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INTELLIGENCE MEMORANDUM

PRELIMINARY ESTIMATES OF PRODUCTION OF TEXTILE FIBERS
IN THE SOVIET BLOC
1953

CIA/RR IM-393

3 September 1954

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FOREWORD

A detailed analysis of the textile industry, including the utilization of textile fibers, is being published as a separate report

This intelligence memorandum deals only with the supply and demand of textile fibers in the Soviet Bloc as a whole and in each of its major components -- the USSR, Communist China, and the European Satellites. Although the memorandum does not analyze the relation of the production of textile fibers to the economy of each country concerned, consideration is given to the relationship between textile fiber production and population, to long-term trends, and to plans and capabilities of Bloc countries to increase production of textile fibers. Inasmuch as crop production plans for all fibers in all of the European Satellites are not available and are not as important as Chinese and Soviet plans, there is presented for the European Satellites a section on "Problems of Supply and Distribution" instead of a section on "Plans."

The data contained in this memorandum do not represent measured or weighed quantities; the margin of error is estimated to be plus or minus 5 percent and in some instances may be more.

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PRELIMINARY ESTIMATES OF PRODUCTION OF TEXTILE FIBERS
IN THE SOVIET BLOC, 1953*

Summary

Although the production of textile fibers** in the Soviet Bloc has been increasing -- the estimated production of 2.7 million metric tons*** in 1953 was nearly 7 percent above 1952 and 21 percent above prewar levels -- the 1953 output fell short of domestic demands by about 5 percent. The deficit was made up by importing from non-Bloc sources. The largest producer of textile fibers in the Bloc is the USSR, which accounted for about 61 percent of total Bloc production in 1953. Communist China, with its relatively large production of cotton, was second, with nearly 28 percent of the Bloc total. The remaining 11 percent, produced by the European Satellites, consisted principally of synthetic fibers. The estimated production of specified textile fibers in the Soviet Bloc by major areas in 1953 is shown in Table 1.****

In the USSR an expansion program for cotton is being pursued with apparent disregard of cost. Acreage is being expanded in the costly irrigated areas, application of fertilizer is being increased, and a procurement price equivalent to US \$1.16 per pound is being paid, which is more than triple the 1953 world price for cotton.

Plans are being executed to increase production of flax, wool, and synthetics, which will enable the USSR to manufacture more consumer goods, build up strategic reserves, and cover the deficiencies of other Bloc countries. The 1955 Plan envisions raising production of textile fibers to about 2.6 million tons -- an increase of about 60 percent above the 1953 level. Such an increase is believed to be unrealistic. It would be possible under the best of

* The estimates and conclusions contained in this memorandum represent the best judgment of the responsible analyst as of 1 July 1954.

** For the purposes of this memorandum, textile fibers will include cotton, wool, flax, silk, and synthetics.

*** Throughout this memorandum tonnages are given in metric tons.

**** Table 1 follows on p. 2.

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Table 1

Estimated Production of Specified Textile Fibers
in the Soviet Bloc by Major Areas
1953

Fibers	Thousand Metric Tons			
	USSR	Communist China	European Satellites	Bloc Total
Cotton (Ginned Basis)	972.0	700.0	21.1	1,693.1
Wool (Clean Basis) a/	114.5	18.7	32.7	165.9
Flax (Scutched Basis)	500.0	9.0	72.6	581.6
Silk (Raw Basis)	1.7	4.7	0.2	6.6
Synthetics b/	44.8	Negligible	174.6	219.4
Total	<u>1,633.0</u>	<u>732.4</u>	<u>301.2</u>	<u>2,666.6</u>

a. Clean basis includes additions for waste which are utilized for mill consumption.

b. Includes staple and filament yarns of rayon and other synthetic fibers.

circumstances to increase production during the next 2 years by 10 to 15 percent over 1950. This rate of increase would indicate a 1955 textile fiber production expectancy of not much more than 1.8 million tons.

In 1953 the European Satellites produced about 301,000 tons, which amounted to only 45 percent of the total fiber demand of that area. These countries, considered as a group, are self-sufficient in flax, synthetics, and silk. In 1953, however, they imported about 94 percent of their cotton and 39 percent of their wool demands from outside sources -- both Bloc and non-Bloc countries.

Because of climatic limitations, the possibility of increasing the production of natural fibers in the European Satellites is

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limited. In the long run, it may be possible for these countries to increase production of synthetics as a means of increasing per capita availability and reducing imports of natural fibers, but such a development will require several years. The emphasis on production of textile products in the USSR and China makes it appear unlikely that increased imports of fibers can be obtained from these countries. The European Satellites can, therefore, be expected to remain dependent on non-Bloc supplies to supplement indigenous production of textile fibers.

The 1953 per capita production of textile fibers in Communist China of 1.5 kilograms was much lower than that in other Soviet Bloc countries. Because of trade agreements with Bloc countries, it was necessary for China to export about 18,000 tons of cotton and about 6,000 tons of wool in exchange for needed industrial goods. To offset these exports, China imported about 65,000 tons of cotton and 3,300 tons of wool from non-Bloc sources. When net imports are considered, the 1953 per capita availability was 1.6 kilograms, compared with 5.8 kilograms in the USSR, 7.2 kilograms in the European Satellites, and 18.3 kilograms in the US.

The 1954 Chinese plans call for increasing cotton production by 10 percent (70,000 tons) over the 1953 production. Yields may be increased slightly from year to year by using additional fertilizers and insecticides and by paying higher procurement prices as an incentive. Most of the increase in production, however, will have to be achieved by increasing acreage. If acreage is expanded in the less favorable areas, as occurred in 1952, it is likely that yields will be low and considerable abandonment will ensue. The 1954 goal may be attained if there is favorable weather and if the cotton acreage is expanded at the expense of summer grains; this, however, will compound the food problem. In any case, it is probable that China will not achieve self-sufficiency in 1954 and will continue to import non-Bloc textile fibers.

Considering the Soviet Bloc as a whole, if programs for augmenting consumer goods availabilities to the growing populations are carried out, continued dependency on non-Bloc sources of supply for the next several years is to be expected.

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I. Introduction.

The importance of textile fibers in the Soviet Bloc is indicated by the fact that the production of these fibers has been, and for the next 2 or 3 years will continue to be, the limiting factor* in the production of textile products. 1/** These products play a vital role in the economy of the Bloc and in the consumer goods programs. Products made from textile fibers are the most important class of consumer goods from a value standpoint in all Bloc countries. In addition, they are directly essential to military operations and have numerous important industrial uses.

The Soviet Bloc is still dependent on imports of textile fibers from non-Bloc countries to supply minimum military and civilian demands. Thus, the Bloc is faced with the problem of increasing indigenous production of textile fibers to eliminate dependence on the non-Bloc countries. The Bloc would also like to increase the per capita availability of products made from textile fibers and to build up strategic reserves, which are negligible at present, especially in the European Satellites. The problem of substantially increasing production of textile fibers is a difficult one to solve, particularly with respect to cotton, because of soil and climatic limitations.

II. Soviet Bloc.

There has been considerable Soviet Bloc trade in textile fibers designed primarily to solve the supply problem in the European Satellites. Even though the European Satellites produce only 45 percent of their total fiber requirements, the per capita availability in 1953 was 7.2 kilograms, compared with 5.8 kilograms in the USSR and 1.6 kilograms in China. As indicated by these data, fiber utilization in each area of the Bloc varies rather widely. Even though the USSR has attempted to supplement the supply of the European Satellites, there has been no attempt by the USSR to increase per capita availability in China.

* Manpower and textile processing machinery are not expected to be limiting input factors, to the extent that textile fibers will be, in the production of textile products in 1954 or 1955.

** Footnote references in arabic numerals are to sources listed in the Appendix.

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A. Production in 1953.

Total production of textile fibers in the Soviet Bloc in 1953, estimated at about 2.7 million tons, was about 7 percent (172,000 tons) above 1952 and 21 percent above prewar levels. The greatest increase occurred in the USSR, which accounted for 61 percent of the increase compared with 29 percent in Communist China and 10 percent in the European Satellites.

The 1953 cotton acreage in the Soviet Bloc as a whole is estimated to have remained at about the 1952 level. Owing to relatively more favorable weather in the cotton growing areas of the Bloc, and shifts in acreage to more suitable soils, however, the 1953 cotton production increased by 152,000 tons over 1952 production. This increase accounted for 89 percent of the increase in total Bloc fiber production. The increase in synthetic production of about 11,000 tons over 1952 accounted for 6 percent of the total increase in Bloc fiber production compared with 3 percent for wool, 2 percent for flax, and about 0.1 percent for silk.

B. Significance.

The production of textile fibers in the Soviet Bloc has increased at a faster rate than population, which resulted in an increase in per capita production. The textile fiber production per capita is estimated at 3.4 kilograms in 1953 compared with 3.2 kilograms in 1952 and 2.9 kilograms in the prewar period. The Bloc, however, was still not self-sufficient in textile fibers in 1953, when it depended on non-Bloc imports for about 5 percent of requirements.

III. USSR.

A. Production in 1953.

Weather conditions in the cotton growing regions of the USSR in 1953 were more favorable than those prevailing in 1952. Higher yields, coupled with a slight increase in irrigated cotton acreage, were primarily responsible for the increase in total textile fiber production. The increase in cotton production accounted for 93 percent of the increase in total textile fiber production in 1953 over 1952. Total production of textile fibers in 1953, estimated

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at 1.6 million tons, was about 7 percent above 1952 production and about 13 percent above prewar production. Estimated production of textile fibers in the USSR in 1938, 1952, and 1953 is shown in Table 2.

Table 2

Estimated Production of Textile Fibers in the USSR
1938, 1952, and 1953 2/

	Thousand Metric Tons		
	<u>1938</u>	<u>1952</u>	<u>1953</u>
Cotton (Ginned Basis)	732.0	874.0	972.0
Wool (Clean Basis)	96.0	111.0	114.5
Flax (Scutched Basis)	601.0	500.0	500.0
Silk (Raw Basis)	1.7	1.6	1.7
Synthetics	10.9	41.2	44.8
Total	<u>1,441.6</u>	<u>1,527.8</u>	<u>1,633.0</u>

1. Cotton.

The 1953 production of cotton (ginned basis) is estimated at 972,000 tons, which is about 11 percent above the 1952 production. Because of better weather, a slight increase in irrigated cotton acreage, and a reduction in nonirrigated cotton acreage, yields of ginned cotton in 1953 were about 4.2 centners per hectare, or about 39 percent above 1952. Cotton acreage in 1953 is tentatively estimated at about 2.3 million hectares, which is slightly less than the 1952 acreage. This reduction in acreage probably took place in the low-yielding nonirrigated areas, the Ukraine in Region* III; the Caucasus in Region IV; and the Lower Volga in Region VI. Cotton acreage in 1953 was about 217,000 hectares above prewar levels, and production exceeded prewar averages by about 240,000 tons.

* The term region in this memorandum refers to the economic regions defined and numbered on CIA Map 9-51 (First Revision 7-52), USSR: Economic Regions.

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Cotton production in 1953 continued to be concentrated in the irrigated regions, Transcaucasus (Region V), Kazakhstan SSR (Region Xa), and Central Asia* (Region Xb). These regions, which contain about three-fourths of the total cotton acreage, 3/ accounted for more than 90 percent of the total cotton production.

Cotton production has continued to increase in importance relative to total fiber production. Cotton production in 1953 accounted for 58 percent, by weight, of total fiber production compared with 56 percent in 1952 and 51 percent in 1938.

2. Wool.

Wool production in 1953 is estimated at about 115,000 tons (clean basis), an increase of about 3,500 tons (3 percent) over the 1952 production and about 18,500 (19 percent) above the 1938 level. The increase in production in 1953 was largely a result of an increase in sheep numbers; the increase in clip per sheep was negligible. Because a large percentage of the sheep in the USSR are of the coarse-wool type, the clip per sheep can be expected to increase slowly from year to year. Wool production accounted for about 7 percent of total textile fiber production in 1953.

3. Other Fibers.

Both the flax acreage (about 1.6 million hectares) and flax production (about 500,000 tons) are estimated to have remained about the same in 1953 as in 1952. Flax production, recovering slowly in the postwar period, is still about 17 percent below the 1938 production of about 600,000 tons.

In 1953, flax production accounted for about 31 percent of total textile fiber production in the USSR. The government, however, procures from growers only about one-half of the harvest because that is about all that can be processed with existing equipment. The other half is used by peasants for homespun yarns.

* Central Asia comprises Uzbek SSR, Tadzhik SSR, Turkmen SSR, and Kirgiz SSR.

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Synthetic production in 1953 is estimated to have been about 45,000 tons, compared to 41,000 tons in 1952 and 11,000 tons in 1938. Synthetic production accounted for only about 3 percent of total Soviet textile fiber production in 1953.

In comparison with other textile fibers the production of silk in the USSR was insignificant in 1953, representing about 0.1 percent of total textile fiber production.

B. Plans.

The Fifth Five Year Plan (1951-55) called for an estimated increase of about 65 percent in total textile fiber production over 1950. By 1953, production had increased only about 3 percent. It is estimated that by 1955 total production of textile fibers can increase by not more than 14 percent over 1950. 4/ Estimated production of textile fibers in 1950, 1955, and 1955 Plan is shown in Table 3.

Table 3

Estimated Production of Textile Fibers in the USSR
1950, 1955, and 1955 Plan

	Thousand Metric Tons		
	<u>1950 5/</u>	<u>1955 6/</u>	<u>1955 Plan 7/</u>
Cotton (Ginned Basis)	913.9	1,030.0	1,424.0
Wool (Clean Basis)	100.6	125.2	231.0
Flax (Scutched Basis)	540.0	600.0	800.0
Silk (Raw Basis)	1.5	1.9	1.9 a/
Synthetics	34.0	60.0	159.8
Total	<u>1,590.0</u>	<u>1,817.1</u>	<u>2,616.7</u>

a. A 1955 Plan figure for silk production is not available. The 1955 CIA estimate for this figure is used in order to arrive at a figure for the total textile fiber production plan.

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The Plan stated that the goals for gross cotton production would increase by 55 to 65 percent by 1955. These goals were to be achieved mainly through increased yields rather than by a large expansion of acreage. Yields were to be increased by increasing application of fertilizers, expanding reclamation projects, and introducing better crop-rotation practices in the cotton growing areas. 8/

Recently, decrees were issued for increasing cotton production in Uzbek SSR and Turkmen SSR for the period 1954-58, and in Tadzhik SSR for the period 1954-60. 9/ It is expected that decrees relating to cotton production in the other producing republics will be issued in the near future. Plans call for increasing production in Uzbek SSR from 3 million tons of raw cotton in 1954 to 4.2 million tons in 1958, and for increasing production in Turkmen SSR from 400,000 tons of raw cotton in 1955 to 620,000 tons in 1958. Plans also call for production of 430,000 tons of raw cotton in Tadzhik SSR in 1955 and 680,000 tons in 1960.

It is planned that these increases will be brought about by increases in both acreage and yields. Acreage increases are to be accomplished by water conservation measures which are designed to increase the areas of irrigated land. Yield increases are to be attained by continued intensive application of fertilizers and adoption of better farm management practices.

The Soviet 1951-55 Plan envisages a 60-percent increase in sheep numbers over 1950 and an average clip of about 2.5 kilograms per sheep (grease basis). If these increases could be attained by 1955, wool production would be about 330,000 tons (grease basis), which is more than double the estimated 1950 production. 10/

From 1951 to 1955, it was planned that production of flax fibers would increase 40 to 50 percent, an increase which would result in a 1955 production of 800,000 tons. After three years, instead of showing an increase, the estimated 1953 production of 500,000 tons was about 40,000 tons less than the 1950 production, and flax acreage is estimated to have dropped about 300,000 hectares below that of 1950. 11/

The Plan called for the production of synthetic fibers in 1955 to be 4.7 times the 1950 production of 34,000 tons. By 1953, however, synthetic production had increased only 13 percent, to about 45,000 tons.

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C. Significance.

The USSR is especially desirous to increase rapidly indigenous production of textile fibers. The recent decrees for the expansion of cotton production in the major producing areas and the government offers of more incentives to cotton growers than to any other farm group are indications of the importance which Soviet leaders attach to increasing textile fiber production. Failure to increase production would mean that the USSR would be forced to reduce the per capita availability, reduce exports to the European Satellites, or increase imports. A sharp decrease in the production of textile fibers would mean that the consumer goods program would fail to meet goals -- assuming the current pattern of trade prevails -- and even that the government might be forced to draw on its existing reserves.

The 1953 production of textile fibers in the USSR, if equally distributed over a population of 214 million, would result in a gross production per capita of about 7.6 kilograms compared with about 7.2 kilograms in 1952. The actual per capita availability of textile fibers is less than per capita production because the USSR is a net exporter of fibers. In 1953, net per capita availability of fibers in the USSR was 5.8 kilograms per capita, compared with 18.3 kilograms per capita in the US. 12/

The recent decrees for increasing cotton production in Central Asia, Uzbek SSR, Turkmen SSR, and Tadzhik SSR indicate that the USSR is placing great emphasis on expanding cotton production in the irrigated areas. This would seem to indicate failure of the program to expand cotton production in the nonirrigated, marginal cotton growing regions of the Ukraine and North Caucasus which were opened in 1950. The program during 1950-52 resulted in an increase of acreage on marginal lands from about 225,000 hectares in 1949 to 1 million hectares in 1952. In spite of this substantial acreage increase the program failed to increase significantly cotton production, while it decreased the acreage available for other crops. As a result, the nonirrigated cotton acreage was probably reduced in 1953, and present plans call for concentrating cotton growing in the better adapted irrigated sectors of the country.

The objectives of the cotton goals in Uzbek SSR, Turkmen SSR, and Tadzhik SSR are believed to be higher than can be attained

within the period indicated.* For example, the announced goals in Uzbek SSR call for increasing the cotton production level from 3 million tons (raw basis) in 1954 to 4.2 million tons in 1958. Attainment of these goals is predicated on an estimated 20-percent increase in acreage and a 16-percent increase in yields. The goals appear even more optimistic when compared with the present 1953 estimate in Uzbek SSR of 2.4 million to 2.5 million tons (raw basis), especially when considering the total sown area involved as related to water needs and soil conditions. Questionable also is the ability to extend irrigated acreage by 600,000 hectares within the time limits of the decree. Furthermore, Uzbek SSR has failed to achieve announced goals for three successive years since 1950.

The timing of the announcements in Uzbek SSR, Turkmen SSR, and Tadzhik SSR is significant for two reasons: (1) it indicates changes in the Fifth Five Year Plan for increasing cotton production, and (2) it is a priority program designed to increase rapidly cotton production in order to meet the future demands of the textile industry in the USSR and European Satellites.

Although new goals have not been announced for the entire country, it is believed that even the goals of the Fifth Five Year Plan cannot be attained. While it is believed that production can be increased somewhat in the irrigated areas, progress in expanding this acreage will be slow as indicated by experience during the past 3 years. During a period of 2 or 3 years, yields can be increased only slightly by use of improved varieties, more fertilizer, better crop rotations, and improved methods of cultivation. It is estimated, therefore, that 1955 cotton production will be about 1.0 million tons (ginned basis), compared with the planned goal of about 1.4 million tons. (See Table 3.)**

* A comparison of the announced goals with US production records of the irrigated areas of California shows that on 1.3 million acres (525,000 hectares) the production of cotton reached an estimated 601 pounds per acre of ginned cotton during 1953, and long-range estimates made for the Council of Economic Advisors contemplate a probable yield of 1,000 pounds per acre by 1975. The 1953 estimate for Uzbek of 2.4 million to 2.5 million tons (raw basis) on an area of approximately 1,125,000 hectares shows an estimated yield of 641 pounds per acre ginned; the yield increase by 1958 is planned to reach approximately 950 pounds per acre ginned.

** P. 8, above.

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That the USSR is expanding cotton acreage in the costly irrigated areas, increasing the application of fertilizers, and paying producers about US \$1.16 per pound (ginned basis)* indicates that the USSR is obsessed with the idea of becoming self-sufficient regardless of cost. Actually the USSR could purchase cotton on the world market for less than one-third of the domestic production cost. (There is now a surplus of cotton in the US and in several other non-Bloc countries.) Furthermore, about one-third of the mineral fertilizer in the USSR is utilized for cotton growing. This dependence on mineral fertilizer increases the vulnerability of the Soviet cotton supply in case of war, when nitrogen would be diverted from fertilizers to munitions.

Even though the USSR has a relatively low per capita availability of textile fibers, about 250,000 tons (ginned basis) of cotton were shipped to the European Satellites in 1953. Although some of this cotton was manufactured into textiles and sent back to the USSR, the bulk was utilized to take care of domestic needs in those countries and to reduce their dependence on imports from non-Soviet Bloc countries. As a result, the USSR in 1953 had a per capita availability of cotton of about 4 kilograms ^{13/} compared with 8 kilograms in Finland, 9 kilograms in Sweden, and 6 kilograms in Turkey. ^{14/}

In 1953, wool production in the USSR is estimated at 115,000 tons, which was about 6 percent above 1952 production. The 1951-55 Plan envisions a wool production of about 231,000 tons by 1955, which is more than double the 1950 level. (See Table 3.)** The Plan also calls for a 60-percent increase from 1950 to 1955 in sheep numbers, which is considered unrealistic. The capacity of ranges and pastures as well as roughage resources is insufficient to maintain planned increases in all classes of livestock at the same time. Increasing sheep numbers at the planned rate would require a downward revision of the 1955 numbers planned for all other classes of livestock except possibly swine.

* This compares with a US cotton price of about \$0.35 per pound. On the other hand, the Soviet procurement price on wheat is about \$0.68 per bushel compared to the 1953 US wheat price of about \$2.00 per bushel.

** P. 8, above.

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The planned average clip of 2.5 kilograms per sheep by 1955, which is about 43 percent above the 1952 clip, will be impossible to attain in 2 or 3 years because a large percentage of the sheep in the USSR are of the coarse-wool type. The average clip per sheep may be increased by better breeding, nutrition, and management practices, but accomplishment of this planned increase will require a longer period than the time allocated. ^{15/} For example, the clip per sheep in 1953 was practically the same as in 1952. In fact, clip per sheep in the USSR is still below the prewar level despite efforts to increase wool production in the postwar period.

In spite of efforts to become self-sufficient in wool supplies during the postwar period, the USSR had to import about 20,500 (clean basis) to take care of domestic demands in 1953. Of the imports, which accounted for about 13 percent of domestic demands, about 6,000 tons were imported from Communist China and the remainder from non-Soviet Bloc countries. In addition to the above shipments, the USSR late in August 1953 signed a trade agreement with Argentina for the purchase of about 10,000 tons (clean basis) of wool. No sizeable quantities had been shipped by mid-1954. ^{16/}

Although the Fifth Five Year Plan called for an increase in flax production from 540,000 tons in 1950 to about 800,000 tons in 1955, the 1953 production is estimated at about 500,000 tons. This decrease in production in 1953 over 1950 primarily resulted from a reduction in acreage of about 300,000 hectares.

A flax decree was published in May 1954 which outlined measures for increasing flax growing and providing more material incentives to induce collective farms and farmers to increase the output of flax and hemp. The increase in production is to be accomplished by expansion of sown areas, by an increase in yields, and by an improvement in the quality of output. The estimated 1955 production of 600,000 tons of flax will be more than adequate to take care of mill requirements, even though it will be 200,000 tons short of the 1955 Plan. (See Table 3.)*

On a per capita basis, the 1953 production of flax in the USSR was about 2.3 kilograms. The actual quantity processed and available for utilization, however, was about 1.5 kilograms per capita,

* P. 8, above.

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which was larger than per capita availability in any other Soviet Bloc country.

The per capita availability of synthetic fibers, based on 1953 production and population, was about 0.3 kilograms in the USSR, compared with 4.5 kilograms in East Germany, 2.4 kilograms in Czechoslovakia, and 4.2 kilograms in the US. Although the Fifth Five Year Plan indicated that production of synthetic fibers in 1955 would be 4.7 times that in 1950, the government has failed to increase materially production to date because of competing demands made by higher priority industries for chemicals and investment capital. It is estimated that synthetic production in 1955 will be about 60,000 tons, an amount which is less than one-half the planned production.

IV. Communist China.

A. Production in 1953.

The 1953 production of textile fibers in Communist China, estimated at 732,000 tons, was about 7 percent above the production of 682,000 tons in 1952 and about 34 percent above the production of 547,800 tons in prewar years. The increase in cotton production, which accounted for all of the total 1953 fiber production increase except for a 100-ton increase in silk, was a result of an increase in the harvested acreage, reported to have been about 300,000 hectares over 1952. ^{17/} The 1953 production of wool and flax is estimated to have remained at about the 1952 level. Estimated production of textile fibers in Communist China, prewar, 1952, and 1953 is shown in Table 4.*

1. Cotton.

In 1952 the Chinese Communist government compelled farmers to plant cotton in fields unsuitable for the crop. In addition unfavorable weather conditions prevailed during the year. Consequently, a considerable acreage was abandoned at harvest time. In 1953, however, weather conditions in the more important cotton producing areas were more favorable than in 1952. Although less acreage was planted to cotton in 1953, a greater percentage of the

* Table 4 follows on p. 15.

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Table 4

Estimated Production of Textile Fibers in Communist China
Prewar, 1952, and 1953

	Thousand Metric Tons		
	<u>Prewar a/</u>	<u>1952</u>	<u>1953</u>
Cotton (Ginned Basis)	500.9	650.0	700.0
Wool (Clean Basis)	22.4	18.7	18.7
Flax (Scutched Basis)	9.0	9.0	9.0
Silk (Raw Basis)	15.5	4.6	4.7
Synthetics	0	Negligible	Negligible
Total	<u>547.8</u>	<u>682.3</u>	<u>732.4</u>

a. China proper, 1931-37 average, and Manchuria, 1935-39 average.

acreage was harvested, which resulted in larger production. The 700,000 tons estimated to have been harvested in 1953 was about 9 percent above the 650,000 tons harvested in 1952.

Cotton production has increased in importance relative to total fiber production since the prewar period. In 1953, cotton production accounted for about 96 percent of total fiber production, about the same percentage as 1952, and for 91 percent in the prewar period. Chinese Communist production in 1953 accounted for about 41 percent of the total production of cotton in the Soviet Bloc.

2. Wool.

Wool production in 1953 is estimated to have been about 19,000 tons (clean basis), which is the same as 1952 production but is about 17 percent below the prewar production of 22,400 tons. It is estimated that both sheep numbers and clip per sheep in 1953 increased only slightly over 1952 totals. Wool production accounted for only about 4 percent of total Chinese Communist textile fiber production in 1953 and about 11 percent of the total Soviet Bloc wool production.

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3. Other Fibers.

Flax production in 1953 is estimated to have been about 9,000 tons, or at the same level as in 1952 and in the prewar period. Flax is not an important fiber in Communist China, representing only 1.3 percent of the total Chinese textile fiber production in 1953 and only about 1 percent of total Soviet Bloc flax production.

The estimated 1953 silk production of 4,700 tons is about 2 percent above the 1952 production of 4,600 tons but only 30 percent of the prewar production of 16,000 tons. Even though 1953 silk production represented less than 1 percent of total Chinese textile fiber production, it accounted for 71 percent of the total Bloc silk production. Synthetic fiber production is negligible in China.

B. Plans.

Cotton is the only textile fiber for which plans have been announced. Based on announcements of plans to date it appears that Communist China plans to increase cotton production in 1954 about 8 to 12 percent above the 1953 production of 700,000 tons (ginned basis). This increase is to be accomplished by an average increase in yields of about 1 kilogram per hectare and an acreage increase of about 335,000 hectares. Announcements have also called for use of additional fertilizers and insecticides. As an incentive toward increased production, it was announced prior to the planting season that the 1954 price of cotton in terms of grain would be higher than in 1953. 18/

The largest planned increases for 1954 are to take place in North China, the largest Chinese cotton growing area, which accounts for 30 percent of the total production of the country. This area is to increase production by about 29 percent. Other planned increases are as follows: Southwest, 12.6 percent; Northwest, 7.3 percent; and East China, 5 percent.

C. Significance.

On a per capita basis the production of textile fibers in 1953 was 1.46 kilograms compared with 1.35 kilograms in 1952. This

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represents an increase of about 8 percent over 1952 and an increase of about 40 percent over prewar levels.*

Even though the Chinese Communists attempted to increase fiber production during the postwar period, they imported about 65,000 tons of cotton and 3,300 tons of wool from non-Soviet Bloc sources to take care of domestic demands, both civilian and military, and trade agreement commitments. Because of trade agreements with Bloc countries, China exported about 18,000 tons of cotton and about 6,000 tons of wool in 1953 in exchange for badly needed industrial goods. Even though China imports substantial quantities of textile fibers, the per capita availability is the lowest in the Bloc. Taking into account net imports, the per capita availability of fibers in China in 1953 was only about 1.55 kilograms, compared with 5.8 kilograms in the USSR and 18.3 kilograms in the United States.

Since cotton accounts for about 96 percent of total fiber production in Communist China and recent plans are focused on increasing cotton production, it is likely that increases in cotton production will account for most of the gains made in textile fiber production during the next 2 or 3 years. The 1954 Chinese plans call for about a 10-percent increase (70,000 tons) over the 1953 production of about 700,000 tons. The plan also calls for acreage to increase by about 335,000 hectares. If acreage is expanded into the poorer soil areas as happened in 1952, it is probable that yields will be low and that there will be considerable abandonment. There are indications, however, that acreage is being expanded at the expense of summer grains. While this would insure better yields it might compound the food problem.

The plan also calls for an increase in average yields of about 1 kilogram per hectare which is to be achieved by using additional fertilizers and insecticides. As an incentive to the additional use of fertilizers and insecticides a higher procurement price for 1954 has been announced. If the acreage expansion takes place at the expense of grains and if there is favorable weather in 1954, the planned increase in yields may be accomplished, in which

* As of 15 June 1954, CIA estimates the population of China to be about 480 million. If the population of 582.6 million, indicated in the recent census, is used, the 1953 per capita production of textile fibers would have been only 1.26 kilograms per capita. 19/

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case China will be self-sufficient at the low per capita availability level that now exists. Even if the planned increase in 1954 is realized, however, China may continue to import non-Soviet Bloc fibers in exchange for rice, and may even export some cotton to the European Satellites if desirable trade agreements can be made. Such exchanges are expected to be relatively small.

From a long-run viewpoint the possibility of significantly increasing cotton production is not good. There is no suitable cotton land available that is not planted to other crops. Production could be expanded at the expense of grain acreage, but this will probably not be attempted on a large scale because of the food problem. Some increased production can be effected by use of improved seed, additional fertilizer, and insecticides, stimulated by increased procurement prices. Year-to-year increases, as a result of these factors, are expected, however, to be relatively modest.

V. Eastern European Satellites.

A. Production in 1953.

The 1953 production of textile fibers in the European Satellites, estimated at 301,000 tons, was about 6 percent above the production of 285,000 tons in 1952 and about 42 percent above the production of 212,000 tons in prewar years. The increase in synthetic production of 7,000 tons over 1952 accounted for about 43 percent of the total fiber production increase. Small gains in cotton, wool, and flax production accounted for the remainder of the increase, while silk production remained at the 1952 level. Estimated production of textile fibers in the European Satellites, in prewar years and in 1952 and 1953 is shown in Table 5.*

The estimated per capita production of textile fibers was only 3.2 kilograms in 1953. Domestic production accounted for only about 45 percent of the total fiber demand of about 664,000 tons. 20/

1. Cotton.

In view of the more favorable weather conditions in 1953, cotton production in the European Satellites is estimated at about 21,000 tons, or 24 percent above the 1952 level. In 1953,

* Table 5 follows on p. 19.

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Table 5

Estimated Production of Textile Fibers
in the European Satellites
1935-39 Average, 1952, and 1953

	Thousand Metric Tons		
	1935-39 Average <u>21/</u>	1952 <u>22/</u>	1953 <u>23/</u>
Cotton (Ginned Basis)	7.7	17.0	21.1
Wool (Clean Basis)	30.0	31.6	32.7
Flax (Scutched Basis)	85.1	68.6	72.6
Silk (Raw Basis)	0.2	0.2	0.2
Synthetics	89.3	167.6	174.6
Total	<u>212.3</u>	<u>285.0</u>	<u>301.2</u>

Bulgaria produced about 66 percent (14,000 tons) of the cotton in the European Satellites; Rumania, 24 percent (5,000 tons); Albania, 6 percent (1,300 tons); and Hungary, 4 percent (800 tons). In 1953, cotton accounted for only about 7 percent of total fiber production in the European Satellites and only about 1 percent of total Soviet Bloc cotton production. Domestic production satisfied only 6 percent of the demand for cotton fibers in the European Satellites in 1953.

2. Synthetics.

Even though synthetics compete with high-priority industries for inputs, production of synthetics in the European Satellites in 1953 is estimated to have been 175,000 tons, about 4 percent above the 168,000 tons produced in 1952. In 1953, synthetic production accounted for about 58 percent of total textile fiber production in the European Satellites and 80 percent of the total Soviet Bloc synthetic production.

Production of synthetics is concentrated in East Germany, Czechoslovakia, and Poland, where about 98 percent of the synthetic fiber output of the European Satellites is produced. In

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1953, East Germany produced 63 percent of the synthetic fiber output of the European Satellites and 49 percent of the total Soviet Bloc output.

3. Other Fibers.

Flax production in 1953 is estimated to have been about 73,000 tons, about 6 percent above the 1952 level but 15 percent below late prewar levels. In 1953, flax represented 24 percent of total fiber production in the European Satellites and 13 percent of total flax production in the Soviet Bloc.

Primarily because of an increase in sheep numbers, the 1953 wool production, estimated to have been about 33,000 tons, was 4 percent above 1952 and 9 percent above prewar levels. In 1953, wool accounted for about 11 percent of the textile fiber production in the European Satellites and about 20 percent of the wool production in the Soviet Bloc. Silk production is negligible in the European Satellites.

B. Problems of Supply and Distribution.

Although the 1953 production of textile fibers in the European Satellites satisfied only about 45 percent of total fiber demands, production of synthetics, flax, and silk was adequate to take care of practically all the domestic demands for these fibers. Cotton and wool production, however, was deficient -- 94 percent of cotton and 39 percent of wool* demands had to be imported. In 1953, about 250,000 tons of cotton were imported from the USSR, 18,000 tons from Communist China, and 46,000 tons from non-Soviet Bloc sources. Because of climatic limitations, the possibilities for substantially increasing domestic production of cotton are limited. In view of the recent consumer goods program in the USSR, the European Satellites are not likely to obtain increased supplies from this source. Moreover, since Communist China is a net importer of cotton, greater shipments of Chinese cotton to the European Satellites cannot be anticipated. Thus it appears that the European Satellites will continue to be dependent on non-Bloc cotton sources for some time to come. In addition to cotton, the European Satellites imported wool from both Soviet Bloc and non-Bloc sources.

* Total mill consumption in 1953 is estimated at 84,660 tons, including waste. 24/

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The "new course" in the European Satellites calls for increasing the consumer availability of textile products and other consumer goods. If more textile products are to be made available in 1954 and 1955, it will be necessary to increase substantially production or imports to provide these textile fiber supplies. The European Satellites also need more fibers than were available in 1953 to increase their working stocks, since there are indications that working stocks have dropped below minimum levels in some countries and forced partial idleness of mills.

C. Significance.

On a per capita basis the production of textile fibers in the European Satellites in 1953 was 3.2 kilograms per capita compared with 3.1 kilograms in 1952. When net imports are taken into consideration, however, the per capita availability of fibers in the European Satellites in 1953 was about 7.2 kilograms, compared with 5.8 kilograms in the USSR and 1.6 kilograms in China.

Since the European Satellites produce only about 6 percent of their cotton fiber demands, efforts have been made to increase cotton production. Despite these efforts, cotton production was increased by only about 6,000 tons from 1950 to 1953, an amount which is less than 2 percent of domestic demands. Small increases may be made in cotton production from year to year, but there are no large remaining areas in the European Satellites with climates suitable for expanding cotton production on an economic basis. Dependence on imports is, therefore, likely to face the European Satellites for many years in the future.

The production of wool in 1953 in the European Satellites increased about 5,000 tons above the 1950 level. Small increases probably can continue to be made by increasing sheep numbers and clip per sheep. It is likely, however, that the European Satellites will be dependent upon imports for the next 5 to 10 years, with any increases in wool imports probably coming from non-Soviet Bloc sources.

The best possibility of increasing the indigenous supply of textile fibers in the European Satellites is through the production of synthetics. The rate of expansion of this industry will, however, depend on the priority that it gets relative to other industries that compete with it for chemicals and processing equipment.

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APPENDIX

SOURCES AND EVALUATION OF SOURCES

1. Evaluation of Sources.

Data and information in this report are based largely on information contained in other CIA publications on the production of textile fibers and on the textile industry. The information contained in these basic studies was based primarily on official statistics and reports of the Department of Agriculture and the Department of State. Plan statistics are based on the Fifth Five Year Plan, on reports from the Consulate in Hong Kong, and on numerous FBIS reports.

2. Sources.

Evaluations, following the classification entry and designated "Eval.," have the following significance:

<u>Source of Information</u>	<u>Information</u>
Doc. - Documentary	1 - Confirmed by other sources
A - Completely reliable	2 - Probably true
B - Usually reliable	3 - Possibly true
C - Fairly reliable	4 - Doubtful
D - Not usually reliable	5 - Probably false
E - Not reliable	6 - Cannot be judged
F - Cannot be judged	

Evaluations not otherwise designated are those appearing on the cited document; those designated "RR" are by the author of this memorandum. No "RR" evaluation is given when the author agrees with the evaluation on the cited document.

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