

**UNITED STATES TARIFF COMMISSION**

**RAYON STAPLE FIBER (Certain Cellulose Filaments)**

**Report on Escape-Clause Investigation No. 7-95  
Under the Provisions of Section 7 of the  
Trade Agreements Extension Act of 1951, as Amended**



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**Washington  
April 1961**

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	(TC29129)

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U.S. Tariff Commission  
Washington, April 10, 1961

#### INTRODUCTION

This report, published pursuant to section 7(d) of the Trade Agreements Extension Act of 1951, as amended (19 U.S.C. 1364(d)), sets forth the finding and conclusion of the U.S. Tariff Commission in connection with an investigation (No. 7-95) to determine whether--

cellulosic filaments of rayon or other synthetic textile (except acetate filaments), not exceeding 30 inches in length, other than waste, whether known as cut fiber, staple fiber, or by any other name, provided for in paragraph 1302 of the Tariff Act of 1930

are, as a result, in whole or in part of the customs treatment reflecting the concessions granted thereon under the General Agreement on Tariffs and Trade, being imported into the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry producing like or directly competitive products.

This investigation was instituted on October 10, 1960, by operation of section 3(b)(1) of the Trade Agreements Extension Act of 1951, as amended. Public notice of the institution of the investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice at the office of the Tariff Commission in Washington, D.C., and at its New York City office, and by publishing the notice in the Federal Register (25 F.R. 9827), and in the October 13, 1960, issue of Treasury Decisions. The public hearing was duly held

on January 31 and February 1, 1961, and all interested parties were afforded reasonable opportunity to produce evidence and to be heard. In addition to the information obtained at the hearing, data were obtained from the Commission's files, from responses to questionnaires, and by fieldwork.

#### FINDING AND CONCLUSION OF THE COMMISSION

On the basis of the investigation, including the hearing, the Commission finds (Commissioners Overton and Sutton dissenting) <sup>1/</sup> that rayon staple fiber is not being imported in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry producing like or directly competitive products. Accordingly, in the judgment of the Commission, no sufficient reason exists for a recommendation to the President under the provisions of section 7 of the Trade Agreements Extension Act of 1951, as amended.

#### CONSIDERATIONS BEARING ON THE COMMISSION'S FINDING AND CONCLUSION

The Commission's finding and conclusion are based principally on the considerations hereinafter discussed.

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<sup>1/</sup> The views of Commissioners Overton and Sutton are set forth commencing on page 37.

## U.S. Customs Treatment

The cellulose filaments covered by this investigation are included in the provision of paragraph 1302 of the Tariff Act of 1930 for--

filaments of rayon or other synthetic textile, not exceeding thirty inches in length, other than waste, whether known as cut fiber, staple fiber, or by any other name.

The term "rayon or other synthetic textile" is defined in paragraph 1313, as amended. As originally defined, 1/ the term was limited to cellulosic products, but in 1958 the definition was amended by the Congress, 2/ with the result that the term now covers noncellulosic products, as well as cellulosic.

This investigation did not cover noncellulosic filaments or cellulose acetate filaments. In practical effect these exclusions result in the limitation of the investigation to rayon filaments, i.e., to filaments made by the viscose and cuprammonium processes. Inasmuch as

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1/ Under the original definition in paragraph 1313, the term meant "the product made by any artificial process from cellulose, a cellulose hydrate, a compound of cellulose, or a mixture containing any of the foregoing, which product is solidified into filaments, fibers, bands, strips, or sheets . . ."

2/ Public Law 85-645, 72 Stat. 602. Under this amendment, paragraph 1313 defined the term as including "any fiber, filament, or fibrous structure, and any band or strip (suitable for the manufacture of textiles) not over one inch in width, . . . whether formed by extrusion or by other processes from substances derived by man from cellulosic or noncellulosic materials by chemical processes, such as . . . polymerization and condensation . . ." The definition specifically excepts from its scope "fibers, filaments, fibrous structures, or bands and strips of glass or other nonmetallic mineral, or of metal, paper, or natural rubber."

virtually all the imports of rayon filaments under the aforementioned provision in paragraph 1302 consist of so-called rayon staple fiber, the products covered by the investigation will be referred to hereinafter in this report as rayon staple fiber or rayon staple.

The duty on rayon staple fiber under paragraph 1302 was originally 25 percent ad valorem. As a result of concessions granted in the General Agreement on Tariffs and Trade, the duty was reduced to 20 percent, effective January 1, 1948, and further to 15 percent, effective June 6, 1951.

#### Description and Uses

Although rayon fibers of all types currently account for about a sixth of the fibers consumed by U.S. textile mills, rayon staple, the subject of the current investigation, accounts for considerably less than a tenth of the total. Rayon (all types) is outranked only by cotton in total quantity consumed. U.S. mills consume about three times as much cotton as rayon but only about a third as much wool.

Most rayon is produced in the form of continuous filaments; <sup>1/</sup> only about a third of the U.S. output consists of rayon staple. As a result of (1) the less rigid requirements for quality control, (2) the higher speed extrusion of the filaments, (3) the bulk collection of the extruded filaments, and (4) the avoidance of winding, twisting, sorting,

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<sup>1/</sup> Sometimes loosely referred to in the trade either as continuous filament yarn or filaments. Throughout this report, the term "continuous filaments" is used to include all monofilaments, plexiform filaments, and grouped filaments more than 30 inches in length however produced, but does not include such filaments which have been subjected to processes such as twisting and untwisting, false twisting, crimping, and curling and which are usable as yarns.



grading, and packaging operations, the cost of producing rayon staple <sup>1/</sup> is less than the cost of producing rayon continuous filaments. Nevertheless, the yarn ultimately spun from rayon staple is more expensive to produce than the yarn made from continuous filaments.

Not only is rayon the most widely used of the many manmade <sup>2/</sup> textile fibers now available, but it is also the first of such fibers to have been produced in appreciable commercial quantities. Whereas rayon continuous filaments were first commercially produced in the early 1900's, the manufacturing of rayon in staple form did not attain commercial importance until the late 1920's. The manmade fibers are customarily identified either as cellulosic (including rayon and acetate) or non-cellulosic (including nylon, various acrylics and modacrylics, <sup>3/</sup> polyesters, <sup>4/</sup> and others. <sup>5/</sup> Wood pulp is the principal raw material used in manufacturing the cellulosic fibers; cotton linters and other sources of cellulose have also been used.

Three principal methods are currently employed in manufacturing cellulosic fibers: the viscose, cuprammonium, and acetate processes. <sup>6/</sup>

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<sup>1/</sup> By the viscose process, which accounts for the great bulk of the total.

<sup>2/</sup> Sometimes referred to as synthetic or manufactured.

<sup>3/</sup> Orlon, Acrilan, Creslan, Zefran, Verel, and Dynel.

<sup>4/</sup> Dacron, Fortrel, Kodel, and Vycron.

<sup>5/</sup> Lycra, Prolene, Darvan, Teflon, and so forth.

<sup>6/</sup> The viscose process is used to produce cellulosic filaments made of regenerated cellulose coagulated from a solution of cellulose xanthate. The cuprammonium process is used to produce filaments made of regenerated cellulose coagulated from a solution of cellulose in ammoniacal copper oxide. In the acetate process, filaments are formed by a compound of cellulose and acetic acid which has been coagulated.

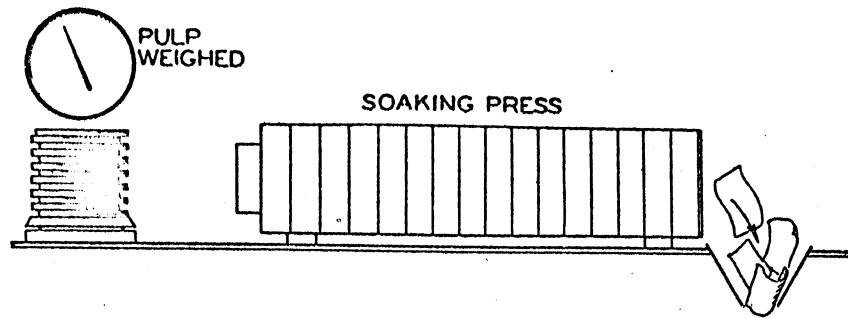
The products of the first two processes are marketed as rayon, and the products of the latter, as acetate. Virtually all rayon currently being produced in, or imported into, the United States is manufactured by the viscose process. U.S. mills consume about three times as much rayon as acetate fiber (formerly sometimes referred to as rayon acetate).

Whether rayon fibers are produced in continuous form or in staple form, their manufacture involves three principal steps: (1) Dissolving wood pulp or other sources of cellulose into a viscose solution; (2) extruding this solution through fine holes in spinnerets; and (3) coagulating it into solid filaments (see figure). Rayon in staple form consists of spinnable filaments of short lengths, usually ranging from 1 to 8 inches. The staple is made by cutting a collection of many parallel, nontwisted continuous filaments in ropelike form (tow) following extrusion. It is customarily cut into lengths suitable for processing on the various yarn-spinning systems. When marketed, rayon staple has an appearance similar to that of raw or unprocessed cotton.

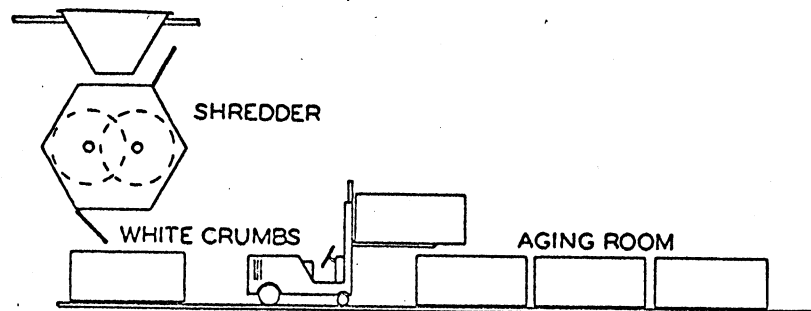
#### Physical properties

Rayon, along with various other manmade fibers, is a product of chemical, industrial, and market research. Faced with continuing competition not only from the greatly improved cotton fabrics but also from the noncellulosic fibers, producers of rayon in recent years have sought product innovation and improvement through research. As a consequence,

## Stages in Advancing Wood Pulp (Cellulose) to Viscose Rayon Fiber

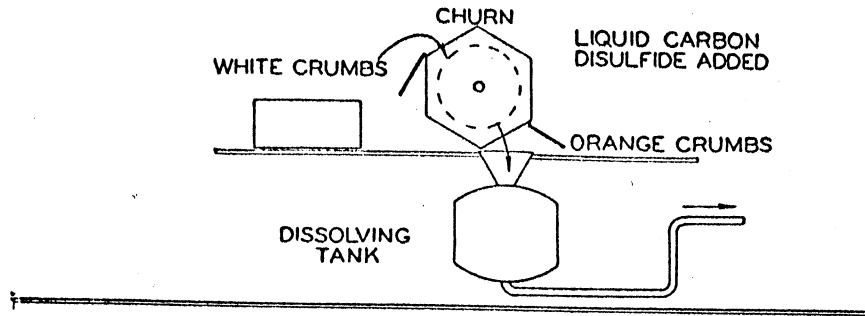


Stage 1.--Mercerization: Sheets of wood pulp are placed in steeping presses where they are soaked in a solution of caustic soda to form alkali cellulose.

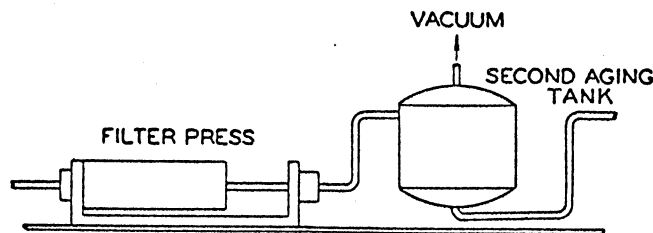


Stages 2 and 3.--Shredding and aging: The alkali cellulose, after being pressed to remove surplus caustic and impurities in the pulp, is fed to shredders which reduce it to small, fluffy, white "crumbs." The crumbs are then transferred to ripening cans and aged in an air-controlled room where the alkali cellulose ripens and undergoes a change in molecular structure.

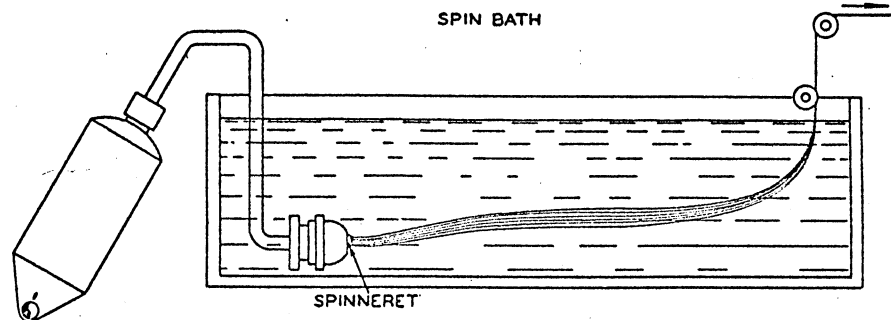
## Stages in Advancing Wood Pulp (Cellulose) to Viscose Rayon Fiber--Con.



Stages 4 and 5.--Xanthation and subsequent conversion of cellulose xanthate to viscose: The ripened alkali cellulose is placed in temperature-controlled iron drum mixers and treated with carbon disulphide to form cellulose xanthate, which is discharged to agitated mixers where it is dissolved in dilute caustic soda to form viscose.



Stages 6 and 7.--Filtering and aging the viscose: Several batches of viscose are blended, filtered, and aged under vacuum in temperature-controlled ripening tanks until the viscose is in the exact condition for spinning.



Stage 8.--Spinning: The viscose solution is pumped through spinneretts (small noble-metal caps containing a multiplicity of minute perforations) into an acid spinning bath where it coagulates in the form of very fine filaments.

the typical rayon products of today offer qualities not available a decade or two ago. By changes in chemical processes, by increased use of automatic and automated production techniques, and by product-use research, improved rayons have been produced at lowered costs. The improvements have been manifest in the greater durability of the fabrics obtained and in their increased wet strength when laundered. The availability of crimped fibers and controlled luster, the greater uniformity, the improved blending qualities, the application of finishes that enhance crease resistance, and the development of methods to make spun rayon resistant to shrinkage have also been factors.

Rayon staple is manufactured to meet a variety of specifications in order to assure its suitability for individual textile uses. For example, the staple may be manufactured for use in yard goods, carpets, blankets, or home furnishings. For such alternate uses, the staple may be produced either for manufacturing all-rayon articles or for blending combinations with one or more of the following fibers: Cotton, nylon, polyester, or acrylic. Rayon fibers, therefore, vary according to their denier, staple length, tenacity, color, luster, crimp, strength, elasticity, and, of course, chemical composition (table 1, in the appendix).

The term "denier" is used to designate the weight (in grams) of a unit length (9,000 meters) of a single filament or of a yarn containing multiple filaments. The lower the denier, the finer the filament. Rayon

staple is currently available in weights ranging from 1 to 15 denier. The most frequently produced denier sizes are 1.0, 1.25, 1.5, 3.0 and 5.5. Nearly 75 percent of the total production of rayon staple, however, is included in weights ranging from 1-1/2 to 3 denier; these types are used largely by mills making apparel fabrics, and they are spun primarily on cotton-spinning systems. The second largest weight category of rayon staple, accounting for more than 20 percent of total production, consists of fibers of 8 denier or coarser. This category includes virtually all of the rayon staple used in making carpets--chiefly tufted carpets. About 6 percent of the domestic output of rayon staple consists of fibers of more than 3 denier but less than 8 denier. Although such staple is the type best adapted for use on woolen- and worsted-spinning systems, the bulk of the small quantity produced in this category is probably used on cotton-spinning systems.

Rayon staple is cut to standard fiber lengths that have been determined largely by the requirements of the various yarn-spinning systems employed in major yarn-spinning establishments. Staple is currently available in lengths ranging from 1 to 7 inches. The following standard lengths, however, account for the preponderant share of the staple traded domestically: 1, 1-7/8, 1-9/16, 2, and 3 inches. Within this range, staple having a length of 1-9/16 inches is the type most commonly used. Mills using a cotton-spinning system require staple ranging from 1 to 3

inches in length; in 1959, staple of such lengths accounted for 94 percent of the domestic output and 76 percent of the imports (table 1). In the main, those using woollen- and worsted-spinning systems require staple ranging from 3 to 6 inches in length, and those spinning yarns for use in carpets require staple lengths varying from 1-1/2 to 4 inches.

Rayon staple is produced to meet three designated tenacity specifications: Regular, intermediate, and high. Tenacity indicates the strength of the fiber; it is measured quantitatively as a ratio of the weight of the fiber (denier) to the stress required to produce a designated elongation thereof. Regular tenacity will withstand a stress up to 2.19 grams per denier; intermediate, from 2.20 to 2.99 grams; and high, 3.00 grams or more. The great bulk of the rayon staple currently used consists of types having regular tenacity.

The staple may be solution-dyed (colored), bleached, or, if neither, it may be produced to either one of four luster specifications: Extra dull, dull, semi-dull, or bright. By far the greater share, about 65 percent, of the total domestic output of rayon staple is produced with a bright luster. About 8 percent of the total is solution-dyed, and only about 1 percent of it is bleached (table 1). In solution dyeing, dye is introduced into the viscose spinning solution, assuring uniform distribution of color. In some types of fabric production, solution-dyed staple is said to offer certain economies and technical qualities not otherwise available. To meet certain requirements of yarn spinners, the remaining 26 percent is treated chemically in the production process to give it one of the aforementioned gradations of subdued luster.

More than two-thirds of the domestically produced rayon staple is uncrimped. Nevertheless, in recent years considerable progress has been made in crimping the fibers, giving them a softer quality, greater spinnability, and greater cover and cohesion, especially in spun yarns. Various processes for crimping have been developed. A substantial share of the staple used on woolen- and worsted-spinning systems and the bulk of that used in the manufacture of carpets and rugs consists of crimped types.

#### End use

In the United States, rayon staple is used largely in the production of spun yarn. Most of the spun yarn, in turn, is used by other textile concerns which process it into broadwoven goods or other fabrics. Some of the staple fiber is spun by yarn-spinning establishments which sell their yarn to textile mills. Although spun rayon yarn may be produced from rayon tow, staple is the preponderant source of such yarn. <sup>1/</sup> Inasmuch as rayon staple generally sells at lower prices than raw cotton, and requires fewer steps in its conversion into spun yarn than cotton, it usually has a lower cost in the end product than an equivalent amount of cotton yarn.

Most of the yarn spun from domestic staple is composed of 100-percent rayon staple fiber and is consumed in the production of 100-percent spun-yarn fabrics. Fabrics containing more than one type of fiber

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<sup>1/</sup> Continuous-filament rayon yarn, also used in broadwoven fabrics, is predominantly the type of rayon used in knitted goods.



(e.g., rayon plus cotton or Dacron) may be produced either by blending two or more types of fiber prior to the spinning of the yarn for weaving or by mixing yarns made of different fibers in the weaving process. Whether blended in the yarn or "mixed" in the fabric, rayon staple, when used in combination with other staple, is combined most frequently with acetate staple. Fabrics in which rayon is combined with cotton rank second and those in which it is combined with nylon, third. Fabrics having two-fiber blends account for the bulk of the mixtures and those having three-fiber blends account for most of the remainder. Rayon staple costs materially less than most other manmade fibers. This lower cost has constituted an important incentive for its use in blends. Over and above the cost factor, however, blends containing rayon staple are often used to assure certain physical characteristics in the fabric, such as hand, drape, and wrinkle-resistant and static-proof qualities. Rayon staple is also used in blends to obtain various cross-dyeing effects.

Yarns spun wholly or partly from rayon staple are used widely in the manufacture of apparel fabrics, blankets, tablecloths, carpets, handkerchief cloth, knit goods, upholstery, tapestry, drapery fabrics, and various other articles for house furnishings. Some of the more important articles of apparel in which substantial quantities of spun rayon are currently used are men's slacks, jackets, and lightweight suits; women's blouses, dresses, coats, and suits; and children's wearing apparel. Data submitted to the Commission by the producers indicate that more than

40 percent of the domestically produced rayon staple is used ultimately in wearing apparel; nearly 20 percent of the total, in making carpets; and more than 5 percent, in the manufacture of blankets. Nearly 25 percent of the total is used in upholstery fabrics, draperies, and other household furnishings, and more than 10 percent, in various other uses (table 2).

Nearly 75 percent of the domestically produced rayon staple is converted into spun yarn on cotton-spinning systems (table 2). The manufacture of spun-rayon yarn on the cotton system has distinct advantages. Spun-rayon yarn is less expensive to produce on the cotton system than on woolen, worsted, linen, or silk systems; the cotton system can be more readily adapted to the spinning of rayon fiber than the other systems can. Nearly 15 percent of the domestic output of rayon staple is spun on woolen- and worsted-spinning systems. Yarns (all spinning systems) used in the manufacture of carpets and rugs account for nearly 20 percent of the total. Other systems and uses utilize the remainder.

#### U.S. Producers

Ten U.S. plants, which are owned by six concerns, currently have facilities for producing rayon staple (table 3). Approximately 8,000 workers are employed in the aforementioned 10 plants; some 3,000 of them are engaged in producing rayon staple. Three of the 10 plants are located in Tennessee, two each in West Virginia and Alabama, and

one each in Connecticut, Georgia, and Virginia. All of them have been constructed since 1934. The three plants owned by the largest domestic producer of rayon staple were established in 1935, 1937, and 1941, respectively. The other seven were built after 1950: three in 1957, and one each in 1950, 1951, 1952, and 1953. In 1959 the four largest of the six concerns accounted for about 99 percent of total production.

Seven of the 10 plants that have facilities for producing rayon staple fiber are operated directly by the concerns in which ultimate control is vested, and 3 are operated through subsidiaries. Two of the six concerns are controlled by foreign interests, either as wholly or partially owned subsidiaries. Another operates one of its plants through a subsidiary. Two of the six concerns have facilities for producing rayon staple in three plants; and the other four, each in one plant only.

Seven of the 10 plants which can produce rayon staple also produce rayon continuous filaments. These seven plants are operated by four concerns and they, in turn, account for the bulk of the U.S. production of both rayon staple and of rayon continuous filaments. The same four concerns also manufacture fibers other than rayon, but only one of them does so in the plant where rayon staple is produced. <sup>1/</sup> One produces nylon staple and nylon filaments; another produces cellophane film, acetate staple,

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<sup>1/</sup> All rayon producers also sell certain chemical byproducts. The sales value of such chemicals is usually deducted from raw material costs.

acetate filaments, and vinyon fiber; a third concern produces nylon filaments and polyester staple, tow, and filaments; and a fourth manufactures acetate staple and acetate filaments. One of the six concerns has a 50-percent equity in corporations that manufacture still other products.

The U.S. capacity for producing rayon staple has increased threefold since 1944, as shown in the following tabulation:

<u>Period</u>	<u>Annual capacity</u> <sup>1/</sup> <u>(Million pounds)</u>
Average:	
1944-46 <sup>2/</sup> -----	133
1947-49-----	177
1950-----	188
1951-----	214
1952-----	226
1953-----	317
1954-----	374
1955-----	403
1956-----	424
1957-----	515
1958-----	531
1959-----	529
1960-----	528

<sup>1/</sup> Capacity data, published by the Textile Organon, reflect weekly capacity in November of each year (except 1944, for which the data for April were used) projected to an annual rate.

<sup>2/</sup> Data for 1945 not reported.

The foregoing figures relate to combined capacity for producing both rayon staple and tow; such capacity is alternatively available for the production of either product. In recent years, however, less than 5 percent of the

production by domestic plants has consisted of tow. The effective capacity for producing rayon staple only, therefore, is about 5 percent less than the figures reported above.

Domestic producers have trebled their capacity for producing rayon staple since the tariff concession on that product became effective in 1948, and they have more than doubled it since the current rate of duty became effective in 1951. Whereas the reported annual capacity for producing rayon staple was 127 million pounds in 1944, it reached 188 million pounds in 1950, and 528 million pounds in 1960. With the establishment of four new plants during the period 1950-53, the average annual capacity for that period was 80 million pounds greater--i.e., 50 percent greater--than the average annual capacity during the period 1944-49. Later, after the establishment of two additional plants and the expansion of a third in 1957, the average annual capacity rose from 424 million pounds in 1956 to 515 million pounds in 1957, and to 531 million pounds in 1958. The average annual capacity for the period 1957-60 was some 150 million pounds greater--i.e., some 40 percent greater--than the average for 1953-56. Although this expansion of productive facilities was made in anticipation of increased demand, the resultant capacity outpaced the domestic market and is now more than adequate to supply the entire domestic consumption, which in recent years has averaged about 400 million pounds.

The world capacity for producing rayon staple has increased at a rate more or less commensurate with the increase in U.S. capacity.

## U.S. Production, Sales, and Inventories

U.S. annual production of rayon staple in recent years has fluctuated between 300 and 350 million pounds (table 4). Such production averaged about 240 million pounds during the period 1952-54 and 323 million pounds in 1955-56. The maximum output attained in any year since the domestic production of rayon staple was first undertaken was in 1957, when 356 million pounds was produced. The output was moderately less in 1958, 313 million pounds, than in either 1955 or 1956, but it was higher in 1959--when it reached 348 million pounds--than in any earlier year except 1957. The total domestic production of rayon staple in 1960 was 302 million pounds.

Annual sales of rayon staple by domestic producers have paralleled, but usually at slightly lower levels, the quantities produced; hence, yearend inventories have increased. Whereas the annual domestic production of rayon staple during the entire period 1955-60 averaged 328 million pounds, sales averaged 322 million pounds. The average annual increment to manufacturers' inventories over the 1955-60 period, therefore, was 6 million pounds; whereas yearend inventories were equivalent to 8 percent of sales in 1955, they amounted to 17 percent in 1960.

U.S. Imports <sup>1/</sup>

The types of rayon staple that are imported are similar to the types manufactured by domestic mills. However, the major trading items account for a moderately greater share of the imports than they do of the domestically produced articles. About three-fourths of the imported staple is made up of types which are 3 denier or finer, having lengths of 3 inches or less. The imports are comprised predominantly of uncrimped staple having regular tenacity and bright luster. Domestic mills can generally utilize the imported staple on their equipment without significant disadvantage. Virtually all imported staple can be substituted for domestic types without noticeably affecting the quality of fabrics ultimately manufactured from the spun yarn.

Annual imports of rayon staple have fluctuated widely since 1929, when they were first entered in quantity. Imports declined from 85 million pounds in 1950 to 58 million pounds in 1954. They increased sharply to about 150 million pounds in 1955, the peak year for such imports; 1955, however, was a very unusual year. Imports in that year were three times as large as those in 1954 and nearly twice as large as those in most subsequent years (table 5). In 1956, imports declined to about 86 million pounds; thereafter, they dropped to approximately 84 million pounds in

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<sup>1/</sup> U.S. imports of rayon staple are not reported separately in the official statistics, but are combined with imports of acetate staple. The preponderant share of such combined imports, however, consists of rayon staple.

1957, then increased to 86 million pounds in 1958 and to about 115 million pounds in 1959. Imports declined to about 58 million pounds in 1960, substantially less than in any of the preceding 5 years. In 1960 the ratio of imports to domestic production was lower than in any other year since 1950, although the ratio in 1954 was only slightly higher, as shown in the following tabulation:

<u>Year</u>	<u>Production</u> <sup>1/</sup> (Million pounds)	<u>Imports</u> <sup>2/</sup> (Million pounds)	<u>Ratio of imports</u> <u>to production</u> (Percent)
1950	185	85	45.9
1951	200	82	41.0
1952	200	60	30.0
1953	210	60	28.6
1954	300	58	19.3
1955	323	150	46.4
1956	323	86	26.6
1957	356	84	23.6
1958	313	86	27.5
1959	348	115	33.0
1960	302	58	19.2

<sup>1/</sup> Production of rayon staple in 1950-54, estimated from data which include both staple and tow, published in Textile Organon; that in 1955-60, compiled from data supplied to the U.S. Tariff Commission by domestic producers.

<sup>2/</sup> Imports of rayon staple in 1950-54, estimated from official statistics of the U.S. Department of Commerce, which include both rayon and acetate staple; those in 1955-60, compiled from data supplied to the U.S. Tariff Commission by the importers.

West Germany has been the principal supplier of U.S. imports of rayon staple since 1955; in recent years, that country has furnished approximately 30 percent of the imported staple. Other major sources, in order of their importance as suppliers, have been Austria, France, Italy, and Sweden.



## U.S. Consumption

Annual U.S. consumption of rayon staple has increased almost continuously since the decade of the twenties, when such staple was first available in commercial quantities. In 1932, 3 million pounds was consumed; in that year, however, staple accounted for only 2 percent of total U.S. consumption of rayon. A decade later, 150 million pounds of rayon staple was consumed annually, and this quantity accounted for 25 percent of annual U.S. consumption of rayon. By the early 1950's, the U.S. consumption of rayon staple had increased to an average of about 250 million pounds per year (table 6). In 2 recent years--1955 and 1959--the largest annual consumption reached 444 million pounds. During the 2-year period 1958-59, the U.S. consumption of rayon staple averaged about 422 million pounds, which was higher than the quantity consumed in most preceding years. The average annual consumption in 1959-60 was 403 million pounds.

Rayon staple has become increasingly important in the total market for textile fibers. Annual U.S. consumption of all textile fibers (including rayon filament yarns and staple) varied considerably during the period 1950-59. Except for 1950 and 1951, when the situation was unusual because of the Korean conflict, the total consumption of textile fibers was highest in 1955 and 1959; in those years 6,600 million pounds and 6,700 million pounds, respectively, were consumed. The share of the total supplied by rayon staple (including both domestic and imported

staple) increased from an average of about 4 percent in 1950-52 to 7 percent in 1957-59; it was about 6 percent in 1960. Since 1952-53 (the 2 years immediately following the Korean conflict), the annual consumption of cotton fibers has declined moderately, notwithstanding that the annual consumption of all fibers has increased. The trend in annual consumption of other natural fibers (wool, silk, and flax) was also downward during the 1952-60 period. The trend for most of the manmade fibers, on the other hand, was markedly upward. The greatly increased consumption of rayon staple has already been noted. Despite the upward trend for manmade fibers as a whole since 1952, however, the consumption of acetate staple and of rayon and acetate continuous filaments has declined.

The increase in the overall consumption of textile fibers between 1952 and 1960 is accounted for largely by increased consumption of the noncellulosic manmade fibers (both staple and continuous filaments). In 1960 the consumption of noncellulosic manmade staple--amounting to 240 million pounds--was more than double the quantity consumed in 1955 and about 10 times the quantity consumed in 1950. The consumption of noncellulosic manmade continuous filaments also increased markedly. In 1960 the consumption of such filaments amounted to 440 million pounds; this was more than 50 percent greater than the quantity consumed in 1955 and more than four times that consumed in 1950.

Although the U.S. consumption of rayon staple has increased materially during the past decade, four factors, probably in the following order of importance, have retarded further expansion--namely, (1) the development of improved cotton fabrics; (2) the increased availability and popularity of the noncellulosic manmade fibers; (3) the low esteem sometimes associated with rayon, not because of its inherent fiber quality but rather of its use at times in the manufacture of substandard fabrics; and (4) the newly established Federal requirements for labeling textile products. In recent years, various technical improvements in processing and finishing cotton fabrics have enhanced their marketability in competition with fabrics made of rayon and other fibers. The new strains of cotton that have become available and improved technology in weaving have provided the consumer with better cotton fabrics. Most important, however, has been the development of chemical finishes and the use of resins to produce cotton fabrics that have crease resistance, "wash-and-wear" (drip-dry) qualities, and soil resistance. The competitive impact of the "miracle" fibers has also affected the market for rayon as well as the market for other textile fibers.

Apparently consumer acceptance of rayon fiber has also been impaired because this fiber has been used more frequently than others to produce low-cost and low-quality merchandise. In comparison with other fibers, rayon has for many years been low in cost, as a consequence of which some producers have been encouraged to combine rayon with substandard construction and workmanship to produce very low priced textile products.

At times, therefore, the ultimate consumer has been led to associate rayon with unsatisfactory quality, when the deficiency in quality was not indeed attributable to the fiber itself. The failure of recent sales of rayon tufted carpets to retain the volume reached a few years ago, for example, might have been avoided, in part at least, if consumers and distributors had had uniform access to products of good workmanship.

A factor of too recent origin to have inhibited sales of rayon staple significantly thus far has been the requirements imposed under the Textile Fiber Products Identification Act of 1958. Beginning in March 1960, concerns marketing fiber products have been required to disclose the constituent fibers of which the products are composed, as well as the proportions thereof (e.g., 60 percent cotton; 40 percent rayon). This requirement may cause manufacturers to use less rayon in their products than they otherwise would.

U.S. consumption, production, and imports of rayon staple fiber have all increased irregularly over the past decade. Both U.S. consumption and production were some 40 percent greater in 1959 than in 1952, and imports were 48 percent greater. During the 3-year period 1951-53, domestic producers supplied about 80 percent of the rayon staple fiber consumed domestically; during the 3-year period 1957-59, they again supplied about 80 percent of the total; in 1960, however, they supplied 83 percent, a larger share than in any year since 1957.

### Prices

The Commission assembled price data for both domestic and imported rayon staple. Questionnaires were sent to domestic producers, importers, and selected textile mills; related information was obtained from trade publications and from the U.S. Bureau of Labor Statistics. Data were collected, on a delivered-price basis, for two types of viscose staple: apparel staple <sup>1/</sup> and carpet staple. <sup>2/</sup> These two types, which are recognized in the trade as the bread-and-butter items, account for about two-thirds of the sales of domestic staple and for more than four-fifths of those of imported staple. The analysis which follows relates principally to changes in the price of apparel staple.

#### Prices received by domestic producers

The average price received by domestic producers for rayon staple has fluctuated considerably from year to year. In 1960, however, during which imports declined markedly, it was substantially lower than in any other recent year (table 7). Throughout most of 1955 the average price received for rayon staple was about 33 cents per pound, but toward the end of the year it decreased to about 32 cents per pound. The price declined even further in 1956, reaching about 31 cents per pound in the third quarter of that year; in the fourth quarter it rose to about 32

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<sup>1/</sup> First-quality, 1-1/2 to 3 denier, 1 to 3 inches in length, bright or dull, regular tenacity, not crimped.

<sup>2/</sup> First-quality, 8 denier or coarser, 1-1/2 inches or more in length, bright or dull, regular tenacity, crimped.

cents per pound. In 1957, during which additional facilities for producing rayon staple were put in operation, the price declined to about 29 cents per pound. In the first quarter of 1958, it rose to about 30 cents per pound, after which it changed little during the rest of the year.

In April 1959 one domestic producer of rayon staple announced increases in its list prices ranging from 1 to 2 cents per pound; the list price for apparel staple was increased from 31 to 33 cents per pound. Shortly thereafter, other domestic producers announced similar price increases. Although the average price actually received by producers did not attain the level announced, it did increase to nearly 32 cents per pound in the last half of 1959.

The period since early 1960 has been one of price instability for rayon staple. Before that time, producers published price lists and generally did not deviate far from such prices. Since then, however, the margin between list prices and prices actually negotiated has widened materially. One domestic producer appears to have engaged in aggressive pricing during the early part of 1960, with the obvious purpose of obtaining an increased share of the domestic market. Other producers reduced their prices accordingly. Thereafter, the prices actually negotiated began to deviate substantially from the list prices; at any given time, only the most alert traders knew the effective price for rayon staple.

During 1960 the average price received by domestic producers declined from about 30.5 cents per pound to about 27 cents per pound, or by about 12 percent. The aggressive pricing may have been induced by the existence of excess capacity. However, if some persons within the trade thought that lower prices would materially stimulate the aggregate domestic consumption of rayon staple, their expectations were not realized. The average price received for domestic carpet staple has declined in recent years by a somewhat greater margin than the decline reported above for apparel staple; between 1955 and 1960 the price of domestic carpet staple declined by 30 percent.

The price decline for rayon staple between 1955 and 1960 ran contrary to the trend of the general price level. Whereas the average price of rayon apparel staple declined by about 22 percent in the 6-year period, wholesale prices of all commodities, as reported by the U.S. Bureau of Labor Statistics, rose by about 8 percent. When measured in constant dollars, therefore, the average price of rayon staple declined in this period by about 31 percent.

The recent price instability is reported to have disrupted the U.S. market for rayon staple. With continuing price uncertainty and with the prospect that inventory losses would result from further price declines, industrial consumers are reported to have held off purchasing rayon staple until they could be assured of a more stable market.

Prices received by importers

Prices received for imported rayon apparel staple in recent years have been fairly stable. During the first three quarters of 1955, the price was slightly above 31 cents per pound. Commencing in the last quarter of that year and continuing through the first quarter of 1960, it fluctuated between 29 and 30 cents per pound (table 8). It declined from 29 cents per pound in the first quarter of 1960 to 27 cents per pound in the last quarter, apparently in response to the break in the price of domestic staple. The price of imported staple declined by a smaller margin in 1960 than did that of domestic staple. In the 1955-60 period the average price of imported staple declined by about 13 percent. The price received for imported carpet staple followed much the same general pattern; the average price for this type declined from about 34 cents per pound in 1955 to about 28 cents per pound in 1960.

Before the aforementioned price break, the average price of imported rayon apparel staple had generally been about 1-1/2 cents per pound (ranging from 1 to 2-1/2 cents per pound) below that of domestic apparel staple (table 9). <sup>1/</sup> This margin enabled importers to compete in the U.S. market notwithstanding that--

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<sup>1/</sup> The only year during the 1955-59 period when this margin was not maintained was 1957; in the last half of that year, the average price of imported staple exceeded that of domestic staple by about 1/2 cent per pound.



- (1) The imported staple generally had to be purchased in larger quantities per order than did the domestic staple (buyers, therefore, generally had to maintain larger stocks because of the delay and uncertainty of delivery);
- (2) There was greater difficulty in making adjustments and in settling disputes between buyers and sellers; and
- (3) Domestic producers frequently supplied technical assistance and advertising promotion not available from importers.

During the last three quarters of 1960 the margin by which the price of domestic staple exceeded that of imported staple disappeared; in fact, the average price of imported staple during this period generally exceeded that of domestic staple by about 1/2 cent per pound. Between 1955 and 1960 the margin between the average price of domestic carpet staple and that of imported carpet staple followed a trend similar to that of the corresponding margin for apparel staple.

#### Employment and Wages

Annual changes in recent years in the man-hours of employment afforded U.S. workers producing rayon staple, as reported by domestic producers, have not correlated closely with the changes in the U.S. production of that product. Since 1955, there have been important technological improvements altering the man-hour requirements for making rayon staple. Moreover, there have been significant annual shifts in the respective shares

of the total domestic output originating in plants having either high or low productivity per man-hour. Earlier sections of this report mentioned that important changes have occurred in (1) the number of domestic plants producing rayon staple, (2) the aggregate capacity of such plants, and (3) the application of advanced technology therein. Such changes have usually facilitated increased production without a commensurate increase in the number of man-hours required. Moreover, one multiple-plant concern reported marked annual changes in man-hours that were not associated with comparable changes in aggregate production; the lack of correlation was attributed to important shifts that had occurred during some years in the respective shares of its total production coming from its individual plants. In each year similar variances occurred in some degree in the shares of U.S. aggregate production coming from each of the 10 plants.

It is not believed, therefore, that annual changes in the reported man-hours of employment in U.S. production of rayon staple are meaningful for the purposes at hand; nevertheless, such data, together with related information on wages, are reported in table 10. While there is no accurate way of determining the degree to which increases or decreases in job opportunities afforded workers engaged in the domestic manufacture of rayon staple are caused by changes in the market for the product itself--rather than to changes in the technology employed in making the product--probably the best index of the aforementioned increases or

decreases is the record of sales by U.S. producers of rayon staple. Indexes of annual sales of domestically produced rayon staple in 1955-60 are as follows (1956-59 average=100):

1955-----	98
1956-----	96
1957-----	104
1958-----	97
1959-----	103
1960-----	93

#### Profit-and-Loss Experience of Domestic Producers

Questionnaires requesting profit-and-loss data on their rayon staple operations for the years 1955-60 were sent to all domestic producers of such fiber. Three of the six concerns furnished usable data for each of the years 1955-60. Another concern, which had completed a new rayon staple plant and which had begun operations therein in 1957, supplied data for the years 1957-60. These four concerns currently account for virtually the entire domestic production of rayon staple.

Net sales, net operating profit or loss, and the ratio of net operating profit or loss to net sales are shown below for the three concerns which furnished financial data for 1955-60:

<u>Year</u>	<u>Net sales</u> <u>(1,000 dollars)</u>	<u>Net operating</u> <u>profit</u> <u>(1,000 dollars)</u>	<u>Ratio of net</u> <u>operating</u> <u>profit to</u> <u>net sales</u> <u>(Percent)</u>
1955-----	103,852	21,890	21.1
1956-----	100,782	12,602	12.5
1957-----	97,491	7,381	7.6
1958-----	89,149	6,267	7.0
1959-----	90,830	10,661	11.7
1960-----	75,038	943	1.3

The sales by these three concerns accounted for more than 85 percent of the total quantity of domestically produced rayon staple sold in 1958-60.

In each of the years 1955-59, all three concerns reported net operating profits. In 1960, however, only one of them did so, and its profits in that year were small compared with those in preceding years. The other two concerns reported losses in 1960. The aggregate net sales of rayon staple by the three concerns declined from \$104 million in 1955 to \$89 million in 1958; they rose to \$91 million in 1959, and then declined to \$75 million in 1960. In 1955, the three concerns reported an aggregate net operating profit of \$22 million from their rayon staple operations; this was equivalent to 21 percent of their net sales in that year. Thereafter, the aggregate net profit of these concerns decreased to \$6 million in 1958, rose to \$11 million in 1959, and dropped to less than \$1 million in 1960. The ratio of operating profit to net sales for the three concerns closely paralleled the aggregate net profits in that period.

The decline in the profitability of the producers from 1959 to 1960 cannot be attributed to increased imports of rayon staple. Whereas imports of such fiber in that interval declined by 57 million pounds--from 115 million pounds to 58 million pounds, domestic production declined by 46 million pounds--from 348 million pounds to 302 million pounds. In other words, domestic production declined by only 13 percent from 1959 to 1960, whereas imports declined by 50 percent. The decrease in profitability of the three concerns is attributable in substantial part to price cutting (discussed previously) initiated largely by domestic producers.

### Summary

Under the escape-clause statute, a sine qua non for a finding of serious injury, or the threat thereof, is an affirmative determination by the Commission that the imported product in question is one on which a trade-agreement concession has been granted, and that "as a result, in whole or in part, of the duty or other customs treatment reflecting such concession, the product is being imported into the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry producing like or directly competitive products." If no such increase in imports has occurred while the concession has been in effect, the Commission has no authority to recommend under the escape-clause statute--or any other statute for that matter--a restriction of imports, irrespective of the plight of the domestic industry concerned.

A demonstration that imports of the concession item were smaller in some selected period before the current trade-agreement concession came into effect than during another selected period when the concession was in effect may be useful for some purposes, but it does not fulfill the statutory specification in the escape-clause statute. Only those products that have entered while the concession has been in effect can be said to have been imported under "the duty or other customs treatment reflecting such concession"; those that entered in an earlier period could not have been imported under such treatment.

In the instant case the complained-of imports became subject on June 6, 1951, to the trade-agreement concession now in effect, and the trend of imports since then has not risen either absolutely or relative to domestic production. Imports of rayon staple fiber declined from 82 million pounds in 1951 to 58 million pounds in 1954, rose to a peak of 150 million pounds in 1955 and then declined irregularly to 58 million pounds in 1960. The ratio of imports to domestic production followed a similar course. The ratio fell from 41.0 percent in 1951 to 19.3 percent in 1954, increased to 46.4 percent in 1955 (the highest for any year in the past decade) and then decreased irregularly to 19.2 percent in 1960--the lowest ratio for any year since 1950.

In view of the foregoing, it is clear that the Commission has no authority to recommend a restriction of imports under the escape-clause statute. But even if the Commission were not foreclosed from doing so on the ground that imports have not increased (either actual or relative to domestic production), it could not, in any event, find that import competition has contributed substantially toward causing or threatening serious injury to the domestic industry producing rayon staple fiber. The majority of the Commission is of the opinion that such distress as confronts the domestic industry is primarily attributable--as detailed in the body of the report--to a complex of causes other than increased import competition.

Like many other industries in the United States, the rayon staple fiber industry has been, and continues to be, confronted with serious problems of adjustment to the changing pattern of the country's economy. In 1959-60 the domestic producers of rayon staple fiber suffered reverses stemming from the general decline throughout the country in industrial activity, employment, and corporate profits. There was a marked shrinkage in that period not only in the absolute consumption of rayon staple but also in the share which it supplied of all textile fibers consumed.

The Commission's investigation revealed a singular feature in the market for rayon staple in the aforementioned period, viz, a particularly sharp reduction in price. The pricing of rayon staple in the United States in that period appears to have been attributable, not to a rising volume of imports or to price cutting by importers, but rather to the aggressive pricing practices instigated in the domestic industry. Indeed, during most of 1960, imports declined precipitously, and domestic rayon staple generally sold at lower prices than the imported. The decline in national consumption of rayon staple, together with intense price competition, had unfortunate repercussions, particularly in 1960, on the profit position of, and employment in, the domestic industry. These adverse developments, however, were not occasioned by increased import competition, inasmuch as imports were 50 percent smaller in 1960 than in 1959, whereas the corresponding domestic production was only 13 percent smaller.

Probably the most serious problem confronting the domestic industry stems chiefly from its overcapacity--which no doubt precipitated the aforementioned aggressive pricing practices. Creation of the overcapacity arose from managerial commitments that were made in a period when domestic production of rayon staple was highly profitable, notwithstanding that imports then supplied a much larger share of the domestic consumption than in 1959-60.

While a restriction of imports might in some measure improve the present position of the domestic rayon staple fiber industry, the escape clause was never designed to accomplish that purpose except in circumstances not here present.

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Joseph E. Talbot, Chairman

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Walter R. Schreiber, Commissioner

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J. Weldon Jones, Commissioner

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William E. Dowling, Commissioner



## VIEWS OF COMMISSIONERS OVERTON AND SUTTON

We, Commissioners Overton and Sutton, dissent from the finding and conclusion of the majority. On the basis of the investigation, including the hearing, we find that, as a result in part of the customs treatment reflecting the concession granted thereon in the General Agreement on Tariffs and Trade, rayon staple is being imported into the United States in such increased quantities, both actual and relative to domestic production, as to cause serious injury to the domestic industry producing the like product.

The conference report on the Trade Agreements Extension Bill of 1955<sup>1/</sup> indicated that three steps must be taken by the Commission in making a determination under section 7 as to whether a basis exists for escape-clause action. The Commission must find (1) that imports (either actual or relative) have increased as a result, in whole or in part, of the duty or other customs treatment reflecting the trade-agreement concession; (2) that there has been serious injury or threat of serious injury to the domestic industry; and (3) that the increased imports have contributed substantially toward causing or threatening such serious injury.

All three of these ingredients of an affirmative finding for relief are established by the facts in this case.

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<sup>1/</sup> House Report No. 745, 84th Cong., 1st sess., see p. 9 for a discussion of the legislative history of the pertinent 1955 amendment.

Current Imports Are at an Increased Rate, Both Actual and  
Relative, Within the Meaning of Section 7 of the Trade  
Agreements Extension Act of 1951, As Amended

At the public hearing in this case the question was raised whether rayon staple "is being imported into the United States in increased quantities, either actual or relative". Of that there can scarcely be doubt. In 1957-58, annual imports of rayon staple averaged nearly 50 percent greater than they did in 1953-54, more than 150 percent greater than in 1946-47, and 400 percent greater (i.e., 5-fold as much) as the average in 1936-37. The average rate of increase during the past 10 years has been nearly 10 percent annually. Even in 1960--when the domestic economy was in recession--imports were higher than in any year before 1950. The current upward trend of imports is both unmistakable and marked.

At the hearing, a spokesman for a group of importers testified that: "In 1960 imports of rayon [staple] fiber decreased actually and relatively, whether compared with 1959 imports only or with the average 1946-59 imports."<sup>1/</sup> Thereupon, it was argued that "there is no basis in fact or in law for escape-clause action in this case." The position is untenable. In the flush of argumentation it is possible, of course, to single out some point of time, or even some singularly non-typical period of time, when imports temporarily ran contrary to the prevailing trend. The imports of 60 million pounds during 1960, a recession year, were no more representative of the recent trend than were the extraordinarily high imports of 115 million pounds in 1959. Either a cursory examination, or measurement

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<sup>1/</sup> Transcript, p. 132.

by accepted statistical technique, of the import data in recent years reveals that the trend is markedly upward. The average annual imports during the past 5 years (1956-60) were greater than the average in any 5-year period prior thereto that could be selected.

It is apparent, therefore, that any objective analysis of the trend of imports since the 1951 tariff concession on rayon staple was granted reveals a pronounced upward trend. However, inasmuch as our finding is based on the application of law to facts, we deem it appropriate at this point to set forth our views respecting the meaning to be attributed to the "current rate of imports", within the context of section 7. The most recent GATT concession on rayon staple became effective in June 1951; it is this concession which the existing customs treatment of the product reflects. As already noted, the trend of imports since this concession became effective has been decidedly upward. The statute employs the language "is being imported in such increased quantities", and counsel for the importer has contended that inasmuch as this language contemplates a current rate of imports, only imports during 1960--the most recent year for which the appropriate statistics are available--may be considered in determining whether the product concerned "is being" imported in increased quantities.<sup>1/</sup>

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<sup>1/</sup> In support of this contention, the majority opinion in escape-clause investigation No. 7-83 (Lamb, Mutton, Sheep, and Lambs) was cited. Commissioner Overton, however, observes that examination of the majority opinion in escape-clause investigation No. 7-83 discloses that the majority did not there define "a current rate of increased imports"; it merely held that to support a finding of "threat" of serious injury "the threat must be related to a current rate of increased imports, and not to a rate of increased imports which may occur at some future time".

As indicated earlier, we are of the view that the "current rate of imports" is not confined to the rate of imports during the immediately preceding year. The "current rate" may be, and should be, determined on the basis of the current trend, as evidenced by imports during a representative period immediately preceding the time of the Commission's finding. In each case the length of such base period might vary with the circumstance.

Even if imports of rayon staple in 1960 were deemed to reflect the "current rate of imports", we hold that such fiber is being imported at an increased rate within the meaning of section 7. The fact that imports were at a decidedly reduced rate in 1960, compared with those in immediately preceding years, does not preclude a finding that rayon staple is being imported at an increased rate. The 1960 imports should be compared with imports in an earlier, and a properly representative, period.

In the 1951 extension bill, the Senate version of section 7 required determination whether a product complained of is "being imported into the United States in such relatively increased quantities (compared to quantities entered during a representative period prior to the concession) as to cause or threaten serious injury...." In conference, this language was changed to "being imported into the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury...." In the discussion of the conference report on the Senate floor, Senator Morse asked Senator George, who was explaining the report, to explain the change

in the language cited above. Senator George commented as follows:

"The amendment as agreed to is in the nature of a clarification. It is intended to meet a situation which might not have been met by the language of the Senate bill.... In conference our attention was called to the fact, which I think persuaded our conferees, that during World War II some of our industries were virtually choked off, and new industries were established, which had no comparative prior period to which the relatively increased imports might be compared. For that reason we thought it best to make it clear that whenever the articles were imported into the United States in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry, the American industry should have the full advantage of the escape-clause provision in the bill." (Cong. Rec., Vol. 97, pt. 5, p. 5951.)

Senator George then called upon Senator Milliken to comment on the amendment. Senator Milliken explained it as follows:

"...I think there is a strengthening of the escape-clause procedure, for the reasons stated by the distinguished senator from Georgia. We might arrive at a case in which there was not a fair representative period prior to a concession...." (Ibid.)

The amendment was not designed to eliminate the need for comparing the current rate of imports with the rate for an earlier representative period but to permit the selection of a representative period after the concession had been granted if no fair representative period prior to the granting of the concession could be found. Further evidence of this concept is supplied by the colloquy between Chairman Wilbur D. Mills of the Ways and Means Committee and former Tariff Commission Chairman Brossard in the hearings on H.R. 10368, the Trade Agreements Extension bill of 1958:

"The Chairman: ...Let us look at some more of this language (of section 7).

The language I refer to now is 'being imported in such increased quantities, either actual or relative'. To me, the expression 'increased quantities' involves some measurement, and in order to measure an increase there must be some base period chosen from which the increase is measured.

Now does the Commission determine a base period, if a base period is necessary for this purpose?

Mr. Brossard: Well, you have to take a base period when conditions were somewhat representative, and if the duty were reduced back before World War II, that makes the base period more or less irrelevant, as far as the present industry is concerned, so you have to take a representative period.

If it is a recent enough one, a period representative before the trade-agreement concession could compare with the representative period after.

The Chairman: You try, then, to establish a base period as being that period immediately preceding the granting of the concession.

Mr. Brossard: Well, not always, because there is not such a period. You take the duties that were reduced in 1935 and 1936, for example, and some of them have not been changed since. Take that prewar period, the industries have had whole revolutions since then, to base any change in the rate of duty on such a period as that would be totally meaningless". (Hearings Before the Committee on Ways and Means, House of Representatives (on H.R. 10368 and other bills), 85th Cong., 2d Sess., Feb.-March, 1958, Part I, pp. 186-187.)

There is need, therefore, for identifying the appropriate representative period for comparing the current rate of imports of rayon staple. This base period might be, but does not necessarily have to be, a period prior to the granting of the concession which the current customs treatment reflects. In this case a proper base period could be selected from the years intervening between the time of the original concession in the GATT (1948) and that of the concession currently

effective (1951). Presumably, when the additional concession was granted in 1951, imports in the period that had followed the 1948 concession were not considered to be injurious; accordingly, it must have been deemed that a further increase in imports could occur without causing serious injury to the domestic industry. The year 1950 should be excluded because of the Korean conflict. The two years 1948 and 1949, therefore, may properly be considered as constituting a "representative period" prior to the time of the 1951 concession. Imports for these two years averaged about 25 million pounds annually, compared with 58 million pounds in 1960. In terms of this base, imports in 1960 entered at an increased rate in actual quantity. Relatively, they were also at an increased rate; the ratio of imports to domestic production averaged about 16 percent in the years 1948 and 1949, compared with 19 percent in 1960.

From the foregoing, it follows that imports of rayon staple in 1960 were at an increased rate within the meaning of section 7.

#### Increased Imports Have Contributed Substantially Toward Causing Serious Injury to the Domestic Industry

The facts obtained in this investigation support the following conclusions: (1) the domestic industry producing rayon staple is in a critical financial position, and (2) although a variety of difficulties currently beset the domestic producers, increased imports have materially aggravated their plight. In denying the

applicants relief from the injury caused by imports it does not suffice merely to show that the respective domestic producers have also been exposed to additional situations which threaten their survival quite as acutely as does the ever-increasing flow of imports. The legislation governing the Commission's responsibilities under the escape clause explicitly rules out such reasoning as a basis for denying relief as intended by Congress.

Section 7(a) calls for a Tariff Commission recommendation to the President for escape-clause action if the Commission finds that the product concerned is "being imported in such increased quantities, either actual or relative, as to cause or threaten serious injury to the domestic industry producing like or directly competitive products". A literal reading of the quoted language might seem to suggest that a recommendation for escape-clause action would be justified only if increased imports, either actual or relative to domestic production, are the sole or virtually the sole cause or threat of serious injury to the domestic industry concerned. However, as will be shown below, the statute itself tells us otherwise.

The first sentence of subsection (b) of section 7 directs the Commission, in arriving at a determination under subsection (a), to take into consideration (without excluding other factors) "a downward trend of production, employment, prices, profits, or wages in the domestic industry concerned, or a decline in sales, an increase in imports, either actual or relative to domestic production, a higher or growing inventory, or a decline in proportion of the



domestic market supplied by domestic producers." The second sentence of section (b) reads as follows:

"Increased imports, either actual or relative, shall be considered as the cause or threat of serious injury to the domestic industry producing like or directly competitive products when the Commission finds that such increased imports have contributed substantially toward causing or threatening serious injury to such industry."  
(Emphasis added)

The second sentence of section 7(b) was added to the law by section 6(a) of the Trade Agreements Extension Act of 1955 (69 Stat. 165). The amendment originated in slightly different form in the Senate version of the 1955 extension bill, and was modified in conference to read in its present form. The conference report (House Rept. No. 745, 84th Cong., 1st Sess.) explained the amendment as follows:

"Subsection (a) of the new section 6 amended section 7(b) of the Trade Agreements Extension Act of 1951 by adding the following:

Increased imports, either actual or relative, shall be considered as the cause or threat of serious injury to the domestic industry producing like or directly competitive products when the Commission finds that such increased imports have contributed materially to the serious injury or the threat of serious injury to such industry."

"It is the consensus of all the conferees on the part of both the House and the Senate that, for the purposes of the language added to section 7(b) of the Trade Agreements Extension Act of 1951 by this amendment, increases in imports are not to be set apart from other relevant factors and dealt with on an exclusive basis. The Tariff Commission must look at all the factors listed in the first sentence of section 7(b) of such act, and at all other relevant factors, and (in order that the amendment may apply) must find (1) that imports (either actual or relative) have increased as a result, in whole or in part, of the duty or other customs treatment reflecting the trade agreement concession;

(2) that there has been serious injury or threat of serious injury to the domestic industry; and (3) that the increased imports have contributed substantially toward causing or threatening the serious injury." (Emphasis added)

Separately and in the aggregate, the criteria pertinent to a finding under the escape clause support a finding of serious injury-- caused in substantial part by increased imports. The financial position of domestic producers has deteriorated in recent years. Indeed, as counsel for the importers declared at the hearing, the domestic rayon staple industry "is a very sick industry."<sup>1/</sup> Prices of rayon staple have declined sharply. Sales are down; domestic production is down; employment is down; and aggregate wages are down. When serious injury caused in substantial part by imports is manifest, as it is in this case, the Commission has no discretion; it must recommend the appropriate measures "to prevent or remedy such injury." The existence of collateral problems, intensifying the injury, provides no warrant for inaction.

The net operating profits earned by domestic producers of rayon staple in recent years have declined very sharply. Although we deem it of some significance that the net operating profits reported in 1960 by the three major producers (who currently account for more than four-fifths of the domestic output) was equivalent to less than 10 percent of the profit reported by those firms in 1959, we are aware that not only imports but also the economic recession of that year were factors in this decline. We are more impressed, therefore, with the fact that during the past 3 years (1958-59) aggregate profits

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<sup>1/</sup> Transcript, p. 152.

for the three concerns amounted to only 18 million dollars, compared with earnings of 42 million dollars during the preceding 3-year period (1955-57--which also included a period of recession--indeed, a recession more marked than the one that occurred in 1960). From 1955-57 to 1958-60, the average annual profits of these producers declined by 42 percent and the ratio of their profits to net sales declined from 14 percent to 7 percent. Increased imports and declining sales at declining prices were the major contributing factors.

Aggregate net sales of rayon staple by the major producers declined by about 15 percent from the 1955-57 period to the 1958-60 period. Whereas the value of such sales totaled 300 million dollars in the 3-year period 1955-57, it was only 255 million dollars in 1958-60. This marked decline in the aggregate value of the industry's sales reflects not only a decline in the actual quantity of rayon sold, but also a substantial decline in the prices at which such sales could be negotiated.

Prices of rayon staple were markedly lower in 1960 than they were in any year for more than a decade. Moreover, in 1957-59 prices of such staple were lower than those in immediately preceding years. A complex of factors contributed to this decline; they culminated in destructive price competition throughout most of 1960. Important among those factors were the existence of unused domestic capacity, the slowing down of the U.S. economy in that year, the intensified struggle among sellers for markets, and, of course, the historic

trend of increased imports. It would be idle here to speculate as to which of these factors supplied the straw which broke the proverbial camel's back. These market depressants were interdependent and their effect was cumulative. It suffices here merely to observe that imports contributed substantially to the prolonged and ruinous price break in 1960. Of particular importance in this regard was the unusually high level to which imports of rayon staple had soared in the latter half of 1959; by the end of the year such imports had totaled 115 million pounds.

Less important in our deliberations than the knowledge that the domestic production of rayon staple declined sharply in 1960 (a recession year) is the fact that the average annual production of such staple during the entire past 3 years (1958-60) was lower than that during the preceding three years (1955-57--which as previously noted also included a recession year).

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J. Allen Overton, Jr., Vice Chairman

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Glenn W. Sutton, Commissioner

STATISTICAL APPENDIX

Table 1.--Rayon staple: Percentage distribution of U.S. production, by designated types and by groups of denier, 1959

Item	3 denier or finer	More than 3 denier but less than 8 denier	8 denier or coarser	Total
<b>Staple length:</b>				
3 inches or less	72	5	17	94
More than 3 but less than 6 inches	1/1	1/1	1	1
6 inches or more	1/1	1/1	4	5
Total	72	6	22	100
<b>Tenacity:</b>				
Regular	71	5	21	97
Intermediate	1/1	1/1	1	2
High	1	-	-	1
Total	72	6	22	100
<b>Color and luster:</b>				
Solution-dyed	5	1/1	3	8
Bleached	1	-	-	1
<b>Other, by luster:</b>				
Extra dull	4	1/1	-	4
Dull	16	1	4	21
Semi-dull	-	-	1	1
Bright	46	4	15	65
Total	72	6	22	100
<b>Extent of crimp:</b>				
Not crimped	66	1	3	70
Crimped	6	5	19	30
Total	72	6	22	100

1/ Less than 0.5 percent.

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

Table 2.--Rayon staple: Percentage distribution of U.S. sales, by designated outlets and end use and by groups of denier, 1959

Outlet and end use	3 denier or finer	More than 3 denier but less than 8 denier	8 denier of coarser	Total
<b>Outlet:</b>				
Cotton spinning systems	60	2	9	71
Woolen- and worsted-spinning systems	4	1	9	14
Other	9	2	4	15
<b>Total</b>	<b>73</b>	<b>5</b>	<b>22</b>	<b>100</b>
<b>End use:</b>				
Apparel	47	1/2	1/18	41
Carpets	17	1/2	1/18	18
Blankets	4	2	1/4	6
Upholstery, draperies, and other household furnishings	21	2	1/4	23
Other	7	1	1/4	12
<b>Total</b>	<b>73</b>	<b>5</b>	<b>22</b>	<b>100</b>

1/ Less than 0.5 percent.

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

Table 3.—U.S. producers of rayon staple, location of their plants producing rayon staple and/or tow, year each plant was established, number of their plants producing other products, and the other products produced, 1960.

Producer	Plants in which rayon staple and/or tow was produced <sup>1/</sup>		Year established	Number	Other plants
	Location	Number			
American Enka Corp.	Lowland, Tenn.	1	1957	1	Nylon, rayon continuous filaments.
American Viscose Corp.	Front Royal, Va.	4	1941	4	Acetate, vinyon,
	Nitro, W. Va. <sup>2/</sup>		1937		cellophane, rayon
	Parkersburg, W. Va.		1935		continuous filaments.
Beaunit Mills, Inc.	Childersburg, Ala.	4	1957	4	Rayon continuous fila-
	Elizabethton, Tenn. <sup>3/</sup>	1	1950	1	ments.
North American Rayon Corp. <sup>5/</sup>	Elizabethton, Tenn. <sup>6/</sup>	None	1957	None	None.
Celanese Corp. of America	Rome, Ga.	3	1952	3	Acetate.
Courtaulds (Alabama), Inc. <sup>7/</sup>	LeMoyne, Ala.	None	1953	None	None.
	Rocky Hill, Conn. <sup>2/</sup>	None	1951	None	None.

<sup>1/</sup> These plants also manufacture rayon continuous filaments but no other products, except as noted.

<sup>2/</sup> Does not manufacture rayon continuous filaments.

<sup>3/</sup> Produces cuprammonium rayon only.

<sup>4/</sup> This plant is owned through a subsidiary, the Skenandoa Rayon Corp.

<sup>5/</sup> Subsidiary of Beaunit Mills, Inc.

<sup>6/</sup> Also produces nylon and polyester fibers.

<sup>7/</sup> Subsidiary of Courtaulds, Ltd.

<sup>8/</sup> A division of Bigelow-Sanford, Inc.

Source: Textile Organon.



Table 4.--Rayon staple: U.S. production, sales, inventories, and exports of domestic merchandise, 1955-60

Year	Production	Sales	Yearend inventories	Ratio of inventories to--		Exports
				Production	Sales	
	<u>Million pounds</u>	<u>Million pounds</u>	<u>Million pounds</u>	<u>Percent</u>	<u>Percent</u>	<u>Million pounds</u>
1955-----	323	317	24	7	8	1/
1956-----	323	315	32	10	10	1/
1957-----	356	340	48	14	14	1
1958-----	313	317	44	14	14	2
1959-----	348	338	54	16	16	1
1960-----	302	305	51	17	17	1

1/ Less than 500,000 pounds.

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

Table 5.--Rayon staple: U.S. imports for consumption,  
average 1952-54, annual 1955-60

(In thousands of pounds)

Period	: Reported : by the Bureau : of the Census <u>1/</u>	: Reported : to the Commission : by responding : importers <u>2/</u>	: Estimated : by the : Commission
1952-54 average-----	: <u>3/</u>	: <u>3/</u>	: 60,000
1955-----	: 171,943	: 146,484	: 150,000
1956-----	: 91,764	: 84,949	: 86,000
1957-----	: 83,579	: 82,770	: 84,000
1958-----	: 83,406	: 84,615	: 85,500
1959-----	: 115,185	: 113,667	: 115,000
1960-----	: 59,031	: 56,972	: 58,000

1/ For all years, the Bureau of the Census figures overstate imports to the extent that they include imports of an unknown quantity of acetate staple fiber; however, imports of this product are known to be small. For some years, the figures reported by the Bureau of the Census understate imports inasmuch as they do not include imports that were reclassified as rayon staple after time of entry.

2/ The data reported directly to the Commission--via questionnaires--relate to imports of rayon staple only. However, inasmuch as complete coverage of imports probably was not obtained, especially in the earlier years shown, the figures in this column probably understate imports.

3/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce and data supplied the U.S. Tariff Commission by importers.

Table 6.--U.S. mill consumption of textile fibers, 1950-60

Year	Natural fibers				Manmade fibers							All fiber total $\frac{5}{}$ Million pounds	Ratio of rayon staple to all fibers Percent
	Raw cotton Million pounds	Raw wool $\frac{1}{}$ Million pounds	Other Million pounds	Staple	Rayon $\frac{2}{}$		Acetate $\frac{3}{4}$ Million pounds	Noncellulosic $\frac{3}{}$ Million pounds	Continuous filament		Noncellulosic Million pounds		
					Million pounds	Million pounds			Rayon and acetate Million pounds	Rayon acetate Million pounds			
1950	4,683	635	22	117	259	22	100	956	100	6,794	3.8		
1951	4,869	484	18	129	262	32	139	866	139	6,799	3.9		
1952	4,471	466	20	95	255	47	164	845	164	6,363	4.0		
1953	4,456	494	16	91	246	51	195	865	195	6,414	3.8		
1954	4,127	384	16	67	346	59	226	721	226	5,946	5.8		
1955	4,382	444	19	58	444	105	274	858	274	6,554	6.8		
1956	4,363	441	21	57	395	127	273	727	273	6,404	6.2		
1957	4,064	370	15	54	418	181	335	686	335	6,123	6.8		
1958	3,867	331	9	75	400	170	320	644	320	5,816	6.9		
1959	4,338	429	12	70	444	233	413	722	413	6,661	6.7		
1960	6/4,280	6/400	6/9	60	363	240	440	625	440	6,417	5.7		

$\frac{1}{}$  Scoured basis.

$\frac{2}{}$  1950-54, estimated; 1955-60, sales of domestic and imported staple minus exports, as reported to the U.S. Tariff Commission by producers and importers.

$\frac{3}{}$  Data shown are for production; as reported by published sources shown below.

$\frac{4}{}$  Includes tow.

$\frac{5}{}$  Does not include domestic consumption of textile glass fibers.

$\frac{6}{}$  Estimated.

Source: Statistical Abstract of the United States and Textile Organon, except as noted.

Table 7. --Rayon staple: Average prices received by U.S. producers for apparel staple, 1/ and indexes thereof, as reported by specified sources, quarterly 1955-60

Date	Reported by U.S. producers			Reported by U.S. textile mills			Index, reported by the Bureau of Labor Statistics (1956-59=100)			Published in the Textile Organon		
	Average price	Index (1956-59=100)	Average price	Index (1956-59=100)	Unadjusted 2/	Adjusted 2/	Unadjusted 2/	Adjusted 2/	Average price	Unadjusted 2/	Adjusted 2/	
	Cents per pound		Cents per pound									
1955:												
Mar. 15	33.6	109.7	33.3	108.0	108.0	115.5	105.6	112.9	34.0	108.1	115.6	
June 15	33.4	109.1	33.1	107.3	107.3	114.4	105.6	112.6	34.0	108.1	115.2	
Sept. 15	33.4	109.0	32.9	106.7	106.7	112.3	105.6	111.2	34.0	108.1	113.8	
Dec. 15	32.1	104.7	31.6	102.7	102.7	108.6	102.4	108.2	32.0	101.7	107.5	
1956:												
Mar. 15	31.7	103.6	31.6	102.7	102.7	107.1	100.8	105.1	32.0	101.7	106.0	
June 15	31.4	102.6	31.6	102.7	102.7	105.8	100.8	103.8	32.0	101.7	104.7	
Sept. 15	31.4	102.5	31.6	104.4	104.4	104.6	100.8	102.6	32.0	101.7	103.6	
Dec. 15	31.9	104.0	31.6	102.7	102.7	103.8	100.8	101.9	32.0	101.7	102.8	
1957:												
Mar. 15	29.7	96.8	30.0	97.3	97.3	97.9	92.8	93.4	29.0	92.2	92.8	
June 15	29.2	95.4	28.8	93.3	93.3	93.5	92.8	93.0	29.0	92.2	92.4	
Sept. 15	28.6	93.3	29.5	95.8	95.8	95.5	99.2	98.9	31.0	98.6	98.3	
Dec. 15	28.8	94.1	29.8	96.8	96.8	96.1	99.2	98.5	31.0	98.6	97.9	
1958:												
Mar. 15	30.3	99.0	30.8	100.0	100.0	98.2	99.2	97.4	31.0	98.6	96.9	
June 15	30.5	99.5	30.6	99.3	99.3	98.0	99.2	97.9	31.0	98.6	97.3	
Sept. 15	30.5	99.5	30.6	99.3	99.3	98.0	99.2	98.0	31.0	98.6	97.3	
Dec. 15	30.6	99.9	30.7	99.6	99.6	98.3	99.2	98.0	31.0	98.6	97.3	
1959:												
Mar. 15	31.0	101.2	30.8	99.8	99.8	98.1	99.2	97.5	31.0	98.6	97.0	
June 15	31.0	101.2	31.0	100.7	100.7	98.9	105.6	103.7	33.0	104.9	103.0	
Sept. 15	31.8	103.8	32.0	104.0	104.0	102.2	105.6	103.7	33.0	104.9	103.0	
Dec. 15	31.7	103.6	31.8	103.1	103.1	102.0	105.6	104.5	33.0	104.9	103.8	
1960:												
Mar. 15	30.5	99.6	30.7	99.7	99.7	97.7	105.6	103.5	33.0	104.9	102.8	
June 15	27.7	90.3	28.0	91.0	91.0	89.6	90.4	89.0	33.0	104.9	103.2	
Sept. 15	27.3	89.0	27.4	88.8	88.8	87.7	88.4	87.3	28.0	89.0	87.9	
Dec. 15	27.0	88.1	26.8	87.0	87.0	85.6	88.1	86.7	28.0	89.0	87.6	

1/ First quality, 1-1/2 to 3 denier, 1 to 3 inches in length, bright or dull, regular tenacity, not crimped; delivered price in the United States, less discounts and allowances.

2/ For changes in the wholesale price index for all commodities.

Source: Compiled from data supplied the U.S. Tariff Commission by domestic producers and by selected domestic textile mills; from official statistics of the U.S. Bureau of Labor Statistics; and from Textile Organon.

Table 8.--Rayon staple: Average prices received by U.S. importers for apparel staple,  $\frac{1}{2}$  and indexes thereof, as reported by specified sources, quarterly 1955-60

Date	Reported by U.S. importers			Reported by U.S. textile mills		
	Average price	Index (1956-59=100)		Average price	Index (1956-59=100)	
		Unadjusted	Adjusted <sup>2/</sup>		Unadjusted	Adjusted <sup>2/</sup>
	Cents per pound			Cents per pound		
1955:						
Mar. 15-----	31.3	106.4	113.8	31.4	107.4	114.9
June 15-----	31.4	106.6	113.6	31.4	107.3	114.4
Sept. 15-----	31.2	106.0	111.6	31.3	107.0	112.6
Dec. 15-----	30.4	103.2	109.1	30.7	105.0	111.0
1956:						
Mar. 15-----	30.0	101.8	106.2	29.9	102.3	106.7
June 15-----	29.7	101.0	104.0	29.4	100.6	103.6
Sept. 15-----	29.5	100.2	102.0	29.1	99.6	101.4
Dec. 15-----	29.4	99.9	101.0	29.3	100.1	101.2
1957:						
Mar. 15-----	29.4	99.8	100.4	28.9	98.9	99.5
June 15-----	29.2	99.2	99.4	28.5	97.5	97.7
Sept. 15-----	29.2	99.1	98.8	28.4	97.2	96.9
Dec. 15-----	29.4	99.8	99.1	28.6	97.8	97.1
1958:						
Mar. 15-----	29.2	99.2	97.4	29.4	100.4	98.6
June 15-----	29.2	99.1	97.8	29.4	100.5	99.2
Sept. 15-----	29.3	99.7	98.4	29.3	100.1	98.8
Dec. 15-----	29.3	99.7	98.4	29.3	100.2	99.0
1959:						
Mar. 15-----	29.2	99.2	97.5	29.3	100.0	98.3
June 15-----	29.3	99.5	97.7	29.2	99.9	98.1
Sept. 15-----	29.7	100.9	99.1	29.9	102.2	100.4
Dec. 15-----	30.0	102.0	100.9	30.0	102.5	101.4
1960:						
Mar. 15-----	29.0	98.6	96.7	29.0	99.0	97.1
June 15-----	28.2	95.8	94.3	28.2	96.5	95.0
Sept. 15-----	27.7	94.1	93.0	27.7	94.6	93.4
Dec. 15-----	27.4	93.2	91.7	27.0	92.2	90.7

<sup>1/</sup> First quality, 1-1/2 to 3 denier, 1 to 3 inches in length, bright or dull, regular tenacity, not crimped; delivered price in the United States, less discounts and allowances.

<sup>2/</sup> For changes in the wholesale price index for all commodities, as reported by the U.S. Bureau of Labor Statistics.

Source: Compiled from data supplied the U.S. Tariff Commission by the importers and by selected domestic textile mills, and from official statistics of the U.S. Bureau of Labor Statistics.

Table 9.--Rayon staple: Range and average of prices received by U.S. producers and U.S. importers for apparel staple, 1/ and average margin between these two prices, quarterly, 1955-60

(In cents per pound)						
Date	Price received by U.S. producers		Price received by U.S. importers		Average price margin 2/	
	Range	Average	Range	Average		
1955:						
Mar. 15-----	32.0-34.0	33.6	30.8-32.4	31.3	2.3	
June 15-----	31.3-34.0	33.4	31.0-32.6	31.4	2.0	
Sept. 15-----	31.3-34.0	33.4	31.0-32.0	31.2	2.2	
Dec. 15-----	31.3-32.1	32.1	30.0-31.8	30.4	1.7	
1956:						
Mar. 15-----	31.0-32.0	31.7	29.0-31.8	30.0	1.7	
June 15-----	30.4-32.0	31.4	28.8-31.8	29.7	1.7	
Sept. 15-----	30.3-32.0	31.4	28.2-31.8	29.5	1.9	
Dec. 15-----	31.0-32.0	31.9	28.5-31.8	29.4	2.5	
1957:						
Mar. 15-----	29.0-29.8	29.7	28.5-31.8	29.4	.3	
June 15-----	27.1-32.0	29.2	28.0-31.8	29.2	0	
Sept. 15-----	27.0-29.1	28.6	28.0-31.8	29.2	-.6	
Dec. 15-----	27.0-30.4	28.8	28.0-31.8	29.4	-.6	
1958:						
Mar. 15-----	28.3-31.0	30.3	28.0-29.5	29.2	1.1	
June 15-----	28.5-31.0	30.5	28.5-29.5	29.2	1.3	
Sept. 15-----	29.0-31.2	30.5	28.5-29.9	29.3	1.2	
Dec. 15-----	29.3-31.1	30.7	28.5-29.9	29.3	1.4	
1959:						
Mar. 15-----	29.5-33.0	31.0	28.5-29.5	29.2	1.8	
June 15-----	28.9-33.0	31.0	28.5-29.5	29.3	1.7	
Sept. 15-----	30.5-33.0	31.8	28.5-31.5	29.7	2.1	
Dec. 15-----	30.0-33.0	31.7	28.5-31.5	30.0	1.7	
1960:						
Mar. 15-----	29.4-33.0	30.5	28.0-30.0	29.0	1.5	
June 15-----	27.0-28.0	27.7	27.0-29.5	28.2	-.5	
Sept. 15-----	27.0-28.0	27.3	27.0-29.5	27.7	-.4	
Dec. 15-----	26.6-28.0	27.0	26.2-29.5	27.4	-.4	

1/ First quality, 1-1/2 to 3 denier, 1 to 3 inches in length, bright or dull, regular tenacity, not crimped; delivered price in the United States less discounts and allowances.

2/ Minus sign (-) indicates that the average price received by U.S. importers exceeded that received by U.S. producers.

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

Note.--See also tables 7 and 8.

Table 10.--Man-hours of employment, total wages, and average hourly wages of production and related workers engaged in producing rayon staple, 1955-60

Year	Man-hours <u>1/</u>	Wages	
		Total <u>2/</u>	Average
	<u>1,000</u> <u>man-hours</u>	<u>1,000</u> <u>dollars</u>	<u>Per</u> <u>hour</u>
1955-----	5,113	9,885	\$1.93
1956-----	5,853	11,315	1.93
1957-----	6,864	13,596	1.98
1958-----	5,939	12,132	2.04
1959-----	5,468	11,622	2.13
1960-----	4,931	10,898	2.21

1/ Includes man-hours for holidays, sick leave, and vacations taken.

2/ Includes wages for holidays, sick leave, and vacations taken.

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