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# Cotton and Wool

Situation and  
Outlook Report

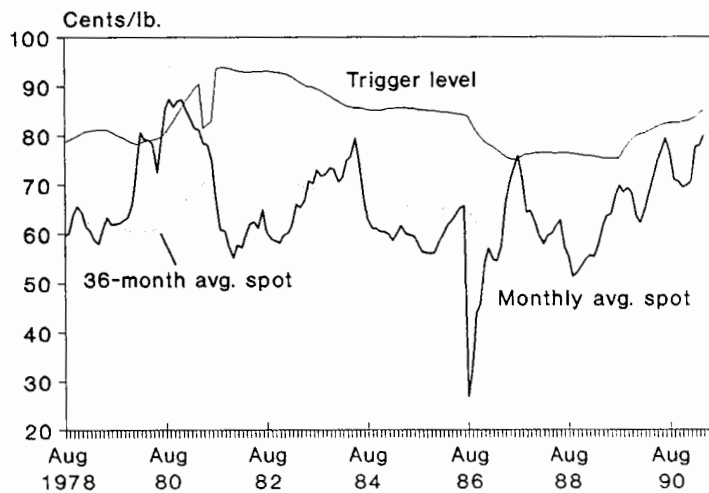
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Prices Near Special Import  
Quota Trigger Level



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## Summary

U.S. cotton production in 1990/91 totaled 15.5 million 480-lb. bales, 27 percent ahead of last season. Upland production rose 32 percent in 1990/91 to 15.1 million bales, while extra-long staple (ELS) output fell 48 percent to 358,000 bales. U.S. cotton yield in 1990/91 was 634 pounds per harvested acre, 20 pounds above last season. Upland cotton yield was 632 pounds per harvested acre (602 in 1989) and ELS yield was 758 pounds (893 in 1989). Total area planted to cotton in 1990/91 was 12.3 million acres—12.1 million upland and 231,000 ELS. Harvested area was 11.7 million acres, for an average abandonment of 5 percent in 1990/91—half of 1989's rate. Upland and ELS harvested acreage was 11.5 million and 227,000 acres, respectively.

Total U.S. cotton offtake in 1990/91 is projected at 16.3 million bales, comprised of 8.4 mill use and 7.9 exports. Cotton mill use rebounded sharply in the first quarter of calendar year 1991 from the low of the previous quarter, with cotton's share of total fibers consumed reaching 74 percent, its highest percentage since 1971. U.S. 1990/91 cotton exports are stronger this season due to tight foreign exportable supplies. The U.S. share of 1990/91 world cotton trade is projected at 33 percent, up slightly from 1989 and well above historical levels.

During the 1990/91 marketing year, both U.S. and world cotton prices have risen above those of the past season. The August to mid-May U.S. spot market price for base-quality cotton averaged 74 cents per pound this season, 6 cents above the respective period last year. The rise in the adjusted world price for the same period has been more moderate, gaining about 2 cents to 67 cents per pound.

U.S. prices on the North European market have exhibited very different patterns between the first half-season and the second-half-to-date. During the first 6 months, U.S. prices were very competitive, being among the lowest quoted. However, since the beginning of February, U.S. quotes have risen sharply and have become some of the highest priced offerings. The sharp price runup has slowed late-season export sales noticeably.

U.S. cotton production in 1991/92 is forecast at 16.0 million bales, about a half million more than the current season. The March Planting Intentions survey placed 1991 cotton acreage at 14 million, 13.77 million upland and 222,000 ELS acres. However, persistent rainfall at planting time in the Delta has likely somewhat reduced planting prospects in that region. The preliminary enrollment report indicates participation in USDA's 5-percent acreage reduction program for upland cotton at 84 percent, down from 87 percent in the current season.

U.S. cotton offtake in 1991/92 is expected to moderate from the current season's strong pace. Domestic mill use in 1991/92 is projected at 8.5 million bales, about unchanged from the current season, while cotton exports in 1991/92 are expected to fall to 7.0 million bales from 7.9 this season. The projected downturn in 1991/92 exports is expected to result from increased competition from foreign exports and smaller world trade demand. Despite the projected export drop, U.S. share of world trade in 1991/92 is expected to be slightly above average at nearly 30 percent.

Based on projections of U.S. 1991/92 supply and offtake, U.S. cotton stocks could increase from a low 2.3 million at the beginning of the season to 3.0 million by season's end. The upland cotton ending stocks-to-use ratio in 1991/92 could rise to 19 percent from the current season's estimated 14 percent—still far short of the 30 percent legislative target.

World cotton production in 1991/92 is forecast at a record 91 million bales, up 5 percent from 1990/91's 86.8 million. Foreign production is forecast to rise nearly 4 million bales from the 71.3 million bales in 1990/91, based on likely higher area and yields. China and India are expected to lead the increase in foreign output next season.

World cotton consumption in 1991/92 is projected at 88 million bales, with foreign consumption of 79.5 million bales—2 million higher than in the current season. Expanded consumption is expected to occur principally among producing countries and world exports are expected to fall by one-half million to 23.5 in 1991/92. Foreign exports are expected to rise slightly to 16.5 million. World and foreign end-of-season 1991/92 stocks are expected to rise. The foreign ending stocks-to-use ratio is projected to rise to 33 percent from the current season's 31 percent.

U.S. raw wool imports in first-quarter 1991 were 23 million pounds, clean, 8 percent above a year earlier. Imports of the 48's-and-finer grades were 18 million pounds, 27 percent more than last year. Unimproved and other grades not-finer-than-46's totaled almost 5 million, 31 percent below a year earlier.

Shorn wool production in the United States during 1990 was 88 million pounds, greasy, 1 percent less than the previous year. Sheep and lambs shorn totaled 11 million head, 0.7 percent less than 1989. The average fleece weight was almost 7.9 pounds. The weighted-average price received by farmers for their shorn wool was \$0.80, compared with \$1.24 in 1989.

## Textiles and the Economy

The recession is finally official. On April 25, 1991, the National Bureau of Economic Research (NBER) concluded that the current U.S. recession began in July 1990. The NBER reported that various indicators were flat during the summer of 1990 and that economic activity peaked in July, with several major indicators peaking in different months. Employment peaked in June, real personal income in July, business sales in August, and industrial production in September. The recession's onset ended a 92-month expansion that began in November 1982, the second longest period of growth on record.

Eleven months after the recession's beginning, the economy may be showing signs of a recovery. The composite index of leading economic indicators rose 0.5 percent in March, the second consecutive advance after 6 monthly declines. An increase in the index of consumer expectations helped push the leading indicator higher, resulting in the return of the all-important consumer confidence.

However, real Gross National Product (GNP) declined for the second consecutive quarter. Preliminary first-quarter GNP fell 2.6 percent (\$26.9 billion) compared with a decrease of 1.6 percent (\$16.6 billion) in the last quarter of 1990. First-quarter declines were led by residential fixed investment and durable goods expenditures. Declines in business inventories also helped push the GNP lower but, as the economy strengthens, inventories will need rebuilding, thus helping to fuel GNP growth.

Also, real disposable personal income declined 0.4 percent in first-quarter 1991. With this decrease, disposable income has fallen for 3 consecutive quarters and is now 1.4 percent below its level one year ago. In addition, personal savings—as a percentage of disposable personal income—averaged 4.0 percent in the first 3 months of 1991, 0.2 percent below the average for the last 6 months of 1990.

Just as personal income has declined, real personal consumption expenditures have followed suit. In first-quarter 1991, expenditures decreased \$9.5 billion, after decreasing a whopping \$23.2 billion in the last quarter of 1990. As expected, expenditures on both durable and nondurable goods moved downward, but expenditures on services continued to rise. During the first quarter, durables fell \$11.7 billion, nondurables declined \$6.6 billion, while expenditures on services climbed \$8.8 billion—despite the economic slowdown.

In April 1991 U.S. industrial production rose for the first time in 6 months. Although the index inched up 0.1 percent to 105.1 percent of the 1987 annual average, industrial production is lagging last year's by 3.4 percent. While clothing production has been decreasing, textile material output has moved upward recently. Clothing production is down 1

percent from January figures, while textile output has gained about 1.5 percent.

U.S. industries operated at 78.3 percent of capacity in April, down 5.9 percent from a year earlier. This has been offset somewhat, however, by a growth of 2.4 percent in the total industry capacity since April 1990. While durable industries advanced, nondurable manufacturing continued to weaken. Among nondurable industries, the textile mill and apparel products sectors increased or held steady. April utilization levels were 81.7 and 71.5 percent, respectively.

In April 1991 the seasonally adjusted U.S. unemployment rate for all civilian workers declined for the first time since May 1990. The April unemployment rate was 6.6 percent. This compares with 6.8 percent in March, the highest rate in over 4 years. Similarly, unemployment in the textile mill products sector fell to 6.0 percent in April. This compares to a 5-year high for the sector of 9.5 percent recorded in March 1991. In contrast, unemployment in the apparel products sector rose to 9.1 percent in April from a 9-month low of 8.2 percent in March.

The overall trade balance improved in first-quarter 1991 from a year earlier. U.S. merchandise exports, on a seasonally adjusted basis, increased 5.6 percent above first-quarter 1990 to \$101.7 billion, while imports declined 3.1 percent to \$118.7 billion. For the first-quarter, the trade balance fell \$9.3 billion from the respective quarter in 1990 to \$16.9 billion. Agricultural commodities reported a net trade surplus of \$4.5 billion and continue to help close the trade gap. During first-quarter 1991, cotton exports were 16 percent above those of a year earlier.

U.S. imports (square-meter-equivalent basis) of textiles and apparel made of cotton, wool, manmade fiber, silk blends, and noncotton vegetable fiber dropped 4.9 percent in first-quarter 1991 from a year earlier. Imports of both apparel and textile mill products declined 5.2 and 4.7 percent, respectively. By volume, cotton, wool, and manmade fiber imports weakened in the first quarter of 1991 by 3.4, 13.1, and 6.6 percent, respectively. Comparing the first quarter of 1991 to that of 1990, these imports also decreased in value. Cotton imports declined 6.0 percent; wool, 7.8 percent; and manmade fibers, 3.3 percent.

Real trade-weighted exchange rate indexes for cotton and manmade fiber textile trade since 1985 are illustrated in figures 1 and 2. Figure 1 suggests imports of cotton textiles may be strengthened by an appreciating dollar which promotes imports as relatively less expensive. Domestic mill demand should also remain strong as reflected by the index, favoring cotton textile exports. Figure 2 also suggests the continuation of strong manmade fiber imports, again reflecting the strong U.S. dollar. The index for manmade fiber exports, however, is relatively stable, reflecting a pos-

# U.S. Cotton Situation and Outlook

Figure 1  
Real Trade-Weighted Exchange Rate  
Index Favors Cotton Textile Imports

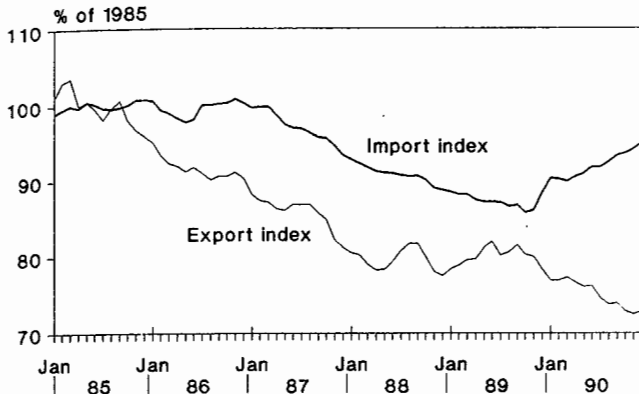
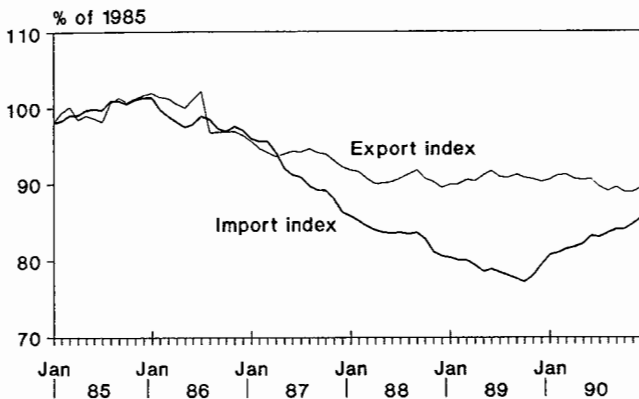


Figure 2  
Real Trade-Weighted Exchange Rates  
Favor Manmade Fiber Imports



sibly larger textile deficit. The real trade-weighted exchange rate data for cotton and manmade textiles are presented in appendix table 27.

## Upland Cotton Situation

### High Yields in Texas, Oklahoma Boost 1990 Production

Final 1990-crop cotton data released in May place U.S. upland cotton production at 15.1 million bales, 32 percent larger than the 1989 crop. Planted acreage in 1990 was 12.1 million, up about 19 percent. Lower abandonment in 1990, 5 percent (versus 10 percent in 1989), contributed to the sharper, 26-percent rise in harvested area to 11.5 million acres. Upland cotton acreage abandonment in the U.S. (less Texas) fell to a low 1.7 percent in 1990, reflecting another in a recent series of good harvest seasons. Average yield in 1990 rose 30 pounds to 632 pounds per harvested acre (table A).

Upland cotton production in the Southeast, Delta, Southwest and West was up 18, 22, 76 and 7 percent, respectively, in 1990. Highlights of the 1990/91 U.S. cotton production season were:

- highest yielding crop ever in Oklahoma, at 496 pounds per harvested acre,
- Second highest yielding crop on record in Texas, at 477 pounds per harvested acre,
- largest cotton crop ever in Louisiana—1.18 million bales, and
- the largest cotton crop in 25 years in North Carolina—263,000 bales.

### Domestic Mill Use Rebounds From Seasonal Low, Strong First Quarter

On May 3, 1991, the Department of Commerce released its first mill consumption and stocks data in the new quarterly format. The data cover the first quarter of calendar year 1991 (January-March). During this 3-month period, U.S. mills consumed 2.13 million 480-lb. bales of upland cotton,

Table A--Final 1989 and 1990 upland cotton acreage, yield, and production 1/

Region	Planted ---1,000 acres---	Harvested	Yield Lbs./acre	Production 1,000 bales
Southeast: 2/				
1989	853	838	603	1,052
1990	1,133	1,123	531	1,242
Delta: 3/				
1989	2,984	2,904	664	4,019
1990	3,583	3,510	672	4,917
Southwest: 4/				
1989	5,022	4,090	357	3,043
1990	5,882	5,371	478	5,348
West: 5/				
1989	1,351	1,334	1,220	3,390
1990	1,519	1,500	1,163	3,634
Total:				
1989	10,210	9,166	602	11,504
1990	12,197	11,504	632	15,141

1/ Based on May Crop Production report. 2/ Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia. 3/ Arkansas, Louisiana, Mississippi, Missouri, and Tennessee. 4/ Kansas, Oklahoma, and Texas. 5/ Arizona, California, and New Mexico.

Figure 3  
Cotton Share Hits 20-Year High

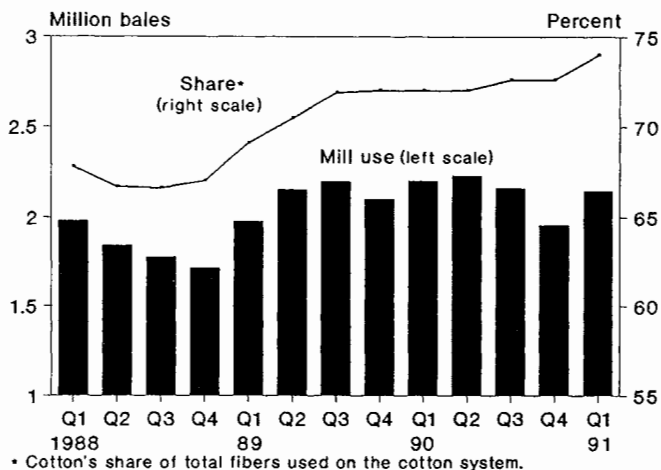
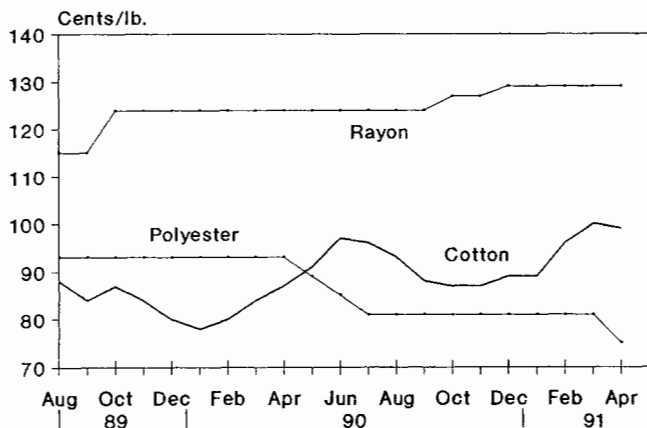


Figure 4  
Fiber Prices Favor Polyester



Raw-fiber-equivalent basis.

down 2.3 percent (50,100 bales) from the same quarter of the previous season. Domestic mills used 1.94 million bales in the last quarter of 1990. The recent data suggest a resurgence in mill use during January-March and support the current USDA forecast for 1990/91 upland cotton mill use of 8.335 million 480-lb. bales. For the first 8 months of the 1990/91 season, domestic mills used 5.638 million 480-lb. bales of upland cotton, compared with 5.864 million for the first 8 months of last season. The tentative release date for second-quarter (April-June) data on mill consumption of cotton is August 6, 1991. End-of-season (July 31, 1991) cotton stocks data will not be available until early November.

All cottons' share of fibers used on the cotton system reached 74 percent in the January-March period, continuing its upward trend (fig. 3). Cotton's share was 72.6 percent in the previous quarter and 72 percent a year earlier. The recent increase in cotton share reflects not only a continuing consumer preference for cotton fiber but also the propensity of manmade fiber products—concentrated more in industrial and household end uses—to suffer more pronounced weakness during economic contractions.

Domestic mill use of upland cotton has been quite strong in early 1991 despite a sharp runup in cotton fiber prices and stable-to-lower polyester fiber prices (fig. 4). At 89 cents per pound in January, the mill-delivered price of strict low middling (SLM) 1-1/16 inch cotton, on a raw fiber equivalent basis, has risen to about \$1.00 per pound in March and April. Prices of polyester, on a raw fiber equivalent basis, had held steady at 81 cents per pound during January-March, before falling to 75 cents in April.

The cotton/polyester price ratio was 1.10, 1.19, 1.23 and 1.32 in January, February, March and April, respectively. In April, cotton was in its least price competitive position since June 1987. Despite the relative price movements of the two fibers, early indications for the second calendar quarter suggest that cotton use is being buoyed by good denim demand and seasonal demand for back-to-school items.

### High Prices Moderate Export Pace

Since moving above the A Index in late 1990, U.S. A-type cotton prices on the Northern Europe market, as measured by Memphis Territory (MT) quotes, have continued to rise (fig. 5). By late May, MT quotes were nearly 13 cents above the A Index and 16 cents above the low quote for comparable styles. In May, MT prices were the highest quoted for A-type cotton, averaging nearly \$1.00 per pound and 600 points above the second most expensive cotton. Quotes for MT cotton have not been included in the A Index since January.

U.S. cotton quotes for coarse-count cotton, as indicated by Orleans/Texas (O/T) prices, rose sharply in February to 85 cents per pound and then retreated 500 points by the end of March. In April and May, O/T prices were quite stable near 81 cents per pound and averaged 300 points above the B Index (fig. 6). In February, March, and April, O/T quotes have been included in the B Index only 18 days, and usually as the most expensive quote. In May, O/T quotes have appeared in the B Index more frequently, owing more to a rise in Turkish prices and the paucity of competing quotes than any weakening of O/T prices.

The U.S. is expected to garner one-third of cotton world trade in 1990/91, up slightly from 32 percent last season. Among individual countries, the U.S. share of total cotton imports is expected to reach 56 percent in Japan, 63 percent in Korea and 71 percent in China (table B).

U.S. 1990/91 upland cotton exports are projected at 7.5 million 480-lb. bales, compared with exports of 7.24 last year. The much higher U.S. cotton quotes on the Northern Europe market have dampened recent sales and shipments for the 1990/91 season; nonetheless, the slower pace appears sufficient to attain the export projection.

Figure 5  
 Memphis Territory Prices  
 Remain Out of A Index

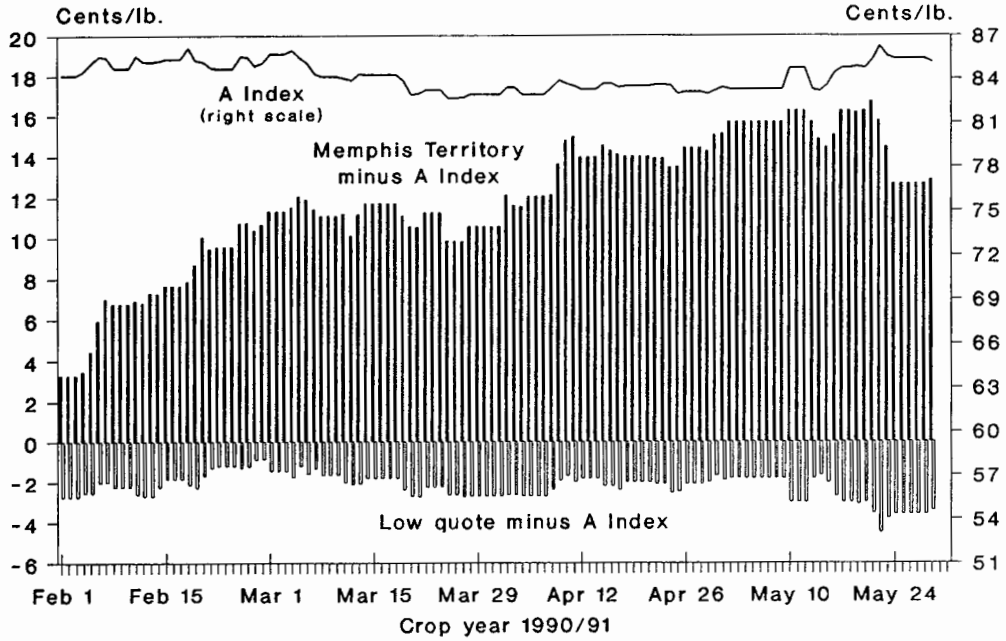


Figure 6  
 Orleans/Texas Remains  
 Out of B Index

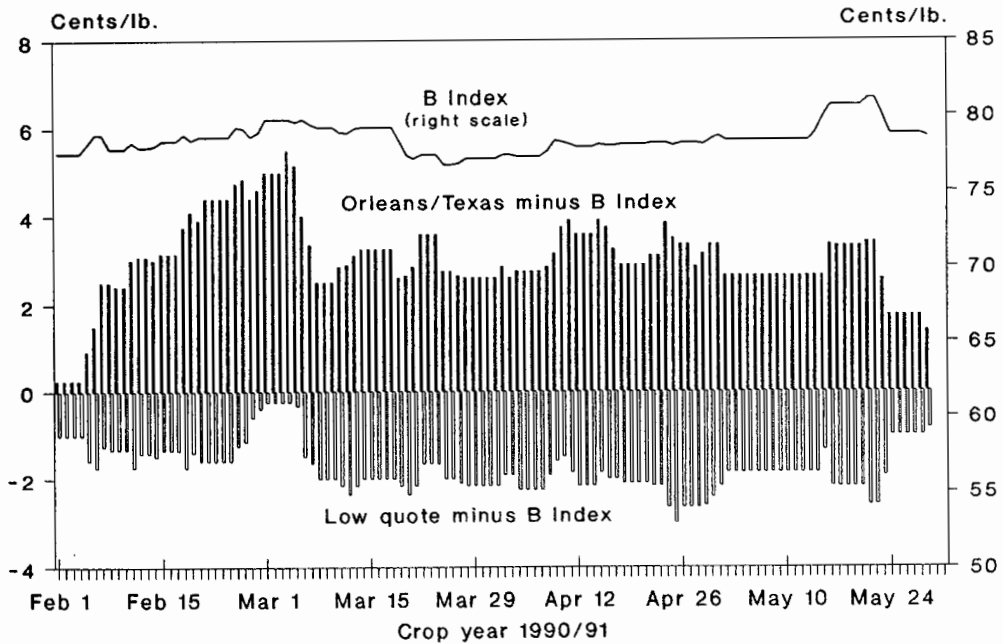




Table B--U.S. cotton export shares to selected countries

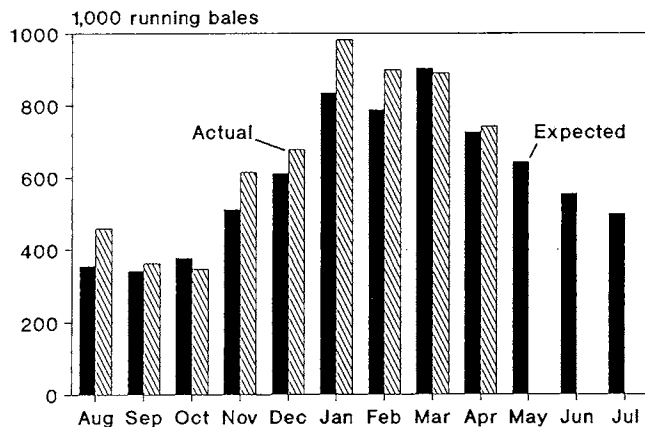
Country	1987/88	1988/89	1989/90	1990/91 1/
	Percent			
Japan	46	40	50	56
Korea	74	61	67	63
Taiwan	26	14	28	33
Hong Kong	7	8	20	21
Italy	29	16	32	33
France	9	1	3	6
Germany	39	24	36	19
Portugal	7	3	6	7
Indonesia	33	28	39	35
Thailand	28	14	29	21
China	0	69	36	71
World	28	24	32	33

1/ Based on estimates as of May 1991.

In the 40th week of the 1990/91 season, upland shipments are 110 percent of their year-earlier level. Based on data from 1975-89, the total commitments/final shipments ratio in the 40th week of the season is expected to be 1.068, compared with the current-season ratio of 1.02. The implication is that, in order to achieve the USDA upland export forecast—in the absence of an upsurge in sales during the remainder of the season—cancellations-plus-rollover will likely need to be very low relative to final shipments this season.

U.S. monthly upland cotton shipments proceeded at rates well above those expected in first-half 1990/91, based on the total export forecast for the season and historical shipment patterns (fig. 7). In March and April, shipment rates weakened to a more normal rate. The recently higher U.S. cotton prices are expected to dampen further shipment rates in the last months of the 1990/91 season. However, owing to the strong shipment rates in the first half of the season, shipments in May, June, and July could fall well below historically based expected levels and still achieve the upland export forecast.

Figure 7  
1990/91 U.S. Upland Export Pace Slows



Based on USDA's May 1991 forecast.

### Cotton Prices Rise With Tight Supplies and New Crop Concerns

In April, U.S. spot market prices for strict low middling (SLM) 1-1/16 inch cotton averaged 79.94 cents per pound—the highest in a decade and 863 points above a year ago. Further sharp gains in early May pushed spot market prices over 86 cents per pound and July futures over 92 cents. Thus far this season the adjusted world price, averaging over 65 cents in May, has been well above the U.S. upland loan rate of 50 cents per pound (table C).

Cash and futures prices for old-crop cotton have strengthened on seasonal supply tightness associated with strong offtake, while new-crop futures prices have surged

Table C--U.S. cotton prices, 1990/91

Month and day	Average spot market price 1/	July futures price 1/	Adjusted world price 2/
	Cents/lb.		
Aug. 2	78.96	73.10	66.40
9	78.86	72.70	66.31
16	72.68	70.85	64.82
23	74.69	72.50	64.24
30	74.91	74.43	66.01
Sept. 6	72.95	74.45	65.94
13	70.44	74.52	65.62
20	71.57	74.85	65.75
27	70.03	74.05	65.45
Oct. 4	69.17	73.40	64.93
11	70.28	74.37	65.55
18	70.22	74.10	65.87
25	71.19	75.00	66.46
Nov. 1	71.31	75.01	67.12
8	69.55	74.70	66.63
15	69.64	73.95	66.56
22	Holiday	Holiday	66.84
29	68.56	73.22	66.89
Dec. 6	68.55	73.16	66.86
13	69.91	74.57	67.79
20	70.44	75.25	68.23
27	70.49	74.87	68.91
Jan. 3	70.36	74.50	68.48
10	69.55	73.48	67.22
17	70.83	75.59	67.09
24	70.21	75.20	67.71
31	72.56	77.12	67.77
Feb. 7	76.11	79.77	68.74
14	76.31	81.92	68.90
21	78.78	84.58	69.02
28	80.38	85.98	68.76
Mar. 7	78.29	84.10	68.88
14	79.10	85.12	67.65
21	77.16	83.65	67.14
28	76.01	82.11	66.23
Apr. 4	77.92	83.55	66.59
11	80.66	85.51	66.80
18	80.01	86.56	65.91
25	80.25	87.05	65.84
May 2	81.88	88.13	65.35
9	83.04	88.55	65.60
16	85.95	91.83	65.81
23	84.69	89.86	66.39
30	81.91	86.77	64.90

1/ Spot and July futures prices are for SLM 1-1/16 inch cotton, U.S. base quality. 2/ Adjusted world price is the Northern European price, adjusted to SLM 1-1/16 inch at average U.S. producing locations. Adjusted world prices are applicable for the week following the date shown.



Table D--Cotton loan statistics, 1988-90 1/

Region	Loans made			Loans repaid			Loans outstanding			Loans forfeited		
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988	1989	1990
	-----1,000 running bales-----											
Southeast 2/	665.9	182.7	104.4	663.6	182.2	50.4	0	0.0	54.1	2.4	0.4	0
Delta 3/	3,995.4	1,571.8	1306.1	3,972.2	1,571.2	1022.8	0.5	0.2	283.4	22.7	0.3	0
Southern Plains 4/	4,631.4	890.1	980.7	4,592.5	888.4	635.1	0.1	1.5	345.6	38.7	0.2	0
West 5/	1,938.5	1,087.5	812.0	1,936.4	1,081.3	411.4	0.1	6.2	400.6	2.0	0.0	0
United States	11,231.2	3,732.1	3,203.2	11,164.7	3,723.1	2,119.7	0.7	7.9	1,083.7	65.8	0.9	0

1/ Producer and cooperative loans through April 30, 1991. Regional statistics do not reflect a backlog of loan payments for 1988 crop.  
 2/ Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia. 3/ Arkansas, Louisiana, Mississippi, Missouri, and Tennessee.  
 4/ Kansas, Oklahoma, and Texas. 5/ Arizona, California, and New Mexico.

with diminished 1991 crop prospects. Any additional planting and early crop development problems that delay the harvesting of the 1991 crop will likely further stress supplies during the transition from old- (1990) to new- (1991) crop cotton.

The recent strength in upland cotton cash prices has focused attention on the special global import quota for cotton (see cover chart and related special article). Should upland cotton spot prices rise high enough to activate the quota trigger, current legislation provides for the import, during a 90-day period, of an amount of cotton equal to 21 day's mill consumption.

Higher upland cotton prices in the 1990/91 season have reduced loan entry of 1990-crop cotton (table D). At the end of April 1991, about 3.2 million running bales (22 percent) of 1990-crop upland cotton had been put under loan, compared with 3.7 million (34 percent) of the 1989-crop.

Stocks of upland cotton on July 31, 1991, are projected at 2.2 million bales, down nearly 600,000 from their beginning level. The ending-stocks-to-use ratio is projected at a low, 14 percent.

#### **Modest Production and Stocks Increase Expected in 1991/92**

A sharply lower acreage reduction requirement (ARP) of 5 percent (versus the current season's 12.5 percent), higher cotton prices, and the new planting flexibility provisions of the 1990 Farm Act are likely to result in a larger U.S. upland cotton crop in 1991/92. The U.S. Prospective Plantings report released in late March showed prospective upland plantings of 13.8 million acres, about 13 percent more than last season (table E).

Preseason upland cotton production forecasts are especially difficult this season and have become rapidly dated as they have been influenced by:

- volatile cotton prices,
- excessive rainfall in the Delta,

- unseasonably low temperatures in the West, and
- inadequate moisture in Texas' High Plains.

In many areas of the Delta, this April proved to be the wettest on record. Aside from the extreme volume, the pattern of rainfall was particularly detrimental as precipitation occurred throughout the month and permitted almost no field preparation or early planting during this critical period. The pattern persisted into early May, the usual peak of planting activity in this region.

While 7-10 days of clear weather would permit rapid sowing progress, some potential cotton acreage is now seen likely to remain waterlogged beyond a reasonable planting date. Also, many producers, who had earlier anticipated increasing their cotton sowings by devoting their flex acres to the crop, had planned to do so without expanding their equipment contingent—counting on a long and open planting season. These producers now face a much narrower planting window and sowings will likely be reduced.

Nonetheless, producers in the region are expected to press on with cotton planting as late in the season as is economically practicable. While agronomic factors militate against late planting, many producers view their principal fallback crop, soybeans, as a distant second-best economic alternative, based on current and historical soybean/cotton price relationships.

Table E--Estimated upland cotton acreage, 1990/91

Region 1/	1990	Indicated 1991 2/	Percentage increase
	1,000 acres		
Southeast	1,143	1,443	26
Delta	3,578	4,140	16
Southern Plains	5,987	6,882	15
West	1,489	1,305	-9
Total	12,197	13,770	13

1/ Southeast: Alabama, Georgia, South Carolina, North Carolina, Virginia, Florida; Delta: Mississippi, Louisiana, Arkansas, Tennessee, Missouri; Southern Plains: Texas, Oklahoma, Kansas; West: California, New Mexico, and Arizona. 2/ Based on March 28, 1991, Prospective Plantings report.

Table F--Use of upland cotton acreage bases by region, 1982-91

Year	---Southeast 1/---		-----Delta 2/-----		--Southern Plains 3/----		-----West 4/-----	
	Acreage base	Percentage of base used 5/	Acreage base	Percentage of base used 5/	Acreage base	Percentage of base used 5/	Acreage base	Percentage of base used 5/
	1,000 acres							
1982	850	84	3,252	85	8,884	82	2,322	90
1983	881	99	3,348	99	8,869	93	2,331	101
1984	926	92	3,462	94	8,825	83	2,351	90
1985	1,000	106	3,584	98	8,868	85	2,372	90
1986	1,088	96	3,706	95	8,534	89	2,237	82
1987	1,094	104	3,673	103	7,640	95	2,264	86
1988	1,143	107	3,714	106	7,398	98	2,229	92
1989	1,223	96	3,868	101	7,269	94	2,205	81
1990	1,206	107	3,915	103	7,129	95	2,129	76
1991 6/	1,306	115	4,076	106	4,176	100	2,069	65

1/ Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia. 2/ Arkansas, Louisiana, Mississippi, Missouri, and Tennessee. 3/ Kansas, Oklahoma, and Texas. 4/ Arizona, California, and New Mexico. 5/ Includes planted plus diverted acres. 6/ Estimated, based on March 28, 1991, Prospective Plantings report and preliminary Program Enrollment report. Total acreage bases for 1987 to present are reduced by base acres accepted into the Conservation Reserve Program with signed contracts.

In the West, where sowings were already down due to moisture problems, cool temperatures in April hindered early plant development. This season's cool temperatures could result in below-average yields.

Assuming actual planted acreage is close to the March Planting Intentions report of 13.8 million acres, and assuming average abandonment and yields, total upland cotton production could range from 15 to 17 million bales. However, prospects have likely diminished since the March acreage report. The initial USDA forecast, based on conditions through early May, has projected 1991 upland cotton production at 15.6 million bales.

The preliminary U.S. upland cotton base in 1991 is estimated at 14.6 million acres, based on USDA's May 13 preliminary enrollment report. Upland cotton base acreage is estimated up 1.7 percent from 1990, with increases in all regions except the West (table F). The modest upturn in the Southern Plains represents the first increase in 6 years.

The preliminary enrollment report also provided an early assessment of how program participants planned to respond to the new planting flexibility provisions of the 1990 farm bill (see related special article). Upland cotton producers participating in the 1991/92 cotton program indicated that they would "flex" about 476,000 acres of other-program-crop base acreage into upland cotton and about 274,000 upland base acres into other crops. The net flexed acreage for upland cotton—the only program crop showing a net gain—is 202,000 acres.

**Total Offtake To Fall in 1991/92 With Lower Export Prospects**

Upland cotton offtake is expected to decline in 1991/92 as stable-to-slightly-stronger mill use is offset by significantly lower exports. U.S. upland export prospects are lower, based on an expected higher foreign outturn in response to high cotton prices. U.S. upland exports in 1991/92 are projected at 6.6 million bales, down 900,000 from the cur-

Figure 8 Strong Preseason Sales for Upland Cotton

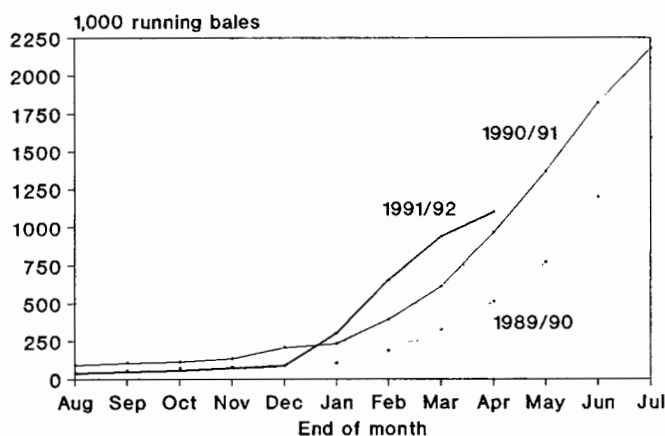
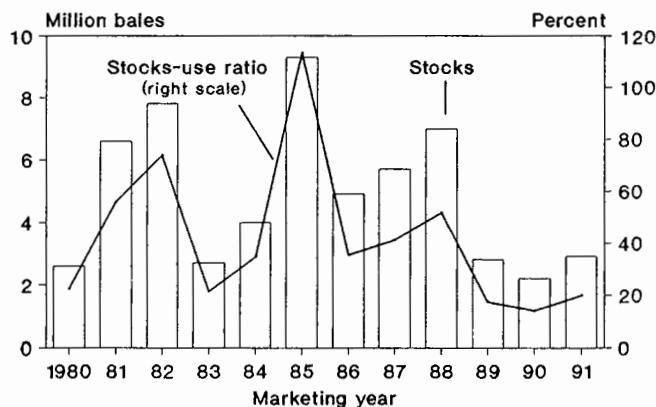


Figure 9 Upland Cotton Stocks, Stocks-To-Use Ratio To Rise Slightly in 1991/92



Estimated 1990 and projected 1991.

rent season. Despite higher cotton prices, preseason sales of upland cotton for the 1991/92 season were 1.1 million bales at the end of April, 14 percent ahead of their year-earlier pace (fig. 8).

Table G--Final 1989 and 1990 ELS cotton acreage, yield, and production 1/

State	Planted ----1,000 acres----	Harvested	Yield Lbs./acre	Production 1,000 bales
Arizona:				
1989	245.0	244.5	936	477.0
1990	125.0	124.0	751	194.0
Texas:				
1989	82.0	78.0	794	129.0
1990	60.0	57.0	682	81.0
New Mexico:				
1989	30.3	30.2	707	44.5
1990	19.3	19.3	609	24.5
California:				
1989	18.0	17.9	1,078	40.2
1990	25.7	25.5	1,080	57.4
Mississippi:				
1989	1.6	1.1	436	1.0
1990	1.3	1.3	591	1.6
Total:				
1989	376.9	371.7	893	691.7
1990	231.3	227.1	758	358.5

1/ Based on May Crop Production report.

Domestic mill use of upland cotton may improve slightly in 1991/92 over 1990's strong usage rates. Upland mill use in 1991/92 is projected at 8.4 million bales, about 1 percent ahead of the current season's forecast. An expected improvement in the general economy in 1991/92 will likely boost upland mill use.

With 1991/92 beginning stocks of upland cotton projected at 2.2 million bales and production estimated at 15.6 million, total upland cotton supply is projected at 17.8 million bales. Based on projected offtake of 15 million bales, ending stocks of upland cotton on July 31, 1992, are placed at 2.9 million bales. The ending stocks-to-use ratio in 1991/92 is projected at 19 percent, compared with an estimate of 14 percent in 1990/91 (fig. 9).

## ELS Cotton Situation

### Production and Use Below Last Season

Final extra-long staple (ELS) cotton production for 1990 totaled 358,000 bales, down nearly one-half from last season's record outturn of 692,000 bales (table G). This season's lower production resulted from a decrease in acreage and a substantial yield reduction. Harvested area was 227,100 acres, 39 percent below 1989. Average lint yields dropped 135 pounds per harvested acre to 758 pounds.

Higher ELS prices have moderated this season's domestic use and exports. ELS cotton, averaging \$1.19 per pound for the first 9 months of the season, carried a 43-cent premium over upland cotton, compared with a 33-cent premium last season (fig. 10). Based on current estimates, total ELS use this season could reach 465,000 bales. If realized, total ELS usage would decline more than 11 percent from 1989/90.

During the first 9 months of the season, domestic mill use of ELS cotton reached 41,244 bales, nearly 10,000 bales below last season's respective level. Although consumption is lower, ELS mill use should reach 65,000 bales this season, compared with 73,000 last season.

Exports of ELS cotton during the first 9 months of 1990/91 climbed to 313,000 running bales, near last year's pace. At the beginning of May, ELS export commitments (shipments plus outstanding sales) for 1990/91 were 17 percent behind last season. Based on these commitments, adjusted for rollover and cancellations, exports could reach 400,000 480-pound bales. With lower production and a slight reduction in demand, ELS ending stocks are projected to fall to 90,000 bales, down sharply from last season's 207,000 bales.

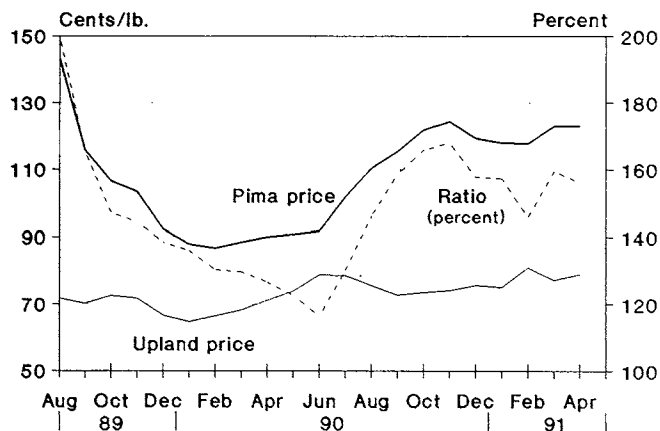
### Larger ELS Base, but Fewer 1991/92 Plantings Indicated

Interest in growing ELS cotton in the United States continues to increase as strong demand and attractive prices remain. In the past 2 years, 50 additional counties were designated by the USDA as suitable for growing ELS cotton. For the 1991 season, 2 additional counties were made eligible. The designated counties are Madera County in California and Atascosa County in Texas.

A total of 92 counties in 8 States now have been designated as eligible to grow ELS cotton. The Agricultural Act of 1949, as amended, defines ELS cotton, for program purposes, as "any pure strains of the Barbados species, or hybrid thereof, of cotton that is grown in a county designated by the Commodity Credit Corporation (CCC) as suitable for ELS production and that is ginned on a roller gin."

The 1991 preliminary enrollment report estimated total ELS cotton base at 230,149 acres, 51 percent above the acreage in the final 1990 compliance report. Based on the preliminary

Figure 10  
Relative Prices at Planting Favor Pima\*



\* Pima (46-03) and Desert SW Spot.

data, acreage enrolled in the ELS program (27,919 acres) accounts for 12 percent of total base, with no acreage in California or Mississippi enrolled.

The Prospective Plantings survey conducted in March indicated that 222,000 acres are intended to be planted in 1991. If actual plantings match the March intentions, ELS acreage would decline 4.4 percent from 1990 plantings. By State, ELS acreage projections suggest a 40,000-acre reduction in Arizona; however, California plantings are expected to be up sharply, nearly offsetting Arizona's decrease. Projections for Texas, New Mexico, and Mississippi have remained relatively stable. Using planting intentions and trend yields, 1991 ELS production could range between 375,000 and 425,000 bales.

Figure 11  
ELS Preseason Sales for 1991/92  
Move Above Last Season

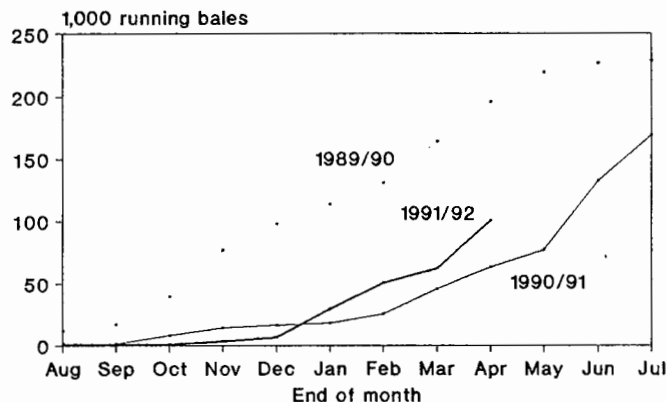


Table H--ELS cotton supply and use in foreign producing countries, 1987-91

Year beginning August 1	1987	1988	1989	1990 est.	1991 proj.
1,000 480-lb. bales					
Beginning stocks:					
Egypt, L. Stpl.	200	181	97	82	81
India	89	158	226	301	204
Israel	5	5	7	10	21
Peru	18	5	11	31	28
PRC	11	4	4	4	18
Sudan	310	224	166	231	180
USSR	162	268	340	102	249
Other producers	29	27	23	27	21
Subtotal	824	872	874	788	802
Egypt, ELS	132	109	86	69	74
Total	956	981	960	857	876
Production:					
Egypt, L. Stpl.	1,218	1,039	938	964	936
India	1,000	878	979	863	985
Israel	58	85	143	72	16
Peru	49	106	150	123	89
PRC	116	115	161	177	195
Sudan	195	186	222	88	54
USSR	1,704	1,792	1,241	1,400	1,200
Other producers	59	49	50	57	60
Subtotal	4,399	4,250	3,884	3,744	3,535
Egypt, ELS	379	370	371	380	397
Total	4,778	4,620	4,255	4,124	3,932
Consumption:					
Egypt, L. Stpl.	1,080	966	903	940	890
India	925	811	786	843	850
Israel	0	0	0	1	1
Peru	54	34	80	50	55
PRC	40	65	93	90	95
Sudan	7	3	6	9	5
USSR	1,450	1,500	1,380	1,264	1,201
Other producers	41	22	22	22	22
Subtotal	3,597	3,401	3,270	3,219	3,119
Egypt, ELS	163	200	232	225	240
Total	3,760	3,601	3,502	3,444	3,359
Exports:					
Egypt, L. Stpl.	172	100	50	25	65
India	0	0	117	117	117
Israel	58	83	140	60	30
Peru	12	51	50	75	29
PRC	100	60	83	87	115
Sudan	290	241	151	130	120
USSR	218	259	145	36	75
Other producers	52	63	57	73	70
Subtotal	902	857	793	603	621
Egypt, ELS	231	176	156	150	165
Total	1,130	1,033	949	753	786

Source: International Cotton Advisory Committee, Washington, D.C.

Demand for ELS cotton in 1991/92 should remain strong but stable. Both domestic mill use and exports are expected to remain near this season's levels. The pace of preseason export sales for 1991/92 is ahead of last season (fig. 11). At the end of April, ELS sales for next season were running 58 percent ahead of 1990/91 preseason sales. Based on supply and demand, ELS ending stocks could range between 40,000 and 60,000 bales.

### **Foreign Production and Consumption Estimated Lower This Season and in 1991/92**

According to the International Cotton Advisory Committee (ICAC) estimates for foreign producing countries, both ELS production and consumption are expected to decline this season (table H). Foreign production is estimated at 4.1 million bales in 1990/91. While production is expected to fall 3 percent from last season, consumption in foreign producing countries is estimated to decline nearly 2 percent to 3.4 million bales.

ICAC estimates indicate that production in Israel and Sudan will be down sharply from last year. In Israel, ELS output is expected to be cut in half—back to more historical levels. In Sudan, production is reported down over 100,000 bales. On the other hand, ICAC indicates that the Soviet Union's increase in output will nearly offset these declines.

In 1990, foreign ELS exports continued their downward trend. Exports this season are estimated at 753,000 bales, 21 percent below last year and 33 percent below the 1987 level.

The Soviet Union and Israel, with its lower production, lead the export declines. Based on supply and demand, 1991/92 beginning stocks could rise slightly to 876,000 bales, up from this season's 857,000 bales.

In 1991/92, foreign ELS production and consumption are projected to decline even further, while exports are expected to rebound slightly. Current ICAC estimates forecast production and consumption at 3.9 and 3.4 million bales, respectively. ELS exports are projected at 786,000 bales. Based on these estimates, a moderate decline in stock levels is expected in foreign producing countries.

## **Foreign Cotton Situation and Outlook**

### **Record Production Expected in 1991/92**

World cotton production in 1991/92 is forecast at a record 91 million bales, up 5 percent from 86.8 million in 1990/91 (table I). The previous record of 89 million bales was produced in 1984/85, the year of China's spectacular 28.7-million-bale crop.

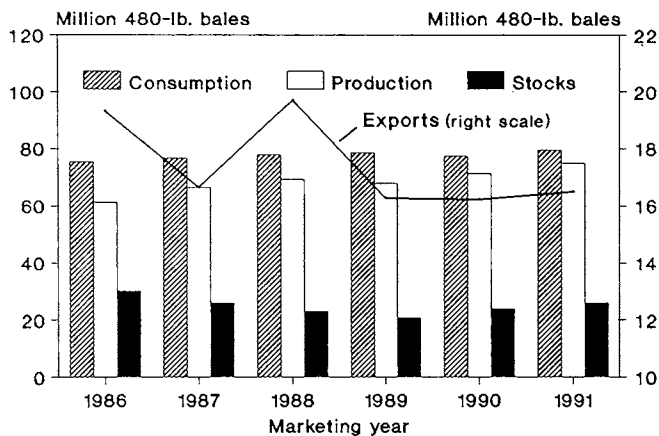
China's plans for another large crop in 1991/92 will help push foreign output to within 1 million bales of the 76-million-bale record of 1984/85. Foreign production is forecast to rise nearly 4 million bales from the 71.3-million-bale crop in 1990/91 (fig. 12). Gains in foreign area as well as yields are likely.

Table I--World cotton supply and use, 1989/90 and 1990/91 1/

Year beginning August 1	United States	Major importers 2/	Major exporters 3/	Other	Total foreign	World
----- Million 480-lb. bales						
1989/90:						
Supply--						
Beginning stocks	7.1	5.2	9.2	9.0	23.1	30.2
Production	12.2	1.5	43.7	22.8	67.8	80.0
Imports	4/	16.1	3.0	6.0	25.2	25.2
Use--						
Mill use	8.8	17.1	39.8	21.8	78.5	87.3
Exports	7.7	1.0	8.4	6.9	16.3	24.0
Ending stocks	3.0	4.6	7.4	8.9	20.8	23.8
1990/91:						
Supply--						
Beginning stocks	3.0	4.6	7.4	8.9	20.8	23.8
Production	15.6	1.6	45.8	22.0	70.4	86.1
Imports	4/	15.0	3.0	6.5	24.3	24.3
Use--						
Mill use	8.4	15.9	40.0	22.2	78.4	86.8
Exports	8.0	1.1	7.5	6.9	16.1	24.1
Ending stocks	2.3	4.1	8.4	7.8	20.5	22.7

1/ Based on May 9, 1991, World Agricultural Supply and Demand Estimates report, 1990/91 projected. Totals may not add and stocks may not balance because of rounding, a small quantity of cotton destroyed, and unaccounted differences.  
2/ Eastern Europe, Western Europe, Japan, Hong Kong, Republic of Korea, and Taiwan.  
3/ Australia, China, Central America, Egypt, Mexico, Pakistan, Sudan, Turkey, and the USSR. 4/ Less than 5,000 bales.

Figure 12  
Foreign Stocks Projected Up Slightly



Estimated 1990 and projected 1991.

Increased foreign production will be highly dependent upon China's success in expanding area. Recently China announced planting intentions of 6.6 million hectares (16.3 million acres), 19 percent above the 1990/91 planted area. If realized, this would be the largest gain since the 1951/52 crop year and China's second largest cotton area on record. Although the Government announced no additional price increases for 1991/92 cotton, the substantial price rise in 1990/91 should continue to encourage cotton planting. Winter wheat farmers in the North China Plain—who plant in the fall prior to price announcements for spring-planted crops like cotton—appear to have reduced wheat area this year, perhaps intending to switch into cotton this spring.

India also plans for sharply larger area and production. As in China, even if India fails to achieve completely its planned increases, some gain over the reduced yields of 1990/91 is likely.

Mexico estimates its planted area at about 260,000 hectares, up from 1990/91. Prospects for yields are good because its reservoirs are more full than usual.

Prospects for other Northern Hemisphere producers are mixed. Turkey reports an expected gain in area, as decreases in its southern region are more than offset by a large increase in the main producing region. But, Turkey's 1990/91 yields were quite good, so a return to more normal yields is likely.

Egypt's cotton planting target is 385,000 hectares, down from 418,000 hectares in 1990/91. Planted area reportedly fell short of the target.

The USSR's main cotton producing republics again report a planned cotton area decrease of roughly 150,000 hectares, although improved price incentives may offset some of the decline.

The Government of Sudan intends to lower sharply the area planted to cotton in its irrigation projects and increase wheat production. Israel and Syria, which are experiencing a severe drought and water shortages, will also sharply decrease their planted area.

Spain's reservoirs are below normal levels and available irrigation water has recovered from earlier rationing. In Greece, planting weather has been cool and rainy and some delay is now anticipated. In addition, the EC has yet to announce support prices for Spain and Greece, increasing risk and uncertainty for some farmers.

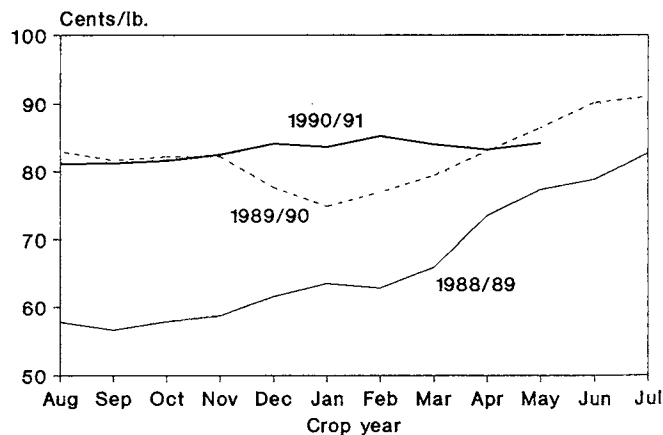
Southern Hemisphere producers will not begin planting until October; they are just completing the 1990/91 harvest. If world prices continue high at that time, producers there are expected to plant record or near-record area again—as most did this season.

### World Prices Remain High but Stable

World prices for 1990/91 remained high through May 1991, according to the Cotlook A Index on the Northern European market in Liverpool. So far, the 1990/91 A Index is averaging 82.9 cents per pound, fractionally above last season's 82.4-cent average. A Index prices have varied unusually little this season (fig. 13). Although U.S. prices have risen dramatically in recent months, more competitive prices on the world market—particularly from the Southern Hemisphere crops just being harvested—kept the A Index stable.

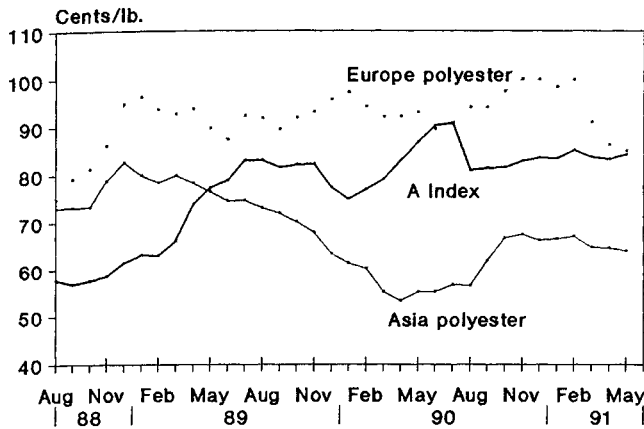
Cotlook began quoting forward A Index prices for the 1991/92 season at the end of March. These prices have been slightly lower than the 1990/91 A Index, in the range of 80-81 cents per pound, suggesting improved supplies are expected.

Figure 13  
Planting Prices Remain High



A Index prices.

Figure 14  
Foreign Polyester Prices Weaken



### Consumption Also Projected Up

Global consumption is expected to exceed 1990/91's slightly reduced level of 85.9 million bales. Consumption in 1991/92 is projected at 88 million, up 2.4 percent. Foreign use of 79.5 million bales, up 2 million, will account for much of the gain.

With the world's economies expecting improved growth during the season, gains in income and population should again push cotton demand up. But, polyester prices dropped sharply in Europe and Asia in recent months, increasing the attractiveness of that fiber over cotton (fig. 14).

Among foreign countries, producers are likely to show the greatest consumption gains. As long as world prices remain relatively high, traditional cotton importers should use minimal amounts of cotton, as they have in 1990/91.

### Total Exports Projected Off, but Foreign Exports To Rise

With consumption expansion primarily occurring among cotton-producing countries and with rising demand for other fibers, world exports are forecast at 23.5 million bales, down from 24 million in 1990/91. Foreign exports, however, are projected to rise slightly, to 16.5 million bales, as foreign production expands. Much of the increasing foreign production, however, is expected to be consumed within the producing countries.

Increased foreign competition, coupled with possibly reduced import demand from China and higher U.S. consumption and stock building, is expected to push U.S. exports down 11 percent to 7 million bales. Despite the drop in exports, the United States is expected to retain a slightly above-average (30-percent) market share in 1991/92, down from 33 percent in 1990/91.

### Stocks To Recover Somewhat

End-of-season stocks are forecast to rise, somewhat alleviating the tight world supply situation of the last 2 years. The foreign stocks-to-use ratio is projected to rise to 33 percent, compared with this season's 31 percent and the second lowest ever, 28.8 percent, in 1989/90.

## U.S. Wool Situation and Outlook

### Lower 1991 Mill Use Expected

Although first quarter raw wool mill consumption data are not available, mill use in 1991 is estimated at 120 million pounds, clean, nearly 6 percent below last year (table K). The current cyclical downturn in textile manufacturing activity is affecting raw wool mill consumption. This weakness will likely dampen mill use during the remainder of 1991.

Table J--U.S. mill consumption of raw wool, clean basis, 1984-90

Year	Apparel wool	Carpet wool	Total
1,000 lbs.			
Jan.-Dec.:			
1984	128,982	13,088	142,070
1985	106,051	10,562	116,613
1986	126,768	9,960	136,728
1987	129,677	13,092	142,769
1988	117,069	15,633	132,702
1989	112,998	14,122	127,120
1990	114,100	13,470	127,570
Jan.-Mar.:			
1984	36,623	3,438	40,061
1985	26,846	3,000	29,846
1986	32,465	2,583	35,048
1987	33,801	2,828	36,629
1988	30,925	4,479	35,404
1989	32,103	3,294	35,397
1990	29,948	3,779	33,727
Apr.-June:			
1984	36,252	3,940	40,192
1985	27,882	2,537	30,419
1986	33,653	2,387	36,040
1987	34,175	3,333	37,508
1988	30,087	3,819	33,906
1989	29,991	3,979	33,970
1990	29,998	2,923	32,921
July-Sept.:			
1984	29,326	2,721	32,047
1985	25,025	2,887	27,912
1986	30,106	2,739	32,845
1987	30,041	3,748	33,789
1988	27,427	4,414	31,841
1989	25,983	3,865	29,848
1990	25,631	3,771	29,402
Oct.-Dec.:			
1984	26,781	2,989	29,770
1985	26,298	2,138	28,436
1986	30,544	2,251	32,795
1987	31,660	3,183	34,843
1988	28,630	2,921	31,551
1989	24,921	2,984	27,905
1990	28,523	2,977	31,500

1/ Preliminary.

Source: Bureau of the Census.



Table K--U.S. wool supply and disappearance, clean content, 1985-91 1/

Item	1985	1986	1987	1988	1989	1990	1991 1/
Million lbs.							
Stocks, January 1	51.6	50.6	47.0	45.5	55.9	76.9	66
Production	47.1	45.3	45.3	48.0	47.8	47.0	50
Imports	79.5	97.0	105.1	96.7	106.9	71.7	70
Diff. unacc.	-9.6	-8.6	-8.1	-0.2	-5.4	0	0
Total supply	168.6	184.3	189.3	190.0	205.2	196.0	186
Mill use	116.6	136.7	142.8	132.7	127.1	127.6	120
Exports	1.4	0.8	1.0	1.2	1.2	2.7	2
Total use	118.0	137.5	143.8	133.9	128.3	130.3	122
Stocks, December 31	50.6	47.0	45.5	56.1	76.9	65.7	64

1/ Estimated by USDA. All projections are rounded.

Source: USDA and Bureau of the Census.

### Raw Wool Imports Rise, Exports Fall

In first-quarter 1991, U.S. imports of raw wool were 23.0 million pounds, clean, up 24 percent from the fourth quarter and 8 percent above a year earlier (table L). Raw wool imports of 48's-and-finer grades were 18.4 million pounds, 20 percent above the previous quarter and 27 percent above a year earlier. About 95 percent were shipped from three countries: Australia, 87 percent; Uruguay, 5 percent, and New Zealand, 3 percent.

Table L--U.S. imports of raw wool for consumption, clean content, 1985-91

Year	48's-and-finer 1/	Not finer-than-46's 2/	Misc. 3/	Total
1,000 lbs.				
Jan.-Dec.:				
1985	50,164	29,308	NA	79,472
1986	66,090	30,901	NA	96,991
1987	74,054	31,066	NA	105,120
1988	72,323	24,418	NA	96,741
1989	77,003	29,889	48	106,940
1990	50,328	21,355	33	71,716
Jan.-Mar.:				
1985	15,169	7,397	NA	22,536
1986	19,749	6,910	NA	26,658
1987	20,434	5,805	NA	26,239
1988	26,763	6,753	NA	33,516
1989	20,166	8,815	1	28,982
1990	14,466	6,697	33	21,196
1991	18,375	4,605	5	22,985
Apr.-June:				
1985	9,661	7,951	NA	17,612
1986	16,744	7,401	NA	24,145
1987	21,829	9,126	NA	30,954
1988	19,150	5,965	NA	25,115
1989	22,507	9,265	17	31,789
1990	10,962	7,070	0	18,032
July-Sept:				
1985	11,573	7,158	NA	18,731
1986	12,922	8,235	NA	21,157
1987	13,974	9,761	NA	23,735
1988	9,940	6,141	NA	16,081
1989	15,328	5,500	30	20,859
1990	9,607	4,275	0	13,882
Oct.-Dec.:				
1985	13,790	6,803	NA	20,593
1986	16,676	8,355	NA	25,032
1987	17,818	6,374	NA	24,192
1988	16,470	5,558	NA	22,028
1989	19,002	6,309	NA	25,312
1990	15,293	3,314	NA	18,607

NA = Not available.

1/ Formerly "Dutiable." 2/ Formerly "Duty-free."  
3/ Raw wool, not carded or combed, but processed beyond the degreased condition, e.g. dyed. Grade is not identified, Harmonized TSUSA 5101.21.6000, 5101.29.6000, and 5101.30.6000.

Source: Bureau of the Census.

Unimproved and other grades not finer-than-46's totaled 4.6 million pounds, 39 percent above the fourth quarter, but 31 percent below a year earlier. Almost 96 percent of these wool grades came from three countries: New Zealand, 75 percent; the United Kingdom, 18 percent; and Argentina, 3 percent.

The share of raw wool imports of the grades not finer-than-46's entering through the New England and Middle Atlantic customs districts exceeded the share of the grades finer-than-48's (table M). In the first quarter, about 57 percent of the grades not finer-than-46's entered through the New England and Middle Atlantic regions, compared with 6 percent of the grades 48's-and-finer. By contrast, the South Atlantic customs districts received 94 percent of the 48's-and-finer grades, compared with 6 percent of the 46's-and-coarser grades.

Raw wool exports in the first quarter totaled 523,000 pounds, clean, 54 percent of the previous quarter, but 21 percent more than the average of the previous 5 years. Overseas shipments of shorn wool amounted to 338,000 pounds. About 58 percent went to Japan and 27 percent to Germany. Exports of raw wool not shorn (pulled wool) were 185,000 pounds. About 65 percent went to the United Kingdom and 35 percent to Canada. U.S. raw wool exports are expected to reach 2 million pounds in 1991, 26 percent below the previous year.

First-quarter top exports were 3.7 million pounds, 11 percent less than the fourth quarter but 42 percent above the 1990 quarterly average. Seven countries were the destination for 91 percent of the first-quarter exports: China, 31 percent; Japan, 29 percent; Korea, 13 percent; Taiwan, 8 percent; and Canada and Venezuela, 5 percent each. First quarter 1991 shipments were valued at \$9.9 million, 21 percent below the fourth quarter but 22 percent above the 1990-average value.

Table M--Raw wool imports by region, 1986-91 1/

Region	Not finer-than-46's						48's-and-finer						Total					
	1986	1987	1988	1989	1990	1q 1991	1986	1987	1988	1989	1990	1q 1991	1986	1987	1988	1989	1990	1q 1991
	Percent																	
New England	34	30	30	24	23	22	25	16	13	15	11	5	28	20	17	18	14	8
Middle Atlantic	33	38	34	38	44	35	2	2	1	1	1	1	12	12	10	11	14	8
South Atlantic and other 3/	33	32	36	38	33	43	73	82	86	84	88	94	60	67	73	71	72	84
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

1/ Imports entered through customs districts in the respective regions. 2/ Includes customs districts along the Gulf, Mexican border, Pacific Coast, and Canadian border.

Source: Bureau of the Census.

Table N--Average U.S. farm prices per pound for shorn wool, greasy basis, 1984-91 1/

Month	1984	1985	1986	1987	1988	1989	1990	1991 2/
	Cents/lb.							
January	58.4	59.2	52.2	58.7	84.8	109.0	65.8	38.2
February	67.1	58.7	54.4	69.1	109.0	131.0	70.6	42.1
March	79.3	61.0	61.9	78.7	140.0	133.0	83.4	47.9
April	87.9	67.9	70.0	99.7	153.0	135.0	92.6	58.4
May	86.5	68.5	73.7	106.0	166.0	136.0	99.5	
June	86.6	69.8	75.5	108.0	161.0	134.0	93.4	
July	82.3	64.0	67.5	87.0	134.0	121.0	80.4	
August	78.5	60.2	65.9	83.1	122.0	112.0	74.4	
September	74.3	59.5	57.6	93.6	113.0	115.0	71.9	
October	80.2	66.6	69.7	95.5	123.0	147.0	83.5	
November	67.5	58.5	64.0	84.1	119.0	102.0	58.0	
December	69.4	56.8	59.4	81.4	116.0	94.0	48.2	
Average	79.5	63.3	66.8	91.7	138.0	124.0	76.8	

1/ Weighted-average market price. 2/ Preliminary and unweighted prices.

Source: Agricultural Prices, National Agricultural Statistics Service, USDA.

### Wool Prices Rebound

U.S. prices for clean, mill-delivered territory wool rose 15-20 percent in May from the March low, reflecting a similar rise in world prices. By late May the 64's averaged \$2.30, up 41 percent from March; the 62's, \$1.80, up 33 percent; and the 60's, \$1.48 up 37 percent.

By mid-May, domestic prices for Australian wool, clean basis, increased about 22 percent from the March low: the 80's, at \$5.81, were up 21 percent; the 70's, at \$4.62, up 30 percent; the 64's, at \$2.77, up 39 percent; the 58's, at \$1.95, and the 56's, at \$1.94, up an average of 48 percent.

### U.S. Wool Production Up Marginally in 1991

Shorn wool production in the United States during 1990 was 88.3 million pounds, greasy, 1 percent less than in the previous year. Sheep and lambs shorn in 1990 were 11.2 million head, 0.7 percent below 1989. The average fleece weight of shorn wool was 7.86 pounds, 0.4 percent less than in 1989. The weighted-average price received by farmers for their shorn wool was \$0.80, compared with \$1.24 in 1989. It was the lowest price since 1986 (\$0.668). The value of the 1990 clip was \$69.7 million, down 37 percent from 1989.

The American Sheep Industry Association has estimated the 1991 domestic clip to be 91 million pounds, greasy. The distribution by grade is:

64's-and-finer (22 micron)	26.9	percent,
60's-62's (22-25 micron)	28.7	percent,
58's-56's (25-28 micron)	24.6	percent,
54's-50's (28-31 micron)	15.4	percent,
48's-and-coarser (31 micron)	4.3	percent.

Almost 84 percent of the 1991 clip is expected to be produced in Texas, California, Oregon, Iowa, Ohio, Minnesota, North and South Dakota, and the Rocky Mountain States (appendix table 21). Finer grade wool (mostly 60's-and-finer) production is concentrated in 10 States. Almost 90 percent of the 1991 finer grade wool clip is forecast in Texas, California, South Dakota, and the Rocky Mountain States. These same States are expected to account for more than 72 percent of the total 1991 clip. The medium-and-coarser grades are largely produced in these same States (excluding Texas), plus Iowa, Oregon, North Dakota, and Ohio. The 12 largest medium-and-coarser wool-producing States are expected to produce almost 71 percent of the total medium-and-coarser clip. At the same time these 12 States represent almost 52 percent of the total estimated 1991 clip.

## USDA Seeks Comments on 1991 Wool Price Support Program

The Department of Agriculture, in an announcement on May 10, 1991, asked for comments on calculating support prices for wool on unshorn lambs and for mohair for the 1991 marketing year.

The National Wool Act of 1954, as amended, provides that "the support price for pulled wool shall be set at a level relative to the support price for shorn wool so as to maintain normal marketing practices for pulled wool." Pulled wool is the wool removed from the pelt of a slaughtered sheep. In the past, this provision has been implemented through payments based on the hundredweight of live, unshorn lambs marketed.

The law also requires that "mohair be supported at a level determined necessary to maintain approximately the same percentage of parity as for shorn wool. The support price shall be set at a level not more than 15 percent above or below the comparable percentage of parity at which shorn wool is supported."

The shorn-wool support price is based on a formula prescribed in the Wool Act. Based on the current reported parity index, the 1991 shorn-wool support price will be \$1.88 per pound (greasy basis).

Comments may be made in writing to: Director, Commodity Analysis Division, USDA/ASCS, Room 3741-S, P.O. Box 2415, Washington, D.C. 20013. Comments must be received by June 13, 1991.

## Foreign Wool Situation and Outlook

### Wool Production Near Record Level

World sheep numbers were about 1.18 billion head at the beginning of the 1990/91 season, 1 percent above the previous season. Sizable flock increases in Australia and China were responsible for most of this increase. In Australia, favorable weather and profit returns stimulated the expansion. In China, the Government created incentives to increase domestic wool production and flock size in an effort to save foreign currency. Australian flock size in March 1990 was 174 million, 800,000 less than the 1970 record. Because of a much less favorable economic climate during the 1990/91 season, sheep numbers are forecast to be 168 million and to decline even further in 1991-92 to 150 million. Sheep in China numbered a record 115 million in 1990.

Unfavorable economic returns and a drought caused New Zealand sheep numbers to decline to a 12-year low of 58.3 million head by June 1990, a decline of 4 percent from a year earlier. South African flocks, at 25.6 million in 1990, were down 1 percent from 1989 because of better returns from mutton sheep and angora goats.

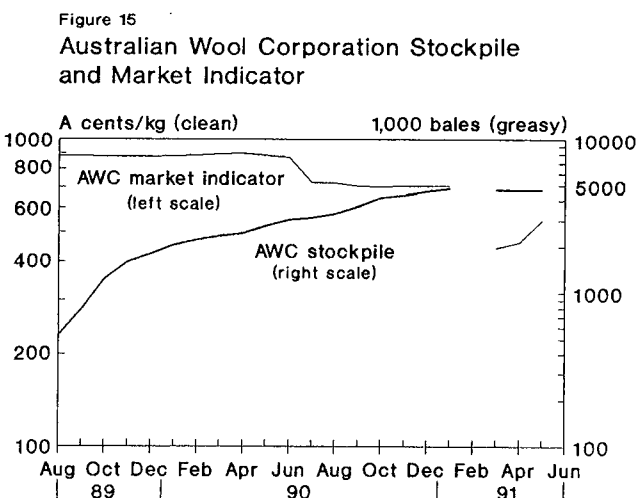
World wool production in 1990/91 is expected to be the same as the previous season's recordbreaking 7.4 billion pounds, greasy (4.3 billion pounds, clean). This clip is almost 9 percent larger than the 5-year average of 1983/84-1987/88. World wool supplies in 1990/91 reached a historic high, almost 5.5 billion pounds, clean, reflecting large levels of unsold stocks in the principal exporting countries. Merino wool had almost a 52-percent share of this world wool availability, while crossbred wool had 25 percent and carpet wool had 23 percent.

Australian wool production in 1990/91 is expected to be 2.45 billion pounds, greasy, 2.3 billion shorn and 0.15 billion pulled. New Zealand's wool output is expected to be 0.67 billion pounds, greasy, a 13-year low. South African wool production is expected to be about 0.23 billion pounds, greasy.

Worldwide wool consumption, 3.3 billion pounds, clean, in 1990 declined 13.5 percent from 1989. This was the lowest wool demand in more than 10 years and resulted from several economic factors. A lack of hard currency prevented China, the Soviet Union, and East European countries from taking as much as they had 2 or 3 years earlier. Other factors were sluggish world economic activity, unfavorable exchange rates, the Persian Gulf crisis, and reluctance of textile mills to pay the high wool prices of the past 2-3 years.

### Spring Demand Boosts Prices

By late May the Australian wool market had rebounded by a third from its low of A428 cents per kilogram in late February. With no price support schemes, the Australian wool market (as measured by their market indicator, a weighted-average index of 13 wool categories) rose 38 percent above the first week's prices to A591 cents in late May (fig. 15). The percent of the offering purchased by the trade averaged about 95 percent. An important element of this relatively strong demand has been Chinese and Soviet purchases. In addition, wool mills worldwide began increasing



their stocks after the price declined. Their buying tended to be at a minimum earlier in the season while prices were maintained at the A700 cents level. The raw wool supply this spring was limited, being restricted to the weekly offering. No sales were made from the Australian wool stockpile accumulated before the suspension of the support program in early February.

The Australian Government has decided to permanently abandon price supports for wool. No sales from the stockpile of about 4.7 million bales will be permitted before July 1, but few, if any, such sales are expected in the early part of the 1991/92 season. As part of the Government reorganization, the Australian Wool Corporation (AWC) will be replaced by three new statutory bodies. A Wool Realization Commission (WRC) will be responsible for managing the old AWC debt and stockpile. The debt (A\$2.88 billion), acquired from the price support program, is to be repaid over 7 years from the sale of the stockpile and other AWC assets. A new Australian Wool Corporation (AWC) will facilitate wool promotion, marketing, and quality control. The third organization is the Wool Research and Development Corporation (WRDC).

This reorganization will take effect July 1 and will focus on repayment of the AWC debt accumulated over 2 years of financing the price support program. The repayment will also include a 15-percent tax (reduced from the current 25 percent) on woolgrowers' incomes.

Following the Australian action, the New Zealand Wool Board suspended its price support mechanism in February. After an initial decline of about 13 percent, the New Zealand market indicator improved over the March-May period. It averaged NZ365 cents in March, NZ433 cents in April, and NZ447 cents in May (fig. 16). Stronger demand resulted in the return of Chinese and Soviet buyers. Textile mills in other countries, in response to lower prices, were replenishing their stocks which had dropped to low levels. By late May the market indicator rose to NZ460 cents. A lower-than-expected auction offering caused the stockpile to decline 5 percent to about 600,000 bales.

Figure 16  
New Zealand Wool Board Stockpile  
and Market Indicator

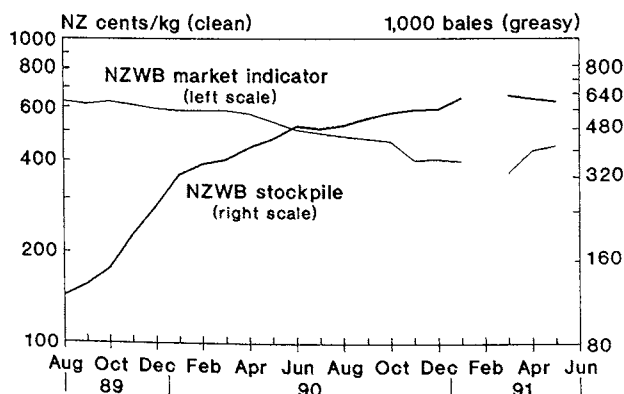
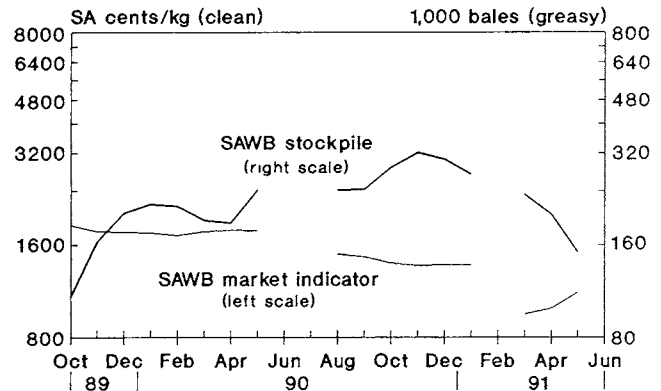


Figure 17  
South African Wool Board Stockpile  
and Market Indicator



South Africa also experienced a rising wool market in the March-May period, rising from an average of SA955 cents in March, to SA998 cents in April, and reaching SA1228 cents in late May. At the same time the stockpile declined 44 percent, reaching 151,000 bales in late May (fig. 17).

## Mohair

### Mohair Export Values Rise

U.S. mohair exports in first-quarter 1991 were 2.6 million pounds, clean, 1 percent more than the previous quarter. The value of these shipments was \$2.6 million, averaging \$1.01 per pound. The average value of 1990 mohair exports was \$1.20 per pound. March 1991 exports reflected the recent rising world mohair demand. The average value of March exports was \$1.05 per pound compared with \$0.98 in February. More than 94 percent of first-quarter exports were shipped to 5 countries: the United Kingdom, 51 percent; India, 24 percent; France and Italy, 7 percent each; and Germany, 6 percent. Exports in 1991 are expected to be 12 million pounds, clean, 3 percent more than last year (table O).

Mohair top exports are included in the Harmonized Schedule B category, "Fine animal hair, carded or combed." During the first quarter of 1991, about 634,000 pounds were exported, 31 percent above the 1990 average. The total value of the 1991 exports was \$1.3 million, averaging \$2.03 per pound. The average 1990 value was \$2.50. The 1991 exports went to 2 countries: India, 77 percent; and Taiwan, 23 percent.

### Slight Increase in 1991 Production Expected

U.S. mohair production in 1991 is forecast at 16.7 million pounds, greasy, up slightly from last season. U.S. production of mohair in 1990 totaled 16.3 million pounds, greasy, 5.6 percent less than 1989. This production was in five States: Texas, 89 percent; Oklahoma and New Mexico, 4 percent each; Arizona, 2 percent; and Michigan, less than 1

Table 0--U.S. mohair supply and disappearance, clean content, 1985-91 1/

Item	1985	1986	1987	1988	1989	1990	1991 1/
Million lbs.							
Stocks, Jan. 1/	1,020	1,304	1,541	1,778	1,404	1,884	1,800
Production	10,990	13,510	13,990	13,170	13,110	12,400	12,700
Imports	20	13	7	59	3	1	1
Diff. unacc.	-1,035	1,436	352	975	317	-85	-1
Total supply	10,995	16,263	15,890	15,982	14,834	14,200	14,500
Mill use	700	100	100	200	800	800	800
Exports	8,991	14,622	14,012	14,378	12,150	11,600	12,000
Total use	9,691	14,722	14,112	14,578	12,950	12,400	12,800
Stocks, Dec. 31	1,304	1,541	1,778	1,404	1,884	1,800	1,700

1/ Estimated by USDA. All projections are rounded.

Source: USDA and Bureau of the Census.

percent. The weighted-average price per pound was \$0.93, 41 percent below 1989. The number of angora goats clipped was 2.2 million, 12 percent below 1989. The distribution by State was: Texas, 86 percent; New Mexico, 6 percent; Arizona and Oklahoma, 4 percent each; and Michigan, less than 1 percent.

#### Stable U.S. Consumption and Stocks

U.S. mill consumption of mohair in 1991 is expected to remain near that of the last 2 seasons, about 800,000 pounds. Ending stocks are estimated at 1.8 million pounds as larger exports are expected to offset slightly higher production this season. Strong world demand for adult hair has resulted in increased U.S. mohair prices. U.S. prices in early May reflect the adult hair demand: adult, \$1.65, up from \$0.65 last winter; young goat, \$1.95, up from \$1.00; and kid, \$2.50, down from \$3.00. Kid hair prices are down because of the depressed world demand for finer suiting fabric.

#### World Consumption To Remain Strong

World consumption of mohair is estimated at 41 million pounds and production at about 36-37 million pounds, with the difference to be taken from stocks. South African production for the summer season just concluded was 8.6 million pounds. About 8.3 million pounds is expected from the current winter season. South African stocks are about 13.9 million pounds, one-third below last winter. The stocks are entirely kid and young goat hair because of currently strong world hand-knitting demand for adult hair.

In South Africa, the cumulative clearance of the first seven mohair sales of the summer (February-April) was 53 percent, the highest since the 1989 summer season's (March-July) 55 percent.

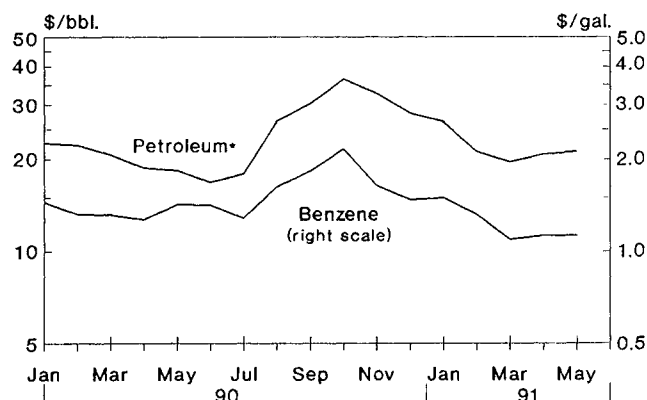
## Manmade Fibers

The manmade fiber business languished in the first quarter of 1991. Production, less than 2.1 billion pounds, was down 5 percent from 1990's fourth quarter. Total shipments, almost 2.0 billion pounds, were also 5 percent below the previous quarter. Mill consumption, 2.0 billion pounds, was 9 percent less. Stocks at fiber producers' plants were up 11 percent.

These plants operated at an average of 78 percent of capacity, compared with 83 percent in the fourth quarter. Staple plant capacity averaged 80 percent, while filament plants were at 77 percent (appendix table 17). To obtain a reasonable rate of return, producers must operate at 85-90 percent of capacity.

The carpet industry continues to consume more fiber than any other market (appendix table 27). In the fourth quarter of 1990, it represented 35 percent of all domestic shipments. About 719 million pounds were used, 2 percent less than in the third quarter. Nylon fibers, at 460 million pounds, constituted 64 percent of the carpet market. Olefin fibers, at 221

Figure 18  
Benzene Price Levels  
Track Petroleum Prices



\* W. Texas intermediate crude (Cushing).

Table P--Reported spot prices of raw materials for manmade fibers, 1990/91

Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
Para-xylene 1/	25.5	25.5	23	23	23	21.5	21.5	21.5	23.5-24
Propylene 1/	15.5	15.5	13.5-14	13.5-14	15.5	16	16.5	20	20.5
Ethylene glycol 1/	40-56	40-56	30-34	26-29	26-29	29	26-29	20	20
Cyclohexane 2/	1.42-1.47	1.46-1.51	1.38-1.43	1.38-1.43	1.38-1.43	1.38-1.39	1.33-1.39	1.33-1.39	1.67-1.71
Acrylonitrile 1/	42	35	35	35	35	35	35	35	35
Caprolactam 1/	89-91	89-91	91	91	91	89	89	89	89
Benzene 2/	1.40-1.50	1.20-1.32	1.27-1.35	1.25-1.30	1.48-1.50	1.30-1.45	1.25-1.36	1.63	1.82
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
	1991								
Para-xylene 1/	27.5	27.5	27.5	24.5	24.5	22	20.5	20.5	NA
Propylene 1/	20.5	24.5	24.5	22.5	22.5	20.5	20.5	19.5	NA
Ethylene glycol 1/	21	26	30	30-33	30-33	28	28	28	NA
Cyclohexane 2/	1.91-1.96	1.91-1.96	1.50-1.55	1.46-1.51	1.46-1.51	1.17-1.22	1.17-1.22	1.17-1.22	NA
Acrylonitrile 1/	35	35	38.5	38.5	38.5	38.5	38.5	38.5	NA
Caprolactam 1/	89	89	89	89	89	89	89	89	NA
Benzene 2/	2.16	1.66	1.48	1.50	1.33	1.10	1.13	1.13	NA

NA = Not available.

1/ Cents per pound. 2/ Dollars per gallon.

Source: Chemical Marketing Reporter.

million pounds, made up almost 31 percent. Preliminary data for the first quarter of 1991 indicate that 347 million pounds were used, 25 percent less than in the fourth quarter. It was the smallest quantity in more than 6 years and probably reflects the sluggish state of residential and commercial construction activity.

Woven textile products remain the second largest market for manmade fibers, taking 25 percent of all domestic shipments. About 483 million pounds of nonrayon fiber were used in the fourth quarter, down 2.5 percent from the third. This decline occurred in polyester filament, which is used mostly in top and bottom apparel, and in olefin filament, which is used mostly in upholstery and draperies. Polyester filament use, 104 million pounds, declined 5.5 percent and olefin filament declined almost 6 percent. In contrast, polyester staple use was 177 million pounds, up almost 3 percent, reflecting strong cotton use.

The knit market took about 301 million pounds of manmade fibers in the fourth quarter, down slightly less than 2 percent from the previous quarter. Knit textiles constitute about 15 percent of manmade fiber domestic shipments. Three fibers dominate this market: polyester fibers, at 186 million pounds, made up 62 percent; nylon, at 61 million pounds, was 20 percent; and acrylic fibers, at 51 million pounds, was 17 percent.

Prices of the major raw materials used to make manmade fibers are influenced by the price of oil. Benzene, a precursor for many chemicals, is very sensitive to oil prices as well as to the market demand of its numerous derivatives. Since the resolution of the Gulf crisis, the prices of both oil and benzene have leveled off to about half of last fall's peak. The average spot price of oil from February to mid-May has been within the \$20-22/bbl. range (table P). Benzene's price has been in the \$1.10-\$1.15/gal. range (fig. 18).

Para-xylene's price dropped about 4 cents since February to \$0.205/lb. in mid-May because of excess supply and slow polyester fiber and bottle demand. The price of cyclohexane, a basic chemical used in nylon production, is tied to the price of benzene and averaged about \$1.17-\$1.22/gal. in March-May. Caprolactam, a raw material for nylon is listed at \$0.89 per pound but is reported to be discounted as much as 25 percent.

Propylene, a precursor for acrylonitrile (a raw material for acrylic fibers) and for olefin fibers, declined to \$0.195/lb. The price of acrylonitrile was listed at \$0.385/lb. but was reported to be discounted because of the depressed demand for its fiber and plastics derivatives. The price of ethylene glycol (a raw material used to make polyester fibers) has declined from \$0.30-\$0.33/lb. to \$0.26 because of excess supply and slow demand.

# Economic Implications of Planting Flexibility Provisions for U.S. Upland Cotton Farms

by

Robert Skinner and Leslie A. Meyer\*

**Abstract:** The Food, Agriculture, Conservation, and Trade Act of 1990 provides farmers enrolled in Government commodity programs more flexibility in planting decisions than in the past. This analysis examines the feasibility of planting flexibility provisions as they pertain to upland cotton farms. Based on 1988 program enrollment data, farms with upland cotton base acreage are organized to take advantage of market opportunities through the new flexibility rules.

**Keywords:** Upland cotton, normal flex acreage, optional flex acreage, crop acreage base.

## Introduction

The Food, Agriculture, Conservation, and Trade Act of 1990 (FACT), P.L. 101-624, as amended by the Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508), will govern farm program provisions for 5 crop years, 1991 through 1995. For upland cotton, these acts continue the market-oriented programs authorized by the Food Security Act of 1985. However, the 1990 bill provides cotton farmers who participate in commodity programs more flexibility in their planting decisions. Under these provisions, producers will have the option to plant crops, other than the program crop, on up to 25 percent of each individual crop acreage base (CAB).

### *Planting Flexibility*

Flexible, or "flex" acreage consists of two parts. (1) The first 15 percent of base acreage for each program crop becomes "triple base" nonpayment acres, which USDA refers to as Normal Flex Acres (NFA). Any program crop (including the original crop on which the acreage base is established) or oilseeds may be planted on NFA. Price support loans are available on the entire production of program crops grown on normal flex acres, but producers will not receive deficiency payments on this acreage.

Program crops applicable to planting flexibility provisions include wheat, corn, grain sorghum, barley, oats, rice, and upland cotton. In addition to these program crops, farmers may plant nonprogram crops on their 15 percent "triple base" acres. Industrial crops such as sweet sorghum, guar, sesame, castor beans, crambe, plantago ovato, triticale, rye, or mung beans may be planted on flex acres. Also, experimental crops, including kenaf and milkweed and crops that have no substantial domestic production or market

(such as adzuki beans, lupin beans, and faba beans), are authorized for planting. Fruits and vegetables may be planted on flexible acreage if used for green manure, haying, or grazing. However, peanuts, tobacco, wild rice, and trees and nuts are ineligible for planting on flexible acreage. For 1991 only, producers may plant peas and lentils on flex acreage up to a maximum of 20 percent of a CAB.

(2) The second part of the planting flexibility provisions, Optional Flex Acres (OFA), allows an additional 10 percent of a CAB to be "flexed" to the alternative crops authorized under NFA. If these optional base acres are planted to their original base crop, a producer would qualify for both deficiency payments and price support loans on this production. This is not considered choosing the OFA provision.

If however, alternative program crops or oilseeds are planted on the 10 percent OFA, then price support loans are available, but deficiency payments are forfeited on the original base crop. As with NFA, if nonprogram crops are planted on the OFA, a producer would not be eligible for deficiency payments on this acreage. In addition, soybeans may not be planted on the OFA if the average price of soybeans is projected to be less than 105 percent of the soybean loan rate.

Individual crop acreage bases would neither increase nor decrease if alternative crops were planted on NFA or OFA. A producer will not be eligible for deficiency payments on NFA regardless of what crop is planted. The "triple base" nonpayment-acres feature of FACT is the major provision aimed at reducing Government expenditures to program crop producers. In return for lower support payments, producers who participate in commodity programs may plant crops with the greatest market potential.

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## Planting Flexibility Provisions

The new flexibility provisions allow a producer to expand production of a program crop beyond the established base—by planting the base crop on the NFA and OFA of another program crop—and still receive price support loans (but not deficiency payments) on the additional acres. For example, a farm with an upland cotton, wheat, and feed grains base could remain within the planting requirements for each program crop base while electing to plant cotton on the NFA and OFA of the wheat and feed grains base. The following examples may help clarify some of the alternatives.

Suppose a farm has established bases for: upland cotton, 500 acres; wheat, 300 acres; sorghum, 200 acres; and historical plantings of soybeans of 100 acres. If crop bases are enrolled in the 1991 acreage reduction programs, then permitted plantings would total 475 acres of cotton, 255 acres of wheat and 185 acres of sorghum. The producer would be eligible for deficiency payments on 765 acres if all permitted acreage was planted.

Example 1 illustrates increasing cotton acreage by utilizing both the NFA and OFA of the farm's wheat and sorghum bases. A producer could increase cotton plantings from 475 to 600 acres. However, acreage that would be eligible for deficiency payments would decline to 715 acres. The acreage shifted through the OFA option would not be eligible for payments.

Example 2 illustrates increasing cotton acreage by using only the NFA option for the wheat and sorghum bases. An additional 75 acres of cotton could be produced without the loss of program benefits. Maximum payment acreage would remain at 765 acres, the same as if the original crops had been planted to their respective bases.

The third example depicts a strategy designed to maximize soybean acreage. An additional 250 acres of soybeans could be planted by utilizing the NFA and OFA of the program crop bases. However, acreage eligible for deficiency payments would decline to 665 acres.

Example 1--Maximize cotton acreage and remain eligible for program benefits

	Acreage shift		Planted acres	Payment acres
	to	from		
Flex crops				
Cotton	125	0	600	400
Wheat	0	75	180	180
Sorghum	0	50	135	135
Soybeans	0	0	100	0
Total			1,015	715

Example 2--Maximize cotton acreage and payment acreage

	Acreage shift		Planted acres	Payment acres
	to	from		
Flex crops				
Cotton	75	0	550	400
Wheat	0	45	210	210
Sorghum	0	30	155	155
Soybeans	0	0	100	0
Total			1,015	765

Example 3--Maximize soybean acreage

	Acreage shift		Planted acres	Payment acres
	to	from		
Flex crops				
Cotton	0	125	350	350
Wheat	0	75	180	180
Sorghum	0	50	135	135
Soybeans	250	0	350	0
Total			1,015	665

Farms with multiple crop bases can more effectively react to changing market conditions than single base farms. If the farm used in the above examples had the same total base of 1,000 acres established in only upland cotton, then cotton acreage could not be expanded above permitted plantings and the combined wheat and feed grain plantings would be limited to a maximum of 250 acres. Clearly, multiple crop bases provide more options under the planting flexibility provisions of FACT.

Assumptions for planting flexibility examples

	Cotton	Wheat	Sorghum	Soybeans	Total
Base (acres)	500	300	200	100	1,100
ARP 1/ (%)	5	15	7.5	0	--
NFA (%)	15	15	15	0	--
OFA (%)	10	10	10	0	--
Total flexibility (%)	25	25	25	0	--
Base (acres)	500	300	200	100	1,100
ARP (acres)	25	45	15	0	85
Permitted acres	475	255	185	0	915
Maximum payment acres	400	210	155	0	765
Total flex acres	125	75	50	0	250
NFA	75	45	30	0	150
OFA	50	30	20	0	100

1/ acreage reduction program requirements for 1991/92 crop year.

With increased pressure on reducing Government expenditures for farm programs and the enactment of the "triple base" nonpayment- acreage concept, producers will have to depend more on commodity markets and less on Government payments to assure viable farming operations. The goal of this analysis is to examine how U.S. upland cotton farms are organized and to determine if producers will benefit from the flexibility provisions contained in FACT.

Data for this analysis are based on unpublished data taken from the 1988 Compliance Report of the Agricultural Stabilization and Conservation Service, USDA. Data are reported for all farms with an upland cotton base and are aggregated by State levels. For the 16 States included, farms with an upland cotton base and any other program crop base were analyzed. State acreages were combined into the four Cotton Belt regions.

In addition, data were analyzed using various base acreage combinations. Four variations were considered to examine the flexibility provisions. The four combinations selected were farms with only upland cotton base, upland base and one other program crop base, upland base and two other crop bases, and upland base and three or more other bases. These State acreages were combined into the Cotton Belt regions.

### Upland Cotton Farms

In 1988, the U.S. upland cotton base totaled nearly 14.5 million acres. Upland bases were established on 74,104 farms in cotton-producing States (table A-1). The Southwest region accounted for 51 percent of the base and 47 percent of the farms producing upland cotton. Upland cotton farms in the Delta States had established bases of 3.7 million acres. Beltwide, farms averaged 212 acres of upland cotton base ranging from 91 acres in the Southeast to 428 acres in the Western States.

Farming operations with upland cotton base also have significant other program crop bases. These farms have almost 6.1 million acres of wheat base and nearly 5.7 million acres of feed grains base. Upland cotton farms also account for 755,000 acres of rice base and 100,000 acres of extra-long staple (ELS) cotton base. In addition to program crops, over 4.2 million acres of soybeans were produced on these farms.

The relative shares of other program crop bases and soybean acreage associated with farms with upland cotton base are presented in table A-2. Upland cotton farms accounted for 24 percent of the wheat base in the Cotton Belt States. Similarly, these farms were associated with 18 percent of the

Table A-1--Program-crop acreage bases and soybean acreage accounted for by farms with upland cotton base 1/

	Number of farms	Upland base	Wheat base	Sorghum base	Corn base	Rice base	Barley base	Oat base	ELS base	Soybean acreage
-----1,000 acres-----										
Southeast:										
Alabama	3,945	465	145	34	89	--	--	4	--	128
Florida	458	32	22	3	18	--	--	4	--	19
Georgia	3,835	353	315	34	268	--	5	20	--	198
North Carolina	2,049	125	70	5	165	--	4	2	--	119
South Carolina	2,113	164	159	5	159	--	3	10	--	194
Virginia	67	2	2	--	3	--	--	--	--	2
Total	12,467	1,140	712	81	701	--	12	40	--	660
Delta:										
Arkansas	5,978	718	507	187	24	354	--	4	--	1,004
Louisiana	2,252	841	146	131	45	101	--	5	--	653
Mississippi	5,228	1,433	422	186	55	239	--	3	--	1,203
Missouri	3,452	249	183	132	51	9	--	--	--	271
Tennessee	4,689	472	181	74	90	--	--	--	--	346
Total	21,599	3,713	1,439	711	264	704	--	12	--	3,476
Southwest:										
Oklahoma	7,978	600	1,198	50	6	--	2	21	--	5
Texas	26,852	6,792	2,029	2,224	822	33	28	89	23	71
Total	34,830	7,392	3,227	2,274	828	34	30	110	23	76
West:										
Arizona	1,294	546	170	24	26	--	45	5	66	--
California	3,290	1,563	480	22	145	17	214	7	--	--
New Mexico	624	120	71	59	28	--	13	4	11	1
Total	5,208	2,229	721	105	198	17	272	17	77	1
Cotton Belt	74,104	14,474	6,099	3,171	1,991	755	314	179	100	4,213

1/ Based on 1988 Compliance Report, Agricultural Stabilization and Conservation Service, USDA.

Table A-2--Share of regional program-crop bases and soybean acreage accounted for by farms with upland cotton base

Base <sup>1/</sup>	Southeast <sup>2/</sup>	Delta <sup>3/</sup>	Southwest <sup>4/</sup>	West <sup>5/</sup>	Cotton Belt
-----percent-----					
Wheat	22	24	23	38	24
Corn	14	7	43	35	18
Sorghum	18	27	43	29	36
Barley	6	1	28	43	32
Oats	15	9	18	23	16
ELS	--	--	88	97	95
Rice	1	24	6	3	18
Soybean acreage	15	26	14	--	23

1/ Based on 1988 Compliance Report, Agricultural Stabilization and Conservation Service, USDA. 2/ Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia. 3/ Arkansas, Louisiana, Mississippi, Missouri, and Tennessee. 4/ Texas and Oklahoma. 5/ Arizona, California and New Mexico.

corn base and 36 percent of the sorghum base in the cotton-producing States. Upland farms have nearly all the established ELS cotton base. In addition, 23 percent of the soybean acreage planted in the Cotton Belt is associated with upland cotton farms.

#### Program Crop Acreage Bases

Farms with upland cotton base have established additional program crop bases of 12.6 million acres. However, ELS cotton is not subject to "triple base" nonpayment acres and is not considered a "flex" crop. Therefore, total potential flex acreage for upland cotton farms would equal 25 percent of

the 12.5 million acres of other-program-crop bases, plus 25 percent of the 14.5 million acres of upland cotton base, or a total of 6.7 million acres.

Although significant program-crop bases are part of many upland cotton farms, the number of bases, as well as the size of the bases associated with a farming operation, are important factors in utilizing the flexibility provisions. Upland cotton farms were categorized into single-crop base operations and operations with two, three, and four (or more) program-crop bases. Upland cotton base and other-crop base acreage associated with these combinations are presented in table A-3.

Table A-3--Regional program-crop base acreage by various farming operations 1/

	Southeast <sup>2/</sup>	Delta <sup>3/</sup>	Southwest <sup>4/</sup>	West <sup>5/</sup>	Cotton Belt
<b>Upland only:</b>					
Base acres	155	790	775	106	1,825
Percent of region	14	21	10	5	--
Percent of U.S.	1	5	5	1	13
<b>Upland plus one other base:</b>					
Upland base acres	261	994	3,060	337	4,656
Percent of region	23	27	41	15	--
Percent of U.S.	2	7	21	2	32
Other base acres 6/	136	397	2,098	168	2,799
<b>Upland plus two other bases:</b>					
Upland base acres	353	1,046	2,664	608	4,682
Percent of region	31	28	36	27	--
Percent of U.S.	2	7	18	4	32
Other base acres 6/	477	1,127	2,592	369	4,565
<b>Upland plus three or more bases:</b>					
Upland base acres	371	883	893	1,178	3,311
Percent of region	33	24	12	53	--
Percent of U.S.	3	6	6	8	23
Other base acres 6/	934	1,606	1,817	792	5,149
Total upland base acres	1,140	3,713	7,392	2,229	14,474
Total other base acres 6/	1,547	3,130	6,507	1,329	12,513

1/ Base acreage reported in thousands and based on 1988 Compliance Report, Agricultural Stabilization and Conservation Service, USDA. 2/ Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia. 3/ Arkansas, Louisiana, Mississippi, Missouri, and Tennessee. 4/ Texas and Oklahoma. 5/ Arizona, California and New Mexico. 6/ Excludes ELS base acreage.

Only 13 percent (1.8 million acres) of U.S. upland cotton base is classified as single-program-crop base operations. Therefore, operations having additional program-crop bases account for the remaining 12.6 million acres of upland cotton base. Farms with upland only operations have the largest acreage base in the Delta States with slightly over one-fifth of that region's cotton base. For these single base farms, upland cotton acreage could only be expanded by producing outside the cotton program.

Farms representing 64 percent of the U.S. upland cotton base are either two- or three-base operations. Southwestern farms with two bases account for 41 percent of the region's upland cotton base and 32 percent of other-program-crop base. Two-base farms in the Southeast and Delta States account for 23 and 27 percent, respectively, of the region's upland base, but less than 13 percent of other-program-crop bases.

Farms with four or more program-crop bases account for nearly one-fourth of the U.S. upland cotton base. By region, these farms account for over 50 percent of other-program-crop bases, except in the Southwest. Farms in the Western region with four or more bases account for 53 percent of the upland cotton base.

Farms representing 55 percent of the U.S. upland cotton base have established three (or more) program-crop bases. These farms also account for 78 percent of the 12.5 million acres of other-program-crop bases. As a result, many upland cotton farms with a total of 17.7 million acres of program-crop base appear to be well organized to take advantage of the new flexibility provisions of the 1990 Farm Act.

### Flex Acreage Estimates

Cotton farms have the potential to "flex" 3.6 million acres of upland base and 3.1 million of other-program-crop base to alternative crops if all bases are enrolled in commodity programs. Figures A-1-4 depict futures prices for 1991 and the previous season for upland cotton, wheat, corn, and soybeans. Monthly trading ranges and monthly market

Figure A-2  
July HRW Wheat Futures

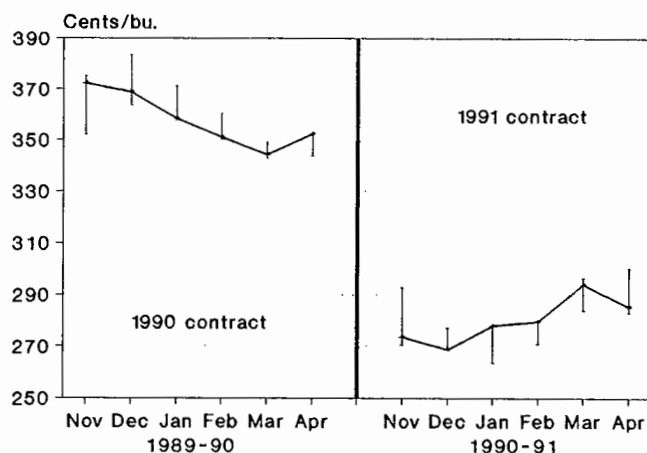
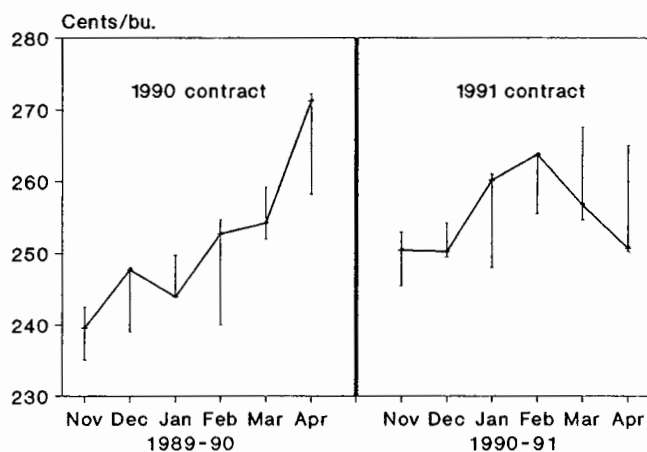


Figure A-3  
December Corn Futures



closes indicate new crop prices were lower than last season for wheat, corn, and soybeans. While producers were evaluating their cropping alternatives and deciding whether to participate in farm programs, the price outlook for cotton appeared more favorable than for other program crops.

The 1991 preliminary enrollment report suggests 475,200 acres have been "flexed" to upland cotton, or about 21 percent of the potential acreage given the regional enrollment-participation rates for all eligible program crops (table A-4). However, nearly 274,000 acres of upland cotton base have been planted to alternative crops. The majority of this acreage was shifted to nonprogram crop production.

On a regional basis, only the Western States chose to "flex" more acreage out of upland production (58,900 acres) than into upland production (14,200 acres). Reduced water availability may account for much of this decline in cotton acreage (fig. A-5). Overall, 201,500 acres were shifted to upland cotton production through the NFA and OFA provisions. In addition, upland cotton is the only program crop associated with increased acreage through the

Figure A-1  
December Cotton Futures

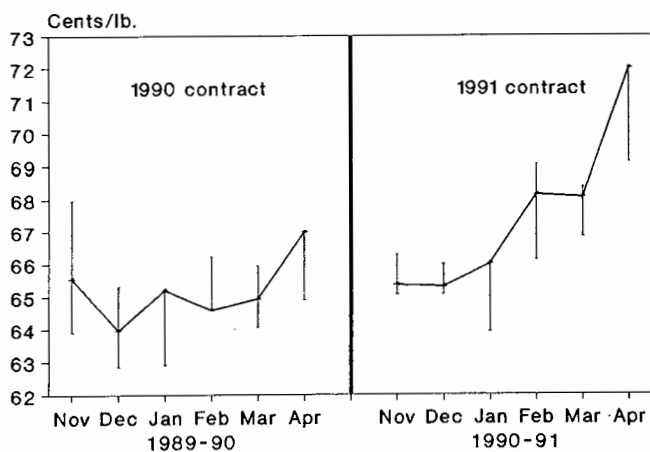


Figure A-4  
November Soybean Futures

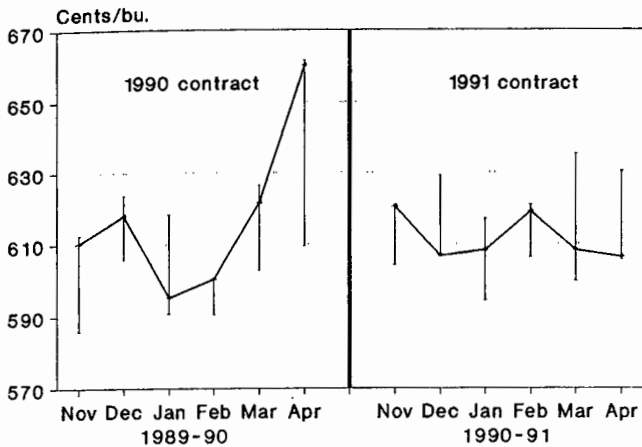
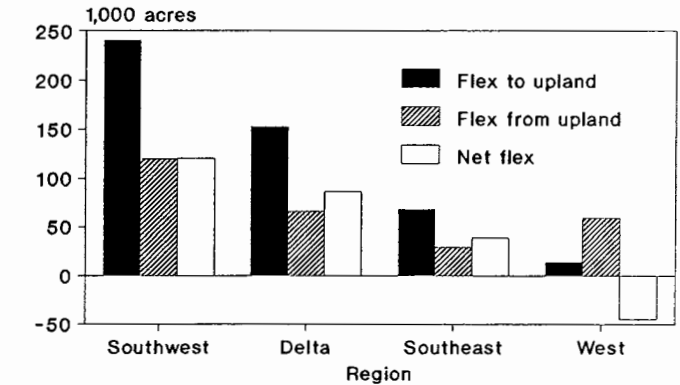


Figure A-5  
1991 Upland Cotton Flexed Acreage by Region\*



\* Based on 1991 preliminary enrollment report

Table A-4--Regional 1991 upland cotton flexed acreage 1/

	Southeast <sup>2/</sup>	Delta <sup>3/</sup>	Southwest <sup>4/</sup>	West <sup>5/</sup>	Cotton Belt
1,000 acres					
Flexed from upland:					
Potential 6/	219.5	779.7	1,644.7	373.4	3,017.3
To program crops	3.0	7.4	33.4	13.5	57.3
Total 7/	29.0	65.9	119.9	58.9	273.7
Flexed to upland:					
Potential 6/	211.2	540.6	1,311.0	207.1	2,269.9
Reported	67.9	152.7	240.4	14.2	475.2
Net flexed acreage	39.0	86.8	120.5	-44.7	201.5

1/ Based on USDA's 1991 preliminary enrollment report. 2/ Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia. 3/ Arkansas, Louisiana, Mississippi, Missouri, and Tennessee. 4/ Texas and Oklahoma. 5/ Arizona, California and New Mexico. 6/ Equals the sum of the 1988 Compliance Report regional bases multiplied by 25 percent maximum flexibility and the 1991 preliminary regional enrollment participation for all eligible program crops. 7/ Includes flexed acreage to soybeans, minor oilseeds, and other crops.

flexibility provisions. Estimated acreage reductions for other program crops subject to the NFA and OFA provisions total 5.6 million acres.

### Summary and Conclusions

During the development of the 1990 Farm Act, increased planting flexibility for farmers was a highly debated issue. Midwestern interest groups representing corn and soybean producers supported almost unlimited flexibility rules while the Southern Cotton Belt and Great Plains States argued for a more restrictive position on planting flexibility. The new planting provisions which limit "flex" acreage to 25 percent of an individual CAB appear to be an equitable compromise. About 5.5 million acres, or only 3 percent, of the enrolled program-crop base in 1991 has been "flexed" to alternative crops.

While 13 percent of the upland cotton base is associated with single-crop-base operations, where the planting flexibility alternatives would be more restricted, other program provisions allow these single-crop-base farms some alternatives, including the zero certification provisions and the prohibition of cross compliance. Most upland cotton farms, however, have more than a single base. Cotton farms accounting for 55 percent (8.0 million acres) of the upland cotton base have established three (or more) program-crop bases, totaling 17.7-million base acres.

In this study, planting flexibility was analyzed as a viable option for upland cotton farmers. As intended in the 1990 farm legislation, the new flexibility provisions will allow producers to react more effectively to market opportunities. As this analysis verifies, the majority of U.S. upland cotton farms are organized to take advantage of planting flexibility.

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# Marketing Foreign Raw Cotton to U.S. Mills—Prospects and Costs

by

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**Abstract:** Prospects for U.S. raw cotton imports are analyzed. Data are presented showing exportable cotton supplies in foreign producing countries, and the associated delivery costs to U.S. textile mills. Results indicate significant volumes of foreign cotton available, but estimated shipping costs ranged from 7.6 to almost 16 cents per pound for the 12 countries analyzed.

**Keywords:** Cotton, imports, marketing costs, trade.

## Introduction

The purpose of this article is to present information which may be helpful in evaluating the prospects for U.S. raw cotton imports in the event of a permanent or temporary lifting of U.S. import quotas. Data is developed on the availability of foreign cotton supplies as well as the transportation and marketing costs associated with delivery to U.S. textile mills.

Limits on the volume of raw cotton imports have been in effect since 1939. Essentially they require U.S. textile mills to rely on domestic cotton producers as their primary source of supply. Many foreign competitors, however, are able to shop the world cotton market for cheaper alternative supplies.

The 1939 import quota was authorized under the Agricultural Adjustment Act of 1933, and is incorporated under Section 22 of the General Tariff Codes of the United States. This permanent legislation allows for annual imports of only 125,000 bales of cotton. Of this total, 30,000 bales are specified by country for all staple lengths 1-1/8 inch or less, while the remaining 95,000 bales represent a global quota covering all cotton with staple length above 1-1/8 inch. Of the 95,000 bales, 82,500 are for extra-long staple cotton.

The regular annual quota has not been filled in recent years, and since 1978, cotton imports have never exceeded 40,000 bales, less than one-third of the amount allowed. Import levels have shown no particular pattern, but have tended to increase only slightly when U.S. cotton prices have risen sharply above prices for comparable foreign cotton.

A special limited *global* quota was put into effect beginning with the 1978 crop year. It allows for U.S. imports of up to

21 days of mill consumption during a 90-day period, if the quota is triggered. The level of domestic market prices determine whether or not the special quota will be opened. The quota is triggered if the U.S. spot market average price for SLM-1-1/16-inch cotton in any one month exceeds 130 percent of the previous 36-month average. The volume of raw cotton allowed would be approximately 600,000 to 675,000 bales, regardless of country of origin or staple length. (Extra-long staple cotton is excluded.)

The performance of the special limited quota program since 1978 is shown in fig. B-1. The top line represents the import trigger price which is 130 percent of the 36-month moving average spot price. Whenever the current monthly spot price moves above the trigger price, the special 90-day quota is triggered.

The special quota has been triggered three times—twice in 1980, and once in 1987. On a number of other occasions, monthly spot prices rose almost high enough to trigger the special quota—during 1989, and again very close in July 1990, and also in March and April and May of 1991.

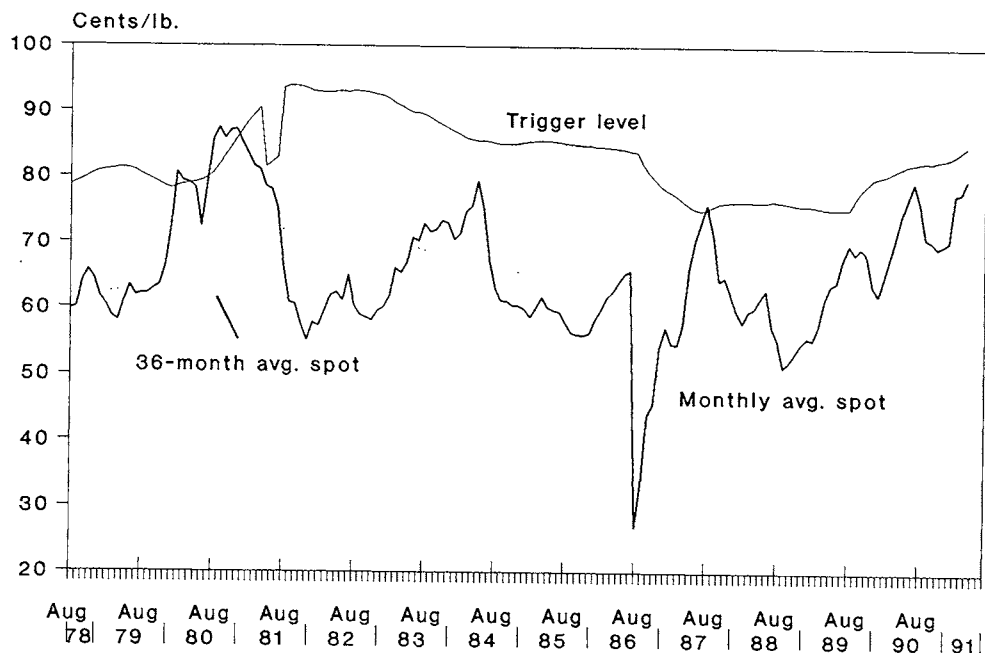
As with the regular annual quota, only a small increase in import volume was noted when the special quota was triggered. In most cases, when U.S. prices climbed high enough to trigger the quota program, foreign prices were also generally high. When transportation costs are added to the price of foreign cotton, most growths could not effectively compete with U.S. produced cotton.

While the volume of U.S. raw cotton imports have been traditionally low, beginning August 1, 1991, new provisions of the 1990 Farm Act will authorize imports of raw cotton

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Figure B-1  
U.S. Cotton Import Trigger Level  
and Spot Market Averages



under certain new criteria. A new special global quota equal to one week's mill consumption (about 145-160,000 bales) over a 90-day period can be triggered on the basis of the relationship of U.S. cotton prices to world market prices.

If the lowest weekly (Friday through Thursday) average U.S. price for M-1-3/32-inch cotton (delivered Northern Europe) exceeds the average of the five lowest priced foreign growths by more than 1.25 cents per pound for any consecutive 10-week period, the quota is triggered. U.S. prices must first be adjusted for the value of any marketing certificates in effect at that time. Also, before imports can be authorized, other specified competitive adjustments in U.S. cotton prices could be made under the marketing loan provisions of the 1990 Farm Act. Nevertheless, these import quota programs, and other "free trade" activities all point to an increasing availability of foreign grown cotton to U.S. mills.

### Foreign Supplies

While world cotton stocks are currently at their lowest level in many years, global supplies are large enough to meet anticipated domestic and export requirements. For the U.S., 1990/91 ending stocks of cotton are projected at 2.3 million bales—the smallest total in over 60 years. The potentially large 1991 crop is expected to help relieve the tight supply situation, but early planting problems in some areas continue to cause concern. This has put pressure on U.S. prices domestically and in the world export market. Potential sources of foreign raw cotton supplies for U.S. mills are shown in table B-1. Other producing countries could be identified, but, for the 12 countries shown, significant supplies were available, and a long history of export activity was present.

The estimated exportable cotton supplies for each country during the past 5 years were calculated as the difference between total supply and current domestic mill consumption. No allowance was made for adequate carryover stocks between seasons, therefore the volumes shown are the maximum available. Usually about 3 to 4 month's domestic consumption is considered a minimum carryover level.

The largest exportable cotton supplies are located in producing countries identified as Asia/Oceania. Since 1986, volumes available in Australia have tended to increase, while supplies in the USSR and Turkey have remained stable. In China, India, and Pakistan, exportable supplies have declined as these countries are placing greater emphasis on the export of cotton textiles.

Raw-cotton exporting countries in South America may offer greater potential as a future source of supply. Expanding agricultural development and closer proximity to the U.S. market may enable these countries to expand their cotton export potential.

Other fundamental considerations, in addition to exportable supply, are necessary before U.S. mills would import substantial volumes of foreign-grown cotton. These include identifying and establishing effective overseas contacts and the availability of large volumes of the desired qualities of cotton. A primary consideration would also be the problems associated with variations in bale weights and dimensions among countries. Many U.S. mills with automated bale opening and feeding equipment require bales of uniform size. For example the average bale in India or Pakistan has a

Table B-1--Foreign exportable supplies of raw cotton, 1986-90 1/

Country	1986	1987	1988	1989	1990
1,000 bales					
<b>South America:</b>					
Argentina	235	958	1,002	1,250	1,486
Brazil	3,244	3,272	3,080	2,434	2,274
Mexico	377	577	917	499	464
Paraguay	489	907	966	1,085	1,378
<b>Asia/Oceania:</b>					
Australia	1,581	1,567	1,843	1,952	2,418
China	14,041	10,458	8,736	3,745	3,882
India	2,506	999	1,548	3,457	3,186
Pakistan	3,966	4,320	4,781	2,090	1,995
Turkey	1,013	674	896	774	949
USSR	5,433	4,395	4,778	5,323	5,343
<b>Africa:</b>					
Egypt	626	500	362	562	506
Sudan	1,691	1,449	1,249	919	519

1/ For each country and year, exportable supply = total supply (beginning stocks + production + imports) - domestic mill use. Totals include ELS cotton.

Source: Foreign Agricultural Service, USDA.

weight of 375 pounds, while the large Egyptian bale weighs about 720 pounds. China has two bale sizes—176 and 440 pounds; bale weights in Turkey and the USSR, 460 pounds, more closely match the U.S. bale.

### Foreign Delivery Costs

The purchase of foreign-grown cotton by U.S. textile mills is generally conducted through domestic cotton merchants or shippers. As with the purchase of U.S. cotton, mills would primarily buy foreign cotton from merchants who would purchase the cotton from the foreign source and arrange for and pay all associated costs of delivery to the textile mill.

Typical costs associated with importing foreign-grown raw cotton would include the following:

- buying commissions,
- controlling fees at origin,
- ocean freight,
- marine insurance,
- U.S. port user fees on arrival,
- customs clearing and forwarding,
- warehousing,
- storage and insurance,
- interest,
- domestic transportation,
- miscellaneous costs, and
- estimated overhead.

If foreign cotton is to be price competitive with U.S. supplies at domestic mills, the foreign export price, plus all delivery costs, should not exceed U.S. mill-delivered prices. In order to estimate the foreign marketing and transportation costs involved in such movements, a number of sources were utilized. The most important source of data was cost information obtained from a number of U.S. cotton merchants with experience in buying and selling foreign growths. Other sources included freight brokers, ocean transportation companies, and USDA and Department of Commerce reports.

Costs were calculated f.a.s. foreign port, delivered to the U.S. port areas of Savannah, Georgia, and Charleston, South Carolina. Domestic transportation from the ports to the Group B mill area was included. However, costs associated with moving cotton from foreign interior locations to the respective foreign ports were not included, because price offerings for foreign cotton are generally quoted on the basis of port location.

Marketing cost estimates were made from each of the 12 foreign exporting countries. While only total costs are reported in this article, estimates reflect the aggregate of the individual cost items. To give some idea of the relative magnitude of each item, detailed costs for shipping Brazilian cotton to U.S. mills are shown in table B-2. Nearly 48 percent of the total cost is accounted for by ocean freight charges, domestic transportation from the port to the mill represents about 6.2 percent, and interest costs are over 9 percent of the total. The overhead expenses for marketing foreign cotton were estimated at about 2 cents a pound, or about 16 percent of the total cost of 12.9 cents a pound.

Table B-2--Estimated total cost to deliver Brazilian cotton to U.S. mills, 1990/91 1/

Item	Dollars per bale 2/	Cents per pound
Buying commissions	3.36	0.7
Controlling fees	.96	.2
Ocean freight	29.66	6.2
Marine insurance	1.68	.3
U.S. port fees	.48	.1
Clearing and forwarding	.96	.2
Warehousing	1.92	.4
Storage & insurance	1.44	.3
Interest	5.66	1.2
Domestic transportation	3.84	.8
Miscellaneous costs	2.16	.4
Overhead	10.00	2.1
<b>Total</b>	<b>62.12</b>	<b>12.9</b>

1/ Does not include foreign interior costs.

2/ 480-pound net weight bale.

Source: Industry estimates and other secondary data.

Table B-3--Estimated cost to import foreign cotton and the cost difference, by country, 1990/91.

	Cost to deliver, U.S. mill points 1/	Cost difference foreign versus U.S. 2/
-Cents per pound-		
<b>South America:</b>		
Argentina	12.9	+5.4
Brazil	12.9	+5.4
Mexico	7.6	+0.1
Paraguay	14.2	+6.7
<b>Asia/Oceania:</b>		
Australia	15.9	+8.4
China	14.7	+7.2
India	13.9	+6.4
Pakistan	13.9	+6.4
Turkey	12.3	+4.8
USSR	12.6	+5.1
<b>Africa:</b>		
Egypt	12.1	+4.6
Sudan	13.3	+5.8

1/ Total cost to deliver, U.S. Group B mill points from selected foreign port areas. 2/ Difference between foreign costs and U.S. interior-to-mill costs estimated at 7.5 cents a pound.

Source: Industry estimates and other secondary data.

Table B-3 lists each of the exporting countries, and the estimated total cost to deliver cotton to U.S. Group B mills. Also shown, are the calculated cost differences between cotton shipped from the average U.S. spot location to the mill area, and the corresponding foreign costs. The U.S. interior-to-mill cost were estimated at approximately 7.5 cents a pound. This is the approximate difference between the spot market average for SLM 1-1/16 inch cotton and the reported Group B mill prices for the same base quality.

Delivery costs ranged from a low of 7.6 cents a pound from Mexico to a high of nearly 16 cents from Australia.

Transportation costs for Mexican cotton reflect a direct, through-rail rate to U.S. mills, with no ocean freight involved.

The data in table B-3 can be used for evaluating alternative import opportunities in the absence of import restrictions, or if current import quotas are triggered. For example, it costs approximately 8.4 cent a pound more to deliver Australian cotton to domestic mills than from U.S. locations (15.9 cents-7.5 cents). Therefore, if the U.S. spot market price of cotton was 79.9 cents a pound (April 1991 average), comparable Australian cotton would have to sell at 71.5 cents a pound, or less, to be competitive with U.S. growths at the mill door. Similar comparisons for other countries can also be made.

### Conclusions

U.S. raw cotton imports have been traditionally low, but recent efforts to ease global trade restrictions could result in an increased opportunity to import foreign-grown cotton. Significant volumes of foreign cotton are available, but foreign shipping costs were found to range from 7.6 to almost 16 cents a pound for the 12 countries analyzed. U.S. cotton is expected to remain very competitive in world markets under provisions of the new 1990 Farm Act. U.S. prices should remain competitive with alternative foreign growths at U.S. mills when transportation and marketing costs are considered, and U.S. imports should remain minimal.

# Wool Prices Liberalized in International Markets

by

Fawzi A. Taha\*

**Abstract:** Wool prices made a dramatic jump in May 1988, reaching their highest level in 30 years. High prices, among other factors, have exerted a strong downward pressure on the quantity demanded and caused disarray in the wool markets. As part of the overhaul of the wool industry in Australia, the world's largest producer and exporter, the Government suspended the wool price support scheme in February 1991, then abolished it in May 1991. As a result, wool prices were freed to be determined according to supply and demand factors.

**Keywords:** Wool markets, price fluctuation, price liberalization.

## Introduction

On February 1, 1991, the Australian Government canceled wool auction sales for 3 weeks and on February 11, 1991, announced the suspension of wool price supports until the end of the present marketing year, June 30, 1991. Following Australia's lead, on February 12, 1991, the New Zealand Wool Board announced a minimum price scheme for the balance of the season. These announcements mean that the two Boards will no longer operate price supports through purchasing wool that fails to reach minimum price levels at auction. Following a 3-week closure of the market, wool sales resumed on February 25, 1991. No market-price-intervention program was in place for the first time in nearly 20 years in Australia, and in 40 years in New Zealand. The freely operating wool market was able to determine the price of wool according to supply and demand factors. For the next season, starting July 1, 1991, the Australian Government will establish new guidelines for wool sales and decide whether or not to reinstate a price support scheme.

As expected the Australian market indicator price dropped from its close of A704 cents to A454 cents per kilogram, clean, a sharp 35 percent decline (11). The drop in New Zealand's market was less drastic, falling from NZ395 cents to NZ357 cents per kilogram, clean, in the first trading day. This represented a decline of almost 26 percent in the real price to growers—from the minimum guaranteed price of NZ485 cents to NZ357 cents (8).

At the end the first week of the free market (end of February), the Australian market indicator dropped further, to A428 cents/kg, clean, (US\$3.35/kg), while New Zealand's fell to NZ347 cents/kg (US\$2.16/kg). In the second week,

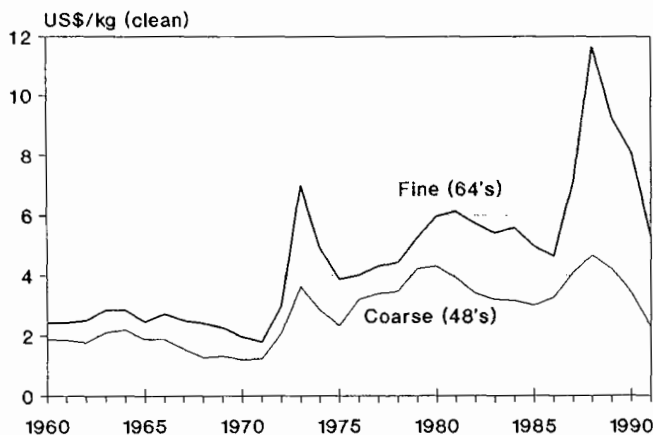
prices were firming, closing at A445 cents/kg in Australia and NZ357 cents per kilogram in New Zealand. At the sale on April 11, the Australian market indicator rose 9 percent from the low of A428 cents to A467 cents, while it increased to NZ411 cents in New Zealand (9). In South Africa, the wool market reopened in the first week of March 1991 with prices generally following the Australian market. The South African market indicator price fell SA403 cents to close at SA947 cents/kg (clean) (US\$ 3.68/kg).

As part of the reorganization of the wool industry in Australia, the Government introduced a new package of measures to provide favorable future conditions for the wool market. Basically, the Government agreed to lift the ceiling on its guarantee of Australian Wool Corporation (AWC) borrowing by only A\$3.5 billion and to extend its guarantee on all borrowing beyond 1992, until its debts are reduced to a manageable level. Also the Government agreed to contribute A\$300 million toward a supplementary payment scheme for wool growers who sell their wool during the remainder of the 1990/91 season. Supplementary payments will make up the difference between the new auction price and the A700 cents/kg reserve price. The Government also agreed to provide additional funds for debt reconstruction, farm improvement, household support, and counselling and assisting individual farmers.

Finally, on May 1, 1991, the Government of Australia announced it would permanently abolish the wool price support scheme. The free wool market will continue to determine the real level of wool prices. Moreover, the Government founded a new institution, the Australian Wool Corporation, which will be responsible for marketing, quality control, research and development, and disposition of

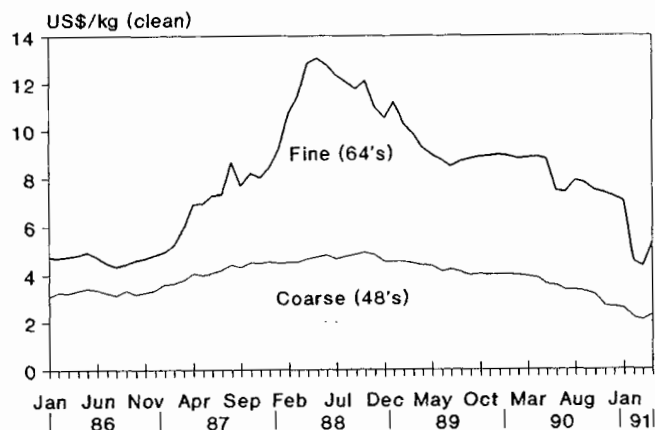
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Figure C-1  
Wool Prices, Annual 1960-91 (April)



C.i.f. London.

Figure C-2  
Wool Prices, Monthly 1986-91



C.i.f. London.

wool stockpiles. Sales of wool stocks, which were frozen in February 1991, will be permitted beginning July 1, 1991. Revenues from these sales will be used to repay AWC debts (7).

The wool price liberalization is considered a significant forward step in providing substantial benefits for the industry, individual growers, users, and taxpayers in Australia, New Zealand, South Africa, and elsewhere. In addition, the new policies ended the uncertainty in wool markets that had caused most buyers to wait before making new purchases. This will add to market stability.

### Wool Price Fluctuation

Wool price fluctuations are not new. They made a dramatic jump between 1986 and 1988, reaching their highest level in 30 years (fig. C-1). In May 1988, the price of fine wool used for high-quality clothing and apparel (category 64's tested 21 microns in diameter) peaked at US\$13.04 per kilogram, clean weight, c.i.f. London. The peak price was triple the price at the trough 21 months earlier (August 1986). The

price for coarse wool, used mainly for carpets and rugs (category 48's tested 34 microns in diameter), rose a relatively modest 60 percent from January 1986 to October 1988. The drastic 1986-88 price increase for fine wool was still below the trough-to-peak price surge that occurred during the international commodity price boom during the 1973 oil crisis. Between 1971 and 1973 the price for fine wool nearly quadrupled, while that for coarse wool tripled.

High wool prices, among other factors, have exerted strong downward pressure on the quantity demanded from June 1988 to the present. The 1988 price was not sustainable. This resulted in a slump in the wool market, especially in the fine wool categories. Between May 1988 and January 1991, fine wool prices declined 43 percent, and, between August 1988 and January 1991, prices for coarse wool declined 47 percent (fig C-2).

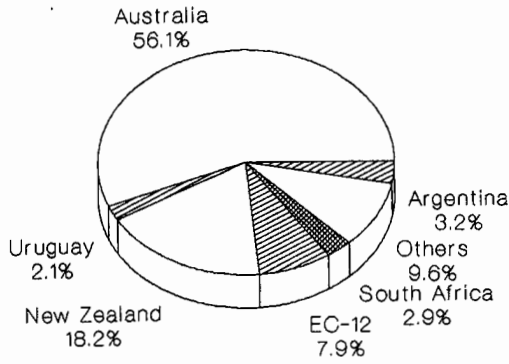
### Australia's Role in Wool Markets

Australia, the world's largest single wool producer and exporter, takes a leading role in setting prices in the world market (figs. C-3-8). At the beginning of the 1988/89 season, the AWC set the minimum support price at A870 cents per kilogram, clean, for a weighted average of 13 wool categories. The new AWC support price was 35 percent higher than a year earlier, and 85 percent higher than in 1984/85. The AWC's justification for raising the price floor was to compensate for the depreciated value of the Australian dollar. Over the last 5 marketing years (1984/85 to 1989/90), the Australian dollar depreciated 42.8 percent against the German mark, 41.7 percent against the yen, 25.9 percent against the pound sterling, and only 1 percent against the U.S. dollar.

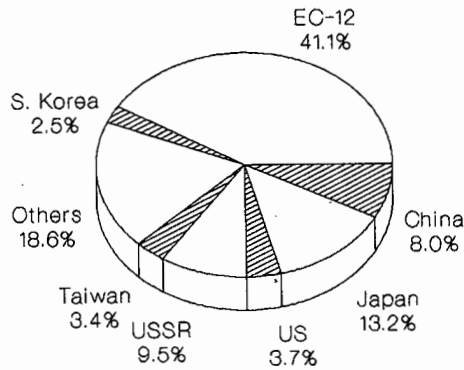
The high Australian support price spurred domestic and foreign production. The increased production, combined with a slowdown in world consumption, forced the AWC to accumulate stockpiles of surplus wool to keep prices from moving below the minimum support level. This caused considerable uneasiness in the world wool market and textile industry. On May 31, 1990, the Australian Government decided to intervene, ordering a new floor price for wool at A700 cents/kg, a 20 percent reduction. In addition, the Government raised the wool levy charged by the AWC from 8 to 18 percent of growers' revenue, effective June 1, 1990. The Government's objective was to significantly increase wool sales and stabilize prices.

The new measures, however, proved to be insufficient. During the 1990/91 season (which started in July 1990), demand has been sluggish and prices have continued to move only a few cents above the floor price of A700 cents/kg, indicating a fundamental weakness in the price structure. Consequently, the AWC had been obliged to purchase even more wool, causing its stockpiles to increase from 3.06 million bales on July 1, 1990, to nearly 4.8 million

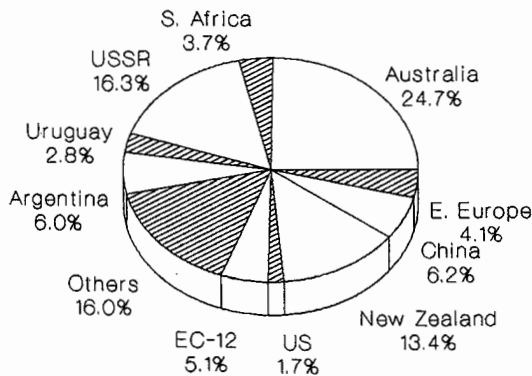
**Figure C-3**  
Major Wool Exporters, 1989



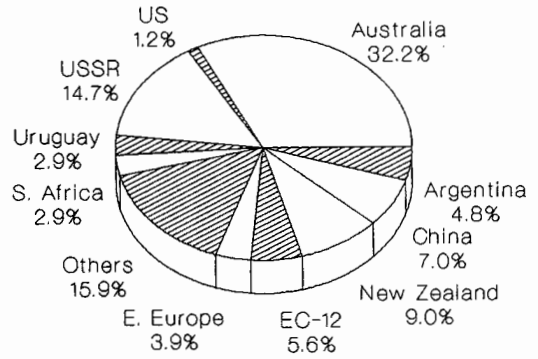
**Figure C-4**  
Major Wool Importers, 1989



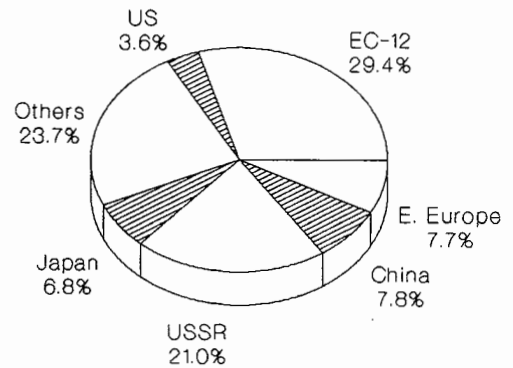
**Figure C-5**  
World Wool Production, 1980



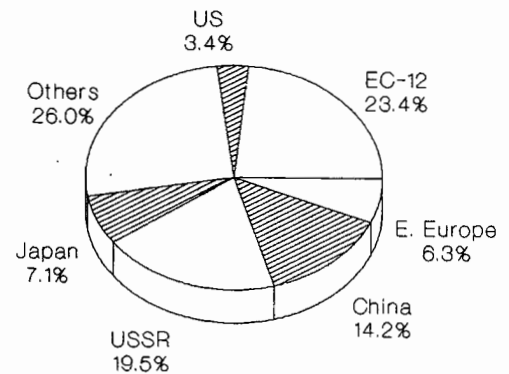
**Figure C-6**  
World Wool Production, 1989



**Figure C-7**  
World Wool Consumption, 1980



**Figure C-8**  
World Wool Consumption, 1989



bales in January 1991. Moreover, the AWC depleted its huge financial reserves and has borrowed a record high A\$2.8 billion, exceeding the maximum Government guarantee level of A\$2.5 billion.

In October 1990, the Government again increased the wool levy from 18 to 25 percent of growers' revenue. The new legislation also established a maximum wool levy of 30 per-

cent (permitting increases up to that level by administrative decree) and, if necessary, a wool tax surcharge of up to 20 percent from the beginning of the 1991/92 season. In November 1990, the Government approved a proposal to slaughter 20 million of the country's 173-million head of sheep and imposed production quotas to cut overall wool production by 25 percent over the 12 months beginning July 1991.

The AWC reportedly wanted the floor price scheme to continue, but the Government balked when the Australian Bureau of Agricultural and Resource Economics forecast that stockpiles would rise from 4.8 million to 8.7 million bales over the next 2 years and require an increase in the AWC's federally guaranteed debt from A\$2.8 billion to about A\$4.0 billion (4).

#### **Analysis of Current Fluctuations in the World Market**

Declining wool prices since May 1988 have basically been a result of changes in market fundamentals, which can be explained by the conventional theory of supply and demand. Usually, when demand for wool is exceptionally high, a rapid increase in price acts as a useful rationing device; some buyers drop out of the market and some substitute other fibers for wool.

Five major factors influence the current world wool market: (1) a deceleration of economic growth rates in the Organization for Economic Cooperation and Development (OECD) countries; (2) the economic situation in China, the USSR, and Eastern Europe; (3) competition from manmade fibers; (4) record world wool stockpiles; and (5) actions of The Australian Wool Corporation.

#### **Deceleration in OECD Economic Growth Rates**

A slowdown in economic growth in OECD countries, the principal wool consumers, is usually accompanied by decreasing expenditures on clothing in general and on wool-fabric clothing in particular. For example, the recent deceleration in the economic growth rate in Western Europe depressed consumers' expenditures for clothing. For the 11 leading OECD countries for which statistics are available, this was reflected by a 5-percent decrease in wool textile manufacturing in the first quarter of 1990 (12). The industry contraction started in worsted processing, but later spread to combing and weaving.

Consumption of raw wool in the EC-12 countries, the world's largest single market, declined 3.7 percent during the last 2 years (table C-1). Because of its large wool reserves, Japan also cut imports and increased imports of intermediate and finished wool textile products from low-cost manufacturers in other Asian countries. Use of U.S. and Japanese wool remains low, with consumption in 1989 being 5.5 and 4.0 percent, respectively, below its level 2 years earlier. These setbacks in Europe and Japan resulted in a substantial buildup of wool stocks at the producer level, as well as at the industrial, wholesale, and retail levels. These, in turn, contributed to a further slowdown in the demand for raw wool.

Table C-1--Consumption of virgin wool, clean basis 1/

Country	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	1,000 tons									
Argentina	23.2	16.2	24.9	23.1	26.7	24.6	27.3	26.3	21.3	21.2
Australia	30.2	29.5	28.6	31.1	18.9	20.6	20.7	20.3	20.5	17.9
Belgium-Lux	35.8	30.4	31.4	33.5	40.0	38.1	36.6	31.0	34.0	42.0
China	122.6	144.6	174.8	171.2	149.2	188.6	243.9	254.1	298.7	243.5
Czechoslovakia	27.1	20.9	22.2	22.6	20.1	21.4	21.9	21.8	24.9	25.8
East Germany	19.0	19.6	17.0	17.5	21.5	19.4	20.2	19.8	22.5	22.0
France	110.0	109.1	99.2	95.7	44.6	42.7	37.8	35.8	32.7	28.2
Fed. Germany	59.6	50.1	41.2	37.1	63.6	62.9	59.8	62.3	58.0	60.1
India	32.3	33.3	37.6	39.1	34.0	35.0	34.5	33.0	33.7	32.2
Italy	140.9	136.0	119.2	114.4	127.1	130.1	125.0	140.2	139.9	133.6
Japan	106.7	103.3	111.9	100.3	118.1	123.2	113.6	126.8	126.3	121.9
New Zealand	16.0	19.9	19.8	19.8	23.3	25.4	22.4	21.5	18.8	19.2
Pakistan	21.3	21.9	18.3	24.0	16.4	13.6	16.2	19.5	25.6	24.5
Spain	20.2	22.5	23.0	20.0	20.0	21.5	24.8	19.2	16.9	16.6
S. Korea	28.1	29.7	29.1	27.6	24.4	27.6	39.5	46.3	54.2	52.6
Soviet Union	331.4	342.0	333.1	360.6	302.9	308.3	308.6	324.1	320.0	333.9
Taiwan	14.9	14.0	16.8	18.2	18.1	14.2	23.9	26.1	19.9	20.9
United Kingdom	92.3	88.2	85.5	87.3	78.0	77.0	78.0	87.0	87.6	80.7
United States	56.6	63.2	53.3	64.0	68.3	51.8	62.1	62.5	53.0	59.0
Sub-Total	1,288	1,294	1,287	1,307	1,215	1,246	1,317	1,377	1,408	1,356
World total 2/	1,574	1,581	1,556	1,566	1,594	1,625	1,700	1,744	1,764	1,711
Total EC-12 3/	462.5	435.6	426.7	415.1	414.0	415.9	407.3	416.0	407.6	401.1
Eastern Europe	121.2	113.9	109.8	106.6	119.3	116.9	114.1	108.8	114.8	108.0
	Percent									
EC-12	29.4	27.6	27.4	26.5	26.0	25.6	24.0	23.9	23.1	23.4
Soviet Union	21.0	21.6	21.4	23.0	19.0	19.0	18.2	18.6	18.1	19.5
China	7.8	9.2	11.2	10.9	9.4	11.6	14.3	14.6	16.9	14.2
Eastern Europe	7.7	7.2	7.1	6.8	7.5	7.2	6.7	6.2	6.5	6.3
Japan	6.8	6.5	7.2	6.4	7.4	7.6	6.7	7.3	7.2	7.1
United States	3.6	4.0	3.4	4.1	4.3	3.2	3.7	3.6	3.0	3.4
Others	23.7	23.9	22.3	22.2	26.5	25.9	26.5	25.9	25.2	25.9

1/ At the spinning stage of the wool textile industry. 2/ Prior to 1984, a total of 47 major countries; beginning 1984, 66 countries. 3/ Prior to 1982, EC-10 countries only.

Source: Wool Statistics 1989-90 and previous issues. Commonwealth Secretariat International Wool Textile Organization and International Wool Study Group, London, June 1990.



Table C-2--Major importing countries of virgin wool 1/

Country	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
	1,000 tons									
Belgium-Lux	42.2	33.5	30.9	33.7	46.9	55.2	58.0	64.0	66.5	69.4
China	29.1	44.6	63.9	50.6	47.3	113.4	152.2	152.5	187.4	104.4
France	117.2	124.4	111.5	108.9	127.8	131.7	131.6	118.5	114.7	126.0
Fed Germany	79.5	71.1	61.4	61.4	75.0	77.2	72.8	79.7	75.9	74.9
India	13.1	18.0	13.0	19.8	19.6	21.2	32.5	27.9	30.0	25.0
Italy	117.7	113.5	90.5	65.9	105.9	120.3	109.2	122.2	114.0	106.8
Japan	175.6	167.4	179.3	161.4	184.2	184.0	176.8	204.4	174.8	173.0
S. Korea	22.8	29.2	28.8	29.9	27.6	31.3	38.2	44.7	37.8	32.2
Soviet Union	124.2	126.3	125.2	149.5	89.6	109.1	115.3	134.0	114.3	124.3
Taiwan	27.8	27.8	31.0	34.9	35.9	40.6	49.7	51.5	35.5	45.0
United Kingdom	95.5	107.9	101.0	109.2	117.8	128.3	117.6	138.9	128.1	110.2
United States	33.0	43.7	36.1	36.0	41.9	35.1	44.0	47.7	43.6	4.9
Sub-total	877.6	907.4	872.7	861.2	919.4	1,047.3	1,098.0	1,186.0	1,122.6	996.1
World totals	1,119.7	1,165.7	1,093.0	1,088.4	1,137.4	1,261.2	1,324.0	1,413.8	1,377.8	1,241.2

1/ Excludes wool on the skin.

Source: Wool Statistics, Commonwealth Secretariat International Wool Textile Organization, and International Wool Study Group, London, June 1990.

### **The Economic Situation in China, the USSR, and Eastern Europe**

Recent political changes in China, the Soviet Union, and Eastern Europe created a chain of economic events with a substantial impact on the world demand for wool. Consumption in these countries was 40 percent of the 1989 world total, down from 41.5 percent in 1988 (table C-1). Import demand was 21.3 percent of the world total, down from 25.7 percent in 1988.

From 1978 to 1988, China had been the fastest growing wool market and wool importer in the world. However, following the Tiananmen Square events of June 1989, China's import demand for raw wool and wool semimanufactures (tops, yarn, and fabrics) was weakened by foreign exchange shortages. Consequently, during the 1989/90 season, China's wool imports dropped by 44.3 percent, forcing its wool textile industry to operate far below capacity (table C-2). In addition, a large proportion of wool tops and yarns that had been ready for shipment to the Chinese market in 1989/90 ended up in storehouses or were sold below cost. This created excess capacity in several wool-processing countries and cut those countries' import demand for raw wool.

A shortage of foreign exchange also hampered the Soviet Union, where wool imports in 1989 were approximately 15 percent below those of 2 years earlier (table C-2). Before 1989, Soviet wool imports had not grown sufficiently to compensate for the declining size of the national flock and domestic production. In addition, the USSR failed to repay some debts to wool exporters in Australia and New Zealand, causing trade to stop near the end of the 1989/90 season. In Eastern Europe, also, import demand for wool decreased 9.3 percent below the previous year, due mainly to political and economic upheavals and lack of foreign exchange.

### **Competition From Other Fibers**

In reaction to the record prices for wool, fabric manufacturers have switched to other fabric blends as substitutes—mainly cotton and manmade fibers. At the same time, technical developments in the manufacture of manmade fibers and in the processing of cotton knitwear provided a wide range of texture choices and contributed to more substitution for wool.

Synthetic fibers are the major competitor for fine wool types in the manufacturing of worsted yarn (6). As a result, for the first time in 6 years, consumption of manmade fibers has gained at the expense of natural fibers. In fact overall wool consumption in nine reporting countries was 2 percentage points lower in the first quarter of 1990 than in the first quarter of 1989, with a corresponding rise in competing manmade fibers (12).

### **Record World Wool Stockpiles**

During the 1989/90 season, world wool stocks have been rapidly accumulating, creating a burdensome surplus and exerting a substantial downward pressure on prices. Worldwide, stockpiles rose to a record 4,503,000 bales (518,000 tons, clean) at the end of June 1990, nearly four times the level at the beginning of the 1989/90 season. From the beginning to the end of the 1989/90 season, Australian wool stocks increased sixteen fold, from 188,300 bales (22,000 tons, clean) to 3,037,381 bales (349,400 tons, clean). These stocks far surpassed the 1974/75 record of 1,616,200 bales (194,000 tons, clean) and represented Australia's largest and quickest stock buildup ever. New Zealand faced a similar situation, with stocks held by the Wool Board quintupling during the season—from 98,300 bales clean (12,000 tons, clean) to 491,00 bales (60,000 tons)—reaching the highest level since 1982. Stocks in South Africa and Argentina also rose substantially (10, 12).

Since the beginning of the 1990/91 season on July 1, 1990, through the end of January 1991, wool stockpiles have continued an unprecedented carryforward trend. In Australia stocks reached 4,765,627 bales, in New Zealand they were nearly 700,000 bales, and in South Africa they amounted to 272,989 bales (11).

### **Action of the Australian Wool Corporation**

Until 1973, Australian wool marketing was conducted at auctions, with brokers representing the producers with the agents of overseas buyers. Auction sales were run privately and freely, and were not subject to direct export regulation or control. In 1973, however, the Australian Wool Board joined the Australian Wool Commission to establish the current Australian Wool Corporation (AWC).

Since its foundation, the AWC has taken a leading role in determining and operating a reserve price scheme for individual qualities of wools. It established the floor price in consultation with the Wool Council of Australia, which represents the 60,000 wool growers who fund the effort by contributing a certain percentage of their wool income as a levy. Wool levies collected by the AWC are used to promote wool marketing and research and to finance the floor price scheme for growers. The AWC bought wool at auction when bidding prices were below the predetermined floor price, and resubmitted the stockpiled wool to the market when prices improved or the floor price was reduced. Wool Boards in New Zealand, South Africa, Argentina, and Uruguay usually maintain reserve prices at levels equivalent to the AWC, after adjusting for quality differences and conversion factors to clean wool.

In the short run, factors influencing the supply/demand forces in the international market for raw wool indicate wool prices will remain low. On the demand side, prospects for import growth in major markets of Western Europe, Japan, and the United States remain dim. With current stocks high in relation to world production and consumption, any pickup in demand along the wool textile pipeline should be reflected relatively slowly in auction trade offerings and prices. Labor costs in the textile industry favor imports of intermediate textile goods and finished clothing and apparel. In addition, demand by the critical importing regions of China, the USSR, and Eastern Europe, while less predictable, has been sluggish and is likely to remain so during the balance of the 1990/91 season, mainly due to slowdowns in economic activities and lack of foreign exchange. These countries are of great importance in the world wool market because they consumed over 40 percent of the world trade total in 1989.

On the supply side, world production is forecast to increase nearly 1 percent over the previous year by the end of June

1991 (1, 2). Following the elimination of the price support scheme, the percentage of wool trade clearances will pick up as prices reflect the supply and demand forces of the world market. However, an absolute clearance will most likely not be achieved due to continuing sluggish world demand for wool. The size of the "new" stock accumulation (in addition to the rate of wool disposition from the frozen stockpiles starting July 1, 1991) will have a substantial impact on sale prices, most likely pushing them lower over the next few years, until burdensome supplies are reduced.

Over the longer run, world wool production will most likely decrease because of the elimination of the Australian floor price scheme, the increased wool levy, the reduction in the size of the national flock, and the imposition of production quotas. These policies are likely to induce a major structural adjustment of the wool industry in Australia and other major producing countries. In Australia, the direct impact of these policies will reduce wool growers' returns, restrain growth in domestic production, and force producers to switch to more profitable crops over the next few years. Wool production is expected to increase in China, the EC-12, and other small markets. However, these countries produce mainly coarse types of wool. Consequently, imports of fine types will accelerate where consumers demand more and higher quality textiles as their income rises.

### **Summary**

A worldwide switch in consumers' preference towards fine wool material for high-quality apparel, started in the mid-1980's. This was the main force driving the wool market to its May 1988 peak, when prices were three times higher than they had been only 21 months earlier. High prices led to larger world sheep flocks and greater wool production, especially in Australia where farmers enthusiastically switched to raising sheep as a lucrative substitute for low-priced wheat.

However, record prices, reduced demand due to economic slowdowns in major consuming and importing countries, lack of foreign exchange in China, the USSR, and Eastern Europe, the impact of interfiber substitution, and unprecedented carryforward of wool stocks in Australia and other countries contributed to serious repercussions in the world wool market. As a result, the Australian Government intervened by the abolishing the wool price support scheme. This led to the liberalization of the wool market. Now prices depend largely on the interaction of a wide range of supply and demand factors, and market signals are transmitted directly to sheep growers, reflecting the actual supply and demand situation.

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Appendix table 1--Cotton acreage, production, and yield, by State, 1985-90

State	Planted acres					Harvested acres					Lint yield per harvested acre					Production				
	Average 1985-89	1987	1988	1989	1990	Average	1987	1988	1989	1990	Average	1987	1988	1989	1990	Average	1987	1988	1989	1990
					1/ 1985-89					1/ 1985-89					1/ 1985-89					1/ 1985-89
	-1,000 acres-					-Pounds-					-1,000 480-lb. bales 2/-									
Alabama	340	335	390	328	390	334	333	375	322	388	586	572	486	571	495	407	397	380	383	400
Arizona 3/	298	290	350	240	350	297	289	349	239	348	1,289	1,410	1,190	1,303	1,131	793	849	865	649	820
Arkansas	563	555	695	610	770	548	550	675	595	750	717	786	742	687	704	820	901	1,044	851	1,100
California 3/	1,176	1,150	1,350	1,050	1,070	1,165	1,140	1,335	1,040	1,060	1,144	1,259	1,015	1,228	1,245	2,767	2,989	2,824	2,661	2,750
Florida	26	30	33	26	37	25	29	29	25	36	634	646	566	557	600	33	39	34	29	45
Georgia	269	250	350	265	355	252	245	315	260	350	607	662	564	631	562	321	338	370	342	410
Kansas	1	1	1	2	2	1	1	1	0	1	350	480	373	240	406	1	1	1	0	1
Louisiana	641	605	735	645	810	613	600	645	620	790	658	782	705	672	717	842	977	948	868	1,180
Mississippi	1,074	1,020	1,230	1,050	1,225	1,052	1,010	1,190	1,020	1,215	726	829	736	732	731	1,594	1,745	1,825	1,555	1,850
Missouri	198	200	245	214	248	192	199	242	209	235	652	796	607	618	623	261	330	306	269	305
New Mexico 3/	67	66	77	61	69	58	62	69	55	62	665	689	710	698	774	81	89	102	80	100
North Carolina	101	96	126	112	201	99	95	124	110	200	583	495	515	615	650	120	98	133	141	271
Oklahoma	400	400	460	370	385	374	385	435	340	365	335	431	334	244	500	263	346	303	173	380
South Carolina	125	120	145	120	155	123	119	142	118	154	521	428	473	626	452	133	106	140	154	145
Tennessee	424	440	535	465	525	419	435	530	460	520	579	700	529	497	452	502	634	584	476	490
Texas 3/	4,960	4,700	5,600	4,650	5,600	4,310	4,400	5,300	3,750	5,000	420	506	472	367	480	3,833	4,635	5,215	2,870	5,000
Virginia	1	2	3	3	5	2	2	3	3	5	476	373	510	498	598	1	1	3	3	7
Total:																				
Upland	10,666	10,259	12,325	10,210	12,197	9,864	9,894	11,759	9,166	11,480	619	702	615	602	638	12,772	14,475	15,077	11,504	15,254
American-Pima	180	138	190	377	232	179	137	189	372	228	904	1,000	848	893	762	334	285	334	692	363
United States	10,846	10,397	12,515	10,587	12,429	10,043	10,030	11,948	9,538	11,708	624	706	619	614	640	13,106	14,760	15,412	12,196	15,617

1/ Crop Production report, May 1991. 2/ Bales of 480 pounds net weight. 3/ Upland only.

Appendix table 2--U.S. cotton supply and use, by type, 1980/81-1989/90

Crop year	Area			Supply				Disappearance					Farm price 5/
	Planted	Harvested	Yield	Begin-ning stocks 1/	Produc-tion 2/	Imports	Total	Mill use 3/	Exports	Total	Unac-counted 4/	Ending stocks	
	--1,000 acres--		Lbs./acre	-----1,000 480-lb.bales-----									
<b>All types:</b>													
1980	14,534	13,215	404	3,000	11,122	27	14,149	5,891	5,926	11,817	336	2,668	74.7
1981	14,330	13,841	542	2,668	15,646	26	18,340	5,264	6,567	11,831	123	6,632	54.3
1982	11,345	9,734	590	6,632	11,963	20	18,615	5,512	5,207	10,719	41	7,937	59.4
1983	7,926	7,348	508	7,937	7,771	12	15,721	5,928	6,786	12,714	-232	2,775	66.4
1984	11,145	10,379	600	2,775	12,982	24	15,781	5,540	6,215	11,755	76	4,102	57.8
1985	10,685	10,229	630	4,102	13,432	33	17,567	6,399	1,960	8,359	140	9,348	56.3
1986	10,045	8,468	552	9,348	9,731	3	19,082	7,452	6,684	14,136	80	5,026	52.4
1987	10,397	10,030	706	5,026	14,760	2	19,788	7,617	6,582	14,199	182	5,771	64.3
1988	12,515	11,948	619	5,771	15,411	5	21,187	7,782	6,148	13,930	-165	7,092	56.6
1989	10,587	9,538	614	7,092	12,196	2	19,290	8,759	7,694	16,453	163	3,000	65.6
1990 6/	12,348	11,732	634	3,000	15,499	5	18,504	8,400	7,900	16,300	96	2,300	7/
<b>Upland:</b>													
1980	14,461	13,143	402	2,962	11,018	26	14,006	5,828	5,893	11,721	329	2,614	75.8
1981	14,272	13,783	542	2,614	15,566	18	18,198	5,216	6,555	11,771	140	6,567	55.4
1982	11,274	9,663	589	6,567	11,864	12	18,443	5,457	5,194	10,651	52	7,844	59.5
1983	7,863	7,285	506	7,844	7,676	8	15,529	5,861	6,750	12,611	-225	2,693	65.3
1984	11,065	10,299	599	2,693	12,851	21	15,566	5,491	6,125	11,616	74	4,024	58.7
1985	10,601	10,145	628	4,024	13,277	33	17,334	6,338	1,855	8,193	148	9,289	56.8
1986	9,933	8,357	547	9,289	9,525	3	18,817	7,385	6,570	13,955	80	4,942	51.5
1987	10,259	9,894	702	4,942	14,475	2	19,419	7,565	6,345	13,910	209	5,718	63.7
1988	12,325	11,759	615	5,718	15,077	5	20,800	7,711	5,883	13,594	-180	7,026	55.6
1989	10,210	9,166	602	7,026	11,504	2	18,532	8,686	7,242	15,928	189	2,793	63.6
1990 6/	12,117	11,505	632	2,793	15,141	5	17,939	8,335	7,500	15,835	106	2,210	7/
<b>Extra-long staple:</b>													
1980	72.5	71.7	698	38	104.2	1	143	63	33	96	7	54	108.0
1981	58.6	58.0	659	54	79.6	8	142	48	12	60	-17	65	96.9
1982	70.9	70.5	672	65	98.7	8	172	56	13	69	-10	93	101.0
1983	63.0	62.7	725	93	94.7	4	192	67	36	103	-7	82	107.0
1984	80.1	79.6	786	82	130.4	3	215	49	90	139	2	78	92.8
1985	84.0	83.6	891	78	155.1	0	233	61	105	166	-8	59	91.8
1986	111.5	111.1	890	59	205.9	0	265	67	114	175	0	84	89.9
1987	137.9	136.6	1,000	84	284.6	0	369	52	237	289	-27	53	104.0
1988	189.6	189.1	848	53	334.2	0	387	71	265	336	15	66	118.0
1989	376.9	371.7	893	66	691.7	0	758	73	452	525	-26	207	97.1
1990 6/	231.3	227.1	758	207	358.5	0	565	65	400	465	-10	90	7/

1/ Compiled from Bureau of the Census data and adjusted to an August 1 480-lb. net weight basis. Excludes preseason ginnings.  
 2/ Includes preseason ginnings. 3/ Adjusted to August 1-July 31 marketing year. 4/ Difference between ending stocks based on Census data and preceding season's supply less disappearance. 5/ Marketing year average, with no allowance for unredeemed loans. 6/ Estimated.  
 7/ USDA is prohibited by law from publishing cotton price forecasts.

Appendix table 3--U.S. cotton supply and disappearance of all kinds, by month, 1988/89-1990/91 1/

Date	Supply					Disappearance					Ending stocks 7/	
	At mills	Beginning stocks 2/ Public storage 3/	Other 4/	Total	Ginnings 5/	Imports	Total supply	Mill use 6/	Exports	Total use		Unac-counted
1,000 480-lb. bales												
1988/89:												
Aug	737	4,863	170	5,771	826	0	6,597	692	265	957		5,639
Sep	677	4,614	348	5,639	1,515	0	7,154	634	265	899		6,256
Oct	607	5,235	414	6,256	4,734	0	11,990	603	235	838		10,151
Nov	589	8,569	992	10,151	4,940	0	15,092	597	398	995		14,096
Dec	580	12,241	1,275	14,096	2,618	0	16,714	512	670	1,182		15,533
Jan	596	14,074	863	15,533	674	1	16,208	648	483	1,131		15,077
Feb	614	12,677	787	15,077	104	0	15,181	609	738	1,347		13,834
Mar	654	12,491	689	13,834	0	1	13,835	722	629	1,351		12,484
Apr	636	11,029	819	12,484	0	0	12,484	650	627	1,277		11,207
May	652	9,744	810	11,207	0	1	11,208	771	682	1,453		9,755
Jun	671	8,501	583	9,755	0	1	9,756	731	254	985		8,770
Jul	631	7,085	1,054	8,770	0	1	8,771	613	902	1,515	(165)	7,092
Season	737	4,863	170	5,771	15,411	5	21,187	7,782	6,148	13,930	(165)	7,092
1989/90:												
Aug	632	6,179	281	7,092	392	0	7,484	831	507	1,338		6,146
Sep	626	5,190	330	6,146	613	0	6,759	753	492	1,245		5,514
Oct	616	4,658	240	5,514	4,944	0	10,458	792	522	1,314		9,144
Nov	575	7,694	875	9,144	4,658	0	13,802	731	520	1,251		12,551
Dec	566	10,997	988	12,551	1,224	0	13,775	579	682	1,261		12,514
Jan	607	11,187	720	12,514	229	0	12,743	754	875	1,629		11,114
Feb	687	9,898	529	11,114	136	0	11,250	690	797	1,487		9,763
Mar	717	8,371	675	9,763	0	1	9,764	757	997	1,754		8,010
Apr	723	6,822	465	8,010	0	0	8,010	711	734	1,445		6,565
May	712	5,662	191	6,565	0	0	6,565	800	590	1,390		5,176
Jun	701	4,385	90	5,176	0	1	5,177	721	538	1,259		3,918
Jul	694	3,314	(90)	3,918	0	0	3,918	641	440	1,081	163	3,000
Season	632	6,179	281	7,092	12,196	2	19,290	8,759	7,694	16,453	163	3,000
1990/91: 8/												
Aug	697	2,270	33	3,000	597	0	3,597	829	544	1,373		2,224
Sep	644	1,679	(99)	2,224	2,087	0	4,311	692	412	1,104		3,207
Oct	550	2,541	116	3,207	5,470	0	8,677	802	377	1,179		7,498
Nov	539	6,368	591	7,498	4,587	0	12,085	687	718	1,405		10,680
Dec	531	9,232	917	10,680	2,134	0	12,814	490	769	1,259		11,555
Jan-Mar	600	10,207	748	11,555	624	2	12,181	2,147	3,116	5,263		6,918
Apr-Jun	675	5,733	510	6,918	0	0	6,918					

1/ Compiled from Bureau of the Census data and adjusted to 480-lb. net weight basis. 2/ August stocks adjusted to an August 1 basis, excluding preseason ginnings. 3/ Adjusted to 480-lb. bales by use of monthly conversion factors for mill stocks. 4/ Primarily cotton on farms and in transit. Estimated by subtracting public storage and mill stocks from total stocks. 5/ August data include preseason ginnings. 6/ Adjusted to a calendar month. 7/ Supply less disappearance. End-of-season stocks adjusted by Bureau of the Census data. Differences primarily reflect varying bale weights. Monthly data are rounded. 8/ Preliminary and estimated.

Appendix table 4--U.S. upland cotton exports by country of destination

Country	1988/89 Staple length				1989/90 Staple length				1990/91 Staple length (Cumulative August-March)			
	1-inch and under	1-inch to 1-1/8 inch	1-1/8 inch and over	Total	1-inch and under	1-inch to 1-1/8 inch	1-1/8 inch and over	Total	1-inch and under	1-inch to 1-1/8 inch	1-1/8 inch and over	Total
1,000 480-lb. bales												
<b>Asia &amp; Oceania:</b>												
Bangladesh	5.7	49.3	2.8	57.8	4.2	110.7	8.3	123.2	--	18.8	--	18.8
China	--	764.3	28.8	793.1	--	629.1	40.8	669.9	16.0	879.0	42.0	937.0
Hong Kong	0.7	98.5	9.2	108.4	19.6	215.7	7.5	242.8	25.9	172.2	2.2	200.3
Indonesia	8.3	279.1	16.1	303.5	10.2	459.6	23.8	493.6	23.0	374.6	9.9	407.5
Japan	60.8	1,215.4	23.9	1,300.1	53.3	1,441.7	2.1	1,497.1	77.6	968.8	8.7	1055.1
Korea	15.8	1,169.8	94.6	1,280.2	12.5	1,245.3	66.2	1,324.0	36.7	805.3	52.8	894.8
Philippines	0.5	48.8	0.8	50.1	16.9	108.2	8.1	133.2	10.2	70.6	--	80.8
Taiwan	44.6	198.2	11.0	253.8	23.8	287.1	4.0	314.9	37.6	200.4	3.7	241.7
Thailand	0.9	164.3	5.6	170.8	5.2	349.0	16.5	370.7	8.9	204.5	11.7	225.1
<b>Eastern Community:</b>												
Belgium	--	41.6	3.4	45.0	--	45.3	3.0	48.3	5.4	29.9	4.5	39.8
France	--	5.4	2.9	8.3	--	16.7	2.6	19.3	4.3	6.0	0.4	10.7
Germany	1.5	163.2	51.6	216.3	--	209.1	74.8	283.9	7.9	93.9	41.9	143.7
Ireland	--	40.7	3.2	43.9	--	41.3	1.3	42.6	1.9	18.2	3.9	24.0
Italy	2.9	169.8	30.2	202.9	1.1	303.9	56.5	361.5	20.0	196.6	50.5	267.1
Portugal	0.9	20.7	2.4	24.0	--	26.3	12.5	38.8	4.5	27.3	4.6	36.4
Spain	1.6	37.0	2.7	41.3	--	124.9	22.0	146.9	1.2	62.7	11.4	75.3
United Kingdom	--	31.9	4.7	36.6	--	62.6	9.6	72.2	--	23.6	3.3	26.9
<b>Other Europe:</b>												
Poland	--	15.9	--	15.9	--	58.7	--	58.7	--	13.7	--	13.7
Sweden	--	15.8	--	15.8	--	19.4	2.5	21.9	1.5	16.2	--	17.7
Switzerland	--	24.8	--	24.8	--	22.1	--	22.1	1.8	28.8	--	30.6
Turkey	--	89.0	7.5	96.5	--	97.3	21.0	118.3	15.1	43.7	4.2	63.0
Yugoslavia	--	5.3	6.6	11.9	--	11.8	1.7	13.5	--	11.2	3.8	15.0
<b>Western Hemisphere:</b>												
Canada	0.8	96.4	51.0	148.2	3.5	127.6	65.5	196.6	8.8	88.3	27.6	124.7
Mexico	0.3	12.1	7.0	19.4	10.5	94.0	12.3	116.8	37.3	110.3	24.3	171.9
<b>Africa:</b>												
Egypt	--	102.3	--	102.3	--	242.2	--	242.2	--	211.0	31.6	242.6
Ghana	--	5.6	--	5.6	0.5	12.2	--	12.7	--	11.9	--	11.9
Morocco	--	15.1	--	15.1	--	26.2	--	26.2	--	26.0	1.4	27.4
Algeria	4.5	61.4	--	65.9	--	26.2	--	26.2	--	35.6	--	35.6
<b>Other</b>	2.9	337.2	85.4	425.5	5.1	178.0	20.8	203.9	17.6	193.7	11.7	223.0
<b>Total</b>	152.7	5,278.9	451.4	5,883.0	166.4	6,592.2	483.4	7,242.0	363.2	4,942.8	356.1	5,662.1

-- = No exports.

Source: Bureau of the Census.

Appendix table 5--American pima exports by country of destination

Country	Marketing year			
	1987/88	1988/89	1989/90	August-April 1/ 1990/91
	-----1,000 bales-----			
European Community:	113.5	103.2	183.2	113.3
Belgium	5.4	3.8	11.3	4.3
France	1.7	1.2	0.9	--
Germany	67.5	53.1	83.4	38.6
Greece	3.2	0.2	1.2	4.2
Italy	27.7	35.7	69.5	58.8
Portugal	3.3	4.4	9.7	3.8
Spain	4.2	4.1	4.6	1.1
Other Europe:	25.2	35.2	89.0	52.0
Australia	1.7	1.6	4.7	1.3
Czechoslovakia	--	1.9	1.4	3.8
Switzerland	15.8	20.2	32.7	31.4
Turkey	0.9	0.7	1.4	1.9
Yugoslavia	6.4	11.0	9.4	3.2
Japan	53.1	81.2	96.4	92.8
China	--	2.2	0.1	--
Taiwan	0.5	0.1	5.6	4.9
Other Asia and Oceania:	35.7	36.6	67.1	61.7
Bangladesh	2.4	3.2	7.1	10.4
Indonesia	2.2	3.0	5.8	12.4
Iraq	3.7	5.6	2.3	--
Korea	22.1	22.3	40.5	33.6
Pakistan	2.5	1.7	5.4	0.8
Thailand	1.7	0.9	4.7	4.6
Africa:	1.3	5.0	4.8	0.6
Algeria	--	5.0	--	--
South Africa	1.3	--	0.4	0.4
Western Hemisphere:	7.8	0.9	5.7	3.4
Argentina	0.5	--	0.7	--
Brazil	--	--	3.8	3.4
Chile	0.6	0.8	0.7	--
Total	237.1	264.4	451.9	328.7

-- = No exports.  
1/ Preliminary.

Source: U.S. Export Sales, Foreign Agricultural Service, USDA.



Appendix table 6--U.S. Raw cotton imports by country of origin

Country	Marketing year										
	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	August-April 1990/91
	-Bales-										
Barbados	0	0	0	0	0	4	19	0	0	0	0
Canada	2	0	6	0	0	0	4	0	0	174	0
China	0	0	0	0	162	49	17	0	9	603	0
Egypt	715	3,016	4,928	2,978	3,286	0	219	0	0	58	0
Germany	0	370	0	0	0	0	0	0	0	0	0
Guatemala	1,047	0	0	0	0	0	0	0	0	0	0
India	0	0	18	89	37	0	446	116	158	115	108
Mexico	25,634	17,218	11,776	5,818	19,520	32,438	1,726	1,372	0	0	1,232
Pakistan	81	0	155	769	702	402	189	81	825	706	107
Peru	22	2,983	772	0	0	0	0	0	0	0	0
Russia (USSR)	0	2,008	0	0	0	0	0	0	4,287	0	0
Singapore	0	153	0	0	0	0	0	0	0	0	0
Sudan	0	430	2,360	2,365	2	0	0	0	0	0	0
Venezuela	0	0	0	0	0	0	0	0	0	93	0
Other 1/	0	1	3	0	0	1	0	0	3	0	0
World total	27,501	26,179	20,018	12,019	23,709	32,894	2,620	1,569	5,282	1,749	1,447

0 = No imports.

1/ Argentina, France, Italy, Switzerland and Taiwan.

Appendix table 7--Index of prices of selected cotton growth and qualities, and price per pound of U.S. cotton,  
c.i.f. Northern Europe, 1984-91 1/

Year beginning August 1	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Average
Cents/lb.													
<b>A Index: 2/</b>													
1984	75.52	73.16	73.63	72.64	71.98	71.40	69.21	67.34	66.26	65.07	62.85	61.10	69.18
1985	56.97	53.43	49.01	48.04	48.25	51.82	54.52	52.35	48.50	45.42	41.04	37.44	48.90
1986	37.16	43.50	51.23	52.81	59.17	65.68	65.85	63.09	66.21	76.60	79.30	83.24	61.99
1987	86.60	83.61	76.19	75.83	75.29	72.19	67.49	66.34	65.75	65.58	68.78	63.43	72.26
1988	57.74	56.75	57.64	58.61	61.26	63.13	62.96	66.02	73.75	77.34	78.82	83.01	66.42
1989	82.97	81.45	82.10	82.13	77.30	74.92	76.92	79.21	83.01	86.85	90.30	90.88	82.34
1990	80.97	81.41	81.51	82.72	83.60	83.36	85.16	83.65	83.24				
<b>Memphis: 3/</b>													
1984	75.85	74.00	74.69	73.25	74.00	74.75	72.94	73.70	75.94	74.80	72.44	70.38	73.90
1985	68.20	67.94	68.56	68.45	67.67	69.15	70.07	71.75	72.88	73.55	41.25	38.05	64.79
1986	37.75	44.69	52.35	54.25	62.08	65.31	64.75	62.56	65.30	75.06	76.19	81.75	61.84
1987	87.38	83.06	76.75	76.44	74.95	72.75	69.81	70.75	72.38	75.31	79.95	76.56	76.34
1988	60.75	60.45	62.13	63.94	65.81	67.19	68.06	69.95	74.06	76.88	77.85	82.75	69.15
1989	85.15	82.56	83.31	82.10	76.34	75.19	77.12	80.15	84.56	88.90	92.69	95.88	83.57
1990	80.50	81.69	82.44	83.20	84.00	85.50	93.75	94.69	96.75				
<b>Calif./Ariz.: 3/</b>													
1984	75.90	74.38	75.19	74.00	74.08	74.25	72.13	72.94	75.81	73.70	71.94	70.63	73.75
1985	68.55	67.38	68.25	68.15	67.17	68.45	69.19	70.75	72.25	73.25	40.25	35.95	64.13
1986	36.69	45.44	54.55	57.00	65.75	69.25	68.44	64.69	67.65	78.75	80.63	86.65	64.62
1987	91.81	87.81	80.95	79.19	78.25	76.25	73.50	74.80	76.13	78.63	81.80	76.75	79.66
1988	64.19	64.10	65.94	66.13	67.31	69.13	69.94	72.10	76.56	80.50	82.40	86.19	72.04
1989	87.00	84.38	85.31	84.10	79.42	79.50	81.12	84.10	88.19	92.20	95.38	95.13	86.25
1990	85.45	87.31	88.00	88.30	89.00	90.15	97.13	96.75	97.75				
<b>B Index: 4/</b>													
1984	69.26	66.11	65.18	64.50	63.48	61.96	58.58	54.55	54.78	54.98	52.21	48.98	59.55
1985	47.03	45.35	43.61	41.42	40.83	43.15	45.14	43.19	40.88	38.70	33.03	28.77	40.93
1986	27.46	32.55	40.19	43.95	52.32	60.88	61.41	58.00	61.33	71.40	72.90	76.96	54.95
1987	81.55	78.44	70.77	71.73	71.08	68.15	64.21	62.69	61.30	59.50	62.73	57.88	67.50
1988	52.76	51.75	53.24	53.28	56.18	58.45	57.55	61.64	67.56	71.89	74.56	77.15	61.33
1989	78.64	76.70	77.08	77.19	73.49	71.20	73.01	74.98	77.14	80.55	83.21	84.39	77.30
1990	77.58	77.44	76.98	77.70	78.25	76.72	78.56	78.24	77.86				
<b>Orleans/Texas: 5/</b>													
1984	68.65	66.44	66.25	65.40	65.08	65.94	63.88	62.15	62.69	62.40	61.13	60.50	64.21
1985	60.90	61.00	61.69	61.65	61.58	61.50	61.75	62.07	62.13	63.85	31.32	27.80	56.44
1986	27.44	32.56	41.55	44.81	53.17	59.13	60.81	57.50	60.10	68.94	70.56	75.40	54.33
1987	80.94	77.44	71.40	70.69	69.65	68.19	65.56	66.95	67.38	69.88	72.30	66.25	70.55
1988	54.56	53.30	54.50	55.56	57.88	59.94	60.81	62.40	67.19	71.31	73.35	76.63	62.29
1989	79.15	76.31	76.88	75.90	72.92	72.19	73.62	75.50	78.87	82.65	84.50	84.69	77.68
1990	76.20	77.56	77.75	77.50	75.83	76.40	82.19	81.25	81.13				

1/ All prices are based on Thursday quotes. 2/ The A Index is an average of the five lowest priced types of SLM 1-3/32 inch staple length cotton offered on the European market. 3/ The Memphis and California/Arizona territories are based on middling 1-3/32 in. 4/ The B Index is based on coarse grades of cotton varying in staple length from 1 to 1-3/32 in. 5/ Based on SLM 1-1/32 inch cotton.

Source: Cotton Outlook, Liverpool Cotton Services, Ltd.

Appendix table 8--C.i.f. Northern Europe price quotations for principal growth of A-type cotton, weekly,  
August 1990 to date

Month & week	California/ Arizona	Memphis territory	USSR	China	Africa	Central America	Australia	Turkey	Paraguay	Mexico	Pakistan 1/	A Index 2/
U.S. cents/lb.												
1990:												
Aug. 2	85.50	81.25	83.00	85.00	80.50	80.50	NQ	NQ	NQ	83.50	82.00	81.45
9	86.25	81.75	82.50	85.00	81.00	81.25	NQ	NQ	NQ	84.00	82.50	82.05
16	83.75	78.25	81.50	83.50	78.75	79.00	NQ	NQ	NQ	81.00	79.75	79.35
23	85.00	79.75	81.75	83.50	79.50	80.25	NQ	NQ	NQ	82.25	80.50	80.35
30	86.75	81.50	82.50	85.00	80.75	81.25	NQ	NQ	NQ	83.75	82.25	81.65
Sept. 6	87.25	82.00	81.00	85.50	80.25	81.00	NQ	NQ	NQ	83.50	82.75	81.40
13	87.25	81.50	81.00	85.50	80.50	81.00	NQ	NQ	NQ	83.00	82.50	81.30
20	88.00	82.25	82.00	86.50	81.50	82.25	NQ	NQ	NQ	84.00	83.00	82.20
27	86.75	81.00	80.50	85.00	80.25	80.75	NQ	NQ	NQ	83.00	81.25	80.75
Oct. 4	86.50	80.75	80.50	85.00	79.50	80.25	NQ	87.00	NQ	82.75	81.00	80.40
11	88.00	82.50	81.00	86.00	80.50	81.25	NQ	87.00	NQ	83.50	82.00	81.45
18	88.50	83.00	81.50	86.25	80.50	81.75	NQ	86.00	NQ	83.50	82.25	81.80
25	89.00	83.50	82.00	87.00	81.00	82.25	NQ	87.50	NQ	83.50	83.25	82.40
Nov. 1	89.50	84.00	83.00	87.00	81.50	83.00	NQ	87.50	NQ	84.25	83.75	83.05
8	88.00	83.00	83.00	86.50	81.50	83.00	NQ	87.50	NQ	83.25	82.25	82.55
15	88.00	83.00	83.00	86.50	82.00	82.75	NQ	86.00	NQ	83.00	82.25	82.60
22	88.00	83.00	83.00	86.50	82.00	83.00	NQ	86.00	NQ	83.25	82.25	82.65
29	88.00	83.00	83.00	86.50	82.00	83.00	NQ	86.00	NQ	83.25	82.75	82.75
Dec. 6	87.75	82.75	83.00	86.75	81.50	83.00	NQ	85.00	NQ	83.00	84.00	82.65
13	89.50	84.50	84.00	85.00	83.25	84.25	NQ	85.50	NQ	84.25	85.75	84.05
20	89.75	84.75	84.00	88.00	83.25	84.25	NQ	86.25	NQ	84.25	86.00	84.10
27	NQ	NQ	NQ	NQ	NQ	NQ	NQ	NQ	NQ	NQ	NQ	NQ
1991:												
Jan. 3	90.00	85.00	84.00	87.00	82.75	85.25	84.50	86.00	80.25	85.25	85.00	83.30
10	88.75	84.25	84.50	87.00	82.25	84.50	84.00	88.00	79.00	84.50	85.25	82.80
17	89.50	85.00	85.00	87.50	82.50	85.25	84.25	88.00	79.50	85.25	85.50	83.25
24	90.00	85.50	84.50	87.50	80.50	85.75	85.25	90.00	80.25	85.75	85.75	83.20
31	92.50	87.75	84.50	87.50	81.00	87.75	86.75	89.00	81.75	87.75	86.75	84.25
Feb. 7	96.25	92.50	85.50	89.50	83.50	90.50	89.50	90.50	83.50	91.50	85.50	85.50
14	96.25	92.50	85.00	89.50	83.75	90.00	90.00	89.50	83.00	91.00	85.00	85.25
21	97.50	94.25	84.00	90.50	83.50	NQ	90.50	88.00	83.50	NQ	85.00	84.80
28	98.50	95.75	84.25	90.50	84.25	NQ	89.50	88.00	84.50	NQ	84.50	85.10
Mar. 7	98.50	95.75	83.50	91.50	83.25	NQ	89.25	88.50	83.50	NQ	83.00	84.35
14	98.50	96.00	82.50	91.00	84.00	NQ	89.50	88.50	84.00	NQ	82.50	84.30
21	95.00	93.50	81.75	91.00	82.50	NQ	88.00	86.50	84.00	NQ	80.25	83.00
28	95.00	93.50	81.25	90.50	82.75	NQ	88.00	86.50	84.00	NQ	80.25	82.95
Apr. 4	96.00	94.50	81.50	90.50	82.50	NQ	88.00	86.50	84.00	NQ	80.25	82.95
11	99.50	98.50	81.50	91.00	82.50	NQ	90.00	87.50	84.00	NQ	82.00	83.50
18	NQ	97.50	81.50	NQ	81.50	NQ	88.75	87.50	85.00	NQ	82.00	83.50
25	NQ	96.50	80.75	NQ	81.50	NQ	87.75	88.50	84.50	NQ	80.50	83.00
May 2	NQ	99.00	81.75	NQ	81.50	NQ	87.75	93.00	83.50	NQ	82.00	83.30
9	NQ	99.00	81.75	NQ	81.50	NQ	87.75	93.00	83.50	NQ	82.00	83.30
16	NQ	101.00	81.75	NQ	83.00	NQ	89.50	94.00	84.00	NQ	85.50	84.75
23	NQ	100.00	81.75	NQ	82.00	NQ	90.50	90.00	83.50	NQ	NQ	85.55

NQ = No quotes.

1/ Since August 1, 1987, Pakistan-type 1505 has been included in the A index selection.

2/ The A index is an average of the five lowest priced types of SLM 1-3/32 inch staple cotton offered on the European market.

Source: Cotton Outlook, Liverpool Cotton Services, Ltd.

Appendix table 9--C.i.f. Northern Europe price quotation for principal growth of coarse-count cotton, weekly, August 1990 to date

Month & week	Orleans/Texas	Pakistan	China	USSR	Turkey	Southern Brazil	Argentina	B Index 1/
U.S. cents/lb.								
1990:								
Aug. 2	76.75	76.75	NQ	81.00	NQ	NQ	NQ	78.15
9	77.25	77.25	NQ	81.75	NQ	NQ	NQ	78.75
16	74.00	74.50	NQ	79.50	NQ	NQ	NQ	76.00
23	75.50	75.25	NQ	79.75	NQ	NQ	NQ	76.85
30	77.50	76.50	NQ	80.50	NQ	NQ	NQ	78.15
Sept. 6	78.00	77.00	NQ	78.00	79.50	NQ	NQ	77.65
13	77.50	76.75	NQ	78.00	79.50	NQ	NQ	77.40
20	78.00	77.25	NQ	79.00	80.00	NQ	NQ	78.10
27	76.75	75.50	NQ	77.50	78.00	NQ	NQ	76.60
Oct. 4	76.50	75.25	NQ	77.50	78.00	NQ	NQ	76.40
11	78.00	76.25	NQ	78.25	76.75	NQ	NQ	77.00
18	78.00	76.50	NQ	78.75	76.00	NQ	NQ	76.85
25	78.50	77.50	NQ	79.00	77.00	NQ	NQ	77.65
Nov. 1	79.00	78.00	NQ	80.00	78.00	NQ	NQ	78.35
8	77.50	76.50	NQ	80.50	78.50	NQ	NQ	77.50
15	77.00	76.50	NQ	80.00	79.00	NQ	NQ	77.50
22	77.00	76.50	NQ	80.00	79.00	NQ	NQ	77.50
29	77.00	77.00	NQ	80.00	79.00	NQ	NQ	77.65
Dec. 6	76.50	78.25	NQ	80.00	78.50	NQ	NQ	77.75
13	75.50	80.00	NQ	81.00	79.25	NQ	NQ	78.25
20	75.50	80.25	NQ	81.00	80.50	NQ	NQ	78.75
27	NQ	NQ	NQ	NQ	NQ	NQ	NQ	NQ
1991:								
Jan. 3	76.50	79.25	NQ	81.00	80.25	76.50	77.75	76.90
10	75.25	79.50	NQ	81.50	81.25	75.00	77.00	75.75
17	76.00	79.75	NQ	NQ	81.25	75.50	77.50	76.35
24	76.25	80.00	NQ	NQ	82.75	76.50	78.25	77.00
31	78.00	81.00	NQ	NQ	81.75	76.50	78.25	77.60
Feb. 7	81.25	79.50	NQ	NQ	83.75	77.50	79.25	78.75
14	81.00	79.00	NQ	NQ	82.75	76.50	78.50	78.00
21	83.00	79.75	NQ	NQ	81.00	77.00	79.00	78.60
28	83.50	79.25	NQ	NQ	79.50	78.50	79.00	78.90
Mar. 7	82.75	77.75	NQ	NQ	81.50	81.50	79.00	79.40
14	82.50	77.25	NQ	NQ	81.50	82.50	79.00	79.25
21	80.00	75.00	NQ	NQ	79.50	82.50	77.00	77.15
28	79.75	75.00	NQ	NQ	80.00	83.00	76.75	77.15
Apr. 4	80.00	75.00	NQ	NQ	80.00	82.50	76.75	77.25
11	82.00	76.25	NQ	NQ	81.00	82.50	77.00	78.10
18	81.00	76.00	NQ	NQ	81.00	82.00	77.25	78.10
25	81.50	75.00	NQ	NQ	81.50	82.00	77.50	78.00
May 2	81.00	76.50	NQ	NQ	85.00	NQ	78.50	78.35
9	81.00	76.50	NQ	NQ	85.00	NQ	77.50	78.35
16	84.00	79.50	NQ	NQ	86.00	NQ	78.50	80.65
23	82.50	79.25	NQ	NQ	85.00	NQ	78.00	79.90

NQ = No quotes.

1/ The B Index is based on coarse grades of cotton varying in staple length from 1 in. to 1-3/32 inch. It is an average of the three lowest priced types of seven styles, so marked.

Source: Cotton Outlook, Liverpool Cotton Services, Ltd.

Appendix table 10--Strict low middling spot prices in designated U.S. markets, loan rates, and prices received by farmers for upland cotton, 1984/5-1990/91

Year beginning August 1	Average spot market prices per pound (net weight) 1/						Price received by farmers (net weight) 2/
	15/16 inch	1 inch	1-1/32 inch	1-1/16 inch	1-3/32 inch	1-1/8 inch	
Cents/lb.							
1984/85	52.39	55.98	58.30	60.51	60.29	60.49	3/ 58.7
1985/86	52.16	55.81	57.87	60.01	59.62	59.77	3/ 56.8
1986/87	44.80	47.77	50.78	53.16	53.81	55.89	3/ 51.5
1987/88	57.38	59.33	60.81	63.13	63.63	64.45	3/ 63.7
1988/89	49.02	52.32	53.99	57.67	58.14	59.51	3/ 55.6
1989/90:							
August	61.03	64.79	66.63	69.88	70.42	72.27	60.2
September	60.56	63.79	65.37	68.46	69.00	70.29	63.9
October	61.11	64.85	66.28	69.40	69.89	70.94	65.8
November	61.54	64.33	65.34	68.33	68.75	68.85	65.4
December	57.37	59.82	60.54	63.56	63.99	64.08	61.4
January	55.19	58.24	59.20	62.21	62.63	62.72	59.9
February	56.87	60.69	61.90	64.95	65.37	65.46	61.0
March	59.43	63.21	64.79	68.06	68.48	68.57	64.1
April	61.33	66.09	68.08	71.31	71.73	71.82	65.0
May	62.77	68.60	71.28	74.61	75.03	75.12	65.4
June	63.37	70.77	73.57	77.06	77.48	77.57	62.3
July	68.23	73.45	76.51	79.53	79.95	80.04	62.9
Season	60.73	64.89	66.62	69.78	70.23	70.64	63.6
1990/91:							
August	66.02	71.01	73.30	76.27	76.69	76.78	64.6
September	59.22	66.21	67.50	71.01	71.43	71.52	65.0
October	58.99	66.13	67.09	70.54	70.97	71.06	67.5
November	60.54	65.01	66.06	69.48	69.97	70.07	68.2
December	58.70	64.61	66.20	69.92	70.43	70.63	64.2
January	58.17	64.70	66.78	70.50	71.09	71.29	67.9
February	64.27	71.78	74.22	77.69	78.45	78.65	68.5
March	65.13	72.24	74.74	77.92	78.63	78.78	71.8
April	65.55	73.6	76.71	79.94	80.65	80.78	
Loan rate 4/	43.87	45.52	48.32	50.27	50.72	50.87	

1/ Spot market loan rates and prices are for cotton with micronaire readings of 3.5 through 4.9.  
 2/ Prices do not include an allowance for loans outstanding and Government purchases. 3/ Weighted market average. U.S. prices based on U.S. monthly prices weighted by monthly marketings from August through the following July. 4/ SLM 1-1/16 in. average location.

Source: Agricultural Stabilization and Conservation Service, Agricultural Marketing Service, and National Agricultural Statistics Service, USDA.

Appendix table 11--CCC loan premiums and discounts for grade and staple length of 1991-crop American upland cotton, basis grade 41 staple 34 (SLM 1-1/16 inch), net weight

Grade	Code	Staple length (inches)								
		13/16 (26) through 29/32 (29)	15/16 (30)	31/32 (32)	1 (32)	1-1/32 (33)	1-1/16 (34)	1-3/32 (35)	1-1/8 (36)	1-5/32 (37) & longer
Points/lb.										
<b>White:</b>										
SM & better	(11 & 21)	-715	-620	-365	-300	-70	160	210	215	250
MID PLUS	(30)	-735	-640	-380	-310	-80	155	195	205	240
MID	(31)	-745	-645	-390	-320	-95	140	190	200	235
SLM PLUS	(40)	-775	-675	-430	-400	-180	50	100	115	140
SLM	(41)	-815	-715	-480	-450	-230	BASE	50	65	75
LM PLUS	(50)	-900	-835	-625	-625	-430	-240	-210	-205	-200
LM	(51)	-995	-935	-755	-755	-550	-360	-340	-330	-320
SGO PLUS	(60)	-1275	-1275	-1275	-1275	-1050	-1000	-975	-965	-950
SGO	(61)	-1395	-1395	-1395	-1395	-1160	-1130	-1120	-1120	-1110
GO PLUS	(70)	-1570	-1565	-1520	-1520	-1330	-1325	-1325	-1325	-1325
GO	(71)	-1625	-1625	-1520	-1565	-1370	-1370	-1365	-1365	-1365
<b>Light spotted:</b>										
SM & better	(12 & 22)	-765	-655	-430	-370	-160	55	80	95	120
MID	(32)	-825	-710	-495	-456	-235	-5	45	50	60
SLM	(42)	-905	-795	-655	-655	-440	-285	-255	-245	-245
LM	(52)	-1130	-1130	-1130	-1130	-900	-900	-890	-890	-890
SGO	(62)	-1565	-1565	-1565	-1565	-1330	-1330	-1330	-1330	-1330
<b>Spotted:</b>										
SM & better	(13 & 23)	-1060	-895	-750	-750	-515	-490	-465	-455	-435
MID	(33)	-1106	-975	-830	-800	-630	-630	-630	-630	-630
SLM	(43)	-1315	-1315	-1315	-1315	-1110	-1110	-1100	-1100	-1100
LM	(53)	-1630	-1630	-1630	-1630	-1380	-1365	-1365	-1365	-1365
SGO	(63)	-1730	-1730	-1730	-1730	-1480	-1465	-1465	-1465	-1465
<b>Tinged: 1/</b>										
SM	(24)	-1720	-1570	-1555	-1550	1340	-1300	-1300	-1300	-1300
MID	(34)	-1770	-1620	-1605	-1600	-1390	-1350	-1350	-1350	-1350
SLM	(44)	-1830	-1756	-1750	-1750	-1545	-1545	-1545	-1545	-1545
LM	(54)	-2000	-1945	-1935	-1935	-1750	-1745	-1745	-1745	-1745
<b>Light gray:</b>										
SM & better	(16 & 26)	-820	-720	-590	-530	-360	0	20	20	30
MID	(36)	-1005	1005	-1005	-1005	-780	-415	-360	-350	-345
SLM	(46)	-2005	-2005	-2005	-2005	-1775	-1456	-1400	-1380	-1370
<b>Gray:</b>										
SM & better	(17 & 27)	-1015	-1015	-1015	-1015	-790	-425	-370	-360	-355
MID	(37)	-2015	-2015	-2015	-2015	-1785	-1465	-1410	-1390	-1380
SLM	(47)	-2115	-2115	-2115	-2115	-1885	-1565	-1510	-1490	-1480

1/ Cotton classed as "Yellow Stained" ( Middling and better grades) will be eligible for loan, if otherwise eligible, at a discount 200 points greater than the discount for the comparable quality in the color group "tinged."

Source: USDA, Agricultural Stabilization and Conservation Service.

Appendix table 12--CCC loan schedule of micronaire discounts for 1991-crop upland cotton

Micronaire reading	Points per pound		:	Micronaire reading	Points per pound	
	Staples 32 (1") & shorter	Staples 33 (1-1/32") & longer			Staples 32 (1") & shorter	Staples 33 (1-1/32") & longer
5.3 and above	-350	-255	:	3.3 through 3.4	-145	-245
5.0 through 5.2	-255	-175	:	3.0 through 3.2	-365	-515
4.3 through 4.9	0	0	:	2.7 through 2.9	-665	-815
3.7 through 4.2	+15	+15	:	2.5 through 2.6	-1035	-1165
3.5 through 3.6	0	0	:	2.4 and below	-1510	-1540

Source: USDA, Agricultural Stabilization and Conservation Service.

Appendix table 13--CCC schedule of loan rates for eligible qualities of 1991-crop extra long staple cotton (American Pima) stored in approved warehouses at all locations, micronaire 3.5 and above 1/

Grade	Staple (inches)	
	1-3/8 (44)	1-7/16 (46) & longer
	Cents/lb.	
01	90.80	91.15
02	90.60	91.00
03	89.40	89.80
04	78.75	79.10
05	57.25	57.25
06	47.35	47.35

1/ A micronaire premium of 129 points (1.29 cents) per pound is reflected in the loan rates for the eligible qualities; thus, the national average loan rate reflected in the above schedule is 84.28 cents per pound. Cotton with micronaire readings below the micronaire range "3.5 and above" will be subject to the discounts in the schedule of micronaire differences for ELS cotton in the above table.

Source: USDA, Agricultural Stabilization and Conservation Service.

Appendix table 14--Fiber prices: Landed Group B mill points, cotton prices, and manmade staple fiber prices, f.o.b. producing plants, actual and estimated raw fiber equivalent, 1984-91

Calendar year	Cotton 1/		Rayon 2/		Polyester 3/		Price ratios 4/	
	Actual	Raw fiber equivalent 5/	Actual	Raw fiber equivalent 5/	Actual	Raw fiber equivalent 5/	Cotton/rayon	Cotton/polyester
-----Cents/lb.-----								
1984	76	84	84	88	79	82	.95	1.02
1985	66	73	79	82	66	69	.89	1.06
1986	61	68	76	79	62	65	.86	1.04
1987	73	81	81	84	66	69	.96	1.18
1988	65	72	91	94	74	77	.77	.94
1989:								
January	64	71	100	104	81	84	.68	.84
February	63	70	100	104	81	84	.67	.83
March	66	73	100	104	81	84	.70	.87
April	69	77	110	115	81	84	.67	.91
May	72	80	110	115	81	84	.70	.95
June	73	81	110	115	89	93	.71	.87
July	76	84	110	115	89	93	.74	.91
August	79	88	110	115	89	93	.77	.95
September	76	84	110	115	89	93	.74	.91
October	78	87	119	124	89	93	.70	.93
November	76	84	119	124	89	93	.68	.91
December	72	80	119	124	89	93	.65	.86
Average	72	80	110	114	86	89	.70	.89
1990:								
January	70	78	119	124	89	93	.63	.84
February	72	80	119	124	89	93	.65	.86
March	76	84	119	124	89	93	.68	.91
April	78	87	119	124	89	93	.70	.94
May	82	91	119	124	85	89	.74	1.03
June	87	97	119	124	82	85	.78	1.13
July	87	96	119	124	78	81	.78	1.19
August	84	93	119	124	78	81	.75	1.14
September	79	88	119	124	78	81	.71	1.08
October	78	87	122	127	78	81	.68	1.07
November	79	87	122	127	78	81	.69	1.07
December	80	89	124	127	78	81	.69	1.09
Average	79	88	120	129	83	86	.71	1.03
1991:								
January	80	89	124	129	78	81	.69	1.10
February	87	96	124	129	78	81	.75	1.19
March	90	100	124	129	78	81	.77	1.23
April	90	99	124	129	72	75	.77	1.33

1/ SLM 1-1/16 inch at Group B mill points, net weight. 2/ 1.5 and 3.0 denier, regular rayon staple. 3/ Reported average market price for 1.5-denier polyester staple for cotton blending. 4/ Raw fiber equivalent. 5/ Actual prices converted to estimated raw fiber equivalent as follows: cotton, divided by 0.90; rayon and polyester, divided by 0.96.

Source: Agricultural Marketing Service, USDA and trade reports.



Appendix table 15--Upland cotton and manmade staple fibers: Mill consumption on cotton-system spinning spindles

Year beginning August 1	Manmade staple			Total	Total fibers	Cotton's share of total
	Cotton	Rayon and acetate	Non-cellulosic			
	1,000 lbs.					Percent
1984/85	2,618,685	231,197	1,336,595	1,567,792	4,186,477	62.6
1985/86	3,086,842	253,459	1,465,228	1,718,687	4,805,529	64.2
1986/87	3,544,852	256,711	1,481,822	1,738,593	5,283,445	67.1
1987/88	3,631,397	268,813	1,481,923	1,750,736	5,382,133	67.5
1988/89	3,687,330	285,742	1,397,434	1,683,176	5,370,506	68.7
1989/90:						
August	341,268	22,314	110,610	132,924	474,192	72.0
September	426,587	27,016	139,980	166,996	593,583	71.9
October	342,841	22,158	108,625	130,783	473,624	72.4
November	318,521	21,230	100,920	122,150	440,671	72.3
December	338,660	24,509	115,126	139,635	478,295	70.8
January	311,880	20,837	103,387	124,224	436,104	71.5
February	326,173	21,676	106,984	128,660	454,833	71.7
March	408,802	28,199	129,921	158,120	566,922	72.1
April	322,064	22,513	107,950	130,463	452,527	71.2
May	330,531	24,393	107,200	131,593	462,124	71.5
June	410,050	28,345	126,947	155,292	565,342	72.5
July	277,834	18,640	87,503	106,143	383,977	72.4
Season	4,155,211	281,830	1,345,153	1,626,983	5,782,194	71.9
1990/91:						
August	338,321	24,197	105,064	129,261	467,582	72.4
September	414,261	30,511	126,528	157,039	571,300	72.5
October	333,106	22,590	102,249	124,839	457,945	72.7
November	301,969	18,891	96,245	115,134	417,103	72.4
December	296,625	19,441	95,312	114,753	411,378	72.1
Jan-Mar 1/	1,030,329	56,178	305,128	361,306	1,391,635	74.0

1/ Preliminary.

Source: Bureau of the Census.

Appendix table 16--Cotton and manmade staple fibers: Daily rate of mill consumption, on cotton-system spinning spindles, unadjusted and seasonally adjusted

Year	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
480-lb. bales												
Upland cotton:												
Unadjusted--												
1986/87	27,748	27,200	28,357	27,444	23,949	28,338	29,043	30,381	29,676	30,331	29,501	28,038
1987/88	31,498	31,307	32,246	31,735	25,358	29,516	30,618	30,514	28,827	28,532	27,394	22,319
1988/89	29,719	28,589	28,462	26,949	23,511	29,209	30,094	31,076	32,220	33,270	33,026	28,922
1989/90	35,549	35,549	35,713	33,179	28,222	32,489	33,976	34,067	33,548	34,430	34,171	28,941
1990/91 1/	35,242	34,522	34,626	31,455	24,719							
Adjusted--												
1986/87	26,604	26,931	26,232	26,905	28,208	28,197	27,819	29,439	29,010	29,053	29,773	32,717
1987/88	29,998	30,844	30,109	31,235	29,486	29,282	29,441	29,426	28,206	27,461	27,811	26,043
1988/89	28,304	28,001	26,625	26,266	27,660	29,093	28,964	29,795	31,588	32,176	33,292	33,946
1989/90	33,568	34,682	33,883	32,656	33,281	32,136	32,764	32,663	32,794	33,234	34,308	34,048
1990/91 1/	33,373	33,355	32,977	31,330	29,322							
1,000 lbs.												
Manmade staple												
Rayon and acetate:												
Unadjusted--												
1986/87	1,073	1,024	1,089	1,121	844	1,041	951	997	961	948	952	867
1987/88	1,038	1,020	1,061	1,066	975	987	1,053	1,057	1,092	1,023	1,106	903
1988/89	1,129	1,129	1,153	1,110	987	1,149	1,110	1,173	1,109	1,133	1,133	868
1989/90	1,116	1,081	1,108	1,100	980	1,042	1,083	1,128	1,127	1,220	1,134	932
1990/91 1/	1,210	1,220	1,130	945	778							
Adjusted--												
1986/87	1,051	1,019	1,008	1,074	987	1,046	914	963	955	902	923	1,035
1987/88	1,010	1,015	984	1,003	1,144	977	1,033	1,026	1,090	998	1,110	1,011
1988/89	1,098	1,109	1,061	1,042	1,165	1,141	1,109	1,159	1,100	1,127	1,121	972
1989/90	1,053	1,051	1,026	1,032	1,126	1,014	1,092	1,104	1,128	1,237	1,125	1,082
1990/91 1/	1,148	1,184	1,070	909	871							
Noncellulosic: 2/												
Unadjusted--												
1986/87	5,817	5,849	5,948	5,835	4,990	5,552	5,770	5,919	5,845	5,818	5,706	5,400
1987/88	5,907	5,815	6,254	6,006	4,861	5,953	5,849	5,897	5,789	5,699	5,667	4,961
1988/89	5,856	5,671	5,599	5,347	4,617	5,430	5,451	5,288	5,469	5,613	5,498	4,766
1989/90	5,530	5,599	5,431	5,091	4,605	5,169	5,349	5,197	5,398	5,360	5,078	4,375
1990/91 1/	5,253	5,061	5,112	4,812	3,812							
Adjusted--												
1986/87	5,664	5,763	5,569	5,847	5,809	5,508	5,418	5,724	5,742	5,654	5,655	6,200
1987/88	5,757	5,690	5,878	5,935	5,626	5,983	5,508	5,725	5,457	5,555	5,644	5,644
1988/89	5,708	5,554	5,218	5,186	5,375	5,457	5,216	5,104	5,346	5,487	5,471	5,510
1989/90	5,333	5,468	5,119	5,001	5,305	5,103	5,224	5,021	5,287	5,234	5,028	4,972
1990/91 1/	5,036	4,904	4,859	4,750	4,362							

1/ Preliminary. 2/ Includes nylon, acrylic and modacrylic, polyester, and other manmade staple fibers.

Source: Bureau of the Census.

Appendix table 17--Cotton spindles in place and active, and hours operated, 1989-91

Date	Spindles		Percentage of active spindles used on			Daily average spindle hours operated		Total fiber spun per spindle hour
	In place	Active	100-percent cotton	100-percent manmade	Other fibers and blends	Actual	Seasonally adjusted	
	-----1,000-----		-----Percent-----			-----Million-----		
1989:								
January	12,077	11,267	38.4	13.8	47.8	288	286	.071
February	11,963	11,183	37.9	14.0	48.1	293	275	.071
March	11,925	11,102	38.5	14.0	47.5	289	276	.073
April	11,940	11,114	39.0	13.6	47.3	296	287	.074
May	11,866	11,072	39.3	13.6	47.1	300	289	.075
June	11,812	11,211	38.7	13.4	48.0	299	300	.075
July	11,669	10,794	39.7	14.0	46.2	301	257	.064
August	11,554	10,750	39.5	13.9	46.6	313	310	.074
September	11,468	10,735	39.4	13.8	46.8	317	314	.073
October	11,507	10,705	39.0	13.6	47.4	279	268	.083
November	11,509	10,676	39.4	14.1	46.5	293	284	.074
December	11,549	10,699	39.1	14.3	46.6	254	293	.073
1990:								
January	11,373	10,588	40.0	14.6	45.4	272	271	.079
February	11,287	10,700	39.8	15.7	44.5	278	264	.079
March	11,336	10,575	39.9	15.8	44.3	276	266	.080
April	11,287	10,520	39.6	15.7	44.8	271	262	.082
May	11,180	10,371	40.0	15.7	44.3	267	257	.085
June	11,167	10,265	40.0	16.2	43.7	255	252	.089
July	11,058	10,130	38.8	15.5	45.7	220	256	.088
August	10,894	10,018	38.7	15.2	46.2	264	257	.089
September	10,891	10,051	39.6	15.0	45.4	255	247	.090
October	10,637	9,816	38.5	15.3	46.2	260	248	.089
November	10,608	9,815	39.7	14.8	45.5	240	233	.089
December	10,541	9,706	39.3	15.0	45.7	196	225	.085
1991:								
Jan-Mar 1/	10,445	9,519	39.9	15.1	45.0	234	NA	.093

NA = Not available.

1/ Preliminary.

Source: Bureau of the Census.

Appendix table 18--Mill consumption of cotton, wool, and manmade fibers, quarterly, 1985-91

Year	Cotton	Wool	Cellulosic	Noncellulosic	Total manmade	Total fibers	Cotton's share of total
							Percent
-----Million lbs.-----							
1985 1Q	663.8	29.9	127.0	1,818.7	1,945.7	2,639.4	25.1
2Q	695.6	30.4	132.5	1,934.4	2,066.9	2,792.9	24.9
3Q	710.3	27.9	138.2	1,956.7	2,094.9	2,833.1	25.1
4Q	740.8	28.4	147.9	1,970.1	2,118.0	2,887.2	25.7
Total	2,810.5	116.6	545.6	7,679.9	8,225.5	11,152.6	25.2
1986 1Q	790.6	35.0	150.8	1,944.4	2,095.2	2,920.8	27.1
2Q	810.7	36.0	153.5	1,976.1	2,129.6	2,976.3	27.2
3Q	808.0	32.9	153.6	2,049.1	2,202.7	3,043.6	26.5
4Q	849.7	32.8	150.4	2,074.8	2,225.2	3,107.7	27.3
Total	3,259.0	136.7	608.3	8,044.4	8,652.7	12,048.4	27.0
1987 1Q	904.4	36.6	140.2	2,095.2	2,235.4	3,176.4	28.5
2Q	939.8	37.5	143.2	2,152.2	2,295.4	3,272.7	28.7
3Q	967.5	33.8	146.2	2,134.3	2,280.5	3,281.8	29.5
4Q	941.5	34.9	156.0	2,098.4	2,254.4	3,230.8	29.1
Total	3,753.2	142.8	585.6	8,480.1	9,065.7	12,961.7	29.0
1988 1Q	950.7	35.4	152.3	2,100.4	2,252.7	3,238.8	29.3
2Q	883.5	33.9	159.0	2,152.2	2,311.2	3,228.6	27.4
3Q	852.1	31.8	151.7	2,108.6	2,260.3	3,144.2	27.1
4Q	821.7	31.6	149.9	2,233.8	2,383.7	3,237.0	25.4
Total	3,508.0	132.7	612.9	8,595.0	9,207.9	12,848.6	27.3
1989 1Q	949.9	35.4	165.8	2,174.2	2,340.0	3,325.3	28.6
2Q	1,033.3	34.0	159.9	2,234.0	2,393.9	3,461.2	29.9
3Q	1,054.2	29.8	140.9	2,134.5	2,275.4	3,359.4	31.4
4Q	1,008.7	27.9	134.2	2,074.1	2,208.3	3,244.9	31.1
Total	4,046.1	127.1	600.8	8,616.8	9,217.6	13,390.8	30.2
1990 1Q	1,056.6	33.7	141.5	2,088.2	2,229.7	3,320.0	31.8
2Q	1,071.1	32.9	144.7	2,163.2	2,307.9	3,411.9	31.4
3Q	1,037.6	29.4	159.2	2,089.3	2,248.5	3,315.5	31.3
4Q	938.1	31.5	153.5	2,098.2	2,251.7	3,221.3	29.1
Total	4,103.4	127.5	598.9	8,438.9	9,037.8	13,268.7	30.9
1991 1Q	1,030.3	NA	121.6	1,922.2	2,043.8	NA	33.5

NA = Not available.

Source: Bureau of the Census, and Fiber Organon.

Appendix table 19--U.S. fiber consumption: Total and per capita, by type of fiber, 1986-90

Fiber and year	U.S. mill use	Percent of fibers	Textile trade 1/		Total domestic consumption 2/	Percent of fibers	Per capita 3/	
			Exports	Imports			Mill use	Domestic consumption
	Million lbs.	Percent	Million lbs.			Percent	Lbs.	
<b>Cotton:</b>								
1986	3,259.0	27.0	274.8	1,910.5	4,894.7	31.0	13.5	20.3
1987	3,753.2	29.0	298.0	2,335.7	5,790.9	33.7	15.4	23.7
1988	3,508.0	27.2	325.3	2,121.7	5,316.7	32.1	14.2	21.6
1989	4,046.1	30.3	NA	NA	NA	NA	16.3	NA
1990	4,103.4	31.1	NA	NA	NA	NA	16.3	NA
<b>Wool:</b>								
1986	136.7	1.2	16.0	275.6	396.3	2.5	0.6	1.6
1987	142.8	1.1	23.5	276.1	395.4	2.3	0.6	1.6
1988	132.7	1.0	30.7	248.7	350.7	2.1	0.5	1.5
1989	127.1	0.9	NA	NA	NA	NA	0.5	NA
1990	127.5	0.9	NA	NA	NA	NA	0.5	NA
<b>Manmade fibers:</b>								
1986	8,652.7	71.8	519.3	1,703.0	9,836.4	62.4	35.8	40.7
1987	9,065.7	69.9	591.9	1,805.4	10,279.2	59.9	37.2	42.1
1988	9,207.9	71.4	681.6	1,758.9	10,285.2	62.1	37.4	41.8
1989	9,217.6	68.8	NA	NA	NA	NA	36.9	NA
1990	9,037.8	67.9	NA	NA	NA	NA	35.6	NA
<b>Flax and silk:</b>								
1986	4.8	4/	NA	632.2	637.0	4.0	4/	2.6
1987	4.7	4/	NA	702.7	707.4	4.1	4/	2.9
1988	5.0	4/	NA	607.5	612.5	3.7	4/	2.5
1989	160.5	1.2	NA	NA	NA	NA	0.6	NA
1990	149.9	1.1	NA	NA	NA	NA	0.6	NA
<b>All fibers: 6/</b>								
1986	12,048.4	100.0	810.1	4,521.3	15,764.4	100.0	49.9	65.3
1987	12,961.7	100.0	913.4	5,119.9	17,172.9	100.0	53.1	70.4
1988	12,848.6	100.0	1,037.6	4,736.8	16,565.1	100.0	52.4	67.3
1989	13,390.8	100.0	NA	NA	NA	NA	53.7	NA
1990	13,268.7	100.0	NA	NA	NA	NA	52.4	NA

NA = Not available.

1/ Raw fiber equivalent of imports and exports of textile products. 2/ Total domestic consumption is U.S. mill consumption plus net textile product trade balance. 3/ January 1 population for 1984=237.1 million, 1985=239.3 million, 1986=241.6 million, 1987=243.9 million, 1988=246.3 million, 1989=248.8 million, and 1990=251.4 million. 4/ Less than 0.05 pounds, or 0.1 percent. 5/ Estimated. 6/ Includes flax and silk.

Source: Bureau of the Census.

Appendix table 20--Manmade fiber production and capacity, 1989-91 1/

Fiber	Annual 1987	Annual 1988	1989					1990					1991					Average planned 1992 capacity	Annual change 1990-92
			1Q	2Q	3Q	4Q	Year	1Q	2Q	3Q	4Q	Year	1Q	2Q	3Q	4Q	Year		
-----Million lbs.-----																			Percent
Grand total, all fibers: 2/																			
Capacity	9,962	10,207	2,596	2,610	2,606	2,607	10,419	2,612	2,618	2,606	2,598	10,434	2,621	2,647	2,656	2,670	10,594	10,804	+1.7
Production	8,945	9,140	2,330	2,395	2,252	2,147	9,124	2,141	2,278	2,134	2,156	8,709	2,054						
Percent	90	90	90	92	86	82	88	82	87	82	83	83	78						
Total staple--																			
Capacity	5,166	5,283	1,336	1,343	1,326	1,312	5,317	1,258	1,271	1,249	1,228	5,006	1,235	1,243	1,247	1,252	4,977	5,082	+0.8
Production	4,721	4,746	1,205	1,235	1,136	1,077	4,653	1,057	1,133	1,037	1,059	4,286	989						
Percent	91	90	90	92	86	82	87	84	89	83	86	86	80						
Total filament-- 2/																			
Capacity	4,796	4,924	1,260	1,267	1,280	1,295	5,102	1,354	1,347	1,357	1,370	5,428	1,386	1,404	1,409	1,418	5,617	5,722	+2.7
Production	4,224	4,394	1,125	1,160	1,116	1,070	4,471	1,084	1,145	1,097	1,097	4,423	1,065						
Percent	88	89	89	91	87	83	88	80	85	81	80	81	77						
Polyester total:																			
Capacity	3,841	3,900	994	999	972	946	3,911	957	968	973	980	3,878	1,570	994	999	1,004	4,567	4,036	+3.8
Production	3,541	3,681	923	974	898	799	3,594	783	826	756	829	3,194	793						
Percent	92	95	94	97	92	84	92	82	85	78	85	82	80						
Staple--																			
Capacity	2,483	2,556	650	655	635	616	2,556	629	642	643	645	2,559	647	649	650	650	2,596	2,618	+1.2
Production	2,362	2,452	609	649	591	536	2,385	521	546	488	535	2,090	505						
Percent	95	96	94	99	93	87	93	83	85	76	83	82	78						
Filament--																			
Capacity	1,358	1,344	344	344	337	330	1,355	328	326	330	335	1,319	340	345	349	354	1,388	1,418	+3.8
Production	1,179	1,229	314	325	307	263	1,209	262	280	268	294	1,104	288						
Percent	87	91	91	94	91	80	89	80	86	81	88	84	85						
Nylon total:																			
Capacity	2,948	2,997	764	770	781	792	3,107	796	801	797	792	3,186	1,065	796	799	804	3,464	3,256	+2.1
Production	2,689	2,670	690	690	676	685	2,740	665	711	651	633	2,661	585						
Percent	91	89	90	90	87	87	88	84	89	82	80	84	74						
Staple--																			
Capacity	1,112	1,135	285	286	287	288	1,146	286	286	286	286	1,144	286	286	287	289	1,148	1,158	+0.9
Production	992	942	253	242	241	245	981	237	273	243	236	989	201						
Percent	89	83	89	85	84	85	86	83	95	85	83	86	70						
Filament--																			
Capacity	1,836	1,862	479	484	494	504	1,961	510	515	511	506	2,042	508	510	512	515	2,045	2,098	+1.4
Production	1,697	1,728	437	448	435	440	1,759	428	438	408	397	1,672	384						
Percent	93	93	91	93	88	87	90	84	85	80	78	82	76						
Olefin total:																			
Capacity	1,786	1,927	491	492	505	520	2,007	533	545	557	570	2,205	780	593	593	593	2,360	2,436	+0.5
Production	1,495	1,569	411	423	402	403	1,639	437	472	462	445	1,816	451						
Percent	82	81	83	86	80	78	82	82	87	83	78	82	78						
Staple--																			
Capacity	458	483	122	122	123	125	491	127	128	129	130	514	131	133	133	133	530	584	+6.8
Production	361	364	97	98	92	95	382	97	105	103	100	405	113						
Percent	79	75	91	80	75	76	78	76	82	74	77	79	86						
Filament--																			
Capacity	1,328	1,444	369	370	382	395	1,516	406	417	428	440	1,691	450	460	460	460	1,830	1,852	+4.8
Production	1,134	1,224	314	325	310	308	1,257	340	367	359	345	1,411	338						
Percent	83	85	85	88	81	78	83	84	88	84	78	83	75						

See footnotes at end of table.

continued--

Appendix table 20--Manmade fiber production and capacity, 1989-91 1/--continued

Fiber	Annual 1987	Annual 1988	1989					1990					1991					Average planned 1992 capacity	Annual change 1990-92 Percent
			1Q	2Q	3Q	4Q	Year	1Q	2Q	3Q	4Q	Year	1Q	2Q	3Q	4Q	Year		
-----Million lbs.-----																			
Other fibers: 2/																			
Capacity	30	30	7	8	7	8	30	8	8	8	8	32	8	8	8	8	32	32	0.0
Production	22	28	7	7	7	7	28	7	8	7	8	30	7	8	8	8	30	30	
Percent	73	93	100	88	100	88	93	88	100	88	100	94	88						
Acrylic staple:																			
Capacity	648	641	161	161	160	160	642	160	160	136	112	568	116	120	123	125	484	503	-0.4
Production	592	588	144	146	129	123	543	130	137	129	110	506	103						
Percent	91	92	89	78	81	77	85	81	86	95	98	89	89						
Noncellulosic total: 3/																			
Capacity	9,253	9,495	2,417	2,430	2,425	2,426	9,697	2,454	2,482	2,471	2,462	9,869	2,486	2,511	2,522	2,534	10,053	10,263	+2.0
Production	8,340	8,526	2,176	2,238	2,112	2,017	8,543	2,021	2,154	2,006	2,026	8,207	1,939						
Percent	90	90	90	92	87	83	88	82	87	81	82	83	78						
Staple--																			
Capacity	4,701	4,815	1,218	1,224	1,205	1,189	4,835	1,202	1,216	1,194	1,173	4,785	1,180	1,188	1,193	1,197	4,758	4,863	+0.8
Production	4,307	4,346	1,104	1,134	1,053	999	4,290	984	1,061	963	982	3,990	922						
Percent	92	90	91	93	87	84	89	82	87	81	84	83	78						
Filament--																			
Capacity	4,552	4,680	1,199	1,206	1,220	1,237	4,862	1,252	1,266	1,277	1,289	5,084	1,306	1,323	1,329	1,337	5,295	5,400	+3.1
Production	4,033	4,180	1,072	1,104	1,059	1,018	4,253	1,037	1,093	1,043	1,044	4,217	1,017						
Percent	88	89	89	92	87	82	87	83	86	82	81	83	78						
Cellulosic staple:																			
Capacity	465	468	118	119	121	123	481	102	81	80	81	344	80	81	80	81	322	322	-0.5
Production	414	400	101	101	83	78	363	73	72	74	77	296	67						
Percent	89	85	86	85	69	63	75	72	89	92	95	86	84						
Cellulosic filament:																			
Capacity	244	244	61	61	60	58	240	56	55	55	55	221	55	55	54	55	219	219	-0.5
Production	191	214	53	56	57	52	218	47	52	54	53	206	48						
Percent	78	88	87	92	95	90	91	84	95	98	96	93	87						

1/ Capacity data as of December 1990. 2/ Includes saran and spandex. USDA estimates. 3/ Glass fibers are not included.

Source: Fiber Organon.

Appendix table 21--U.S. raw wool imports by country of origin

Country	Unimproved and other grades not finer-than-46's				48's-and-finer			
	1989	1990	1q 1990	1q 1991	1989	1990	1q 1990	1q 1991
-----1,000 pounds, clean-----								
Argentina	1,086.5	820.0	250.0	133.0	41.2	37.3	--	26.7
Australia	305.7	337.7	74.2	31.3	66,771.6	42,989.2	12,340.1	15,905.2
Belgium	--	--	--	--	167.6	184.6	26.7	15.8
Canada	67.7	102.5	26.1	41.3	433.8	182.5	13.2	92.8
Chile	--	--	--	--	510.1	406.6	406.6	278.4
Falkland Islands	--	26.6	--	--	21.8	921.6	--	--
Ireland	111.4	115.8	38.1	--	--	--	--	--
Lesotho	--	--	--	--	678.1	15.2	15.2	--
Mexico	--	--	--	--	548.9	694.9	212.9	147.1
New Zealand	24,962.7	16,726.1	5,320.2	3,445.3	4,749.8	2,699.9	846.2	543.1
Spain	--	--	--	--	192.9	17.4	17.4	2.4
United Kingdom	3,179.6	3,121.4	988.3	833.3	516.4	318.0	64.3	25.1
Uruguay	24.0	68.4	--	106.0	1,638.3	1,703.6	522.9	962.6
Other	151.5	36.7	--	15.2	732.2	140.1	--	375.7
Total	29,889.1	21,355.2	6,696.9	4,605.4	77,002.7	50,310.9	14,465.5	18,374.9

-- = Not available.

Source: Bureau of the Census.

Appendix table 22--U.S. raw wool exports by country of destination

Country	Shorn wool			Unshorn wool			Carbonized wool		
	1989	1990	1q 1991	1989	1990	1q 1991	1989	1990	1q 1991
-----1,000 pounds, clean-----									
Canada	40.0	25.3	1.3	13.4	92.4	63.6	7.4	--	--
Hong Kong	--	--	--	21.1	9.7	--	--	--	--
Japan	--	588.2	195.3	50.8	9.4	--	--	--	--
Mexico	104.8	92.7	43.9	412.5	946.2	--	--	83.3	--
Taiwan	77.6	19.9	--	--	--	--	--	--	2.6
United Kingdom	36.7	--	--	4.7	165.6	121.3	--	--	7.2
West Germany	291.6	662.0	91.3	36.8	57.3	--	--	--	--
Other	68.9	--	6.0	28.9	63.3	--	3.5	3.1	2.2
Total	619.6	1,388.1	337.8	568.2	1,343.9	184.9	10.9	86.4	12.0

-- = No exports.

Source: Bureau of the Census.

Appendix table 23--U.S. trade in wool tops 1/

Country	U.S. Imports			U.S. Exports		
	1989	1990	1Q 1991	1989	1990	1Q 1991
	1,000 lbs.					
Australia	175.2	54.0	35.4	107.8	199.1	--
Belgium	89.3	--	--	33.0	46.3	--
Brazil	--	--	--	43.3	--	--
Canada	--	--	--	330.6	651.4	178.8
Chile	76.0	100.2	--	6.7	--	--
China	--	--	--	210.6	1,782.6	1,141.4
Columbia	--	--	--	140.9	--	--
Ecuador	--	--	--	12.7	--	--
France	33.2	10.9	--	89.6	154.9	20.7
Hong Kong	--	--	--	302.0	213.9	--
India	--	--	--	251.0	--	--
Israel	--	27.5	--	--	--	--
Italy	2/	2/	--	13.7	110.7	126.7
Japan	--	--	--	3,209.3	4,472.4	1,056.2
Netherlands	--	--	--	33.7	6.0	--
Peru	--	22.9	--	--	--	--
Singapore	--	--	--	61.3	--	--
South Korea	--	--	--	3,190.1	1,341.0	481.4
Taiwan	--	--	--	1,796.9	636.5	290.4
United Kingdom	96.9	82.9	14.3	44.3	43.1	140.9
Uruguay	21.6	58.9	--	--	--	--
Venezuela	--	--	--	141.8	262.1	181.0
West Germany	--	--	--	43.0	44.0	38.2
Other	--	1.0	0.6	1.6	344.2	0.7
Total	492.2	358.3	50.3	10,063.9	10,308.2	3,656.4

-- = No imports or exports.

1/ Raw wool, not carded or combed, but processed beyond the degreased condition, e.g. dyed. Grade is not identified. 2/ Less than 500 pounds.

Source: Bureau of the Census.

Appendix table 24--U.S. mohair exports by country of destination

Country	1989	1990	1990	1991
			1Q	1Q
	1,000 pounds clean			
Belgium	218.0	347.8	321.8	32.1
France	526.9	317.2	96.2	123.6
Hong Kong	--	15.0	--	--
India	1,559.1	928.7	462.8	381.9
Ireland	--	26.6	--	--
Italy	382.0	274.0	132.5	97.3
Japan	179.2	13.5	--	--
Mexico	24.1	16.4	--	--
Netherlands	--	47.4	--	--
Spain	556.4	71.8	26.3	--
Switzerland	193.7	--	--	--
Taiwan	30.8	12.5	--	28.6
United Kingdom	7,649.2	9,211.3	2,546.2	715.9
USSR	--	150.9	150.9	--
West Germany	85.2	128.5	36.8	148.5
Other	38.5	1.4	--	1,067.8
Total	11,443.1	11,563.0	3,773.5	2,595.7

-- = No exports.

Source: Bureau of the Census.



Appendix table 25--Domestic shipments of manmade fibers by major category, 1986-90 1/

Fiber type	1986				1987				1988				1989				1990				1991
	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q	1q
Million lbs.																					
<b>Woven products:</b>																					
Total	534.4	533.6	536.7	535.4	524.7	563.2	559.1	586.3	559.8	569.7	564.9	630.2	586.5	618.1	544.2	480.7	455.2	499.9	495.0	482.5	NA
Polyester	326.2	319.0	319.8	312.7	314.4	334.0	316.2	329.8	317.5	328.7	319.1	377.4	322.6	359.7	302.0	292.6	267.7	285.8	282.2	281.4	NA
Rayon	53.9	53.2	55.1	55.8	52.9	55.2	59.9	62.7	58.7	60.5	63.5	60.3	69.1	59.7	50.6	NA	NA	NA	NA	NA	NA
Olefin	66.9	76.2	78.6	85.3	77.8	85.4	90.4	102.0	94.2	92.3	90.5	95.7	98.8	98.0	97.9	96.0	100.2	120.6	118.8	111.0	NA
Nylon	38.2	38.0	35.1	35.8	37.1	39.0	43.1	41.0	40.1	36.7	38.1	40.6	38.7	40.6	39.0	40.1	39.3	41.5	40.4	36.9	NA
Acetate	32.8	32.1	32.0	31.4	26.7	32.1	31.8	34.4	32.5	36.3	36.9	40.6	37.3	39.3	38.8	38.4	34.6	38.3	42.0	41.2	NA
Acrylic	16.4	15.1	16.1	14.4	15.8	17.5	17.7	16.4	16.8	15.2	16.8	15.6	20.0	20.8	15.9	13.6	13.4	13.7	11.6	12.0	NA
<b>Knit products:</b>																					
Total	345.8	364.3	357.2	355.4	368.6	375.0	339.8	331.3	327.1	343.4	326.7	366.8	378.7	370.3	353.5	328.2	317.5	331.3	306.6	301.1	NA
Polyester	167.8	165.5	171.5	183.0	181.5	196.2	182.5	190.9	173.2	183.8	175.0	219.6	214.2	211.9	206.7	197.7	185.0	199.4	187.2	186.2	NA
Nylon	68.3	65.1	60.0	59.4	63.7	63.5	60.9	61.8	64.7	64.1	70.8	68.8	68.4	64.9	63.3	63.3	53.4	61.2	57.8	60.7	NA
Acrylic	95.9	117.7	111.6	99.9	112.7	105.2	87.5	72.1	85.3	86.3	80.6	70.0	84.1	82.2	77.9	62.7	73.5	65.8	58.2	51.2	NA
Acetate	12.0	14.3	12.3	11.2	9.1	8.4	5.2	6.3	5.9	7.9	5.9	5.2	6.3	7.6	3.8	4.2	5.3	4.7	3.1	2.7	NA
Rayon	1.8	1.7	1.8	2.0	1.6	1.7	1.1	1.1	0.9	0.7	1.1	1.2	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	NA
<b>Carpets:</b>																					
Total	582.7	623.9	694.7	700.3	686.3	722.0	732.8	675.0	722.1	729.0	733.4	732.6	724.9	723.7	736.5	705.0	753.4	740.6	734.6	718.7	NA
Nylon	387.1	406.4	476.4	449.3	458.7	474.7	476.7	411.0	452.5	443.6	467.6	460.0	451.8	450.4	474.0	450.8	469.8	460.0	456.0	459.7	2/ 345.2
Olefin	164.2	178.9	181.9	212.5	180.8	196.6	204.7	203.9	203.3	216.3	203.5	208.7	212.9	221.8	213.7	202.6	235.6	240.5	238.2	221.0	NA
Polyester	31.3	38.4	36.9	38.4	46.8	50.7	51.4	60.1	66.1	69.0	62.3	63.8	60.1	51.3	48.6	51.6	48.0	40.1	40.4	38.0	37.6
Rayon	0.1	0.2	NA	0.1	NA	NA	NA	NA	0.2	0.1	NA	0.1	0.1	0.2	0.2	NA	NA	NA	NA	NA	NA

NA = Not available.

1/ Filament plus staple. 2/ Estimated.

Source: Fiber Organon.

Appendix table 26--Raw wool mill consumption, 1988-90

Fiber type	1988				1989				1990 1/				1988 Annual	1989 Annual	1990 1/ Annual
	1q	2q	3q	4q	1q	2q	3q	4q	1q	2q	3q	4q			
	1,000 pounds														
All fibers	187,599	180,738	182,404	179,281	185,565	196,292	178,278	175,201	212,125	203,245	169,599	175,019	730,022	735,336	759,988
Total raw wool	35,404	33,906	31,841	31,551	35,397	33,970	29,848	27,905	33,747	32,921	29,402	31,500	132,702	127,120	127,570
Apparel	30,925	30,087	27,427	28,630	32,103	29,991	25,983	24,921	29,948	29,998	25,631	28,523	117,069	112,998	114,100
Total woolen	12,804	11,197	9,550	11,094	13,703	13,209	9,796	9,227	11,741	12,477	10,284	12,142	44,645	45,935	46,644
60's-and-finer	6,476	6,092	5,682	5,519	7,016	7,189	5,417	4,510	5,282	6,535	5,297	6,137	23,769	24,132	23,251
Coarser-than-60's	6,328	5,105	3,868	5,575	6,687	6,020	4,379	4,717	6,459	5,942	4,987	6,005	20,876	21,803	23,393
Total worsted	18,121	18,890	17,877	17,536	18,400	16,782	16,187	15,694	18,207	17,521	15,347	16,381	72,424	67,063	67,456
60's-and-finer	14,521	13,984	12,879	13,169	13,883	13,591	11,181	11,758	13,843	12,751	10,734	12,488	54,553	50,413	49,816
Coarser-than-60's	3,600	4,906	4,998	4,367	4,517	3,191	5,006	3,936	4,364	4,770	4,613	3,893	17,871	16,650	17,640
Total 60's-and-finer	20,997	20,076	18,561	18,688	20,899	20,780	16,598	16,268	19,125	19,286	16,031	18,625	78,322	74,545	73,067
Total coarser-than-60's	9,928	10,011	8,866	9,942	11,204	9,211	9,385	8,653	10,823	10,712	9,600	9,898	38,747	38,453	41,033
Carpet wool	4,479	3,819	4,414	2,921	3,294	3,979	3,865	2,984	3,799	2,923	3,771	2,977	15,633	14,122	13,470
Noils, reprocessed and reused wool	6,956	5,878	5,926	5,130	6,659	7,317	6,118	3,779	4,380	4,984	4,935	3,974	23,890	23,873	18,273
Total other fibers	145,239	140,954	144,637	142,600	143,509	155,005	142,312	143,517	173,998	165,340	135,262	139,545	573,430	584,343	614,145
Carpet other fibers	105,693	100,120	102,019	104,346	103,554	110,193	100,366	106,190	131,359	122,023	97,465	98,563	412,178	420,303	449,410
Non carpet other fibers	39,546	40,834	42,618	38,254	39,955	44,812	41,946	37,327	42,639	43,317	37,797	40,982	161,252	164,040	164,735
Non carpet other fibers	1.279	1.357	1.554	1.336	1.245	1.494	1.614	1.498	1.424	1.444	1.475	1.437	1.377	1.452	1.444

1/ Preliminary.

Source: Bureau of the Census. (M22D report)

Appendix table 27--Real trade-weighted exchange rate indexes 1/

Calendar year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>Cotton exports:</b>												
1980	71.3	71.2	73.4	73.9	72.0	71.1	70.0	70.4	70.2	70.7	71.8	72.6
1981	72.2	74.2	74.1	74.9	77.1	78.7	80.1	81.2	79.5	78.4	77.5	77.3
1982	77.3	80.7	87.1	87.1	85.4	88.2	88.3	94.8	95.9	91.1	90.2	88.6
1983	89.6	89.7	89.3	89.6	89.6	90.7	90.9	91.9	92.0	91.0	92.4	96.4
1984	96.4	94.6	93.1	94.3	95.9	95.5	97.1	97.7	100.0	100.7	99.7	100.5
1985	101.0	103.1	103.6	100.0	100.5	99.6	98.2	99.7	100.7	98.1	96.8	96.0
1986	95.2	93.5	92.4	92.1	91.3	91.9	91.1	90.2	90.7	90.7	91.2	90.4
1987	88.2	87.4	87.2	86.3	86.1	86.9	86.9	86.9	85.8	84.9	82.2	81.2
1988	80.5	80.3	79.0	78.2	78.3	79.3	80.8	81.7	81.7	80.0	78.1	77.5
1989	78.4	78.8	79.6	79.7	81.2	82.0	80.2	80.6	81.5	80.3	80.0	78.3
1990	76.9	76.9	77.3	76.6	76.0	76.2	74.6	73.7	73.9	72.9	72.5	72.9
<b>Cotton imports:</b>												
1980	68.6	68.6	70.0	70.3	68.9	68.6	67.6	67.7	67.2	67.6	68.4	69.0
1981	68.8	69.8	70.0	70.5	71.9	72.4	73.3	74.9	74.8	74.9	74.0	74.3
1982	75.1	76.1	76.3	77.1	76.5	78.8	79.7	79.8	80.5	82.6	83.0	81.3
1983	80.9	81.4	82.3	84.1	85.0	85.8	85.9	87.0	88.2	87.6	87.7	88.2
1984	88.8	88.7	88.7	89.2	90.4	90.7	91.9	92.7	94.5	95.2	96.8	98.5
1985	98.9	99.5	100.0	99.7	100.5	100.3	99.7	99.6	99.8	100.1	100.8	100.8
1986	100.7	99.4	99.0	98.3	97.8	98.2	100.1	100.1	100.3	100.4	100.9	100.4
1987	99.7	99.9	99.9	98.7	97.5	97.1	97.0	96.4	95.8	95.7	94.7	93.4
1988	92.9	92.4	91.9	91.3	91.1	91.0	90.8	90.6	90.7	90.2	89.1	88.8
1989	88.6	88.2	88.2	87.5	87.2	87.2	87.1	86.6	86.8	85.8	86.1	88.5
1990	90.4	90.3	89.9	90.6	91.0	91.9	91.9	92.6	93.4	93.7	94.3	95.0
<b>Manmade exports:</b>												
1980	77.4	77.3	78.7	79.0	77.8	76.9	76.1	76.2	76.1	76.2	76.8	77.4
1981	76.6	77.7	77.5	77.7	79.0	79.9	80.9	81.8	81.1	80.7	79.7	79.3
1982	79.4	82.2	87.3	87.1	86.4	88.8	88.7	94.2	95.1	90.6	89.5	89.1
1983	90.7	90.7	90.3	90.3	90.2	90.7	90.9	91.2	91.4	91.0	90.9	91.2
1984	91.5	91.5	93.2	93.5	94.7	95.0	96.3	96.4	97.9	98.1	97.7	98.4
1985	98.2	99.4	100.2	98.5	99.0	98.7	98.2	100.7	101.4	100.8	101.3	101.7
1986	102.0	101.5	101.3	100.5	100.0	101.1	102.2	96.7	96.8	96.8	96.9	96.4
1987	95.6	94.7	94.1	93.6	93.9	94.3	94.2	94.6	94.1	93.9	93.1	92.2
1988	91.8	91.6	90.7	90.0	90.1	90.3	90.7	91.3	91.8	90.7	90.3	89.5
1989	89.9	89.9	90.5	90.4	91.1	91.7	90.9	90.8	91.2	90.8	90.6	90.3
1990	90.5	91.1	91.2	90.6	90.5	90.6	89.6	89.1	89.6	88.9	88.9	89.5
<b>Manmade imports:</b>												
1980	73.9	74.1	75.2	75.6	74.1	73.5	73.0	73.0	72.0	72.2	73.2	73.5
1981	73.3	74.1	74.0	74.6	76.1	76.1	77.1	78.4	77.4	78.4	77.8	78.2
1982	78.8	80.1	81.5	82.2	81.7	84.2	85.3	86.2	87.2	87.6	87.9	86.3
1983	86.2	85.9	86.3	87.2	87.9	88.8	89.4	90.3	91.0	91.2	91.4	91.9
1984	92.1	91.5	90.9	91.0	91.9	92.9	93.9	94.1	95.4	96.1	97.0	98.2
1985	98.1	98.3	99.1	99.1	99.8	99.9	99.8	101.0	101.0	100.5	101.1	101.4
1986	101.4	99.9	98.9	98.2	97.5	97.8	98.9	98.5	97.2	96.9	97.6	97.1
1987	96.0	95.6	95.6	94.1	92.1	91.2	90.9	89.8	89.2	89.2	88.1	86.3
1988	85.8	85.2	84.5	84.0	83.7	83.6	83.7	83.5	83.7	82.9	81.2	80.6
1989	80.4	80.1	80.1	79.4	78.6	78.9	78.5	78.1	77.6	77.2	78.1	79.5
1990	80.8	81.0	81.5	81.8	82.2	83.2	83.1	83.7	84.1	84.1	84.8	85.5

1/ Base 1985 = 100. Weights based on share of 1985-87 U.S. textile trade.

Appendix table 28--Estimated production of 25 micron 60's-and-finer raw wool, selected States, 1991

State	25-Micron-and-finer			
	Clip	State/USA	Total clip	Finer/ Total clip
	(000) Greasy lbs.	Percent	(000) Greasy lbs.	Percent
Texas	15,533	94.997	16,351	30.685
Wyoming	5,988	70.002	8,554	11.829
California	5,880	79.989	7,351	11.616
Colorado	3,500	50.000	7,000	6.914
Montana	3,325	49.992	6,651	6.569
South Dakota	3,300	60.000	5,500	6.519
New Mexico	3,188	84.991	3,751	6.298
Utah	2,640	55.000	4,800	5.215
Arizona	1,340	80.000	1,675	2.647
Nevada	808	84.963	951	1.596
Kansas	800	50.000	1,600	1.580
Iowa	595	15.006	3,965	1.175
Oklahoma	536	54.974	975	1.059
Idaho	500	20.000	2,500	0.988
Oregon	469	15.003	3,126	0.927
Nebraska	434	35.000	1,240	0.857
North Dakota	285	15.000	1,900	0.563
Missouri	236	24.974	945	0.466
Ohio	188	9.968	1,886	0.371
Pennsylvania	138	15.000	920	0.273
Michigan	116	14.987	774	0.229
Illinois	99	9.990	991	0.196
Virginia	84	10.012	839	0.166
New York	82	15.046	545	0.162
Washington	73	8.859	824	0.144
Wisconsin	72	10.056	716	0.142
Indiana	63	10.064	626	0.124
Total 27 States	50,272	57.813	86,956	99.313
23 States	348	8.552	4,069	0.687
Total U.S.	50,620	55.611	91,025	100.000

Source: American Sheep Industry Market Information Services.

Appendix table 29--Estimated production of coarser-than-25-micron 60's raw wool, selected States, 1991

State	Coarser-than-25-micron			
	Clip	State/USA	Total clip	Coarser/ Total clip
	(000) Greasy lbs.	Percent	(000) Greasy lbs.	Percent
Colorado	3,500	50.000	7,000	8.662
Iowa	3,370	84.994	3,965	8.341
Montana	3,326	50.008	6,651	8.232
Oregon	2,657	84.997	3,126	6.576
Wyoming	2,566	29.998	8,554	6.351
South Dakota	2,200	40.000	5,500	5.445
Utah	2,160	45.000	4,800	5.346
Idaho	2,000	80.000	2,500	4.950
Minnesota	1,877	94.990	1,976	4.645
Ohio	1,698	90.032	1,886	4.202
North Dakota	1,615	85.000	1,900	3.997
California	1,471	20.011	7,351	3.641
Illinois	892	90.010	991	2.208
Texas	818	5.003	16,351	2.025
Nebraska	806	65.000	1,240	1.995
Kansas	800	50.000	1,600	1.980
Pennsylvania	782	84.449	926	1.935
Virginia	755	89.988	839	1.869
Washington	751	91.141	824	1.859
Missouri	709	75.026	945	1.755
Michigan	658	85.013	774	1.629
Wisconsin	644	89.944	716	1.594
Indiana	563	89.936	626	1.393
New Mexico	563	15.009	3,751	1.393
New York	463	84.954	545	1.146
Oklahoma	439	45.026	975	1.086
West Virginia	372	93.000	400	0.921
Arizona	335	20.000	1,675	0.829
Kentucky	207	90.000	230	0.512
Maryland	184	90.196	204	0.455
Nevada	143	15.037	951	0.354
Maine	130	94.891	137	0.322
Massachusetts	120	100.000	120	0.297
Louisiana	112	94.915	118	0.277
Total 34 States	39,686	44.024	90,147	98.221
16 States	719	81.891	878	1.779
Total U.S.	40,405	44.389	91,025	100.000

Source: American Sheep Industry Market Information Services.

Appendix table 30--World wool supply and disappearance, 1980/81-1990/91

Year	Sheep Population Mil. head	Production (greasy)	Production (clean)	Consumption (clean)	Exports (greasy)	Ending stocks (clean)
1980/81	1,087	6,268	3,525	3,489	2,715	220
1981/82	1,105	6,334	3,563	3,431	2,624	269
1982/83	1,097	6,349	3,584	3,554	2,730	368
1983/84	1,106	6,462	3,651	3,514	2,660	456
1984/85	1,100	6,636	3,818	3,582	2,993	456
1985/86	1,105	6,618	3,803	3,766	2,489	386
1986/87	1,121	6,766	3,904	3,829	2,694	390
1987/88	1,139	6,896	3,995	3,872	2,584	212
1988/89	1,165	7,097	4,116	3,812	2,441	161
1989/90	1,176	7,390	4,310	3,321	2,099	289
1990/91	--	7,403	4,308	--	--	1,144

-- = Not available.

1/ Sheep population during April-June of the second year indicated for most countries. Consumption are calendar year for the second year indicated for most countries. Stocks are for countries that are major producers and exporters.

Source: International Commonwealth Secretariat.

Appendix table 31--Sheep population, wool production, and wool exports, major producing foreign countries

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
	Million head							
Sheep numbers:								
Australia	135	146	150	153	157	165	174	167
USSR	145	143	141	142	141	141	139	135
China	99	95	94	99	103	111	114	115
New Zealand	70	68	68	64	65	61	58	58
Argentina	34	29	29	29	29	29	29	--
Uruguay	21	21	23	24	25	25	25	--
South Africa	24	23	23	24	24	26	26	--
World	1,106	1,100	1,105	1,121	1,139	1,615	1,176	--
	Million pounds, clean							
Wool production:								
Australia	1,014	1,153	1,177	1,263	1,310	1,380	1,594	1,609
USSR	481	461	443	465	456	474	476	467
China	214	203	196	205	231	245	262	265
New Zealand	597	611	584	575	573	562	509	498
Argentina	214	198	201	198	207	216	196	194
Uruguay	123	106	130	134	134	126	141	139
South Africa	134	132	121	115	119	126	130	132
World	3,651	3,818	3,803	3,904	3,995	4,116	4,310	4,308
Wool exports:								
Australia	784	876	977	1,096	1,079	1,008	845	--
New Zealand	570	591	530	571	521	518	404	--
Argentina	120	96	111	99	101	73	81	--
Uruguay	57	38	54	66	50	41	59	--
South Africa	82	80	60	50	47	54	60	--
Total	1,613	1,681	1,732	1,882	1,798	1,694	1,448	--

-- = Not available.

Source: International Commonwealth Secretariat.

Appendix table 32--World wool trade by major importing and exporting countries

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
Million pounds, greasy							
Wool exports:							
Australia	1,209	1,389	1,540	1,724	1,696	1,591	1,336
New Zealand	672	700	620	662	607	606	464
Argentina	157	132	153	132	133	95	112
South Africa	142	129	99	82	76	90	102
Uruguay	60	54	77	94	72	59	85
World	2,660	2,991	3,057	3,241	3,073	2,818	2,099
Wool imports:							
Japan	406	406	390	451	385	381	315
China	282	290	290	261	396	223	73
France	197	241	254	295	252	278	219
USSR	123	250	336	295	252	283	129
United Kingdom	260	283	261	306	282	242	195
Italy	233	265	241	269	251	240	263
West Germany	165	170	161	176	167	165	149
Belgium	103	122	128	141	147	152	119
United States	92	77	122	105	197	107	72
Taiwan	79	89	110	114	78	99	69
South Korea	61	69	84	99	83	76	68
World	2,520	2,780	2,919	3,118	2,953	2,763	2,167

-- = Not available.

Source: International Commonwealth Secretariat.

Appendix table 33--Wool sales, government purchases, and government-owned stocks, major foreign exporters

Year	Australia			New Zealand			South Africa		
	Auction sales	Purchased by AWC	AWC Ending stocks	Auction sales	Purchased by NZWB	NZWB Ending stocks	Auction sales	Purchased by SAWB	SAWB Ending stocks
	1,000 bales	Percent	---1,000 bales---		Percent	-----1,000 bales-----		Percent	1,000 bales
1980/81	3,637	5.1	271	1,783	17.7	344	693	11	--
1981/82	3,703	15.4	508	1,753	11.1	422	706	17	--
1982/83	3,654	24.2	867	1,735	3.6	286	729	40	121
1983/84	3,742	23.1	1,144	1,736	0.8	93	685	11	121
1984/85	4,098	17.3	936	1,746	4.1	39	669	1	18
1985/86	4,022	9.6	895	1,633	13.4	124	627	1	18
1986/87	4,134	6.4	346	1,472	7.2	31	578	2	12
1987/88	4,286	0.8	8	1,560	11.1	94	592	1	17
1988/89	4,601	5.2	189	1,406	12.0	100	618	6	60
1989/90	5,716	52.0	3,037	1,307	40.6	490	661	30	242

-- = No data available.

Source: International Commonwealth Secretariat.

Appendix table 34--International wool prices

Year	Australia		New Zealand		South Africa
	Market indicator 1/	Minimum floor price	Market indicator 1/	Minimum floor price	Market indicator 1/
	A cents per kg clean		NZ cents per kg clean		SA cents per kg clean
1984/85	526	470	502	424	815
1985/86	533	500	466	443	926
1986/87	626	508	556	443	942
1987/88	1,003	645	600	476	1,664
1988/89	990	870	672	500	2,093
1989/90:					
July	889	870	666	525	N.S.
August	884	870	626	525	1,840
September	881	870	614	525	1,902
October	879	870	626	525	1,842
November	879	870	612	525	1,771
December	879	870	595	525	1,762
January	882	870	585	525	1,762
February	887	870	587	525	1,719
March	896	870	586	525	1,756
April	900	870	571	525	1,792
May	888	870	540	525	1,774
June	733	700 2/	507	525	N.S.
Season	870	870	589	525	1,790
1990/91					
July	724	700	493	485	N.S.
August	723	700	481	485	1,493
September	707	700	473	485	1,467
October	703	700	463	485	1,397
November	704	700	402	485	1,367
December	706	700	404	485	1,374
January	706	700	398	485	1,373
February 3/					
March	444		365		936
April	464		433		998
May	533		445		1,082

1/ Weighted average of all types offered. 2/ The guaranteed minimum floor price was reduced to A 700 cents per kg for the last 4 weeks of 1989/90 season. 3/ All sales were suspended for month and minimum floor price was eliminated.

Source: International Commonwealth Secretariat.

Appendix table 35--World textile fiber production

Year	Rayon and acetate	Noncellulosic fibers	Cotton	Wool (clean)	Silk	Flax	Hemp (soft)	Total fibers
Million pounds								
1980	7,147	23,095	31,193	3,525	123	1,389	569	67,041
1981	7,064	23,869	34,171	3,563	126	1,347	492	70,632
1982	6,493	22,368	32,747	3,584	121	1,437	459	67,209
1983	6,457	24,418	31,671	3,651	121	1,733	406	68,457
1984	6,605	26,023	42,723	3,823	123	1,512	443	81,252
1985	6,462	27,533	38,764	3,825	150	1,642	481	78,857
1986	6,303	28,530	34,048	3,915	152	1,605	485	75,038
1987	6,285	30,300	38,997	4,008	161	2,108	474	82,333
1988	6,365	31,665	40,640	4,131	163	1,664	465	85,093
1989	6,336	32,445	38,371	4,332	163	1,695	478	83,820
1990 1/	--	--	41,671	4,339	--	--	--	--

-- = Not available.

1/ Forecast.

Source: International Commonwealth Secretariat and U.S. Department of Agriculture.

Appendix table 36--Raw cotton equivalent of U.S. imports for consumption of cotton-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric						Apparel						House furnishings						
	Yarn, thread, and cordage, rope	Broad-woven fabric 100%	Broad-woven fabric blends	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bottoms	Suits and coats	Sweaters	Other apparel	Total	Blankets	Bedsheets, pillow-cases, etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling	Curtains, drapes, etc.	Bedspreads, quilts, and misc.	Total
1,000 lbs.																			
1989:																			
Jan	8,353	44,521	8,802	1,224	2,213	65,113	49,685	36,947	7,723	6,104	13,472	113,930	479	1,737	1,618	7,730	304	859	12,727
Feb	7,039	40,347	6,749	1,169	1,888	57,193	46,299	39,325	5,493	3,582	9,522	104,221	270	2,372	1,282	7,692	292	814	12,723
Mar	7,903	32,429	7,822	1,136	2,119	51,411	46,394	38,690	4,096	2,610	9,253	101,043	784	2,203	1,070	8,185	189	517	12,948
Apr	6,763	30,359	9,339	1,339	1,765	49,565	38,378	32,086	3,788	3,182	7,656	85,091	287	2,067	1,153	6,110	316	890	10,823
May	7,383	30,165	9,197	1,427	2,168	50,340	47,383	40,073	7,458	5,282	7,843	108,039	215	2,577	1,308	7,987	629	562	13,278
Jun	8,514	36,261	10,344	1,412	2,309	58,839	55,724	49,220	10,603	6,804	10,001	132,353	239	3,126	1,482	5,749	356	2,755	13,706
Jul	7,413	35,216	11,704	1,297	2,135	57,765	62,984	54,827	14,495	8,091	9,940	150,338	278	4,301	1,470	7,908	260	1,261	15,479
Aug	7,965	38,638	13,874	1,604	2,309	64,391	65,195	52,903	16,977	7,576	9,797	152,448	413	5,522	1,898	9,845	489	1,262	19,430
Sep	6,617	29,340	10,353	1,283	1,661	49,254	54,183	42,785	11,458	6,309	7,901	122,636	198	3,673	1,769	7,677	208	1,001	14,526
Oct	11,445	47,731	13,093	1,442	1,928	75,639	62,125	48,829	10,310	9,781	7,658	138,703	509	4,815	1,711	11,591	474	961	20,060
Nov	8,624	38,441	11,475	1,239	1,995	61,775	52,014	42,070	8,382	7,909	7,664	118,039	331	4,615	842	10,251	310	723	17,073
Dec	5,933	32,653	10,376	1,223	1,925	52,109	47,712	37,955	7,294	4,540	10,145	107,646	167	2,401	658	9,898	299	767	14,188
Total	93,952	436,103	123,130	15,796	24,414	693,395	628,076	515,710	108,078	71,770	110,852	1,434,485	4,171	39,411	16,261	100,621	4,125	12,372	176,962
1990:																			
Jan	7,431	47,386	13,006	1,474	1,776	71,073	66,425	48,717	9,140	4,914	12,437	141,633	115	3,427	827	13,947	214	647	19,177
Feb	5,510	32,948	9,096	1,097	1,787	50,438	58,176	52,686	5,841	2,677	9,986	129,366	271	2,644	1,112	12,090	296	1,047	17,460
Mar	6,253	27,486	8,076	1,162	1,761	44,737	53,979	46,033	3,814	1,444	10,323	115,593	412	2,258	1,535	10,336	404	1,504	16,448
Apr	5,684	26,239	9,275	1,328	1,875	44,401	50,544	37,672	4,158	2,327	8,597	103,298	525	2,403	1,591	9,837	306	994	15,655
May	5,612	35,032	10,903	1,538	1,987	55,073	53,470	43,139	8,305	4,437	8,949	118,299	175	1,886	1,691	9,398	300	1,072	14,522
Jun	6,224	31,085	9,003	1,521	2,150	49,983	60,950	51,828	13,787	6,402	9,024	141,971	287	3,177	1,433	8,187	243	993	14,320
Jul	6,910	39,045	9,550	1,436	1,822	58,764	73,105	55,772	15,251	7,858	8,837	160,823	505	6,268	1,718	7,714	386	970	17,560
Aug	6,780	42,434	10,658	1,605	1,613	63,091	71,348	44,784	16,202	8,526	8,543	149,404	412	5,594	2,071	9,640	356	1,137	19,210
Sep	5,308	35,236	9,404	1,666	1,647	53,260	54,534	34,401	10,360	6,989	8,199	114,484	396	4,791	1,668	7,672	341	822	15,690
Oct	7,455	43,981	10,695	1,806	1,895	65,832	63,026	38,691	9,457	11,388	8,606	131,168	247	4,890	1,387	9,345	264	1,126	17,259
Nov	4,653	38,467	9,214	1,438	1,857	55,629	49,267	34,163	8,173	7,970	8,337	107,910	203	3,539	1,230	8,928	227	567	14,674
Dec	5,219	39,495	8,399	1,132	1,664	55,909	43,843	32,129	5,583	3,688	7,728	92,971	301	2,939	845	8,407	166	433	13,092
Total	73,040	438,834	117,277	17,203	21,834	668,189	698,647	520,016	110,071	68,620	109,565	1,506,919	3,849	43,815	17,106	115,499	3,503	11,293	195,066
1991:																			
Jan	3,997	49,675	9,826	1,476	1,669	66,642	67,393	43,853	7,939	4,137	11,736	135,059	414	2,268	1,485	12,887	239	1,357	18,650
Feb	3,358	35,315	7,493	1,310	1,510	48,986	58,100	40,383	5,537	2,120	11,507	117,647	297	2,396	1,468	11,252	302	1,387	17,101
Mar	4,151	34,214	8,047	1,206	1,805	49,423	52,336	35,068	3,199	1,457	10,023	102,083	392	2,695	1,196	8,218	201	960	13,661

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.



Appendix table 37--Raw linen equivalent of U.S. imports for consumption of linen-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric				Apparel						House furnishings						Total	
	Yarn, thread, cordage, and rope	Broad-woven (inc. pile) fabric	Knit fabric	Narrow, industrial, and misc. fabric	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets pillowcases etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling	Curtains, drapes, etc.	Bed-spreads, quilts, and misc.		
1,000 lbs.																		
1989:																		
Jan	18,431	13,306	--	293	32,030	1,356	3,519	1,186	8,788	103	14,952	0	2	22	48	16	26	115
Feb	25,384	12,639	--	286	38,310	1,334	5,036	1,275	6,891	96	14,632	--	3	12	53	80	11	159
Mar	41,704	20,689	--	521	62,914	1,381	3,305	770	4,194	258	9,907	--	1	48	50	71	19	189
Apr	22,971	12,734	--	182	35,887	1,129	2,445	489	5,073	135	9,271	0	1	60	26	59	71	217
May	16,995	14,469	--	222	31,686	982	2,320	491	10,519	50	14,362	0	1	27	26	63	33	149
Jun	10,915	11,363	--	264	22,543	1,544	2,212	462	12,654	140	17,011	--	1	16	10	88	76	190
Jul	8,494	9,702	0	228	18,424	1,657	1,859	524	14,709	131	18,879	--	1	21	8	49	74	153
Aug	8,171	20,448	0	343	28,962	1,794	1,817	566	13,952	189	18,317	0	1	26	8	46	59	140
Sep	5,534	14,046	0	288	19,868	1,527	1,529	513	12,063	127	15,758	0	0	26	12	96	17	152
Oct	7,168	19,142	0	341	26,651	1,948	2,021	643	16,116	181	20,909	0	1	23	6	75	31	135
Nov	8,711	12,947	0	286	21,944	1,662	2,260	539	11,032	137	15,630	0	1	27	18	29	33	107
Dec	34,624	14,005	0	186	48,815	1,276	2,513	856	4,599	83	9,327	0	1	14	10	2	66	93
Total	209,101	175,492	1	3,441	388,036	17,591	30,836	8,312	120,589	1,629	178,957	1	13	323	273	674	515	1,799
1990:																		
Jan	43,697	24,235	19	561	68,512	2,039	3,888	1,434	5,617	110	13,089	0	2	24	6	5	15	52
Feb	16,506	13,703	0	381	30,591	1,573	3,941	895	3,004	111	9,523	0	1	36	9	1	26	73
Mar	31,818	22,722	1	270	54,811	1,535	2,933	726	1,956	76	7,226	0	1	23	6	10	45	84
Apr	32,164	15,234	0	482	45,880	1,223	2,319	560	3,559	60	7,721	--	0	11	6	1	63	80
May	11,374	16,170	1	299	27,844	1,249	1,915	455	8,189	46	11,855	--	1	16	8	4	83	111
Jun	10,595	16,182	0	294	27,071	1,440	2,133	502	11,842	116	16,033	0	1	16	20	3	17	55
Jul	7,287	14,845	0	225	22,357	1,975	1,932	735	14,425	234	19,301	0	0	14	56	4	92	166
Aug	6,938	7,588	0	489	15,016	2,044	1,589	709	13,607	191	18,141	0	1	36	10	2	121	170
Sep	3,491	17,845	1	453	21,789	1,567	1,140	612	11,921	132	15,372	0	1	38	4	0	140	183
Oct	16,452	12,085	0	346	28,884	1,777	1,887	733	19,744	228	24,369	0	1	39	56	3	71	171
Nov	12,794	9,926	1	241	22,962	1,383	2,338	762	13,645	143	18,271	0	0	64	14	5	95	179
Dec	18,934	23,090	0	336	42,360	1,342	2,636	849	4,531	109	9,466	0	1	42	7	1	137	187
Total	212,051	191,626	24	4,377	408,078	19,149	28,650	8,972	112,039	1,557	170,367	1	9	358	202	38	904	1,512
1991:																		
Jan	29,700	17,805	0	377	47,883	2,157	4,801	1,663	3,459	82	12,162	0	1	43	4	0	169	216
Feb	34,536	13,728	0	140	48,403	1,687	4,220	1,560	2,761	104	10,332	0	1	72	18	1	97	190
Mar	17,259	14,688	0	236	32,183	1,299	2,997	1,211	1,936	91	7,534	0	0	24	29	3	180	236

--- = An absence of trade.

0 = Levels of trade less than 1,000 lbs.

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

Appendix table 38--Raw wool equivalent of U.S. imports for consumption of wool-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric					Apparel						House Furnishings					Total		
	Noils and waste	Yarn, thread, and cordage, and rope	Broad-woven (inc. pile) fabric	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets pillow-cases etc.	Table-cloths placemats, napkins, etc.	Bath-room and kitchen toweling		Curtains, drapes, etc.	Bed-spreads, quilts, and misc.
1,000 lbs.																			
1989:																			
Jan	1,209	265	1,355	51	211	3,091	2,051	1,040	1,199	1,168	240	5,698	23	--	--	--	--	15	38
Feb	1,388	317	1,397	6	224	3,333	1,851	959	1,065	1,159	251	5,285	23	0	--	--	--	28	52
Mar	1,968	341	1,612	77	232	4,231	1,531	920	1,074	912	288	4,726	36	0	--	--	--	24	59
Apr	958	404	1,328	50	242	2,982	1,678	883	1,039	2,049	279	5,928	29	1	--	--	--	25	54
May	1,135	306	1,316	58	239	3,054	2,482	1,592	1,881	4,365	502	10,822	23	1	--	--	--	18	42
Jun	1,621	407	1,300	59	263	3,650	3,176	2,373	2,852	3,971	780	15,152	30	1	--	--	--	18	48
Jul	1,457	452	1,110	69	393	3,482	3,701	3,369	3,651	7,735	1,137	19,593	42	2	--	--	--	21	66
Aug	1,209	266	1,027	26	231	2,759	4,130	3,965	4,329	9,103	983	22,509	34	4	--	--	--	19	56
Sep	1,113	296	758	8	178	2,353	3,278	2,841	3,353	6,853	701	17,006	54	0	--	--	--	16	71
Oct	1,181	459	896	10	201	2,747	3,405	2,278	2,867	6,041	595	15,186	36	0	--	--	--	18	54
Nov	1,074	251	729	5	413	2,472	2,411	1,330	1,662	2,210	333	7,946	43	2	--	--	--	53	98
Dec	762	226	887	10	259	2,144	1,869	765	1,098	2,728	330	4,789	39	1	--	--	--	23	63
Total	15,073	3,992	13,715	430	3,086	36,297	31,563	22,315	26,050	48,293	6,419	134,640	410	12	--	--	--	279	700
1990:																			
Jan	888	664	1,512	23	197	3,284	2,574	1,186	1,101	1,145	236	6,241	19	0	--	--	--	24	44
Feb	827	859	1,262	9	122	3,079	2,019	897	824	801	202	4,744	3	1	--	--	--	22	26
Mar	719	730	1,565	41	202	3,257	1,990	714	868	827	152	4,551	41	0	--	--	--	12	53
Apr	876	930	1,442	44	209	3,500	1,970	915	938	1,171	179	5,174	38	0	--	--	--	29	67
May	588	882	1,432	30	280	3,213	2,766	1,653	1,310	2,298	443	8,470	49	0	--	--	--	24	73
Jun	520	733	1,370	39	395	3,056	3,602	2,242	2,618	3,572	514	12,548	54	0	--	--	--	19	73
Jul	963	525	1,434	44	332	3,297	4,571	3,609	4,075	5,401	688	18,344	52	2	--	--	--	17	71
Aug	686	566	1,105	8	253	2,617	4,724	3,508	4,038	6,515	725	19,511	105	0	--	--	--	36	141
Sep	467	384	900	14	386	2,152	3,595	2,553	3,586	4,943	624	15,300	106	1	--	--	--	21	129
Oct	700	475	1,024	9	508	2,716	3,771	2,080	2,890	5,145	540	14,425	60	0	--	--	--	27	88
Nov	677	407	994	7	392	2,479	2,341	1,110	1,511	1,972	286	7,222	66	2	--	--	--	27	95
Dec	640	319	835	7	372	2,173	1,907	838	1,094	602	220	4,661	58	0	--	--	--	23	81
Total	8,550	7,473	14,874	277	3,649	34,823	35,829	21,306	24,853	34,392	4,809	121,190	651	7	--	--	--	282	940
1991:																			
Jan	417	521	1,190	18	367	2,512	2,819	1,263	1,109	569	211	5,972	17	0	--	--	--	10	27
Feb	385	544	1,050	21	404	2,404	2,371	1,093	1,033	236	252	4,985	10	1	--	--	--	15	27
Mar	724	580	1,258	32	418	3,012	1,904	917	957	262	236	4,276	33	0	--	--	--	35	68

--- = An absence of trade.

0 = Levels of trade less than 1,000 lbs.

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

Appendix table 39--Raw silk equivalent of U.S. imports for consumption of silk-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric				Apparel						House furnishings						Total	
	Yarn, thread, and rope	Broad-woven (inc. pile) fabric	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets, pillowcases, etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling	Curtains, drapes, etc.		Bed-spreads, quilts, and misc.
1,000 lbs.																		
1989:																		
Jan	79	582	--	34	695	1,949	1,278	1,081	1,554	452	6,314	--	--	52	1	2	10	64
Feb	134	560	--	60	754	1,853	1,374	1,032	8,533	666	13,457	0	0	21	3	11	8	43
Mar	75	583	--	25	683	1,486	1,177	968	698	449	4,779	169	0	28	1	9	3	211
Apr	79	551	--	22	651	1,460	978	768	815	399	4,420	0	0	37	2	6	27	72
May	102	531	--	19	652	1,434	834	705	1,851	555	5,379	0	2	24	0	7	17	90
Jun	75	610	--	24	709	1,462	592	723	2,286	958	6,020	0	0	37	--	7	9	54
Jul	95	696	--	30	820	1,335	541	727	2,924	634	6,160	0	0	57	0	2	11	81
Aug	57	739	--	31	827	1,527	619	743	3,234	577	6,700	0	1	45	0	2	19	62
Sep	44	634	--	26	703	1,324	568	713	2,850	480	5,934	0	1	17	0	7	15	44
Oct	52	647	--	33	731	1,615	944	820	3,504	560	7,444	0	0	12	0	3	10	31
Nov	53	670	--	19	742	1,515	926	890	1,954	529	5,814	0	1	12	0	2	10	25
Dec	37	498	--	33	568	1,221	1,012	770	767	493	4,263	0	0	12	0	0	10	23
Total	882	7,299	--	354	8,535	18,182	10,843	9,940	30,969	6,751	76,684	170	7	394	7	61	162	801
1990:																		
Jan	73	559	0	19	651	2,009	1,543	1,106	963	690	6,311	1	0	10	0	0	16	28
Feb	22	397	--	20	439	1,296	1,463	826	588	662	4,835	--	0	28	0	0	5	33
Mar	22	440	0	20	481	1,333	1,265	918	305	454	4,276	--	0	28	0	1	3	32
Apr	29	439	0	21	489	1,444	1,014	603	550	409	4,019	0	0	18	0	0	3	52
May	23	473	--	28	524	1,459	691	599	1,335	480	4,564	0	0	4	0	0	48	52
Jun	16	487	0	20	524	1,356	665	660	2,027	466	5,174	1	0	7	0	0	21	30
Jul	12	578	0	27	617	1,566	711	971	2,583	460	6,292	0	0	9	0	0	17	27
Aug	22	636	0	17	675	1,674	791	977	2,979	426	6,846	0	1	27	1	0	6	55
Sep	7	566	0	30	604	1,525	665	939	2,759	501	6,388	4	0	45	1	0	3	53
Oct	26	833	0	25	885	1,984	900	1,046	4,049	589	8,567	0	1	133	0	0	4	139
Nov	13	651	0	21	684	1,742	1,035	978	2,221	655	6,630	0	0	124	1	1	4	130
Dec	17	575	0	14	606	1,419	1,134	882	749	477	4,662	1	0	251	0	0	4	256
Total	282	6,634	1	262	7,179	18,807	11,876	10,504	21,107	6,268	68,563	8	3	684	4	3	133	836
1991:																		
Jan	12	523	0	34	569	2,125	1,917	1,287	554	653	6,536	0	0	112	0	0	9	121
Feb	23	427	0	25	475	1,684	1,797	1,207	437	576	5,701	0	0	123	0	0	5	129
Mar	22	392	0	25	439	1,433	1,324	1,153	288	461	4,660	0	0	24	0	0	5	29

--- = An absence of trade.  
 0 = Levels of trade less than 1,000 lbs.  
 1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

Appendix table 40--Raw manmade fiber equivalent of U.S. imports for consumption of manmade fiber-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric					Apparel						House furnishings					Total		
	Yarn, thread, and rope	Broad-woven fabric 100%	Broad-woven fabric blends	Knit fabric	Narrow, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets, pillowcase etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling		Curtains, drapes, etc.	Bed-spreads, quilts, and misc.
1,000 lbs.																			
1989:																			
Jan	19,773	8,177	5,720	849	5,044	39,563	42,180	22,509	10,817	4,594	5,978	86,080	689	1,342	1,519	755	802	1,038	6,146
Feb	19,950	8,749	5,060	641	4,035	38,436	35,853	24,044	8,422	4,263	5,784	78,366	478	1,136	1,064	788	707	889	5,062
Mar	22,974	10,595	5,832	679	3,827	43,907	33,171	22,217	7,180	4,026	5,900	72,493	558	1,058	1,109	834	605	1,050	5,213
Apr	21,228	9,164	5,920	1,016	4,132	41,460	30,738	17,896	8,170	8,402	5,996	71,202	503	1,184	1,296	606	883	976	5,448
May	25,106	10,163	5,672	1,978	4,972	46,890	40,353	20,756	13,778	16,981	7,648	99,516	747	1,265	1,251	894	881	683	5,721
Jun	26,815	9,949	5,764	1,190	5,380	49,098	45,791	23,862	16,648	21,547	9,124	116,972	857	1,284	1,391	597	1,127	2,422	7,678
Jul	26,020	9,634	6,118	1,217	4,224	47,214	51,338	26,143	20,017	23,821	10,592	131,911	1,080	1,180	2,215	759	761	1,673	7,667
Aug	27,607	9,504	7,344	1,474	5,036	50,965	54,757	27,216	22,939	24,739	11,063	140,714	1,597	1,511	1,877	858	1,220	1,347	8,409
Sep	22,692	7,579	5,172	1,112	4,732	41,286	44,849	22,785	17,993	18,369	9,031	113,027	1,361	992	1,966	678	634	1,700	7,332
Oct	24,374	9,229	7,329	1,082	5,729	47,743	48,680	24,669	16,219	15,659	9,237	114,464	1,430	1,725	1,851	994	1,260	1,266	8,527
Nov	21,827	8,306	6,331	1,099	4,914	42,477	39,291	20,541	12,679	5,543	6,889	84,942	1,324	1,228	887	861	1,100	1,432	6,832
Dec	17,942	8,176	5,877	952	4,618	37,565	34,554	19,469	11,305	2,139	6,985	74,452	1,301	986	615	857	937	789	5,486
Total	276,308	109,225	72,139	12,287	56,644	526,604	501,555	272,106	166,168	150,083	94,227	1,184,140	11,926	14,891	17,039	9,482	10,917	15,265	79,520
1990:																			
Jan	24,130	9,564	7,764	1,409	6,963	49,831	47,431	27,527	14,328	2,736	7,854	99,875	704	1,632	821	1,145	557	1,095	5,955
Feb	18,876	8,363	5,776	1,060	6,752	40,827	39,796	25,877	8,520	3,260	6,900	84,353	547	1,784	1,187	1,030	728	1,945	7,221
Mar	22,786	8,532	6,456	1,503	7,345	46,623	38,223	22,266	7,011	3,835	6,533	77,867	473	1,388	1,435	888	1,092	2,019	7,296
Apr	21,297	9,726	6,423	1,909	6,969	46,324	34,496	18,269	8,843	4,631	6,413	72,652	598	1,215	1,268	835	794	1,438	6,148
May	24,542	9,793	7,673	2,095	6,548	50,651	41,302	22,224	15,470	7,515	8,357	94,868	716	880	1,345	782	873	914	5,510
Jun	23,352	10,061	6,500	1,999	7,184	49,095	47,536	24,830	20,530	11,799	8,123	112,818	907	964	1,111	715	701	899	5,297
Jul	22,655	11,429	7,316	1,891	6,669	49,962	57,869	27,990	25,548	14,764	8,877	135,048	1,338	1,845	1,788	692	977	659	7,300
Aug	23,719	10,073	8,195	2,187	6,594	50,768	56,820	24,964	26,333	14,642	10,164	132,923	1,366	1,294	1,948	826	749	981	7,163
Sep	19,353	9,229	6,456	2,025	6,042	43,105	45,037	20,308	19,197	11,558	9,212	105,312	1,314	1,077	1,586	661	851	448	5,936
Oct	20,824	10,282	7,093	2,022	7,100	47,321	48,260	22,549	18,893	10,686	7,337	107,726	1,818	1,338	1,220	853	758	1,133	7,120
Nov	18,162	8,970	6,840	1,807	6,871	42,650	34,826	18,914	13,275	4,573	5,424	77,011	1,652	1,075	936	775	589	437	5,464
Dec	17,428	8,078	6,471	1,365	4,962	38,304	30,167	18,304	10,462	946	5,456	65,337	1,672	1,323	721	714	507	363	5,300
Total	257,123	114,101	82,964	21,273	80,000	555,461	521,763	274,023	188,411	90,945	90,648	1,165,791	13,104	15,815	15,366	9,914	9,177	12,331	75,708
1991:																			
Jan	18,553	9,579	7,223	1,566	5,629	42,551	44,693	27,751	13,254	1,382	6,955	94,035	750	1,137	1,311	1,116	667	506	5,488
Feb	18,337	7,961	5,723	1,864	5,698	39,584	39,673	23,737	9,523	758	7,477	81,168	573	1,212	1,158	917	639	509	5,007
Mar	20,437	8,381	6,831	1,682	5,316	42,647	34,922	19,563	7,270	917	7,254	69,926	526	1,010	796	684	653	653	4,323

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

Appendix table 41--Raw cotton equivalent of U.S. exports of cotton-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric						Apparel					House furnishings							
	Yarn, thread, and rope	Broad-woven fabric 100%	Broad-woven fabric blends	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets, pillowcases etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling	Curtains, drapes etc.	Bed-spreads, quilts, and misc.	Total
1,000 lbs.																			
1989:																			
Jan	2,631	3,902	4,434	1,162	4,243	16,371	4,234	5,259	685	120	1,864	12,162	69	449	18	191	12	238	978
Feb	2,910	4,232	4,726	1,826	4,946	18,640	6,923	7,227	653	76	3,137	18,016	51	707	24	431	43	185	1,440
Mar	3,016	5,011	5,906	2,281	4,478	20,692	7,449	8,003	767	94	2,533	18,847	55	686	30	498	34	130	1,433
Apr	1,561	4,656	5,774	2,366	5,696	20,053	6,469	6,158	577	131	2,954	16,289	41	625	25	516	78	253	1,539
May	2,439	4,015	5,443	2,321	5,559	19,778	7,511	5,988	772	56	2,848	17,176	37	729	107	711	42	193	1,820
Jun	3,313	4,490	4,555	1,990	5,665	20,013	8,230	8,006	865	251	2,581	19,932	55	960	35	682	66	149	1,947
Jul	2,324	3,979	4,332	1,130	5,977	17,742	6,392	6,378	770	133	2,127	15,800	31	683	45	769	55	421	2,004
Aug	3,582	4,567	5,798	1,314	6,271	21,531	7,491	7,426	856	257	2,437	18,468	31	1,075	49	803	92	194	2,245
Sep	2,856	3,758	5,268	1,727	5,285	18,893	7,400	7,146	782	178	2,547	18,054	48	793	54	751	58	209	1,913
Oct	3,049	4,541	6,013	1,405	6,900	21,908	8,632	7,426	998	126	2,563	19,745	47	901	56	864	51	114	2,031
Nov	4,001	3,924	6,153	1,267	5,450	20,795	7,224	6,632	813	193	2,250	17,113	53	848	41	617	14	112	1,683
Dec	3,337	4,320	5,787	1,192	6,335	20,973	7,244	6,934	791	295	2,371	17,635	35	585	48	743	39	102	1,552
Total	35,019	51,395	64,189	19,983	66,804	237,390	85,200	82,582	9,332	1,911	30,212	209,237	553	9,042	532	7,575	583	2,301	20,586
1990:																			
Jan	3,283	5,497	8,431	2,497	5,041	24,748	7,703	6,374	794	113	2,672	17,656	60	851	45	982	33	132	2,102
Feb	4,355	4,988	8,061	2,190	5,923	25,518	7,800	7,990	833	350	2,645	19,619	59	928	19	760	63	92	1,921
Mar	4,053	6,212	9,518	3,175	5,738	28,695	9,746	9,360	1,076	162	2,831	23,175	66	1,097	32	1,435	80	144	2,856
Apr	4,408	5,735	8,191	2,425	5,029	25,788	8,828	8,439	940	247	2,614	21,068	1,238	1,423	44	909	93	141	3,848
May	4,987	6,030	8,282	2,790	5,476	27,565	9,518	8,432	1,017	244	2,899	21,910	1,250	1,274	47	1,334	73	141	4,120
Jun	4,877	5,331	9,451	2,978	6,330	28,968	9,514	9,374	999	388	3,157	23,431	845	1,151	87	1,066	54	136	3,339
Jul	3,162	5,408	7,960	2,287	5,577	24,393	8,679	6,844	1,159	195	2,209	19,086	239	828	40	879	58	130	2,172
Aug	3,994	5,553	8,212	3,110	5,718	26,587	9,577	8,086	1,251	150	3,123	22,187	297	867	52	865	40	173	2,294
Sep	3,933	5,053	8,619	3,609	5,276	26,489	8,872	9,234	1,280	174	3,027	22,586	217	812	51	885	79	152	2,196
Oct	5,138	6,555	8,390	3,963	6,047	30,092	10,805	10,996	1,183	168	3,340	26,493	324	1,151	57	1,255	75	179	3,042
Nov	4,640	6,395	8,994	2,754	5,205	27,988	9,929	12,025	1,494	145	2,046	26,440	421	1,478	45	776	107	155	2,982
Dec	5,561	6,562	8,831	2,573	6,005	29,532	8,878	8,614	1,177	152	2,718	21,539	202	1,165	31	823	73	103	2,395
Total	52,390	69,318	102,940	34,351	67,365	326,364	109,650	105,768	13,204	2,488	34,080	265,190	5,218	13,024	550	11,969	829	1,677	33,267
1991:																			
Jan	5,391	5,309	8,045	2,778	5,161	26,685	7,882	7,266	1,217	130	1,984	18,479	242	1,076	23	795	62	96	2,294
Feb	4,940	5,369	8,558	2,811	5,420	27,098	9,715	9,496	1,042	125	1,976	22,355	354	811	42	996	98	121	2,421
Mar	6,146	5,488	9,206	3,605	5,543	29,989	11,214	9,443	1,226	109	2,494	24,487	461	1,301	29	1,061	41	119	3,013

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

Appendix table 42--Raw linen equivalent of U.S. exports of linen-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric					Apparel						House furnishings						
	Yarn, thread, and rope	Broad-woven (inc. pile) fabric	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets, pillowcases etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling	Curtains, drapes, etc.	Bed-spreads, quilts, and misc.	Total
1,000 lbs.																		
1989:																		
Jan	312	383	17	2,087	2,800	161	181	324	21	32	718	2	149	1	3	34	43	232
Feb	370	340	202	607	1,518	224	121	364	5	99	813	4	92	3	24	17	50	190
Mar	555	568	200	1,243	2,567	399	145	310	5	123	982	4	121	0	3	29	59	216
Apr	405	544	269	667	1,885	247	142	480	10	74	954	3	165	1	22	18	74	283
May	491	542	202	684	1,918	285	230	609	4	135	1,263	2	159	14	6	37	120	339
Jun	389	596	275	705	1,965	265	313	403	13	140	1,134	3	70	1	3	36	44	157
Jul	407	490	153	688	1,738	260	231	326	32	120	970	2	82	--	33	53	37	208
Aug	417	389	133	583	1,522	212	194	497	26	134	1,063	3	44	0	11	46	42	147
Sep	595	468	227	592	1,882	174	178	496	52	79	980	7	63	1	8	46	63	187
Oct	572	589	323	2,433	3,917	278	163	525	12	149	1,128	15	40	0	7	71	47	180
Nov	626	502	258	1,144	2,530	243	206	573	22	78	1,123	5	93	--	9	47	29	183
Dec	371	618	199	1,283	2,471	221	163	571	9	67	1,032	8	48	4	16	52	21	149
Total	5,511	6,029	2,457	12,716	26,712	2,972	2,269	5,477	212	1,230	12,160	59	1,127	25	144	487	630	2,471
1990:																		
Jan	503	558	147	2,037	3,244	192	116	749	5	45	1,108	4	32	4	4	173	11	227
Feb	646	628	128	2,175	3,576	220	195	726	2	107	1,251	1	72	0	3	75	27	178
Mar	482	528	222	2,219	3,451	334	258	839	9	70	1,509	8	124	1	10	80	46	269
Apr	641	593	347	1,271	2,852	311	233	634	7	107	1,292	553	74	1	6	82	15	731
May	693	576	268	1,717	3,253	290	286	563	11	60	1,210	597	36	4	16	110	27	790
Jun	2,097	683	273	1,541	4,594	256	357	701	4	49	1,368	292	54	3	4	125	29	507
Jul	706	518	278	1,091	2,593	194	206	602	18	34	1,055	81	42	1	2	95	21	241
Aug	567	793	244	1,029	2,633	325	288	784	12	195	1,604	81	50	28	2	59	45	265
Sep	531	467	221	1,074	2,293	243	179	690	14	60	1,186	76	47	1	21	63	11	220
Oct	430	620	178	1,061	2,288	299	395	670	10	90	1,463	114	51	2	6	94	19	285
Nov	536	605	197	1,179	2,517	278	379	677	19	80	1,433	101	112	4	5	68	11	302
Dec	479	425	173	1,032	2,109	413	199	618	11	74	1,315	76	88	0	3	50	36	252
Total	8,312	6,991	2,676	17,424	35,404	3,356	3,093	8,254	123	969	15,794	1,984	781	50	80	1,073	299	4,267
1991:																		
Jan	853	366	164	1,278	2,662	161	188	370	10	83	812	50	25	1	4	46	16	142
Feb	452	480	206	1,267	2,406	276	208	542	9	65	1,100	120	57	0	3	34	15	229
Mar	568	432	218	1,275	2,493	222	416	483	5	68	1,194	133	18	3	1	35	36	226

--- = An absence of trade.

0 = Levels of trade less than 1,000 lbs.

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

Appendix table 43--Raw wool equivalent of U.S. exports of wool-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric					Apparel						House furnishings					Total		
	Noils and waste	Yarn, thread, cordage, and rope	Broad-woven (inc. pile) fabric	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets, pillow-cases, etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling		Curtains, drapes, etc.	Bed-spreads, quilts, and misc.
1,000 lbs.																			
1989:																			
Jan	214	6	261	268	1,614	2,363	27	254	341	51	114	786	6	--	--	--	--	33	40
Feb	509	30	363	140	2,052	3,094	55	353	423	77	115	1,023	18	--	2	--	--	45	65
Mar	857	74	552	75	1,492	3,049	40	402	544	94	224	1,304	20	--	0	--	--	51	71
Apr	523	292	425	184	1,693	3,117	39	456	563	164	203	1,425	7	--	--	--	--	43	50
May	495	26	421	156	2,414	3,511	59	769	577	53	198	1,656	16	--	--	--	--	108	125
Jun	286	11	436	306	2,066	3,105	27	695	595	246	210	1,773	50	--	--	--	--	35	85
Jul	256	14	340	452	1,976	3,038	35	272	581	66	182	1,137	7	--	--	--	--	31	38
Aug	103	15	301	211	1,666	2,295	24	336	679	218	199	1,457	4	--	0	--	--	37	41
Sep	337	22	348	179	1,544	2,430	53	401	820	141	116	1,530	11	--	0	--	--	53	64
Oct	536	20	381	293	2,220	3,449	41	336	667	78	162	1,285	22	--	0	--	--	41	63
Nov	189	33	321	328	1,704	2,575	25	318	367	122	134	965	9	--	--	--	--	22	32
Dec	318	16	236	349	2,134	3,053	17	290	341	366	129	1,143	11	--	0	--	--	20	31
Total	4,624	559	4,384	2,940	22,573	35,079	441	4,883	6,499	1,675	1,989	15,486	182	--	3	--	--	519	705
1990:																			
Jan	436	63	471	306	793	2,068	176	256	476	120	147	1,175	9	--	0	--	--	10	20
Feb	190	46	354	59	1,346	1,995	65	273	718	445	188	1,689	6	--	0	--	--	24	30
Mar	426	58	576	57	1,151	2,268	76	421	743	133	166	1,538	31	--	0	--	--	41	72
Apr	316	39	393	136	1,331	2,214	107	386	965	247	148	1,853	519	--	1	--	--	14	534
May	276	74	478	64	1,375	2,268	50	835	716	301	185	2,087	564	--	0	--	--	24	588
Jun	438	45	447	37	1,247	2,214	52	587	880	513	169	2,200	287	--	--	--	--	21	308
Jul	121	42	339	73	1,163	1,738	39	845	734	194	184	1,996	112	--	1	--	--	19	131
Aug	165	28	370	123	1,568	2,255	52	636	866	134	325	2,013	109	--	--	--	--	41	150
Sep	187	53	386	37	867	1,529	51	839	677	165	268	2,000	85	--	0	--	--	9	95
Oct	191	27	352	46	1,130	1,745	50	576	587	157	305	1,675	120	--	0	--	--	17	136
Nov	123	21	298	96	1,661	2,199	41	418	509	125	171	1,265	111	--	0	--	--	9	120
Dec	212	45	314	24	1,355	1,951	48	373	471	118	147	1,157	83	--	0	--	--	32	115
Total	3,081	540	4,778	1,057	14,988	24,445	808	6,445	8,341	2,652	2,402	20,648	2,035	--	2	--	--	261	2,299
1991:																			
Jan	283	37	310	57	1,404	2,090	43	276	410	133	165	1,028	54	--	--	--	--	13	67
Feb	189	55	319	37	1,513	2,113	51	293	523	88	170	1,124	119	--	0	--	--	14	133
Mar	241	49	398	28	1,194	1,910	75	401	623	149	157	1,405	130	--	1	--	--	32	163

--- = An absence of trade.

0 = Levels of trade less than 1,000 lbs.

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

Appendix table 44--Raw silk equivalent of U.S. exports of silk-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric				Apparel						House furnishings					Total		
	Yarn, thread, cordage, and rope	Broad-woven (inc. pile) fabric	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets, pillow-cases, etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling		Curtains, drapes, etc.	Bed-spreads, quilts, and misc.
1,000 lbs.																		
1989:																		
Jan	134	96	21	590	841	184	99	20	25	698	1,026	--	142	9	2	--	24	176
Feb	117	153	280	599	1,149	268	49	28	42	760	1,147	--	85	18	3	--	32	139
Mar	88	270	216	451	1,024	310	42	26	58	842	1,278	--	110	9	1	--	37	157
Apr	84	295	329	538	1,247	237	40	23	107	685	1,091	--	141	91	9	--	31	272
May	100	247	309	608	1,264	326	47	33	27	1211	1,644	--	146	35	2	--	75	258
Jun	67	414	406	647	1,534	303	25	21	123	903	1,376	--	63	10	1	--	25	99
Jul	134	302	313	725	1,474	269	51	30	43	781	1,173	--	72	18	5	--	22	118
Aug	211	223	224	482	1,139	243	32	27	108	1012	1,422	--	41	44	3	--	29	117
Sep	114	189	298	450	1,050	302	28	32	62	906	1,329	--	56	28	3	--	39	125
Oct	98	346	411	806	1,660	297	22	29	34	702	1,084	--	35	16	1	--	32	85
Nov	104	202	418	348	1,073	275	28	20	49	676	1,048	--	81	9	1	--	17	108
Dec	83	252	341	570	1,246	257	45	13	211	499	1,025	--	38	3	1	--	15	56
Total	1,335	2,987	3,567	6,813	14,701	3,271	507	302	887	9,675	14,643	--	1,010	292	31	--	377	1,711
1990:																		
Jan	131	374	283	378	1,165	221	22	18	70	661	992	--	29	5	1	--	7	43
Feb	203	355	316	344	1,218	258	29	47	284	660	1,277	--	56	8	1	--	17	82
Mar	89	293	516	562	1,459	415	43	42	86	512	1,098	--	111	15	1	--	29	157
Apr	164	303	518	386	1,371	392	9	52	159	465	1,077	--	70	43	0	--	11	124
May	81	361	440	474	1,356	290	69	37	120	577	1,093	--	29	34	2	--	17	83
Jun	58	297	445	257	1,056	288	74	41	331	471	1,205	--	48	37	2	--	15	102
Jul	163	334	575	542	1,614	339	34	49	128	518	1,068	--	38	27	1	--	13	79
Aug	202	370	363	318	1,253	301	60	54	64	567	1,047	--	43	44	0	--	36	123
Sep	93	263	369	733	1,457	290	36	44	70	750	1,190	--	43	104	2	--	7	156
Oct	96	381	359	654	1,490	412	81	50	68	888	1,499	--	45	119	3	--	12	179
Nov	99	339	540	595	1,573	466	66	66	59	636	1,292	--	96	84	2	--	7	189
Dec	158	217	400	605	1,379	336	60	73	40	612	1,121	--	72	60	1	--	23	155
Total	1,536	3,885	5,123	5,847	16,391	4,009	581	572	1,480	7,318	13,960	--	681	581	16	--	193	1,471
1991:																		
Jan	344	202	462	663	1,672	188	22	48	32	520	811	--	19	30	1	--	9	60
Feb	192	182	622	415	1,411	256	34	47	37	374	749	--	53	24	1	--	10	89
Mar	258	192	707	627	1,784	463	28	52	41	808	1,393	--	12	21	0	--	23	55

--- = An absence of trade.

0 = Levels of trade less than 1,000 lbs.

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.



Appendix table 45--Raw manmade fiber equivalent of U.S. exports of manmade fiber-containing textile manufactures, 1989-91 1/

Year and month	Yarn, thread, and fabric					Apparel						House furnishings					Total		
	Yarn, thread, and rope	Broad-woven fabric 100%	Broad-woven fabric blends	Knit fabric	Narrow, industrial, and misc. fabric	Total	Tops	Bot-toms	Suits and coats	Sweat-ers	Other apparel	Total	Blan-kets	Bed-sheets, pillow-cases, etc.	Table-cloths, placemats, napkins, etc.	Bath-room and kitchen toweling		Curtains drapes, etc.	Bed-spreads, quilts, and misc.
1,000 lbs.																			
1989:																			
Jan	35,986	7,239	2,931	1,662	8,466	56,283	4,242	1,649	1,240	63	1,942	9,135	70	274	29	45	46	135	598
Feb	35,156	10,675	3,047	2,320	13,041	64,239	5,841	2,607	1,337	72	2,503	12,360	107	515	34	103	80	187	1,026
Mar	36,776	12,795	3,548	2,085	13,252	68,456	6,720	2,202	1,518	92	2,851	13,382	66	409	30	111	60	135	810
Apr	41,462	10,327	3,469	1,950	14,135	71,342	6,111	2,577	1,318	174	3,389	13,569	77	423	37	104	92	242	975
May	31,288	9,857	3,560	3,006	14,844	62,555	7,379	2,008	1,342	47	2,723	13,500	55	517	65	112	81	157	988
Jun	30,998	11,050	3,559	3,003	14,748	63,358	7,040	2,957	1,633	240	2,859	14,729	130	556	43	95	136	138	1,097
Jul	33,408	8,846	2,904	2,126	12,797	60,161	5,378	2,143	1,534	73	2,478	11,606	67	572	61	148	131	394	1,372
Aug	32,100	9,257	3,414	1,989	15,902	62,662	6,783	2,558	1,858	196	2,784	14,180	81	528	71	138	138	171	1,126
Sep	28,768	10,475	4,028	1,669	11,701	56,640	6,457	2,918	1,841	101	2,700	14,016	182	546	59	124	85	249	1,245
Oct	34,591	10,565	4,154	2,506	17,084	68,901	6,449	1,989	1,658	83	3,025	13,203	157	573	44	181	167	118	1,240
Nov	33,387	9,464	3,739	1,395	14,161	62,146	5,642	1,723	1,791	103	2,430	11,689	87	493	25	160	147	138	1,051
Dec	31,523	8,308	3,545	1,676	14,530	59,581	5,667	1,727	1,477	353	2,154	11,378	130	416	30	116	132	109	934
Total	405,442	118,857	41,977	25,388	164,660	756,324	73,710	27,058	18,545	1,598	31,837	152,748	1,209	5,822	529	1,437	1,294	2,171	12,462
1990:																			
Jan	38,873	11,278	5,240	2,487	16,702	74,581	5,437	1,722	1,309	115	2,609	11,193	89	658	63	129	177	215	1,332
Feb	38,197	10,706	5,207	2,641	17,320	74,070	5,726	1,934	1,517	432	2,736	12,344	45	530	63	127	112	99	977
Mar	42,537	12,885	6,223	2,999	18,132	82,776	7,230	2,539	1,700	136	3,090	14,695	110	700	34	190	143	154	1,351
Apr	41,382	11,049	5,264	2,926	16,098	76,718	6,146	1,950	1,487	272	2,593	12,449	3,099	773	79	117	177	147	4,393
May	48,530	11,775	5,895	3,228	20,812	90,240	7,243	2,025	1,570	217	2,922	13,978	3,343	818	132	183	162	131	4,770
Jun	41,915	11,983	5,514	3,600	20,468	83,480	7,093	3,049	1,727	509	3,022	15,401	1,752	596	78	135	145	110	2,815
Jul	31,139	9,595	4,655	3,021	14,927	63,337	6,110	1,725	1,962	195	3,090	13,082	528	460	47	151	153	143	1,483
Aug	42,952	10,292	5,182	3,466	16,552	78,443	7,201	1,952	1,904	152	3,554	14,763	660	640	60	124	162	189	1,836
Sep	41,287	9,998	5,045	3,184	15,250	74,763	6,077	2,190	2,019	175	3,438	13,899	558	443	61	131	134	192	1,520
Oct	44,412	11,288	5,405	4,036	16,986	82,126	7,393	2,363	2,341	153	3,871	16,120	877	738	105	155	219	144	2,238
Nov	45,046	12,789	5,126	3,141	16,664	82,766	6,486	2,404	2,601	125	2,869	14,485	786	907	68	122	143	130	2,156
Dec	41,303	9,917	5,361	2,906	15,685	75,172	5,237	2,044	2,370	126	1,909	11,687	573	680	43	147	129	80	1,652
Total	497,571	133,554	64,116	37,634	205,596	938,472	77,380	25,899	22,507	2,607	35,704	164,097	12,421	7,944	854	1,712	1,857	1,735	26,522
1991:																			
Jan	41,876	9,713	4,522	3,322	17,721	77,153	5,422	1,450	1,600	77	2,075	10,624	443	704	27	135	162	112	1,583
Feb	39,226	8,117	4,809	3,338	16,459	71,949	5,773	1,926	1,632	70	2,265	11,666	779	522	44	127	129	104	1,703
Mar	47,393	8,460	5,013	3,404	17,903	82,173	6,913	2,149	1,889	91	2,538	13,581	919	925	38	155	140	169	2,346

1/ Revised preliminary. Totals may not add due to rounding.

Source: Bureau of the Census.

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