.

Probable Economic Effect of the Termination
of the Increase in the Duty

Under conditions which currently exist in the domestic Wilton and velvet carpet industry, in the market place, and in the industry abroad, the U.S. producers in the aggregate would be little affected by the termination of the duty increase. Current conditions are found to be substantially changed from those which obtained at the time of a finding of injury in 1961.

The output of the domestic Wilton and velvet carpet industry continued to decline after 1961 despite a decline of more than 90 percent in imports. This decline in output is attributable to the shift to tufted carpets, which have undergone dynamic expansion; they now account for more than 90 percent of the pile floor coverings consumed in the United States. A number (15 altogether) of the less profitable Wilton and velvet plants have closed or ceased producing such carpets since 1960. A majority of the workers in plants closing have found alternate employment; some of the older workers have retired from the labor force. Most of the plants which remain in production are experiencing a shortage of qualified workers. The industry anticipates a further decline in output of about 20 percent over the next several years resulting from continued displacement by tufted carpets. In 1968, however, output increased slightly and the average net profit on Wilton and velvet operations was 7.2 percent of sales, the highest in recent years.

The particular types of Wiltons and velvets currently imported differ from the major types imported in 1961 and are not directly competitive with domestic items. Imports of these types may increase if the duty is lowered but, in the Commission's judgment, there would be almost no effect on the domestic industry resulting from the increase.

It appears unlikely that the types of Wilton and velvet carpets which were of major importance in 1961 (i.e., those types principally for residential installation) will again be imported in substantial quantity regardless of a reduction in the rate of duty. The bulk of those imports were of a medium to lower quality in a price range in which they would be undersold by domestic tufted carpets.

The principal domestic market which might be affected by increased imports if the "escape-clause" rate is allowed to terminate is that for Wilton and velvet carpets of types mainly for commercial installation, i.e., Wiltons in custom designs primarily for use in restaurants, theaters, hotel lobbies, and similar public places and velvets in a tightly woven loop pile (the so-called "Gropoint" type) primarily for use in office buildings and other commercial establishments. The Commission, however, does not expect the imports of such carpets to be substantial for the following reasons:

(1) The commercial market requires, in some degree, a specialized sales force, stocks on hand for quick delivery, and close working relationships with architects and customers on specifications and other matters. Customers tend to utilize domestic sources for custom-designed carpets, which comprise most of the commercial Wiltons. A

substantial price advantage for imports of both Wiltons and velvets would be necessary to offset the advantage of domestic manufacturers in the commercial market.

(2) Cost savings resulting from lower wage rates in major supplying countries would be at least equaled by the added costs of transportation and insurance (about 10 percent) plus duty at the trade-agreement rate of 21 percent.

(3) The principal potential supplying countries are unlikely to make special efforts to enter the U.S. market because their major markets are much closer and, in many cases, duty-free.

(4) Although some excess Wilton and velvet capacity may occur in some of the supplying countries from time to time as a result of displacement of woven by tufted carpets, such occurrences are unlikely to be sudden or large. Tufting already accounts for more than half the output of pile floor coverings in most of these countries; a traditional preference for woven carpets in Europe will make further displacement relatively gradual. In some countries, where the consumption of carpets and rugs has increased, output of woven carpets has continued to increase slightly, despite the gains of tufted carpets. Older inefficient equipment abroad is likely to be scrapped as excess capacity occurs.

The marginal firms referred to in the Commission's 1967 report (about a half dozen) have since made certain adjustments. All but one reported financial results in the current investigation. Those reporting showed a profit, on the average, of 2.1 percent in 1968

compared with losses in 1964, 1965, and 1966. Several of the firms have been purchased by, or become affiliated with, larger, more profitable concerns. One or two firms, currently on an unprofitable basis, may undergo further adjustment.

After considering all economic factors including idling of production facilities, unemployment or underemployment, as well as a reasonable margin of profit, the Commission concludes that the probable economic effect of a decrease in the duty from the "escape-clause" rate of 40 percent ad valorem to the "concession" rate of 21 percent ad valorem, would be so minimal that the Wilton and velvet rug and carpet industry as a whole would not be adversely affected. The degree to which this minimal impact might fall unevenly on one or two firms already at the margin of profitability would depend on the specific circumstances of their production and sales and their role in the entire industry.

U.S. Tariff Treatment

Wilton (including Brussels) and velvet (including tapestry) floor coverings and floor coverings of like character or description are currently dutiable at the escape-clause rate of 40 percent ad valorem provided for in item 922.50 of part 2 of the appendix to the TSUS. ^{1/} Had there been no escape-clause action, these articles would have been dutiable at 21 percent ad valorem under item 360.45 of the TSUS prior to January 1, 1968, and item 360.46 thereafter. Carpets and rugs imported from designated Communist-dominated or Communist-controlled countries are currently dutiable under the latter item at 60 percent ad valorem.

The extension of the increased duty will terminate at the close of December 31, 1969, unless further extended by the President pursuant to section 351(c)(2) of the Trade Expansion Act. Under that section, the President is authorized to extend the increase in whole or in part for such periods (not in excess of 4 years at any one time) as he may designate if he determines, after taking into account the advice received from the Commission and the Secretary of Commerce and the Secretary of Labor, that such an extension is in the national interest.

Pursuant to the Kennedy Round of trade-agreement negotiations, item 360.45 was abolished and two new items, 360.46 and 360.48, were

^{1/} The Automotive Products Trade Act of 1965, Public Law 89-283, effective Jan. 18, 1965, provides duty-free treatment for U.S. imports from Canada of original motor vehicle equipment, but imports of Wiltons and velvets eligible to receive such treatment are believed to have been negligible, if any.

established, effective January 1, 1968. Item 360.46, with a rate of duty of 21 percent ad valorem, will apply to imports of Wiltons and velvets should the President decide not to further extend the 40 percent rate. Item 360.48 applies to imports of floor coverings, other than Wiltons and velvets, currently dutiable at a rate of 16.5 percent ad valorem.

Description and Uses

Wiltons and velvets constitute two of the major types of woven pile floor covering. ^{1/} Seventeen years ago they accounted for about 40 percent of the pile floor coverings made in the United States. Currently they account for less than 5 percent. By far the major portion of the market for pile floor coverings (more than 90 percent) is now supplied by tufted carpets and rugs. The remainder is accounted for by woven carpets and rugs other than Wilton and velvet, such as Axminsters, narrow cushion-backed carpets woven on upholstery-type looms, and machine-knitted types. There has been a phenomenal growth in the production of so-called indoor-outdoor carpets of which felted or needle-punched types (nonpile) have contributed an increasing share.

Wiltons now account for less than 20 percent of the U.S. production of woven pile floor coverings, and less than 2 percent of that of all pile floor coverings. Velvets presently account for more than 40 percent of the production of woven pile floor coverings, but for less than 4 percent of the production of all pile floor coverings.

^{1/} Pile carpets are those having tufts that stand erect and form the surface of the carpet. The tuft ends may be cut or uncut (looped).

Wilton (and Brussels) carpets and rugs

The technical literature of three or more decades ago described the Wilton carpet as a cut-pile fabric and the Brussels carpet as an uncut-pile (loop or round-wire) fabric. Current trade practices, however, do not distinguish between Wilton and Brussels carpets. Wiltons are currently produced with cut pile, with uncut pile, and with a combination of cut and uncut pile. Thus "Wilton" has become a generic term to cover all three types.

The Wilton carpet is woven on a loom with a jacquard attachment. This is a mechanism to determine whether individual pile yarns will be submerged in the body of the fabric, or will appear on the surface. It is used to achieve a pattern, by variations in the color, texture, or depth of pile. The yarns submerged in the body of the fabric give the carpet what has been termed a cushion back.

Velvet (and tapestry) carpets and rugs

Three or four decades ago, when there was substantial trading in tapestry carpets and rugs, the velvets were characterized as being cut-pile fabrics, and the tapestries as uncut-pile fabrics. Velvet carpets are no longer distinguished in the trade from tapestry carpets. Plain-woven carpets and rugs, whether of cut or uncut pile, are regularly marketed as velvets.

Velvet carpets are made by one of the simplest of carpet weaves. They are usually less expensive than Wiltons because they are woven more rapidly and require less pile yarn per square yard of carpeting. Nevertheless, when closely woven, velvets are long wearing and are rich in appearance. In recent years, they have been produced largely in solid colors. Textured effects are achieved by a variety of methods. An ordinary plush surface is attained when the pile is cut and the tufts are uniform in height. The pile may be woven at different heights to form a sculptured or textured surface. Tightly twisted pile yarns finished in cut pile provide a frieze surface. Uncut looped pile supplies a pebbly texture. Other effects are obtained by combining cut and uncut pile in the surface.

Velvet carpets may be woven on Wilton looms without the use of the jacquard attachment, and in such instances are often referred to, particularly in foreign countries, as plain Wiltons.

Machine-tufted carpets and rugs

Two decades ago tufted carpets and rugs were relatively unimportant in the market for floor coverings; they consisted mostly of scatter rugs, bath mats, and other rugs and mats 4' by 6' and smaller. At present tufted carpets account for more than 90 percent of the domestic output of soft-surface floor coverings, and they consist predominantly of sizes larger than 4' x 6'.

Machine-tufted carpets differ from machine-woven carpets principally in the manner by which the surface yarns are anchored to the base of the fabric. In Wiltons and velvets, the pile tufts (pile warp) are anchored into the backing during the weaving process by the weft yarns, which run the width of the fabric. The weft yarns, in turn, are bound into the fabric by the chain warp. In the tufted carpet, the tufts are inserted mechanically into a previously prepared fabric backing. This backing, which is generally made of jute or of manmade fibers, is coated with latex after the tufts have been inserted in order to anchor the tufts more firmly and inhibit the carpet's sliding. In recent years most of the tufted carpets produced have been provided with an additional backing of jute or other fabric, bonded to the original or primary backing, to give more body and wearability to the carpet.

The tufting machine (which probably should be thought of as a tuft-inserting machine) employs a multineedle operation to sew the pile yarns (tufts) into the backing. It operates at many times the speed of an ordinary Wilton or velvet loom, thereby contributing to the lower cost of the tufted carpet.

In December 1961, in its supplemental report to the President on Escape-Clause Investigation No. 7-104, 1/ the Tariff Commission reported:

Most of the tufted carpeting has been made in solid colors, largely because of the prevailing consumer choice, but partly because the processes of production had not developed to a point where they would permit flexibility of design and the use of multiple colors such as is possible in weaving Axminster and Wilton carpets. Technology in the tufting process has been developing rapidly, however, and new types of tufted carpeting are being introduced that offer many of the texture and decorative effects now popular in woven carpets.

Tufting technology has continued to progress, perhaps more rapidly than anticipated. Finer gauge tufting machines, new types of carpet backing, piece dyeing, and the printing of tufted carpets with color and design are among the advances in recent years. As a result, many attributes of woven carpets can be incorporated in tufted carpets, and at a lower cost. Tufted carpets have largely supplanted woven carpets and have accounted for almost the whole increase in the sale of pile floor coverings in recent years.

Most prospective buyers (and many retail salesmen as well) are uninformed and unconcerned as to the difference between Wilton, velvet, and tufted construction. Moreover, there is little endeavor on the part of either manufacturers or retailers, through advertising or sales promotion, to acquaint buyers with the difference. In their advertising policy retailers generally disregard weave or construction. They give predominant emphasis to price and then to type of fiber.

1/ TC Publication 41, 1961, p. 11.

General Developments

A growing variety of manmade fibers are used for carpet face (pile) yarns. Polypropylene and polyester are now used as well as nylon, acrylic, and rayon fibers. Types especially designed for use in carpets have been introduced. Manmade fibers accounted for 89 percent of the face yarns used in soft-surface floor coverings in January-June 1969. In the same period, however, wool remained the predominant fiber used in woven carpets and rugs, accounting for 56 percent of the total.

There is growing use of new or improved production processes, especially in tufted carpet production. These include hot melt lamination for backing materials, continuous piece dyeing, printing of carpet designs, and the use of high-gauge tufting machines and horizontal (low-line) tufting machines.

Several market developments have helped to expand carpet sales. "Indoor-outdoor" carpet, which is resistant to the effects of water and sunlight and easy to clean has broadened the sales potential of soft-surface floor coverings. There is growing acceptance of carpeting for commercial and institutional use, even in schools and hospitals, where its use was negligible a few years ago. Recent rulings of the Federal Housing Administration and the Veterans Administration allow carpeting to be included in home purchases as part of an insurable mortgage.

U.S. Consumption

The U.S. consumption of Wiltons and velvets declined from 47.4 million square yards in 1959 to 21.7 million square yards in 1968, a decrease of about 54 percent (table 2). During 1962-63 the decline in consumption was largely attributable to a substantial decrease in imports as a result of the duty increase in mid-1962, although domestic production also decreased somewhat during this period. The decline in subsequent years was accompanied by a continuing decline in domestic production as the result of a shift to tufted and other types of floor covering. From 1961, the peak year of imports, through 1968, annual imports declined by 7.4 million square yards (89 percent) and U.S. production declined by 7.5 million square yards (26 percent). Imports supplied 23 percent of the U.S. consumption of Wiltons and velvets in 1961, but only 4 percent in 1968. Imports have tended to increase since 1965. Domestic production, which comprises the bulk of current consumption, is sold largely in commercial and institutional markets while the relatively small quantity of imports is sold largely in the residential market. A negligible quantity is exported.

In the first half of 1969, consumption of Wiltons and velvets was 10.6 million square yards, which was about 0.5 million square yards smaller than in the corresponding period of 1968.

The U.S. Industry

On the basis of information developed in its 1961 escape-clause investigation, the Commission found "that the domestic industry producing products that are 'like' the imported products under investigation is coextensive with the domestic production of Wilton and velvet floor coverings as they are now known in the trade." ^{1/} In 1960, Wiltons and velvets were produced in 35 plants by 27 individual concerns, and, in the aggregate, were the principal item of manufacture by those concerns and those plants. Twenty-four of the 27 concerns produced velvets; 22 made Wiltons; 9 made Axminsters; 14 made machine-tufted; and 8 made machine-knitted.

In 1968, Wiltons and velvets were produced in 25 plants by 22 concerns. Velvets were produced by 17 of these concerns; Wiltons, by 13; Axminsters, by 6; tufted, by 15; and knitted, by 3. Of the 25 plants in which Wiltons and velvets were produced, 12 produced no other floor coverings. Eight of the 25 plants were located in Pennsylvania; 3 in Massachusetts; 2 each in New Jersey, South Carolina, New Hampshire, New York, and North Carolina; and 1 each in Connecticut, Georgia, Maine, and Virginia. Subsequent to 1968, 4 concerns (4 plants) ceased the production of Wiltons and/or velvets. One additional concern (1 plant) ceased the production of Wiltons, but continued the production of velvets at another plant. Thus, currently, Wiltons and velvets are being produced by 18 concerns in 20 plants.

^{1/} TC Publication 28, 1961, p. 10.

Several of the producing concerns have only a small output of Wilton and velvet carpets. In 1968, 7 concerns produced approximately 86 percent of the total output of Wiltons and velvets; they manufactured about 79 percent of the Wiltons and 89 percent of the velvets. Wiltons and velvets accounted for 15 percent and tufted for 78 percent of the total output of machine-made floor coverings by these 7 concerns. With regard to the plants in which these concerns produced Wiltons and velvets, such carpets accounted for 32 percent of the production and 51 percent of the value of sales in 1968.

The share of tufted carpets in the total floor covering output of those concerns that produced Wiltons and velvets increased from 73 percent in 1966 to 76 percent in 1967 and to 78 percent in 1968. Considering only the plants in which Wiltons and velvets were produced in 1968, tufted carpet accounted for 67 percent of the production, Wiltons and velvets 29 percent, and other types about 4 percent. On the basis of sales value, Wiltons and velvets accounted for 45 percent in 1968.

Production

U.S. annual production of Wiltons and velvets has declined substantially since 1959. Production in 1968, 21 million square yards, was slightly higher than in 1967, but was 19 million square yards lower than in 1959 (table 2). The output in the first half of 1969 was about 6 percent lower than in the corresponding period of

1968. The annual production of Wiltons has declined more sharply than that of velvets in recent years. The index of production of Wiltons (1957-59=100) in 1968 is 35 percent while that of velvets is 74 percent (table 3). In the first half of 1969 the production of Wiltons was about 20 percent below and that of velvets slightly above the output of such carpets in the first half of 1968. Velvets continue to account for the major part of Wilton and velvet production.

The great bulk of the Wiltons currently produced consists of multicolored, specially designed and patterned carpets for the commercial market (hotels, restaurants, theaters, schools, etc.). The principal velvet type apparently is the tightly-woven one-level round-wire (loop pile) carpet designed primarily for use in commercial installations. Other important velvet types are the plush (cut pile); the twist, composed of tightly twisted pile yarns finished in cut pile; the serrated wire, a multilevel loop pile; and variations of the cut-and-loop and multilevel types. The available data indicate that currently more Wiltons and velvets are used in commercial installations than in residential installations.

Sales and inventories

Indexes of the sales and inventories of concerns that supplied data for the years 1957-68 (which in the aggregate accounted for more than 90 percent of the output of Wiltons and velvets during the period) are shown in table 4. The downward trend of sales approximated that of production. Between 1963 and 1968, when the index of the quantity of sales declined by 20 points, the index of the value of

sales declined by 12 points. The difference, as shown elsewhere, reflects changes in the composition rather than in price.

Annual yearend inventories of Wiltons and velvets have declined for a number of years. They were 4 percent lower (based on quantity) in 1968 than in 1967. During the period 1962-68, average yearend inventories were equivalent to about 20 percent of sales.

Employment and earnings

As reported to the Commission by concerns accounting for more than 90 percent of production throughout the period, the number of production and related workers in plants manufacturing Wiltons and velvets declined from 9,007 in 1963 to 7,609 in 1967, but increased to 7,903 in 1968 (table 5). The increase, however, took place in employment on other products, chiefly tufted carpets, rather than on Wiltons and velvets. The number of man-hours worked on Wiltons and velvets declined in 1968, as it has done for a number of years. It was only 70 percent as large in 1968 as in 1963, and accounted for only 43 percent of total man-hours worked in the plants, instead of 52 percent as in the beginning of the period. Reported data indicate that the output per worker on tufted carpeting is several times as large as on woven. The average age of experienced weavers is high and replacements are difficult to obtain.

A tight labor market has both contributed to the shift by producers from woven to tufted carpets and minimized the effect of this shift on total employment. Of several hundred workers scheduled to be released in January 1969, upon termination by Mohasco Industries, Inc.,

of its woven carpet production at Amsterdam, New York, one-half had found other employment before that time, and a majority of those remaining in the labor force had found employment in the next 4 months. Although given the opportunity, none were willing to move to the carpet plant of Bigelow-Sanford, Inc., at Thompsonville, Connecticut, 145 miles away.

Wages paid for work on Wiltons and velvets were almost constant at \$17 million to \$18 million a year from 1964 to 1968, as the reduction in man-hours was approximately offset by the increase in the hourly rate. At its level in 1968, the average rate per man-hour on Wiltons and velvets was \$2.53, as compared with \$2.21 for textile mill products as a whole and \$3.01 for all manufacturing.

Prices

Based on the average for their leading items, as shown below, producers' prices (per square yard) for Wiltons and velvets, as well as for tufted carpeting, have changed little since 1966, despite a substantial increase in U.S. prices as a whole.

Kind	As of June 30--			
	1966	1967	1968	1969
Wilton-----	\$6.31	\$6.03	\$6.25	\$6.28
Velvet-----	8.04	7.44	7.68	7.64
Tufted-----	4.57	4.29	4.43	4.48

Little change has occurred also in the unit value of producers' shipments, derived (per square yard) from reports of the U.S. Bureau of the Census as follows:

Kind	1966	1967	1968	Jan.-June 1969
Wilton-----	\$7.87	\$7.72	\$8.07	\$7.85
Velvet-----	6.78	6.56	6.84	6.94
Tufted-----	3.30	3.29	3.50	3.47

The unit values above, which represent total shipments of each type, differ substantially from the average prices reported by producers, which are based on selected items representing leading types by each company in 1968.

A large difference between Wiltons and velvets and tufted carpeting occurs both in average price and in unit value of sales. This difference results from differences in the kind and amount of fiber in the surface pile, as well as in manufacture. As shown below for the producers' leading items in 1968, the proportion of wool, rather than manmade fibers, in the surface pile is 53 percent for the velvets (by far the principal kind of woven carpeting) and 18 percent for the Wiltons, as compared with only 2 percent for the tufted carpeting. Besides containing a larger proportion of wool, the Wiltons and velvets contain a larger amount (weight) of fiber in the pile, as the

result, at least in the case of Wiltons, of pile fiber buried in the back.

Kind	Surface pile	
	Proportion of wool	Weight
	<u>Percent</u>	<u>Pounds per sq. yd.</u>
Wilton-----	18	2.5
Velvet-----	53	2.7
Tufted-----	2	2.1

U.S. Imports

U.S. imports of Wiltons and velvets declined sharply from the record high of 8.2 million square yards in 1961 to a low of 519 thousand square yards in 1965. After 1965, they increased each year, reaching 879 thousand square yards in 1968 (table 2). Imports in the first 6 months of 1969 were 18 percent larger than in the comparable period of 1968. Wiltons are estimated to comprise more than 60 percent of 1968 imports and velvets the remainder.

Composition

The particular types of Wiltons and velvets which accounted for the bulk of imports in 1961 no longer enter in significant quantity. These types were (1) figured Wilton roll goods and (2) twist-type velvets, both low-priced and sold largely for wall-to-wall installation in the residential market. The sharp decline in imports is attributed not only to the duty increase in 1962, but to price

competition from domestic tufted carpets, and to the declining popularity of figured carpets.

Unlike the domestic Wiltons and velvets, which are in large part of manmade fiber and are sold principally on order for commercial installation, the imports are almost wholly of wool pile and are sold (as in 1961) principally for household use. The imported Wiltons are largely cut-pile rugs of oriental design, made on face-to-face looms, ^{1/} and retailing in the United States for \$100 to \$300 each in a 9' x 12' size. Oriental-design Wiltons are made by only two U.S. firms. They are a small part of the output by those firms and a negligible part of the U.S. production of Wiltons. Rugs of oriental design produced by one manufacturer on an Axminster-type loom are of superior quality and do not undergo competition from imported Wiltons. The relatively little imported velvet carpeting consists largely of plush type, with a dense cut pile. The domestic, on the other hand, is largely of low loop-pile construction, with only a small proportion of plush type.

The average foreign value of Wilton and velvet imports in 1968 was \$5.50 per square yard, a decrease of 36 cents from 1967. In January-June 1969 it was \$5.02 per square yard. The recent decrease apparently reflects a change in the composition rather than a reduction in list prices. List prices reported by importers were constant,

^{1/} The face-to-face loom uses two shuttles to weave a double fabric with interconnecting pile yarns which are cut as the material comes off the loom to form the cut-pile surface on both carpets. There is no known domestic production of Wilton floor coverings on face-to-face looms.

for the most part, over the period January 1966-June 1969. Prices for the best-selling types averaged \$10.80 per square yard for Wiltons and \$12.15 for velvets in 1968. The average unit value of sales by importers was \$11.50 per square yard in that year as compared with an average (as shown by census data) of \$7.20 by U.S. producers. Importers' list prices for Wiltons were generally in the range of \$9.00 to \$15.00 per square yard and those for velvets in the range of \$10.00 to \$16.00 per square yard. The maximum reduction in price that could result from restoration of the trade agreement rate on these articles would leave them priced appreciably higher than most domestic Wiltons and velvets.

Principal sources

Belgium, Italy, and the United Kingdom together supplied 95 percent of the quantity and value of U.S. imports of Wilton and velvet carpets and rugs in 1968 (table 6). Belgium supplied 74 percent in both quantity and value; Italy supplied 15 percent of the quantity and 13 percent of the value; and the United Kingdom supplied 6 percent of the quantity and nearly 8 percent of the value.

Belgium has been the principal source of U.S. imports of Wiltons and velvets for many years, usually supplying well over half the annual total. Nearly 90 percent of Belgium's output of all textile floor coverings is exported. The principal market for the exports in 1968 was West Germany, which took more than one-third (by value) of the total; exports to the United States were less than 5 percent.

Wiltons and velvets account for over half the value of U.S. imports of floor coverings from Belgium.

Italy has been the second largest source of Wilton and velvet imports since 1965. Italy, like Belgium, exports the bulk of its domestic output of textile floor coverings. West Germany is its principal market, accounting for about 30 percent of the total value in 1968. Exports to the United States were about 8 percent of the total. Wiltons and velvets account for about two-thirds of the value of U.S. imports of floor coverings from Italy.

The United Kingdom has supplied a small share (less than 10 percent) of U.S. imports of Wiltons and velvets over the years. Exports to the United States account for only 2 percent of Britain's total exports of machine-made carpets and rugs and, of the exports to the United States, Wiltons and velvets are less than half.

Imports of Wiltons and velvets from Japan have been negligible since 1965. In 1961 Japan supplied over 3 million square yards, or about 37 percent of total U.S. imports of Wiltons and velvets. Most of Japan's output of woven and tufted floor coverings is consumed in the home market. Although the United States is the leading market for Japanese exports of floor coverings, nearly all of the exports consist of braided and hooked rugs.

Profit-and-Loss Experience of U.S. Producers on
Their Wilton and Velvet Operations

Fifteen concerns, accounting for 90 percent of U.S. sales of Wiltons and velvets in 1968, furnished adequate profit-and-loss data on their Wilton and velvet operations. Twelve of the 15 produced other types of carpets, such as machine-tufted and machine-knitted, as well as machine-woven carpets and rugs, in the same plants.

The net sales of Wilton and velvet carpets and rugs by the 15 concerns amounted to \$133 million in both 1967 and 1968 (table 7). Net profits earned by the 15 concerns on their Wilton and velvet operations were \$6.3 million in 1967 and \$9.6 million in 1968. The ratio of the net profits to net sales on the Wilton and velvet operations was 4.7 percent in 1967, and 7.2 percent in 1968. Although the Wilton and velvet operations of the 15 concerns in both years were profitable in the aggregate, net operating losses were reported by six of them in 1967 and two in 1968 * * * . The six concerns that reported losses in 1967 accounted for about 15 percent of the total sales of Wilton and velvet carpets and rugs by the reporting firms; the two concerns reporting losses in 1968 accounted for about 2 percent.

Two companies which were included in the previous investigation (TEA-I-EX-2, September 1967) were unable to submit profit-and-loss information for the years covered.

* * * * *

Statistical Appendix

Table 1.--Machine-woven and machine-tufted pile carpets and rugs: U.S. production, by types, 1958-68

Year	Machine-woven 1/			Machine-tufted 2/			Grand total
	Wilton and velvet	All other 3/	Total	4' x 6' and smaller	Automobile and aircraft	Over 4' x 6'	
1958	34,258	16,802	51,060	34,057	6,508	73,083	113,648
1959	40,570	19,484	60,054	36,416	4/	96,107	132,523
1960	31,530	16,781	48,311	38,220	4/	113,764	151,984
1961	28,663	15,614	44,277	44,530	4/	134,095	178,625
1962	29,473	14,614	44,087	48,569	30,437	145,816	224,822
1963	28,290	13,983	42,273	52,432	34,191	176,362	262,985
1964	24,248	13,507	37,755	60,674	38,539	219,703	318,916
1965	23,546	12,275	35,821	67,389	48,474	259,885	375,748
1966	23,359	10,492	33,851	72,705	43,298	288,710	407,713
1967	20,855	9,062	29,917	62,310	40,198	318,160	420,668
1968	21,169	9,803	30,972	74,481	41,776	394,747	511,004

1/ In recent years, significant quantities of machine-woven pile floor coverings have been made on upholstery-type looms, but only small quantities of such production are believed to be included in this tabulation.

2/ Shipments. Data for 1958 and 1959 are not strictly comparable with those for later years.

3/ Includes sheen, chenille, Axminster, and others.

4/ Not separately reported. Believed to be included with floor coverings over 4' x 6'.

Source: Production of machine-woven pile carpets and rugs estimated by the U.S. Tariff Commission staff from data supplied by domestic producers; shipments of machine-tufted as reported by the Bureau of the Census, Facts for Industry and Current Industrial Reports.

Table 2.--Wilton and velvet carpets and rugs: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, calendar years 1958-68, fiscal years ending June 30, 1962-69, and January-June 1962-69

Period	Produc-	Imports	Exports ^{2/}	Apparent	Ratio of	
	tion ^{1/}			consump-	Produc-	Consump-
	tion ^{3/}			tion ^{3/}	tion	tion
	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	Percent	Percent
	sq. yds.	sq. yds.	sq. yds.	sq. yds.		
1958-----	34,258	4,632	266	38,624	13.5	12.0
1959-----	40,570	6,982	196	47,356	17.2	14.7
1960-----	31,530	8,165	186	39,509	25.9	20.7
1961-----	28,663	8,234	221	36,676	28.7	22.5
1962-----	29,473	5,919	230	35,162	20.1	16.8
1963-----	28,290	^{4/} 1,853	188	29,955	6.6	6.2
1964-----	24,248	^{4/} 949	149	25,048	3.9	3.8
1965-----	23,546	519	245	23,820	2.2	2.2
1966-----	23,359	574	235	23,698	2.5	2.4
1967-----	20,855	669	204	21,320	3.2	3.1
1968-----	21,169	879	327	21,721	4.2	4.0
Fiscal year ending						
June 30--						
1962-----	29,423	9,070	248	38,245	30.8	23.7
1963-----	29,419	2,407	175	31,651	8.2	7.6
1964-----	25,566	^{4/} 1,472	187	26,851	5.8	5.5
1965-----	23,563	^{4/} 594	192	24,009	2.7	2.7
1966-----	24,266	494	233	24,527	2.0	2.0
1967-----	21,143	581	246	21,478	2.7	2.7
1968 ^{5/} -----	21,551	822	242	22,131	3.8	3.7
1969-----	20,557	948	313	21,192	4.6	4.5
January-June--						
1962-----	15,157	4,508	135	19,530	29.7	23.1
1963-----	15,103	995	80	16,018	6.6	6.2
1964-----	12,409	^{4/} 614	75	12,948	4.9	4.7
1965-----	11,724	259	115	11,868	2.2	2.2
1966-----	12,444	234	103	12,575	1.9	1.9
1967-----	10,228	240	113	10,355	2.3	2.3
1968 ^{5/} -----	10,924	393	152	11,165	3.6	3.5
1969-----	10,312	462	138	10,636	4.5	4.3

^{1/} In recent years, a relatively small quantity (believed to be less than 5 percent) of floor coverings woven on upholstery-type looms has been included in this tabulation.

^{2/} Exports of wool floor coverings.

^{3/} Production plus imports minus exports.

^{4/} Contains a relatively small amount of pile floor coverings other than Wiltons and velvets, estimated to be less than 10 percent.

^{5/} Revised.

Source: Production estimated by U.S. Tariff Commission from data supplied by domestic producers; imports and exports compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table 3.--Wilton and velvet carpets and rugs: Indexes of U.S. production, 1957-68

(1957-59=100)

Year	Wilton	Velvet	Total
1957	98	100	99
1958	90	94	92
1959	112	106	109
1960	86	83	85
1961	70	82	77
1962	70	86	79
1963	60	89	76
1964	42	83	65
1965	36	85	63
1966	37	83	63
1967	35	73	56
1968	35	74	57

Source: Computed from data supplied the U.S. Tariff Commission by domestic producers.

Table 4.--Wilton and velvet carpets and rugs: Indexes of U.S.
net sales and inventories, 1957-68

Year	(1957-59=100)		
	Net sales		Inventories as of Dec. 31 (quantity)
	Quantity	Value	
1957	97	102	102
1958	95	92	93
1959	108	106	104
1960	89	88	93
1961	79	80	92
1962	84	83	88
1963	80	80	87
1964	69	75	77
1965	68	73	70
1966	66	73	69
1967	60	68	64
1968	60	68	61

Source: Computed from data submitted to the U.S. Tariff Commission by U.S. firms whose output is estimated to have accounted for more than 90 percent of the total production of Wilton and velvet carpets and rugs during the period 1957-68.

Table 5.--Employment and earnings of production and related workers in Wilton and velvet plants in the United States, 1963-68

Item	1963	1964	1965	1966	1967	1968
Number of workers-----	9,007	8,367	8,329	8,100	7,609	7,903
Man-hours worked--						
On all products						
thousands--	19,469	17,892	17,671	17,130	16,067	16,559
On Wiltons and						
velvets--thousands--	10,057	8,558	8,167	7,766	7,170	7,047
Wages paid on Wiltons						
and velvets:						
Total--1,000 dollars--	19,360	17,435	17,510	17,419	16,809	17,809
Average per man-hour--	\$1.93	\$2.04	\$2.14	\$2.24	\$2.34	\$2.53

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. concerns whose output is estimated to have accounted for more than 90 percent of the total production of Wiltons and velvets during 1963-68.

Table 6.--Wilton and velvet floor coverings: U.S. imports for consumption, by specified sources, 1964-68 and January-June 1969

Source	1964	1965 ^{1/}	1966 ^{1/}	1967	1968	Jan.-June 1969
Quantity (1,000 square yards)						
Belgium and Luxembourg--	611	266	379	498	649	328
Italy-----	32	95	106	101	^{2/} 132	84
United Kingdom-----	61	50	45	40	55	25
West Germany-----	14	13	17	9	26	9
France-----	57	20	17	14	6	6
Japan-----	145	49	6	3	5	2
All other-----	29	26	4	4	6	8
Total-----	^{3/} 949	519	574	669	879	462
Value (1,000 dollars)						
Belgium and Luxembourg--	2,302	1,826	2,197	2,907	3,571	1,574
Italy-----	236	495	466	503	^{2/} 641	383
United Kingdom-----	393	333	288	266	359	180
West Germany-----	86	88	104	56	147	66
France-----	262	130	104	104	41	40
Japan-----	598	270	37	34	23	11
All other-----	144	118	40	52	54	67
Total-----	^{3/} 4,021	3,260	3,236	3,922	4,837	2,321
Unit value (per square yard) ^{4/}						
Belgium and Luxembourg--	\$3.77	\$6.87	\$5.80	\$5.83	\$5.50	\$4.80
Italy-----	7.37	5.22	4.38	4.99	4.86	4.52
United Kingdom-----	6.42	6.61	6.43	6.66	6.56	7.28
West Germany-----	6.14	6.52	6.01	5.99	5.66	7.68
France-----	4.57	6.61	6.22	7.48	6.98	6.20
Japan-----	4.13	5.55	5.88	10.16	4.30	5.42
All other-----	4.90	4.54	8.64	15.18	8.30	8.70
Average-----	4.24	6.28	5.63	5.86	5.50	5.02

^{1/} Country breakdown partly estimated.

^{2/} Includes 11 thousand square yards, valued at 50 thousand dollars, shipped from Italy but country of origin unknown.

^{3/} Contains a relatively small amount of pile floor coverings other than Wiltons and velvets, estimated to be less than 10 percent.

^{4/} Calculated from the unrounded figures.

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

Table 7.--Financial experience of 15 U.S. producers on their Wilton and velvet operations, 1967 and 1968

Item	1967	1968
	<u>1,000</u>	<u>1,000</u>
	<u>dollars</u>	<u>dollars</u>
Net sales-----	132,788	133,480
Cost of goods sold-----	109,029	106,407
Gross profit-----	23,759	27,073
Administrative and selling expense-----	17,463	17,436
Net operating profit-----	6,296	9,637
Ratio, net operating profit		
to net sales-----percent--	4.7	7.2

Source: Compiled from data supplied to the U.S. Tariff Commission by domestic producers.

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