

UNITED STATES TARIFF COMMISSION

**VISCOSE RAYON YARNS WHOLLY OF CONTINUOUS FIBERS:
WORKERS OF THE
LEWISTOWN, PA., RAYON PLANT OF
AMERICAN VISCOSE DIVISION, FMC CORP.**

**Report to the President
on Investigation No. TEA-W-167
Under Section 301(c)(2) of the Trade Expansion Act of 1962**



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C O N T E N T S

	<u>Page</u>
Report to the President-----	1
Finding of the Commission-----	2
Considerations Supporting the Commission's Finding-----	3
Information obtained in the investigation:	
Articles under investigation-----	A-1
U.S. tariff treatment:	
Lewistown-type yarns-----	A-4
Yarns of continuous manmade fibers-----	A-4
Other manmade-fiber articles-----	A-5
U.S. consumption:	
Lewistown-type yarns-----	A-6
Yarns of continuous manmade fibers-----	A-6
Other manmade-fiber articles-----	A-7
All textile fibers-----	A-7
U.S. production:	
Lewistown-type yarns-----	A-8
Yarns of continuous manmade fibers-----	A-8
Other manmade-fiber articles-----	A-9
U.S. imports:	
Lewistown-type yarns-----	A-9
Yarns of continuous manmade fibers-----	A-9
Other manmade-fiber articles-----	A-10
U.S. exports:	
Lewistown-type yarns-----	A-11
Yarns of continuous manmade fibers-----	A-12
Other manmade-fiber articles-----	A-12
FMC Corp-----	A-13
Fiber and Film Group-----	A-13
American Viscose Division-----	A-14
* * *	
Statistical appendix-----	A-15

Appendix Tables

1. Yarns wholly of continuous manmade fibers, singles, with twist but not over 20 turns per inch (TSUS items 310.01 and 310.02): Changes in U.S. rates of duty, ad valorem equivalents of the specific rates, and imports for consumption of such yarns wholly of continuous cellulosic fibers (TSUSA items 310.0125 and 310.0225), specified years 1930 to 1972----- A-16
2. Manmade-fiber textiles: Ad valorem equivalents of the rates of duty and U.S. imports for consumption, by groups, specified years 1934 to 1971----- A-17

CONTENTS

	<u>Page</u>
3. Viscose rayon yarns of continuous fibers: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1967-71-----	A-18
4. Yarns wholly of continuous manmade fibers: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1961-71-----	A-19
5. Woven fabrics of manmade fibers (except glass): U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1961-71---	A-20
6. Manmade-fiber textile materials: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1961-71-----	A-21
7. Textile fibers: U.S. mill consumption, by kinds, 1961-71---	A-22
8. Manmade fibers: U.S. production, by types, 1961-71-----	A-23
9. Yarns wholly of continuous manmade fibers: U.S. imports for consumption, by types, 1964-71 and January-September 1972-----	A-24
10. Manmade-fiber textiles: U.S. imports for consumption, by types, 1965-71-----	A-25
11. Textiles, wholly or in chief value of manmade fibers: U.S. general imports, by kinds, 1964-71, January-June 1971, and January-June 1972-----	A-26

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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 an individual concern. 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,
February 12, 1973.

To the President:

In accordance with section 301(f)(1) of the Trade Expansion Act (TEA) of 1962 (76 Stat. 885), the U.S. Tariff Commission herein reports the results of an investigation made under section 301(c)(2) of that act in response to a workers' petition for determination of eligibility to apply for adjustment assistance.

On December 13, 1972, a petition was received from the Textile Workers Union of America on behalf of the former workers of the Lewistown, Pa., plant of the American Viscose Division of the FMC Corp., San Jose, Calif., for a determination of their eligibility to apply for adjustment assistance. On January 2, 1973, the Commission instituted an investigation (TEA-W-167) to determine whether, as a result in major part of concessions granted under trade agreements, articles like or directly competitive with viscose rayon yarns wholly of continuous fibers (of the types provided for in items 310.01 and 310.02 of the Tariff Schedules of the United States (TSUS)), produced by said firm are being imported into the United States in such increased quantities as to cause, or threaten to cause, the unemployment or underemployment of a significant number or proportion of the workers of such firm or an appropriate subdivision thereof.

Public notice of the receipt of the petition and the institution of the investigation was published in the Federal Register on January 9, 1973 (38 F.R. 1160). No public hearing was requested and none was held.

The information in this report was obtained principally from the petitioners, from officers of the American Viscose Division of the FMC Corp., and from the Commission's files.

Finding of the Commission

On the basis of its investigation, the Commission finds unani-
mously that articles like or directly competitive with viscose rayon
yarns wholly of continuous fibers produced by the Lewistown, Pa. plant
of the American Viscose Division of the FMC Corporation, are not, as a
result in major part of concessions granted under trade agreements, be-
ing imported into the United States in such increased quantities as to
cause, or threaten to cause, unemployment or underemployment of a sig-
nificant number or proportion of the workers of such plant.

Considerations Supporting the Commission's Finding

Section 301(c)(2) of the Trade Expansion Act of 1962 has established four conditions that must be met in the judgment of the Commission if an affirmative determination is to be reached. The determination must be negative if any one of the four conditions is not met. The four conditions are as follows:

- (1) Articles like or directly competitive with those produced by the workers concerned must be imported in increased quantities;
- (2) The increased imports must be in major part the result of concessions granted under trade agreements;
- (3) A significant number or proportion of the workers concerned must be unemployed or underemployed or threatened therewith; and
- (4) The increased imports resulting in major part from trade-agreement concessions must have been the major factor causing or threatening to cause the unemployment or underemployment.

In the case at hand, we have concluded that the fourth condition has not been met--namely, increased imports are not the major factor causing, or threatening to cause, unemployment or underemployment of the petitioning workers.

The petitioning workers in this case had been employed at the Lewistown rayon plant of American Viscose Division, FMC Corp., Lewistown, Pa. The rayon plant was one of two plants of the American Viscose Division, located adjacent to the Juniata River at Lewistown, Pa. The principal product of the rayon plant at Lewistown was viscose rayon yarns wholly of continuous fibers. Most of the plant's output

was sold to be utilized in making fabrics for draperies, upholstery, mattress tickings, and linings for men's garments and shoes. The plant began operations in 1921, and was one of the largest rayon yarn producing facilities in the United States. The Lewistown rayon plant was operating at a high level of capacity when the Juniata River flooded on June 23, 1972, causing the cessation of operations and inflicting extensive damage on the plant and equipment. The evidence in this case shows that the shutdown of the plant, and the subsequent unemployment of the workers, resulted from the flood--not increased imports.

Although the market for viscose rayon yarns of continuous fibers fluctuated during the 1967-71 period, estimated U.S. consumption in 1971 (the last full year of the plant's operation) was 20 percent above the 1970 level. Moreover, employment in the Lewistown plant on rayon yarn operations in 1971 was substantially above the 1970 level. Employment continued to increase in 1972 and at the time of the flood was * * *. Sales in 1971 of the yarn produced at the Lewistown rayon plant were * * *. Sales in 1972, up to the time of the flood, were * * *. Had the flood not occurred and if sales continued at their current level it is likely that 1972 sales would have been * * *.

* * * * *

In light of the foregoing circumstances, it is clear that the Lewistown rayon plant would not have closed had the flood not occurred. Therefore, our determination is negative because increased imports of like or directly competitive articles were not the major factor causing the shutdown of the plant and the unemployment of the workers.

INFORMATION OBTAINED IN THE INVESTIGATION

Articles Under Investigation

At Lewistown, Pa., the American Viscose Division of the FMC Corp. had two separate plants; one plant produced rayon products and the other, polyester products. The rayon-producing plant was closed in June 1972, but at the present time part of the plant is being utilized by the American Viscose Division to manufacture tire fabric and cord and industrial strapping from yarns produced at another plant. Prior to June 1972 the rayon plant produced principally viscose rayon yarns wholly of continuous fibers; other products included viscose rayon staple * * * and tire fabric and cord and industrial strapping * * *. Because the products other than viscose rayon yarn of the rayon plant accounted for a minor portion of its production, this report will deal only with the yarn manufactured at that plant.

Viscose rayon yarns wholly of continuous fibers are in the form of filaments of great length, usually over 300 yards. Two or more monofilaments are necessary to form a multifilament yarn, and these are assembled or held together usually by twist. The filaments are formed by forcing or extruding a chemical substance (polymer) through tiny holes of a perforated device known as a spinneret. The filaments emerging from the holes are then solidified either in a chemical bath or upon exposure to the air, depending upon the method used. The polymer forced through

the spinneret may be (1) a solution derived from fibrous material such as cellulose (resulting in rayon or acetate), or (2) a solution of a fiber-forming substance which has been produced by various chemical processes (resulting in nylon, polyester, acrylic, and so forth).

The filaments used in making the viscose rayon yarns at Lewistown are generally extruded as grouped filaments. After extrusion the grouped filaments are twisted (one-fifth of a turn or more per inch, referred to in the trade as producers' twist) and become singles yarns. After the producers' twist is inserted, the yarns are either (1) shipped directly to customers without further modification, (2) given additional twists by the producers and shipped, (3) plied by producers and shipped as plied yarns, or (4) subjected by the producers to a process known as texturing 1/ and shipped. Some extruded yarns (especially those for industrial purposes, as in tires) are woven into fabrics by the yarn producers and then sold. The additional twisting, the plying, and the texturing may also be performed by a manufacturing customer using the yarns described in (1) above.

Viscose rayon yarns wholly of continuous fibers (made by the viscose process and consisting of cellulosic filaments) may consist of 10 to more

1/ The products made by this process are known as textured yarns. According to schedule 3, pt. 1, subpt. E, statistical headnote 1 of the Tariff Schedules of the United States Annotated (1972), "the term "textured", as used with reference to yarns, means such yarns having special characteristics of bulk or elasticity, or both, which have been imparted to the filaments, or the yarns, by twisting and untwisting, false twisting, crimping, curling, or other additional processing subsequent to the extrusion of the filaments from the spinneret. . . ."

than 3,000 filaments; * * * of those produced at the Lewistown plant had 40 filaments. * * *.

Viscose rayon yarns wholly of continuous fibers are made in three tenacities: 1/ Regular, intermediate, and high. Regular- and intermediate-tenacity viscose rayon yarns can be made on virtually the same equipment; however, high-tenacity yarns, by reason of their distinct molecular arrangements, require substantially different polymers before spinning and usually stronger processing equipment before their final shipping form. Regular- and intermediate-tenacity viscose yarns are generally used in apparel not demanding exceptional breaking resistance, such as underwear, dresses, and lounge wear; in home furnishings such as draperies, bedspreads, and quilts; and in other consumer products such as umbrellas and toys. High-tenacity viscose yarns are used mainly in articles requiring great breaking strength and abrasion resistance, such as tires and industrial belts; and the remainder is used principally in upholstery, slipcovers, industrial hose, and luggage.

Most of the viscose rayon yarns produced at Lewistown were used in draperies, upholstery, and mattress tickings, and in lining fabrics used in men's apparel and in shoes.

1/ Strength in grams per denier.

U.S. Tariff Treatment

Lewistown-type yarns

Imports of the types of viscose rayon yarns similar to those produced at Lewistown are dutiable as singles, with twist but not over 20 turns per inch, under TSUS item 310.01 if valued not over \$1 per pound and under item 310.02 if valued over \$1 per pound. These TSUS items also include yarns wholly of other cellulosic and noncellulosic continuous fibers. The rate history of yarns wholly of cellulosic continuous fibers and imports of such yarns (except textured) are shown in table 1.

The rate of duty on imports under item 310.01 was reduced from 50 cents per pound in 1930 to 12.5 cents per pound in 1972, resulting in a reduction in the ad valorem equivalent from 60.3 percent to 15.1 percent, or of 75 percent. The rate on imports under item 310.02 during this period was reduced from 50 percent ad valorem to 16 percent ad valorem, or by 68 percent.

Yarns of continuous manmade fibers

Other types of yarns of continuous manmade fibers (items 310.05 through 310.21) and glass yarns (items 309.98 and 309.99) have been subject to numerous rates of duty which have also been reduced in trade agreements. It is estimated that the various reductions in the rates that occurred between 1930 and 1959 averaged about 50 percent in the aggregate. No reductions in the rates of duty occurred during 1959-67, but in the Kennedy Round the rates were further reduced an average of 50 percent, in five annual stages, the last reduction becoming effective January 1, 1972.

Other manmade-fiber articles

The rates of duty on other manmade-fiber articles, consisting broadly of yarns other than those of continuous manmade fibers, sewing thread, wastes, filaments (including staple fiber), fibers, fabrics, and apparel, have also been reduced through trade agreements. The rates on these fibers, yarns, fabrics, and articles are too numerous to be mentioned separately here, but the estimated aggregate average ad valorem equivalent of the rates of duty on these articles declined from 69.6 percent in 1934 to 33.8 percent in 1971, or by about 51 percent, as shown in table 2.

The major reductions in the ad valorem equivalents of the duties on the manmade-fiber articles included in table 2 took place from 1934 to 1952, and on three groups there was actually an increase from 1952 to 1962, reflecting the absence of any general reduction in the rates, a change in the composition of imports, and changes in the value of imports. In the Kennedy Round, reductions in the rates of duties on most manmade-fiber articles other than apparel approximated 50 percent, but there were no duty reductions on most apparel of wool or manmade fibers, of which the volume of imports was large. The effect of the reductions on the average ad valorem equivalents of the categories shown has not been substantial.

U.S. Consumption

Lewistown-type yarns

Data on the domestic consumption of the specific types of viscose rayon yarns made by the Lewistown plant are not available. However, U.S. consumption of all viscose rayon yarns of continuous fibers, including the types made by the Lewistown plant, fluctuated during the 1967-71 period. It increased from 282 million pounds in 1967 to a peak of 337 million pounds in 1968, then declined to a low of 227 million pounds in 1970 (table 3). An important reason for the decline was the increasing demand for yarns of other types of manmade fibers in certain uses. With an increase in demand in 1971 for viscose rayon yarns, consumption of such yarns in that year increased by about 20 percent over that in 1970.

Yarns of continuous manmade fibers

The consumption of all yarns wholly of continuous manmade fibers increased from 1.1 billion pounds in 1961 to 2.6 billion pounds in 1968, then declined to 2.3 billion pounds in 1970 (table 4). In 1971, consumption increased by 18 percent to 2.7 billion pounds. Approximately 43 percent of the quantity of these yarns consumed in 1971 consisted of nylon; 17 percent, acetate; 15 percent, rayon; 12 percent, glass; and 10 percent, polyester. In 1971 rayon yarns of continuous fibers of all types were used principally in tires; acetate yarns, in dresses and apparel linings; nylon yarns, in tires and carpets; and glass yarns, in the reinforcement of plastics.

Other manmade-fiber articles

The consumption of all broadwoven fabrics of manmade fibers (except glass) increased from 2.9 billion square yards in 1961 to 7.1 billion square yards in 1969 (table 5), and then declined to 6.8 billion square yards in 1970 and to 6.7 billion square yards in 1971.

U.S. consumption of all manmade-fiber textile materials (including fibers and the fiber equivalent of yarns, fabrics, and finished articles) increased without interruption from 1.8 billion pounds in 1961 to 5.7 billion pounds in 1969. In 1970 it declined slightly, but reached a peak in 1971 of 6.7 billion pounds (table 6).

All textile fibers

U.S. mill consumption of all major textile fibers (including manmade and natural) during 1961-71 increased from 6.6 billion pounds in 1961 to 9.8 billion pounds in 1969, declined to 9.6 billion pounds in 1970, and then increased to a peak of 10.7 billion pounds in 1971 (table 7). During this period a marked change occurred in the consumption of individual fibers. The use of cotton, wool, flax, and silk declined, while the use of manmade fibers increased. Manmade fibers have accounted for more than half of the annual consumption of all textile fibers in recent years. In 1971, consumption of manmade fibers was over three times as great as in 1961. Virtually all of the increase was accounted for by noncellulosic fibers (nylon, polyester, acrylic, and so forth).

U.S. Production

Lewistown-type yarns

Data on the domestic production of the specific types of viscose rayon yarns made by the Lewistown plant are not available. U.S. production of all viscose rayon yarns of continuous fibers, including the types made by the Lewistown plant, fluctuated during the 1967-71 period. It amounted to 286 million pounds in 1967, and rose to 338 million pounds in 1968 (table 3). Production then declined to 248 million pounds in 1970, but increased to 287 million pounds in 1971, or by 15 percent. * * *

Yarns of continuous manmade fibers

The combined domestic production of acetate and noncellulosic yarns ^{1/} of continuous manmade fibers increased greatly from 1961 to 1971 and far surpassed the production of rayon yarns, which had declined over the period. Production of acetate yarn (including some grouped filaments) increased from 249 million pounds in 1961 to 463 million pounds in 1970, then declined to 449 million pounds in 1971 (table 8). Noncellulosic-yarn production increased from 497 million pounds in 1961 to 2.2 billion pounds in 1971. By 1971 the U.S. output of acetate yarns was almost 50 percent greater than, and production of noncellulosic yarns were about seven times as great as, that of rayon yarns.

^{1/} Including monofilaments and some grouped filaments.

Other manmade-fiber articles

U.S. production of all broadwoven fabrics of manmade fibers (except glass) increased from 3.0 billion square yards in 1961 to 7.0 billion square yards in 1969, and then declined to 6.6 billion square yards in 1971 (table 5). In 1970 and 1971 the largest declines occurred in fabrics containing rayon and nylon fibers. Most broadwoven fabrics of manmade fibers produced domestically are consumed by domestic producers of apparel, home furnishings, and industrial products.

U.S. production of all manmade-fiber textile materials increased from 2 billion pounds in 1961 to 6.4 billion pounds in 1971 (table 6).

U.S. Imports

Lewistown-type yarns

Data on U.S. imports of the specific types of viscose rayon yarns made by the Lewistown plant are not available. U.S. imports of all viscose rayon yarns of continuous fibers, including the types made by the Lewistown plant, increased from 4.6 million pounds in 1967 to 8.7 million pounds in 1968, and then declined to 2.2 million pounds in 1970 (table 3). In 1971, however, imports were almost double those in 1970, amounting to 4.1 million pounds. The ratio of imports to consumption fluctuated between 0.9 percent in 1969 and 1.6 percent in 1967. It was 1.5 percent in 1971.

Yarns of continuous manmade fibers

Imports of yarns wholly of continuous manmade fibers increased sharply from 5 million pounds in 1961 to 57 million pounds in 1968, declined to 39 million pounds in 1969, but then continued the sharp upward trend to

133 million pounds in 1970 and to a high for the period of 246 million pounds in 1971 (table 4). The largest increase occurred in textured yarns, although nontextured yarns wholly of continuous noncellulosic fibers with twist but not over 20 turns per inch also showed a strong increase in 1970 and 1971. During 1961-71, the ratio of imports to consumption increased from 0.5 percent to 9.1 percent.

Imports of all yarns wholly of continuous manmade fibers with twist but not over 20 turns per inch are shown as "specified singles" in table 9. These yarns are predominately producers' twist yarns. Imports of the cellulosic "specified singles" yarns (including rayon and acetate) fluctuated during 1964-71. In January-September 1972, they amounted to 6.4 million pounds, valued at \$5.1 million, already more than the total for 1971. The increase is attributed principally to * * *.

Other manmade-fiber articles

Imports of broadwoven fabrics of manmade fibers (except glass) increased from 40 million square yards in 1961 to 255 million square yards in 1966, declined to 178 million square yards in 1967, and then increased steadily to 253 million square yards in 1971 (table 5). Almost all of the imports were of quality comparable to that of similar domestically produced fabrics; their prices, however, were usually lower. During the 1961-71 period, the highest ratio of imports to consumption was 4.9 percent in 1966. It was 3.8 percent in 1971.

Annual imports of all manmade-fiber textile materials increased almost without interruption from 81 million pounds in 1961 to 859 million pounds in 1971 (table 6). The ratio of imports to consumption increased from 4.4 percent in 1961 to 12.7 percent in 1971. By far the greater part of the increase in imports from 1965 to 1971 occurred in yarns of continuous manmade fibers and in apparel (table 10). Data on imports of textiles and apparel of manmade fibers are shown in greater detail in table 11.

Shipments of most articles of textiles and apparel of manmade fibers, including the viscose rayon yarns herein considered, from Japan, Hong Kong, the Republic of Korea, Taiwan, Malaysia, and Portugal (Macao) are subject to quantitative limitations pursuant to bilateral agreements between each of these countries and the United States. The agreements have the effect of controlling--to some extent--increases in imports in each year covered by them.

U.S. Exports

Lewistown-type yarns

Data on exports of the specific types of viscose rayon yarns made by the Lewistown plant are not available. U.S. exports of all viscose rayon yarns of continuous fibers produced domestically, including the types made by the Lewistown plant, increased irregularly from 9 million pounds in 1967 to 23 million pounds in 1970, and then declined to about 17 million pounds in 1971 (table 3). The sharp increase in exports in

1970 was attributed principally to the increased demand by European tire manufacturers for U.S.-produced high-tenacity viscose tire yarn. The Lewistown plant * * *.

Yarns of continuous manmade fibers

U.S. exports of all yarns wholly of continuous manmade fibers declined from 97 million pounds in 1965 to 86 million pounds in 1967, then increased annually to 129 million pounds in 1970 (table 4). They declined to 120 million pounds in 1971. Exports exceeded imports in every year from 1961 to 1969, but were less than imports in 1970 and 1971. In 1971 they were only about half as large as imports.

Other manmade-fiber articles

During the years 1961-71, annual U.S. exports of broadwoven fabrics of manmade fibers (except glass) ranged between 137 million square yards (in 1961) and 181 million square yards (in 1964). They amounted to 163 million square yards in 1971 (table 5).

Exports of all manmade fibers and manufactures increased irregularly from 231 million pounds in 1961 to 503 million pounds in 1971 and were equivalent to approximately 7 to 12 percent of the manmade-fiber production annually during 1961-71 (table 6). The exports consisted in large part of grouped filaments, yarns, staple (noncellulosic), and waste.

FMC Corp.

FMC Corp. is an international conglomerate with executive offices in San Jose, Calif. Annual sales reached \$1 billion in 1966 and then rose to over \$1.3 billion during 1967-71. The corporation comprises four major groups: Machinery, Chemical, Fiber and Film, and Ordnance. The Machinery Group, the largest, accounts for about 40 percent of the corporation's sales; the Fiber and Film Group, for about 25 percent; the Chemical Group, for about 20 percent; and the Ordnance Group, for about 15 percent. Sales outside the United States totaled \$193 million in 1971 and accounted for 14 percent of the corporation's total sales; of total international sales in 1971, exports from the United States accounted for 48 percent and sales of products of foreign manufacturing operations, 52 percent.

Fiber and Film Group

The Fiber and Film Group consists of four major divisions: The American Viscose Division, the Ketchikan Pulp Co., and two Mexican subsidiaries, Plasticos Extruidos, S.A., and Viscosa de Chihuahua, S.A. The sales of this group amounted to \$303 million in 1967, \$345 million in 1968 and 1969, \$313 million in 1970, and \$350 million in 1971. The group manufactures principally manmade fibers, films for packaging, and cellulosic wood pulp.

American Viscose Division

The FMC Corp. acquired the operating assets of American Viscose Corp., now an FMC division, in 1963 for * * *. The division produces manmade fibers (both cellulosic and noncellulosic), cellophane and plastic packaging films, nonmetallic industrial strapping and shrink film palletizing systems, and microcrystalline cellulose. The division has its executive offices in Philadelphia, Pa., and its main sales office in New York City. It operates regional sales offices at Charlotte, N.C., Orange, Calif., Akron, Ohio, Philadelphia, Pa., and Providence, R.I. Manmade fibers are produced at Lewistown 1/ and Meadeville, Pa., Fredericksburg, Front Royal, and Radford, Va., and Nitro and Parkersburg, W. Va. Other plants of the division are located in Downingtown, Kennett Square, and Marcus Hook, Pa.

* * * * *

Viscose rayon yarns--the product produced by the petitioning workers--were produced by the American Viscose Division at the Front Royal, Va., Parkersburg, W. Va., and Lewistown, Pa., plants. The Front Royal plant produced high-tenacity viscose yarns, while the Lewistown and Parkersburg plants produced regular- and intermediate-tenacity viscose yarns (called rayon textile yarns by the trade). Since the high-tenacity yarns are produced by different equipment and are used for different purposes than the regular- and intermediate-tenacity yarns (see the earlier section on articles under investigation), the following discussion is limited largely to the Lewistown and Parkersburg plants.

* * * * *

STATISTICAL APPENDIX



Table 1.--Yarns wholly of continuous manmade fibers, singles, with twist but not over 20 turns per inch (TSUS items 310.01 and 310.02): Changes in U.S. rates of duty, ad valorem equivalents of the specific rates, and imports for consumption of such yarns wholly of continuous cellulosic fibers (TSUSA items 310.0125 and 310.0225), specified years 1930 to 1972

Year	Changes in rates of duty on the specified yarns valued--			Imports (items 310.0125 and 310.0225) ^{1/}	
	Not over \$1 per pound (item 310.01)	Over \$1 per pound (item 310.02)	Ad valorem equivalent of the rate of duty, based on imports in 1971	Quantity	Value
	<u>Cents per pound</u>	<u>Percent</u>	<u>Percent ad valorem</u>	<u>1,000 pounds</u>	<u>1,000 dollars</u>
1930-----	50.0	60.3	50.0	^{2/}	^{2/}
1948-----	32.5	39.2	27.5	9,945	11,819
1951-----	27.5	33.1	25.0	5,061	4,219
1956-----	26.0	31.3	23.5	1,255	1,027
1957-----	25.0	30.1	22.5	1,240	2,069
1968-----	22.5	27.1	21.0	14,282	11,547
1969-----	20.0	24.1	19.5	3,980	3,485
1970-----	17.5	21.1	18.5	3,560	3,457
1971-----	15.0	18.1	17.0	5,020	4,225
1972-----	12.5	15.1	16.0	^{3/} 6,423	^{3/} 5,095

^{1/} Includes rayon and acetate fibers; does not include textured yarns.

^{2/} Not available. ^{3/} Data for January-September.

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

Note.--All changes in U.S. rates of duty were negotiated under the General Agreement on Tariffs and Trade.



Table 2.--Manmade-fiber textiles: Ad valorem equivalents of the rates of duty and U.S. imports for consumption, by groups, specified years 1934 to 1971

Description	1934	1952	1962	1969	1970	1971
Ad valorem equivalents of the rates of duty (percent) 1/						
Manmade fibers and waste, other yarns, and thread-----	18.0	15.2	18.7	15.6	14.7	12.7
Broadwoven fab- rics of man- made fibers-----	77.3	31.0	36.8	30.6	28.2	27.5
Knit and pile fabrics of man- made fibers-----	70.2	27.7	32.4	31.6	29.9	29.6
Apparel of man- made fibers-----	85.0	41.3	34.8	38.3	37.9	38.1
Average-----	69.6	17.4	29.6	34.2	33.7	33.8
Value (1,000 dollars)						
Manmade fibers and waste, other yarns, and thread-----	279	29,529	27,586	66,870	70,717	82,234
Broadwoven fab- rics of man- made fibers-----	510	1,160	18,175	93,753	129,039	142,589
Knit and pile fabrics of man- made fibers-----	37	2,018	1,347	32,008	70,188	177,796
Apparel of man- made fibers-----	675	1,216	31,327	401,632	555,933	784,639
Total-----	1,501	33,923	78,435	594,263	825,877	1,187,258

1/ Based on imports and rates of duty in the years specified.

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

Table 3.--Viscose rayon yarns of continuous fibers: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1967-71

Year	Pro- duction	Im- ports	Ex- ports	Apparent consump- tion	Ratio of imports to con- sumption
	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	<u>1,000</u> <u>pounds</u>	Percent
1967-----	286,449	4,583	8,757	282,275	1.6
1968-----	338,179	8,720	9,700	337,199	2.6
1969-----	292,119	2,442	8,709	285,852	.9
1970-----	248,170	2,182	23,306	227,046	1.0
1971-----	286,549	4,059	17,464	273,144	1.5

Source: Partly estimated from official statistics of the U.S. Department of Commerce and from statistics of Textile Organon.

Table 4.--Yarns wholly of continuous manmade fibers: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1961-71

Year	Production <u>1/</u>	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>Percent</u>
1961-----	<u>2/</u> 1,174,518	<u>3/</u> 5,206	<u>4/</u> 84,005	1,095,719	0.5
1962-----	1,414,296	<u>3/</u> 7,415	<u>4/</u> 109,893	1,311,818	.6
1963-----	1,497,679	<u>3/</u> 6,545	<u>4/</u> 98,080	1,406,144	.5
1964-----	1,708,186	8,224	<u>4/</u> 116,091	1,600,319	.5
1965-----	1,915,351	13,831	96,917	1,832,265	.8
1966-----	2,062,004	14,996	95,337	1,981,663	.8
1967-----	2,037,745	27,262	85,728	1,979,279	1.4
1968-----	2,596,781	57,126	89,645	2,564,262	2.2
1969-----	2,465,269	38,876	89,899	2,414,246	1.6
1970-----	2,265,155	133,427	129,233	2,269,349	5.9
1971-----	2,561,873	245,730	119,883	2,687,720	9.1

1/ Production partly estimated from Textile Organon figures.

2/ Includes negligible amounts of chopped glass strands.

3/ Prior to September 1963, glass-yarn imports were not separately reported in official statistics; however, such imports were estimated by the U.S. Tariff Commission and have been included in the table.

4/ Estimated. Data on exports of monofilaments and yarn were reported together. It was necessary to eliminate the estimated exports of monofilaments from the reported data in arriving at the amount indicated.

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

Table 5.--Woven fabrics of manmade fibers (except glass): U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1961-71

Year	Production ^{1/}	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	<u>1,000</u> <u>sq. yd.</u>	<u>1,000</u> <u>sq. yd.</u>	<u>1,000</u> <u>sq. yd.</u>	<u>1,000</u> <u>sq. yd.</u>	<u>Percent</u>
1961-----	3,006,802	40,177	136,851	2,910,128	1.4
1962-----	3,423,550	64,049	137,468	3,350,131	1.9
1963-----	3,886,456	75,909	153,205	3,809,160	2.0
1964-----	4,375,123	87,261	181,454	4,280,930	2.0
1965-----	4,892,109	161,069	145,514	4,907,664	3.3
1966-----	5,092,945	255,279	150,277	5,197,947	4.9
1967-----	5,416,657	177,724	152,771	5,441,610	3.3
1968-----	6,925,176	195,935	146,618	6,974,493	2.8
1969-----	7,026,995	218,702	163,299	7,082,398	3.1
1970-----	6,729,105	234,938	173,806	6,790,237	3.5
1971-----	6,630,360	253,275	162,904	6,720,731	3.8

^{1/} Square yards estimated from official statistics reported in linear yards by use of conversion factors shown by the U.S. Bureau of the Census in Current Industrial Reports, series MQ-22T.2 Supplement dated Dec. 5, 1968.

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

Table 6.--Manmade-fiber textile materials: U.S. production, imports for consumption, exports of domestic merchandise, and apparent consumption, 1961-71

Year	Production <u>1/</u>	Imports <u>2/</u>	Exports <u>2/</u>	Apparent consumption	Ratio of imports to consumption
	Million pounds	Million pounds	Million pounds	Million pounds	Percent
1961-----	1,995.4	81.4	230.8	1,846.0	4.4
1962-----	2,435.3	124.1	268.5	2,290.0	5.4
1963-----	2,696.7	186.3	266.4	2,616.6	7.1
1964-----	3,078.0	208.4	307.9	2,978.5	7.0
1965-----	3,589.4	238.5	294.1	3,533.8	6.7
1966-----	3,934.2	338.3	326.4	3,946.1	8.6
1967-----	4,050.2	340.1	324.5	4,065.8	8.4
1968-----	5,226.4	497.1	366.0	5,357.5	9.3
1969-----	5,605.5	477.3	422.4	5,660.4	8.4
1970-----	5,425.2	614.3	487.4	5,552.1	11.1
1971-----	6,387.1	858.8	503.3	6,742.6	12.7

1/ Consists of filaments, strips, and fibers (see schedule 3, pt. 1, subpt. E, headnote 2, TSUSA-1972).

2/ Includes manufactures of manmade fibers.

Source: Production, Textile Organon; imports and exports, compiled partly from data published in the Cotton Situation, U.S. Department of Agriculture, and partly from official statistics of the U.S. Department of Commerce.

Table 7.--Textile fibers: U.S. mill consumption, by kinds, 1961-71

(In millions of pounds)

Year	Cotton	Wool	Manmade fibers			Total	Flax and silk	All fibers
			Rayon and acetate	Noncell- ulosic fibers	Man- made fiber waste			
1961--	4,081.5	412.1	1,128.0	861.4	65.2	2,054.6	12.7	6,560.9
1962--	4,188.0	429.1	1,263.4	1,075.6	73.8	2,412.8	12.4	7,042.3
1963--	4,040.2	411.7	1,440.2	1,257.5	77.3	2,775.0	13.1	7,240.0
1964--	4,244.4	356.7	1,516.3	1,554.8	91.1	3,162.2	14.2	7,777.5
1965--	4,477.5	387.0	1,550.4	1,961.5	102.2	3,614.1	13.3	8,491.9
1966--	4,630.5	370.2	1,591.1	2,299.1	98.8	3,989.0	14.7	9,004.4
1967--	4,423.0	312.5	1,500.2	2,620.1	124.0	4,244.3	10.4	8,990.2
1968--	4,146.5	329.7	1,688.0	3,462.0	155.4	5,305.4	12.2	9,793.8
1969--	3,932.7	312.8	1,614.9	3,798.0	139.2	5,549.3	12.8	9,807.6
1970--	3,814.8	240.3	1,414.4	3,948.5	138.4	5,501.3	7.9	9,564.3
1971--	3,947.5	191.5	1,489.4	4,859.6	186.4	6,535.4	7.2	10,681.6

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

Table 8.--Manmade fibers: U.S. production, by types, 1961-71

Year	Staple and tow				Yarn ^{1/}				Textile:	
	Rayon	Acetate	Noncel- lulosic	Total	Rayon	Acetate	Noncel- lulosic	Total	glass fiber	Total manmade fiber
1961	400.5	53.0	235.7	707.2	392.7	249.0	497.2	1,138.9	149.3	1,995.4
1962	500.0	46.0	345.5	891.5	420.4	305.7	627.4	1,353.5	190.3	2,435.3
1963	579.1	60.0	443.2	1,082.3	400.2	309.5	712.8	1,422.5	191.9	2,696.7
1964	594.3	60.0	559.1	1,213.4	411.6	365.9	847.6	1,625.1	239.5	3,078.0
1965	648.0	54.0	782.4	1,484.4	433.8	391.2	997.7	1,822.7	282.3	3,589.4
1966	659.2	60.0	918.1	1,637.3	405.5	394.3	1,164.7	1,964.5	332.4	3,934.2
1967	603.4	50.0	1,137.9	1,791.3	309.1	425.6	1,215.4	1,950.1	308.8	4,050.2
1968	739.1	50.0	1,562.3	2,356.4	365.3	439.9	1,662.1	2,467.3	402.7	5,226.4
1969	758.8	43.0	1,761.0	2,562.8	319.2	455.2	1,766.9	2,541.3	501.4	5,605.5
1970	607.4	35.0	1,792.8	2,435.2	267.6	463.2	1,793.4	2,524.2	467.3	5,426.7
1971	611.7	28.0	2,104.3	2,744.0	303.5	449.4	2,186.8	2,939.7	468.5	6,152.2

^{1/} Includes monofilaments and some grouped filaments.

Source: Compiled from data in Textile Organon.

Table 9.--Yarns wholly of continuous manmade fibers: U.S. imports for consumption, by types, 1964-71 and January-September 1972

Period	Wholly cellulosic yarns			Wholly noncellulosic yarns			Combination cellulosic and non- cellulosic yarns		Textured yarns	Grand total
	Specified singles 1/ textured	Other, except textured	Total	Specified singles 1/ textured 2/ textured 2/	Other, except textured 2/	Total	cellulosic	and non- cellulosic yarns		
	Quantity (pounds)									
1964	4,982,376	11,632	4,994,008	2,339,920	188,231	2,528,151	702,292	3/	8,224,451	
1965	6,559,365	4,501	6,563,866	5,464,145	253,705	5,717,850	1,548,814	3/	13,830,530	
1966	3,511,705	77,141	3,588,846	8,709,431	1,058,285	9,767,716	1,433,369	205,911	14,995,842	
1967	7,147,463	490,620	7,638,083	11,107,106	2,217,680	13,324,786	2,075,420	4,223,967	27,262,256	
1968	14,282,052	252,062	14,534,114	15,790,902	1,281,966	17,072,868	6,598,508	18,920,921	57,126,411	
1969	3,980,403	88,882	4,069,285	19,275,004	1,008,313	20,283,317	3,973,432	10,550,145	38,876,179	
1970	3,560,857	76,368	3,637,225	47,979,326	729,763	48,709,089	5,140,313	75,940,449	133,427,076	
1971	5,020,494	52,825	5,073,319	72,885,380	1,386,231	74,271,611	24,606,887	141,777,992	245,729,809	
1972 (Jan.-Sept.)	6,423,153	53,891	6,477,044	63,876,236	1,850,341	65,726,577	17,317,180	83,294,171	172,814,972	
	Value									
1964	\$5,165,981	\$18,886	\$5,184,867	\$2,998,112	\$432,389	\$3,430,501	\$716,913	3/	\$9,331,381	
1965	5,121,700	7,294	5,128,994	6,583,564	407,252	6,990,816	1,403,378	3/	13,523,188	
1966	3,040,982	73,742	3,114,724	8,516,849	1,136,973	9,653,822	1,355,574	\$368,004	14,492,124	
1967	5,045,267	649,605	5,694,872	11,004,751	2,713,018	13,717,769	2,581,334	6,221,234	28,245,209	
1968	11,546,680	364,060	11,910,740	15,856,295	2,136,160	17,992,455	8,374,755	25,043,407	63,321,357	
1969	3,485,109	112,694	3,597,803	19,943,617	1,507,992	21,451,609	6,271,328	18,050,485	49,379,225	
1970	3,456,672	107,114	3,563,786	49,249,249	1,260,444	50,509,693	6,278,230	105,419,447	165,771,156	
1971	4,224,666	49,626	4,274,292	69,202,550	1,096,536	70,299,086	22,359,112	192,902,680	289,835,170	
1972 (Jan.-Sept.)	5,094,977	51,896	5,146,873	55,415,317	2,018,587	57,433,904	14,943,041	93,138,100	170,661,918	

1/ With twist but not over 20 turns per inch. Does not include glass yarns. 2/ Includes glass yarns. 3/ Not separately classified.

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

Table 10.--Manmade-fiber textiles: U.S. imports for consumption, by types, 1965-71

(In millions of pounds)

Year	Yarn			Staple fiber	Woven fabric	Apparel	Other textile articles	Total
	Specified singles ^{1/}	Other	Total					
1965----	13.5	1.9	15.4	128.8	26.1	30.6	37.6	238.5
1966----	13.5	6.3	19.8	176.6	44.2	38.4	59.3	338.3
1967----	22.0	10.6	32.6	148.7	32.7	60.1	66.0	340.1
1968----	46.3	23.1	69.4	214.9	38.1	91.3	83.4	497.1
1969----	34.4	19.2	53.6	156.1	48.3	143.5	75.8	477.3
1970----	123.1	25.7	148.8	135.5	54.9	187.9	87.2	614.3
1971----	238.7	23.7	262.4	168.3	66.7	256.0	105.4	858.8

^{1/} Wholly of continuous manmade fibers, with twist but not over 20 turns per inch. Does not include glass yarns.

Source: Compiled partly from data published in the Cotton Situation, U.S. Department of Agriculture, and partly from official statistics of the U.S. Department of Commerce.

Table 11.—Textiles, wholly or in chief value of manmade fibers: U.S. general imports, 1/ by kinds, 1964-71, January-June 1971, and January-June 1972

(In thousands of units of quantities)												
Groupings 2/	Kind (commodity description)	Units of quantity	1964	1965	1966	1967	1968	1969	1970	1971	January-June--	
											1971	1972
200A	Textured yarns	Pounds	3/	3/	249	4,303	20,407	11,588	77,893	145,087	83,338	44,414
201A	Cellulosic continuous filament yarns	do	5,062	6,753	3,856	7,209	14,072	4,109	3,574	4,958	2,165	4,148
202A	Noncellulosic continuous filament yarns	do	3,090	7,506	10,644	16,705	25,472	24,259	57,169	97,386	46,986	51,642
203A	Cellulosic yarns of noncontinuous fibers	do	320	353	1,283	2,117	1,736	1,632	1,008	1,550	896	131
204A	Noncellulosic yarns of noncontinuous fibers	do	195	51	908	1,703	3,523	7,433	8,658	9,658	5,421	3,646
205A	Other yarns of manmade fibers	do	295	716	1,828	1,651	1,339	1,751	3,871	6,766	3,250	3,415
206A	Woven fabrics of cellulosic continuous filament yarns	Square yards	35,001	43,550	46,916	48,302	50,280	49,062	42,261	35,502	20,539	21,455
207A	Woven fabrics of cellulosic noncontinuous fibers	do	13,984	19,224	42,228	25,233	10,795	17,281	11,641	4,938	2,792	2,633
208A	Woven fabrics of noncellulosic continuous filament yarns	do	29,844	64,002	70,887	62,895	83,176	108,149	134,384	154,141	79,794	79,665
209A	Woven fabrics of noncellulosic noncontinuous fibers	do	3,567	30,426	85,772	25,970	37,198	23,479	23,130	26,614	12,439	13,746
210A	Other woven fabrics, n.e.s.	do	7,669	11,500	17,363	13,414	22,834	26,769	27,758	29,128	13,343	20,311
211A	Knit fabrics	Pounds	792	2,495	3,241	4,401	4,836	6,668	18,394	54,744	26,909	21,148
212A	Pile or tufted fabrics	Square yards	688	1,232	2,332	2,406	3,852	9,916	12,088	16,880	8,411	9,842
213A	Specialty fabrics	Pounds	3,307	4,869	5,926	5,983	13,151	13,518	14,276	33,114	15,365	19,827
214A	Gloves and mittens	Dozen pairs	2,417	2,640	2,827	2,658	3,230	3,714	3,366	2,705	978	1,367
215A	Hosiery	do	554	648	667	911	1,086	1,318	7,811	4,596	289	1,451
216A	Knit dresses	Dozens	32	28	46	121	260	428	696	1,199	577	559
217A	Knit pajamas	do	9	29	22	34	107	203	182	113	61	31
218A	T-shirts	do	95	142	88	70	221	187	361	563	344	284
219A	Knit shirts, including blouses	do	219	1,080	2,263	3,044	3,513	5,336	6,628	11,728	6,261	7,025
220A	Knit skirts	do	6	7	7	36	37	60	126	181	90	113
221A	Sweaters	do	230	513	1,348	2,576	4,785	7,137	6,066	8,329	3,720	3,927
222A	Women's, girls', and infants' knit trousers	do	6	16	17	95	507	1,513	3,036	6,113	3,265	3,629
223A	Knit underwear	do	68	140	201	157	358	540	1,452	2,517	1,444	936
224A	Knit wearing apparel, n.e.s.	Pounds	962	1,559	1,805	2,033	3,594	8,450	11,460	22,193	9,268	14,277
225A	Body-supporting garments	Dozens	108	194	294	610	1,430	1,835	2,674	3,745	1,782	2,409
226A	Handkerchiefs	do	685	938	726	624	729	1,350	944	572	325	299
227A	Mufflers, etc., not knit	Pounds	2,439	3,411	1,628	1,324	1,590	3,825	3,376	2,143	1,147	987
228A	Blouses, not knit	Dozens	327	556	760	526	828	1,643	2,852	2,900	1,669	802
229A	Coats, not knit	do	72	154	101	159	530	1,325	1,865	2,126	1,271	1,421
230A	Dresses, not knit	do	57	78	164	166	310	488	600	691	371	387
231A	Dressing gowns, not knit	do	21	36	71	68	103	161	147	107	51	51
232A	Pajamas, not knit	do	47	44	62	107	270	617	651	655	360	204
233A	Playsuits, etc., not knit	do	43	63	79	58	117	200	333	299	204	269
234A	Dress shirts, not knit	do	122	318	1,033	2,242	2,596	4,195	5,548	6,256	3,493	2,763
235A	Shirts, n.e.s., not knit	do	74	162	527	1,287	2,226	2,753	3,442	3,752	1,891	1,546
236A	Skirts, not knit	do	1	2	5	4	37	115	245	307	181	76
237A	Suits, not knit	Number	41	275	169	73	133	496	785	813	508	357
238A	Trousers, etc., not knit	Dozens	676	1,041	758	819	1,162	1,516	1,753	1,984	1,041	807
239A	Underwear, not knit	do	5	13	9	6	36	109	110	280	62	149
240A	Wearing apparel, n.e.s., not knit	Pounds	634	888	890	990	1,835	3,590	6,707	9,331	3,322	5,748
241A	Floor coverings	Square feet	13,338	37,582	86,382	85,865	129,670	133,548	110,741	98,086	54,585	46,826
242A	Furnishings, n.e.s.	Pounds	1,065	1,116	1,576	1,429	2,116	2,904	4,742	5,147	2,867	3,846
243A	Manufactures, n.e.s.	do	4,973	5,153	6,450	5,682	6,442	6,749	7,214	7,375	4,272	5,183

1/ Includes merchandise released from customs custody immediately upon arrival plus merchandise entered into bonded storage warehouses immediately upon arrival.

2/ Groupings used by U.S. Department of Commerce (Publication TQ 2310).

3/ Not separately classified.

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

Note.—Totals of all imports for each year are not meaningful as the units differ among the various groupings. On a common basis by conversion to equivalent square yards the totals for recent years were as follows:

Year	Equivalent square yards (thousands)	Growth over previous year (Percent)
1967	933,458	17.0
1968	1,452,997	55.7
1969	1,782,628	22.7
1970	2,759,649	54.8
1971	4,330,220	56.9



