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## Cotton and Wool

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## Summary

Despite the prospect of burdensome ending stocks, U.S. cotton prices have strengthened in recent weeks. Spotmarket prices averaged nearly 65 cents a pound in early March, 4 cents above a month earlier and the highest level this season.

Many factors are behind this price strength, including the prospect of high participation in the cotton payment-in-kind (PIK) program, a pickup in economic and textile activity since Christmas, and recent unexpected sales to the Soviet Union, which are further tightening supplies of higher-quality cotton. So, prospects are improving for mill use and exports. During the first half of this season, both domestic use and exports fell short of the pace needed to reach the total use forecast of 10.4 million bales. However, with economic recovery emerging, cotton-textile activity will likely rise moderately this spring. Also, recent additional funds for USDA's blended credit program, a reduction in the USSR's export offerings, and more competitive prices may help stimulate this season's sagging export sales.

The 1983 PIK program is especially attractive to cotton producers for several reasons. The PIK is exempt from the $\$ 50,000$ limit per person on cash program payments, encouraging additional participation among the larger cotton farms. Also, PIK provides an opportunity to avoid some of cotton's high production costs, which among major field crops are only exceeded by rice. In addition, producers receive a guaranteed yield on PIK acreage-an important feature because cotton's yield is one of the most variable of all crops.

The February prospective plantings survey indicated that cotton farmers' participation in the PIK program will be high. The survey showed that growers intend to plant 9.3 million acres in 1983-a 19 -percent drop from 1982. The final outcome may change, however, depending on how many whole-base bids USDA accepts and farmers' final planting decisions.

If cotton plantings are around intentions, weather is normal, and total use grows moderately, 1983/84 ending stocks would drop a couple of million bales from this
season's expected 8.4 million. So, PIK has the potential to reduce burdensome stocks. Nevertheless, unless weather is extremely bad or demand surges dramatically, stocks will remain high for many qualities.
U.S. mills used cotton at an annual rate of only 5.23 million bales during August-January, compared with the season's forecast of 5.4 million. Per capita cotton consumption-mill use plus the net cotton-textile trade balance-was 13.5 pounds in 1982, a 6 -percent drop from 1981. So, a rebounding general economy could unmask pent-up textile demand. However, any demand boost in 1983 will continue to be limited by high imports and low exports. Imports of cotton textiles arrived at an annual rate of 1.9 million equivalent bales during AugustDecember, almost equal to a year earlier. Meanwhile, exports fell to less than a half million equivalent bales, down 29 percent from a year earlier and 60 percent from 1980.
U.S. cotton export commitments-exports plus outstanding sales-stood at 4.5 million bales in late February, 2 million below a year earlier. For 1982/83, exports are forecast at 5 million bales, 1.6 million below a year earlier. An increase in foreign supplies relative to use provides the fundamental reason for this season's decline in exports. Also, U.S. cotton was generally priced 2 to 3.5 cents a pound above foreign cotton during AugustDecember. However, during January and February, the gap steadily closed to less than a cent as supplies of higher quality foreign cotton-particularly Soviet cotton-became tighter.
The 1982/83 foreign cotton outlook continues to be dominated by stagnant consumption, higher supplies, and lower imports. Mill use is forecast at 61.1 million bales, 0.6 million above last season. However, foreign use, excluding China, has been flat since 1979/80. Foreign production, at 55.9 million bales, is 0.4 million above last season. A 2 -million-bale gain in China more than offset steep drops in Mexico and the USSR. Most of this
season's drop in world imports will occur in the Far East, where the U.S. trade share historically has been large. China will likely reduce imports by 1.5 million bales to just 0.7 million. Korea, Japan, Hong Kong, and Taiwan are expected to lower their combined purchases by almost a half million bales.
Declining total use of extra-long staple (ELS) cotton, coming at the same time as the largest American-Pima crop since 1977, will cause ELS stocks to skyrocket this season. Mill use is forecast at 47,000 bales, nearly equal to a year earlier. With U.S. prices above foreign ones, U.S. exports are forecast at 13,000 bales, up only marginally from a year ago and 40 percent below 2 years earlier. Ending stocks are expected to build to 116,000 bales, nearly 80 percent above beginning stocks. Reflecting reduced allotments, farmers' February planting indications were 64,000 acres, down 12 percent from 1982. This acreage, coupled with trend yields, could cause ELS stocks to build again next season.
Low production, use, and prices mark this season's wool market. Sheep numbers on January 1, 1983, were 10.3 million, 10 percent below a year earlier and the lowest since recordkeeping began in 1867. Mill use in 1982 was 115 million pounds, 17 percent below 1981. February farm prices averaged 57.7 cents a pound, greasy, the lowest price for that month since 1975.
This issue of the Cotton and Wool Situation contains two special articles. The first article, "An Economic Analysis of the 1983 Upland Cotton Program," concludes that, for an average farm, participation in the PIK program is the more profitable planting strategy over a wide range of expected market prices and yields. The second article, "The Raw Cotton Equivalent of U.S. Textile Imports by Country of Origin," presents data on the volume of U.S. imports for 1982. Of total imports of 1.9 million equivalent bales, over 83 percent came from Asian nations.

## Cotton and Wool Situation

## TEXTILES AND THE ECONOMY

The U.S. output of goods and services in fourth-quarter 1982 continued the sluggish performance that began in the third quarter. The real gross national product (GNP) dropped at an annual rate of 1.9 percent from the third quarter, which in turn increased only 0.7 percent from the second. The major cause of the lower fourth-quarter GNP was a 37 -percent annual-rate decline in gross private domestic investment, which accounted for 12 percent of GNP. Private domestic investment fell because of a sharp reduction ( $\$ 18.7$ billion) in real business inventories, two-thirds of which were in motor vehicles. By comparison, real inventories increased $\$ 3.4$ billion in the third quarter and decreased $\$ 4.4$ billion in the second. In contrast, real personal consumption expendi-
tures, which accounted for almost two-thirds of GNP, rose at an annual rate of 4.8 percent. Half of this spending was in the retail sales of motor vehicles and parts.

Other fourth-quarter data also indicated low economic activity. The index of industrial production declined at an annual rate of 8.4 percent; it has declined every quarter since third-quarter 1981. The civilian unemployment rate increased or stayed constant every month since August 1981, until it reached 10.8 percent in December.

On the other hand, here are some economic factors that foretell business recovery. The index of leading indicators rose 3.6 percent in January, the largest monthly increase in over 30 years. It went up 9 of the past 12 months. The coincident index, a companion index that measures current economic activity, rose for the second time in 3 months. Consumer spending and housing starts rose sharply in January 1983, while
interest rates declined. Manufacturers' inventories in December 1982 were at a 2 -year low, suggesting inventory disposal may be about over. In January 1983, civilian unemployment fell 0.4 percent to 10.4 . The consumer prices index has declined since mid-1982. Retail sales of nondurable goods, seasonally adjusted, rose each month of the fourth quarter.
The textile industry, in contrast to the general economy, experienced a mild recovery in the latter part of 1982. The quarterly index of textile production rose at annual rates of $2,0.8$, and 4 percent in the second, third, and fourth quarters, respectively. The unemployment rate in textile mills dropped from 19.3 percent in July 1982 to 10.1 percent in January 1983, and unemployment in apparel manufacturing went from 15.5 percent in September to 13 percent in January.

Mill consumption of fibers in 1982 was the lowest in several years. Total fiber consumption was 10.1 million pounds, 13 percent below 1981. Cotton use, 2.49 billion pounds, was 8 percent less than in 1981 and the lowest level in 50 years. In addition to the depressed economy, one of the major causes of lower mill use of fibers has been the relatively large quantity of textile imports at time of declining exports. As the dollar became stronger, textile trade reacted accordingly. Imports of cotton textiles averaged a record-high 933 million pounds over the last 2 years, while 1982 exports fell to less than half of the 1980 high of 528 million pounds. Last year's imports of manmade fiber textiles climbed to a record 807 million pounds, while exports dropped one-third from the previous 3-year average.

These data indicate that, when the global economy rebounds, a restoration of mill consumption of fibers to prerecession levels could mean an increase of up to 20 percent.

## COTTON SITUATION

## U.S. Outlook for 1982/83

## Mill Use Probably Bottomed in December; January's Rebound Expected To Continue

U.S. mill use plunged to a seasonally adjusted annual rate of only 5.04 million bales during December. However, because there continues to be a basis for optimism
during the second half of this season, mill use is still expected to total 5.4 million bales for 1982/83 (tables 14 and 15). Evidence of future mill strength came in January, when the monthly rate jumped to 5.35 million bales. Many economic indicators (as described in the previous section) suggest that the trough of the recession has past, and quarterly real GNP growth rates should be up sharply during most of 1983. The abnormally low per capita consumption of cotton during $1982-13.5$ pounds, compared with 14.4 pounds in 1981-suggests that a rebounding economy may unmask substantial pent-up demand for textiles. Because the annual rate of mill use averaged only 5.23 million bales during the first half of this season, mill use would have to jump to an average of 5.47 million bales during February-July to reach this season's forecast. Obviously, this expectation is tied to the emerging optimism for the U.S. economy.

Data for the third quarter of 1982 -the start of the cotton marketing season-reveal the types of textile products that have suffered the greatest drops in cotton use (table 16). Among chiefly cotton items, declines from a year earlier include: sheeting and allied coarse fabrics, 37 percent; toweling, 20 percent; and denim and corduroy, 19 percent. Among primarily polyester fabrics, bed sheeting saw the largest drop in cotton use, down 30 percent. Knit fabrics-which account for a quarter of total cotton mill use-were off 16 percent. These data also indicate the importance of household furnishings. Recent sharp gains in housing construction should provide help after some lag in time.

Additional factors that are important for monitoring mill use include the following:

- Textile trade-The raw fiber equivalent of cotton textile imports was 1.94 million bales at an annual rate during the first 5 months of this season, compared with 2.03 million a year earlier. Cotton textiles were exported at an annual rate of 0.47 million bales, down from 0.66 million a year earlier and nearly 60 percent below 1980 . The decline in exports is especially damaging to U.S. mill use. So, a severe cotton-textile trade deficit is likely again this season. Furthermore, prospects now are not bright for a weakening of the dollar, which could help change this situation. Any major boost in U.S. mill use will likely need to be linked to improvement in the cotton-textile trade deficit (tables 17 to 20).

Table 1 - Upland cotton and manmade staple fibers: Mill consumption on cotton-system spinning spindles

| Year beginning August 1 | Cotton | Manmade |  |  | Total fibers | Cotton's share of total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rayon and acetate | Noncellulosic | Total |  |  |
|  | 1,000 pounds |  |  |  |  | Percent |
| 1981/82 | 2,503,788 | 234,321 | 1,450,365 | 1,684,686 | 4,188,474 | 59.8 |
| 1982/83 |  |  |  |  |  |  |
| August | 193,941 | 15,575 | 108,335 | 123,910 | 317,851 | 61.0 |
| September | 235,629 | 18,909 | 135,000 | 153,909 | 389,538 | 60.5 |
| October | 207,127 | 16,747 | 113,879 | 130,626 | 337,753 | 61.3 |
| November | 194,028 | 17,644 | 109,023 | 126,667 | 320,695 | 60.5 |
| December ${ }^{1}$ | 213,960 | 17,013 | 118,077 | 135,090 | 349,050 | 61.3 |
| January | N.A. | 16,823 | 114,856 | 131,679 | N.A. | - |

[^0]Table 2-Cotton and manmade fibers: Daily rate of mill consumption on cotton-system spinning spindles, unadjusted and seasonally adjusted

| Month | Upland cotton |  |  |  | Manmade staple |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1981/82 |  | 1982/83 ${ }^{1}$ |  | 1981/82 |  |  |  | 1982/83 ${ }^{1}$ |  |  |  |
|  | Unadjusted | Adjusted | Unadjusted | Adjusted | Rayon and acetate |  | Noncellulosic ${ }^{2}$ |  | Rayon and acetate |  | Noncellulosic ${ }^{2}$ |  |
|  |  |  |  |  | Unadjusted | Adjusted | Unadjusted | Ad- justed | Unadjusted | Adjusted | Unadjusted | Adjusted |
|  | Bales ${ }^{3}$ |  |  |  | 1,000 pounds |  |  |  |  |  |  |  |
| August | 22,147 | 21,971 | 20,202 | 20,042 | 1,172 | 1,150 | 6,448 | 6,403 | 779 | 765 | 5,417 | 5,379 |
| September | 21,399 | 21,836 | 19,636 | 20,037 | 1.132 | 1,129 | 6,312 | 6,395 | 756 | 754 | 5,400 | 5,471 |
| October | 23,156 | 22,011 | 21,576 | 20,510 | 1,090 | 1,007 | 6,391 | 6,151 | 837 | 774 | 5,694 | 5,480 |
| November | 20,763 | 20,276 | 20,211 | 19,737 | 1,078 | 1,087 | 5,737 | 5,554 | 882 | 889 | 5,451 | 5,277 |
| December | 16,367 | 17,618 | 17,830 | 19,193 | 764 | 852 | 4,692 | 5,106 | 681 | 759 | 4,723 | 5,139 |
| January | 19,406 | 18,914 |  |  | 887 | 864 | 5,585 | 5,591 | 841 | 819 | 5,743 | 5,749 |
| February | 20,488 | 18,970 |  |  | 843 | 836 | 5,865 | 5,773 |  |  |  |  |
| March | 20,550 | 19,741 |  |  | 812 | 801 | 5,595 | 5,375 |  |  |  |  |
| April | 21,391 | 21,158 |  |  | 852 | 844 | 5,608 | 5,403 |  |  |  |  |
| May | 20,395 | 19,744 |  |  | 820 | 771 | 5,267 | 5,031 |  |  |  |  |
| June | 19,000 | 18,793 |  |  | 752 | 736 | 5,066 | 4,952 |  |  |  |  |
| July | 16,419 | 19,711 |  |  | 651 | 758 | 4,536 | 5,324 |  |  |  |  |

${ }^{1}$ Preliminary. ${ }^{2}$ Includes nylon, acrylic and modacrylic, polyester, and other manmade fibers. ${ }^{3} 480$-pound net weight bales.
Complied from reports of the Bureau of the Census.

- Cotton's market share-During the last several years, changes in cotton mill use amounting to as much as several hundred thousand bales have been related to changes in cotton's share of total fiber use. The price of cotton relative to polyester is a factor. However, changes in relative prices have a lagged effect, because it takes time to recognize the changes, assess their permanence, and turn a new mill order into a finished textile. Figure 1 shows the relationship between 1) the ratio of the Group $B$ mill price of cotton to the price of polyester staple, f.o.b., producing plants, and 2) cotton's share of the fiber used on the cotton system (spindles designed for cotton-like staple fibers). The data are for 6 -month periods, January-June and JulyDecember, and the price ratio lags behind the market share variable by one period. For example, the share for July-December 1982 is plotted against the price ratio for January-June 1982. The figure shows that cotton's share generally rises ast cotton becomes relatively cheaper. During July-December 1982, cotton's price was 91 percent of polyester, compared with 86 percent during January-June (table 21). These prices suggest a market share of around 61 percent during the first half of 1983. While cotton's share of the textile pie will likely remain up, total mill use will continue to depend on how large the pie gets during 1983.


## Export Prospects Approach 6-Year Low

U.S. cotton exports are forecast at 5 million bales this season, which is below expectations early in the season and nearly a quarter below last year. This season's outlook is a sharp departure from the export-driven market growth once anticipated for the early 1980's. What happened? A combination of factors-some of which are likely to prevail for a few years-have called into question the general presumption that export growth would

Cotton's Share of Fiber Used on the Cotton System ${ }^{1}$ Percent

${ }_{2}^{1}$ Data are for 6 -month periods, Jan. June and July-Dec.
2Price ratio is lagged one period. For example, second-half 1982 is plotted as first-half 1983.
follow the path of the 1970's. That trend implied that demand growth would exceed increases in productivity and lead to real price rises.

The current worldwide recession has reduced growth in foreign cotton mill use. Stagnant consumption is a major factor behind smaller world cotton trade. Most U.S. exports go to developing countries, where real GNP growth averaged about 2.5 percent in 1982, well below the 5 to 6 percent of the 1970's. Because of high inflation, low commodity prices that limit export earnings, and credit problems, GNP growth in developing countries is now expected to continue below that of the 1970's during the next several years. Furthermore, foreign cotton exporters will likely continue to increase production as yields grow and foreign exchange needs keep acreage in
cotton. So, the stage is set for a slow-growing, highly competitive export market during the next couple of years.

Specific factors affecting the size of U.S. exports in future years and their relationship to this season's export forecast include the following:

- Foreign supply/use gap-This gap represents foreign excess supplies, which are inversely correlated with U.S. exports (figure 2). Foreign excess supplies are expected to total 15.6 million bales, 0.5 million above $1981 / 82$. While there is not a perfect unit-for-unit relationship between U.S. exports and foreign excess supplies, the relationship is strong enough to indicate that, with U.S. exportable supplies about the same as last season, the rise in foreign excess supplies this year largely explains the soft export market.
- U.S. market share-The shrinking of world trade means any export strength has to come from a larger trade share for the United States. Unfortunately, the U.S. share is expected to drop to 28.8 percent, from 32.4 percent last season. The expected drop is mainly caused by less competitive U.S. prices, which have exceeded foreign prices all season. The premium has narrowed recently, which may help export sales in the second half of this season.
- Exchange rates and freight costs-These are two major factors determining the foreign currency price of U.S. cotton delivered to overseas mills. The trade-weighted value of the dollar, using cotton exports as the weights, averaged 148.7 (April $1971=100$ ) during the first 5 months of this season, compared with 135.2 a year earlier. This 10 -percent gain is equivalent to a 10 -percent rise in the foreign currency price of U.S. cotton and has been a factor in this season's loss of market share. Its importance has been mitigated somewhat by dropping ocean freight rates. Freight capacity increased during 1982, and use fell, so cheaper transportation costs have prevented the appreciating dollar from having an even greater negative impact on trade.
- Export credit-The blended credit program was announced in the fall of 1982, with financing for this season's agricultural exports amounting to $\$ 500$ million. That initial allocation was totally committed within 1 month. Two programs were for cotton $-185,000$ bales to Yugoslavia and 14,000 to Portugal. Coinciding with the announcement of the PIK program, President Reagan authorized an additional $\$ 1.25$ billion in blended credit for this season, most of which has not yet been committed. Many trade analysts place U.S. cotton exports between 4.5 and 5 million bales this season. Different assumptions about the extent of blended credit used for cotton exports is a major factor explaining the range in forecasts. The popularity of the initial $\$ 500$ million authorization suggests that the new authorization will likely boost cotton sales during the next couple of months, providing support for a 5 -million-bale export forecast.
- Export commitments-Exports plus outstanding sales were 4.5 million bales in late February, 2 million below a year earlier. The export forecast for this season is only 1.6 million bales below last season. However, more competitive U.S. prices, a
U.S. Export Potential

Mil. bales


* Beginning stocks and production minus consumption.
$\Delta$ Estimated.
O Projections from World Agricultural Supply and Demand Estimates, February 14, 1983.
USDA
Figure 2
Neg. ERS 264-83(2)
strengthening world economy, and additional export financing are expected to help sales. Recent Soviet purchases of cotton and a reduction in their export offerings may also help push U.S. exports to the forecast level this season.


## Stocks Continue High, With Most Under Loan

This season's production estimate of 12 million bales and carryin stocks of 6.6 million bring the total supply to 18.7 million. With total use expected to be only 10.4 million bales, carryover stocks would build to 8.4 million27 percent above last season, more than double the desirable level, and the most since 1966/67.

Following redemptions of about 1 million bales during the first 6 months of this season, redemptions of 1980 and 1981-crop cotton from Commodity Credit Corporation (CCC) loans have nearly stopped. The most profitable option now for most of this cotton is forfeiture to the CCC. However, 1982 -crop cotton will likely continue to be placed under loan as the remainder of the crop is ginned. Some will be redeemed whenever market prices spike upward. The distribution of CCC and loan stocks of upland cotton on February 23 was:

| Stocks category | Quantity <br> Million bales |
| :--- | :---: |
| Outstanding loans |  |
| 1982 | 4.244 |
| 1981 | 2.649 |
| 1980 | .094 |
| CCC owned | .095 |
| Total | 7.082 |

High participation in the payment-in-kind (PIK) program will mean a large proportion of the 1980 and 1981 loans that mature this spring and summer will be extended and used to satisfy PIK requirements. It is likely that a portion of the 1982 loans will have to be used to cover PIK needs. The final amount will depend on program enrollment and the number of whole-base bids that USDA accepts.

## U.S. Cotton Prices

4/lb.


Neg. ERS 2597-83(3)

The PIK program will probably need to use 3 to 4 million bales for payments. Even with PIK cotton at the upper end of this range and as much as 2 million bales of 1982 cotton remaining in outstanding loans, there would still be almost $2-1 / 2$ million bales of free stocks on August 1, 1983. Although overall cotton supplies are excessive, prices have already shown strength among the better qualities, and it is likely that only these qualities have much chance of continuing to be bid up this spring and summer. For most qualities, price gains will be limited to carrying costs. The extent of tight farmer holdings and PIK enrollment in California and Arizona will be key factors determining the availability of the better qualities. High enrollment in these States would mean more of the better qualities of the 1982 crop would have to be kept off the market to satisfy PIK entitlements.

## PIK Helps Move Spot Prices; <br> Farm Prices Exceed Expectations

The expectation that PIK will tie up a significant portion of the cotton under loan while simultaneously removing several million acres from production, a pickup in economic and textile activity since Christmas, and recent unexpected sales to the USSR have helped boost spot prices. Loan placements of higher quality cotton have also restricted such supplies and added price strength. During early March, spot prices for SLM 1 $1 / 16$-inch cotton reached nearly 65 cents a pound, 5 cents above prices prevailing at the time PIK was announced and nearly 8 cents above a year earlier.
Farm prices have been slightly above expectations during the first 5 months of this season, averaging 58.4 cents a pound (figure 3). Normally, sales during December and January are dominated by lower priced Texas cotton. However, this season, prices for those 2 months averaged 57 cents a pound. The relatively stronger prices probably reflect proportionally lower marketings of Texas cotton, which were only 23 percent of total U.S. production, compared with 36 percent a year ago. Some Texas marketings were probably reflected in the early February farm price, which fell to 53.7 cents a pound.

Cotton Use/Supply and Farm Price


## Prices When Ending Stocks-to-use Ratio Exceeded

 40 Percent ${ }^{1}$

[^1]
## Farm-Price Fundamentals Are Weak

Farm-price relationships are presented in figures 4 and 5. Figure 4 shows the relationship between the use/supply ratio and the season-average farm price. This season's use/supply ratio is 56 percent, down from 64 percent last season. Over the past 6 years, a 1-percentagepoint change in the ratio has been associated with a 1 -cent-a-pound change in price in the same direction. If this relationship were to hold this year, it would imply an average farm price below 50 cents a pound. However, the loan rate, designed to function as a "safety net," has been doing just that.

Over the past two decades, the loan rate has served as a fairly effective floor on cotton prices. Figure 5 shows the ratio of ending stocks to total use plotted against the ratio of the season-average farm price to the loan rate. Only data for years when the stocks-to-use ratio exceeded 40 percent are used. The figure clearly shows that the relationship becomes flat (the loan rate about equals the farm price) at stocks-to-use ratios in excess of 50 percent. This season's ratio is expected to be 81 percentwell onto the flat portion of the curve. This figure also shows that the stocks-to-use ratio has to be reduced some 25 to 35 percentage points before major price impacts can be expected.

## ELS Cotton Situation

## Mill Use Fails To Pick Up; Huge Stocks in Prospect

Mill use of extra-long staple (ELS) cotton is expected to total 47,000 bales this season. This forecast is down sharply from forecasts earlier in the season. Through the first 5 months of $1982 / 83$, mill use averaged only 45,000 bales at a seasonally adjusted annual rate, compared with 53,000 a year earlier. The 47,000 -bale forecast represents a substantial deterioration in ELS mill use, which averaged 64,000 bales during 1979/80$1980 / 81$. Mill use will have to stage a moderate gain this spring even to reach this season's forecast. Strength in the overall economy and in the upland cotton market, combined with some new products, such as Pima sheets and shirts, could provide the impetus to boost ELS use during the second half of this season.

Declining total use, coming at the same time as the largest American-Pima crop since 1977, will cause ELS carryover stocks to skyrocket this season. Exports are expected to total 13,000 bales, up marginally from a year ago, but only 40 percent of 2 years earlier. U.S. prices are not competitive with foreign ELS prices, such as those for Peruvian ELS, which is similar in quality to American-Pima. Total ELS use is expected to be 60,000 bales-a third of this season's supply of 181,000 . Consequently, carryover stocks will likely build to 116,000 bales, compared with beginning stocks of 65,000 and a more desirable level of around 50,000 . ELS prices averaged $\$ 1.04$ a pound during August-December, compared with the average loan rate of 99.89 cents a pound. It is likely that superior qualities were marketed while others were put under loan. Some 35 to 40 percent of this season's carryover may be owned by the CCC, as large loan forfeitures are expected this spring.

Faced with prospects for excessive stocks, the lyos ELS acreage allotment has been lowered to 80,131 , down from last season's 120,200 acres. This allotment is expected to be restrictive in Arizona and will likely cause 1983 plantings to drop 10,000 acres from the 73,000 planted in 1982. The February prospective plantings survey showed grower intentions of 64,000 acres. Even with such an acreage drop and trend yields, produc. tion would still top 80,000 bales. Total use will likely be up only moderately from this season's 60,000 bales, sug. gesting that ELS stocks could build again in 1983/84.

## Outlook for 1983/84

## Effectiveness of PIK Dominates Outlook

President Reagan announced the PIK program on January 11, 1983. This is a diversion program designed to put acreage into conserving uses in addition to the area diverted under the acreage reduction (ARP) and paid land diversion (PLD) programs. Participants in the PIK program have the option to idle not less than an additional 10 percent or more than 30 percent of a farm's base acreage for cotton and receive 80 percent of the farm's program yield as payment for each acre idled. In addition, a producer may submit a bid to withdraw a farm's entire base from production. The whole-base bid cannot exceed the offer rate of 80 percent of the program yield that is in effect for the 10 - to 30 -percent PIK.

Another program feature especially relevant for cotton is the availability of a special PIK for producers exceeding the $\$ 50,000$ limit for cash program payments. Producers whose cash payments are reduced because of the limit may request a reduction in their conservation use requirement for the acreage reduction program. Or, they may forgo the reduction and receive PIK on this acreage. The PIK compensation per reduced acre would be 50 percent of the farm's program yield.

As the first special article in this issue points out, the ARP and PIK programs provide strong incentives to participate in one or both. The incentives are even stronger in the West (where participation is usually lower) because PIK is not counted against the $\$ 50,000$ limit and because of the special PIK provisions for producers affected by the limit.

Program participation and yield will be the primary factors that determine the extent to which 1983/84 carryin stocks-forecast at 8.4 million bales-may be reduced during next season. The following table provides some insight on the production impact of alternative levels of planted acreage and yield, assuming harvested area is 95 percent of planted area:

| Yield | Planted area |  |  |  |  |  |
| :---: | ---: | ---: | :---: | ---: | ---: | :---: |
| Lbs/acre | Million acres |  |  |  |  |  |
|  | 7.8 | 8.3 | 8.8 | 9.3 | 9.8 |  |
|  | Production |  |  |  |  |  |
|  | Million bales |  |  |  |  |  |
|  | 7.3 | 7.8 | 8.3 | 8.7 | 9.2 |  |
| 475 | 8.5 | 9.0 | 9.6 | 10.1 | 10.7 |  |
| 550 | 9.6 | 10.3 | 10.9 | 11.5 | 12.1 |  |

## Prospective Plantings Report Suggests PIK Impact

The USDA survey of growers' prospective plantings, taken around February 1, indicated cotton producers intend to plant 9.28 million acres this spring, a 19 percent drop from 1982 (table 3). This is consistent with the previous table, which shows a range of the most likely production outcomes. However, the survey intentions fall near the middle of the acreage range. The survey results are only a rough guide, because many farmers had not decided on their final planting strategy by February 1. Still, the survey results provide evidence of the strong participation expected. A major qualification of the survey results is that they probably do not fully account for whole-base bids. The final outcome will depend on how many whole-base bids USDA accepts and farmers' final planting decisions.

Table 3-Cotton: All kinds, U.S. acreage planted by States

| State |  |  |  |
| :--- | ---: | :---: | :---: |
|  | 1982 | Indicated <br> $1983^{1}$ | 1983 as a <br> percentage <br> of 1982 |
| Upland | 1,000 acres |  |  |
| Alabama |  |  | Percent |
| Arizona | 302 | 225 |  |
| Arkansas | 490 | 310 | 75 |
| California | 435 | 375 | 63 |
| Georgia | 1,380 | 1,100 | 86 |
| Louisiana | 180 | 145 | 80 |
| Mississippi | 610 | 400 | 81 |
| Missouri | 1,050 | 800 | 66 |
| New Mexico | 158 | 150 | 76 |
| North Carolina | 79 | 70 | 95 |
| Oklahoma | 74 | 55 | 89 |
| South Carolina | 480 | 450 | 74 |
| Tennessee | 97 | 85 | 94 |
| Texas | 275 | 240 | 88 |
| Other states ${ }^{2}$ | 5,800 | 4,800 | 87 |
| Total | 15.9 | 12.2 | 83 |
| American-Pima | $11,425.9$ | $9,217.2$ | 77 |
| Texas |  |  | 81 |
| New Mexico | 19.5 | 22.0 | 113 |
| Arizona | 9.5 | 11.0 | 116 |
| Total | 44.1 | 31.0 | 70 |
| Total | 73.1 | 64.0 | 88 |
| (all cotton) | $11,499.0$ | $9,281.2$ | 81 |
| Prosperive |  |  |  |

${ }^{1}$ Prospective plantings report of February 17, 1983. ${ }^{2}$ Virginia, Florida, illinois, Kentucky, and Nevada.

## Demand Rise May Not Be Enough To Balance Market

It is clear that unless unusual circumstances prevail, production in 1983 will fall short of this season's 12 million bales. To reduce stocks, demand must exceed production, which is likely in 1983/84. Mill use and exports are both likely to rise. With the textile trade balance expected to remain about the same as this season, a stronger U.S. economy could boost mill use by 0.2 to 0.4 million bales in 1983/84. Foreign area will likely remain about the same, and with trend yields and a rise in foreign use of 1 to 2 million bales, the foreign supply/use gap could narrow by 0.5 to 1.5 million bales, causing a similar gain in U.S. exports.

What would be the impact on carryover stocks? The following table shows carryover levels in 1983/84 for three demand and yield alternatives, assuming plantings of 8.8 million acres and an unaccounted for difference of 0.1 million bales:

| Yield | Total use <br> Million bales |  |  |
| :---: | :---: | :---: | :---: |
| Lbs/acre |  |  |  |
|  | 11.0 | 11.5 | 12.0 |
|  | Carryover stocks |  |  |
|  |  | 5.3 | 4.8 |
| 475 | 5.8 | 6.6 | 6.1 |
| 550 | 7.1 | 7.9 | 7.4 |

Only under a fairly unlikely set of conditions-a 12 -million-bale total use and low yields-would carryover stocks fall below 5 million bales. And, only under the low-yield alternative would the stocks-to-use ratio fall enough to cause very significant price reactions.

## World Outlook for 1982/83

## Recession Continues to Restrain Mill Use

World cotton consumption is forecast at 66.5 million bales this season, 0.8 million above 1981/82 (table 4). China's mill use is expected to rise 0.6 million bales to 16.4 million. So, foreign mill use, excluding China, is essentially as flat as it has been since 1979/80. By January, there was little evidence of any strength in foreign textile activity, which apparently will follow, but only with a lag, a general rebound in the U.S. economy.

Among the importing countries, there are only a few substantive changes from last season's mill use. Consumption in Eastern Europe is expected to fall 0.1 million bales to 3.35 million, with 60 percent of the decline in Poland. In China, retail prices of cotton goods have been raised relative to manmade-fiber items, a development likely to further reduce China's future import needs for cotton. In Korea, Japan, Hong Kong, and Taiwan-the primary U.S. cotton buyers-mill use is placed at 6.43 million bales, more than 0.2 million below last season. Only Korea is expected to register a slight gain. Most of the drop will likely occur in Japan, where imported textiles continue to weaken domestic use. The Japanese Spinners Association is expected to ask for an increase in the voluntary production restraints on mills.

Among exporting countries, the sharpest gains in mill use are expected in the USSR and Argentina. Soviet mills will likely use 9.5 million bales this season, up 0.1 million from 1981/82. Argentina is expected to use 435,000 bales, an 18 -percent gain. With this season's crop greatly curtailed, Mexican mill use is forecast at 500,000 bales, 120,000 below 1981/82.
Global production is expected to total 67.9 million bales this season. Foreign production, at 55.9 million, is 0.4 million above last season. This rise reflects growth in Chinese area and yield, with production now forecast at 15.6 million bales, 2 million above 1981. Small gains were registered in Brazil, Pakistan, and the Sudan. Steep declines in output occurred in Mexico, 0.6 million

Table 4-Cotton: Supply and use; U.S., major importers, major exporters and world

| Year beginning August 1 | United States | World less United States |  |  |  | World ${ }^{3}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Major importers | Major exporters ${ }^{2}$ | Other | Total |  |
|  | Million 480-pound bales |  |  |  |  |  |
| 1981/82 |  |  |  |  |  |  |
| Beginning stocks | 2.7 | 9.1 | 4.7 | 6.3 | 20.1 | 22.8 |
| Production | 15.6 | 14.5 | 24.5 | 16.4 | 55.5 | 71.1 |
| Imports | (4) | 17.1 | . 2 | 2.6 | 19.8 | 19.9 |
| Use |  |  |  |  |  |  |
| Mill use | 5.3 | 31.0 | 15.1 | 14.3 | 60.5 | 65.7 |
| Exports | 6.6 | . 4 | 9.2 | 4.1 | 13.8 | 20.3 |
| Ending stocks | 6.6 | 9.3 | 4.8 | 6.8 | 20.9 | 27.5 |
| 1982/83 ${ }^{5}$ |  |  |  |  |  |  |
| Beginning stocks | 6.6 | 9.3 | 4.8 | 6.8 | 20.9 | 27.5 |
| Production | 12.0 | 16.3 | 23.2 | 16.3 | 55.9 | 67.9 |
| Imports | (4) | 14.9 | . 2 | 2.6 | 17.7 | 17.7 |
| Use |  |  |  |  |  |  |
| Mill use | 5.4 | 31.3 | 15.3 | 14.6 | 61.1 | 66.5 |
| Exports | 5.0 | . 4 | 7.7 | 4.4 | 12.5 | 17.5 |
| Ending stocks | 8.4 | 8.7 | 4.9 | 6.8 | 20.5 | 28.9 |

${ }^{1}$ Includes Western Europe, Eastern Europe, Japan, PRC, Korea, Taiwan, and Hong Kong. ${ }^{2}$ Includes the USSR, Pakistan, Egypt, Sudan, Turkey, Central America, and Mexico. ${ }^{3}$ Total trade of individual countries, including intra-regional trade. World imports and exports may not balance due to cotton in transit and reporting discrepancies in some countries. ${ }^{4}$ Less than 50,000 bales. ${ }^{5}$ February projections.

Totals may not add and stocks may not balance due to rounding, a small quantity of cotton destroyed, and differences unaccounted.
bales, and in the USSR, 0.5 million. India, Greece, Egypt, and Australia also witnessed smaller outturns this season.

World exports are forecast at 17.5 million bales, down 2.8 million from last season and the lowest since 1974. Greater self-sufficiency in China will likely reduce import needs by 1.5 million bales to just 0.7 million. Korea, Japan, Hong Kong, and Taiwan are expected to reduce their combined imports by about 450,000 bales. So, most of this season's drop in world imports will take place in the Far East, where the U.S. trade share historically has been large.

Foreign carryover stocks are likely to drop slightly to 20.5 million bales, compared with $1981 / 82$ 's 20.9 million. With consumption stagnant and exporters' supplies up, many importing countries are choosing to use up stocks. Most of the drop in stocks will likely occur in China 200,000 bales-and in Western European importing countries-150,000.

## U.S. Prices Becoming More Competitive

Last season, when U.S. prices were near the loan rate, quotations in Northern Europe for Memphis Middling 1 $3 / 32$-inch cotton averaged 2.11 cents a pound above the Outlook "A" index. This season, because U.S. prices remained near a higher loan rate, U.S. cotton became even more expensive relative to foreign cotton. During December, the spread widened to 3.58 cents a pound (table 5).

The spread began to narrow in late January as supplies of better quality foreign cotton became tighter and the " $A$ " index moved up. By January 20, the premium on U.S. cotton was down to 2 cents a pound, and a week later, it fell to 0.85 cents. The premium fell again during early February but began rising later that month as

Table 5-Index of prices of selected cotton growths and qualities, and price per pound of U.S. M-1-3/32" c.i.f Northern Europe

| Month | 1982 |  | 1.983 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Index ${ }^{1}$ | $\begin{gathered} \text { U.S. } \\ M \\ 1-3 / 32^{\prime \prime} \end{gathered}$ | Index ${ }^{1}$ | $\begin{gathered} \text { U.S } \\ M \\ 1-3 / 32^{\prime \prime} \end{gathered}$ |
|  | Cents |  |  |  |
| January | 69.98 | 72.75 | 71.88 | 74.25 |
| February | 69.98 | 72.50 |  |  |
| March | 70.44 | 74.69 |  |  |
| April | 71.52 | 77.40 |  |  |
| May | 76.69 | 78.88 |  |  |
| June | 75.64 | 75.38 |  |  |
| July | 78.47 | 80.60 |  |  |
| August | 76.40 | 77.13 |  |  |
| September | 72.75 | 74.10 |  |  |
| October | 70.21 | 73.38 |  |  |
| November | 69.04 | 72.00 |  |  |
| December | 69.67 | 73.25 |  |  |
| Average | 72.57 | 75.17 |  |  |

TOutlook "A" index of Liverpool Cotton Services. Average of the 5 lowest priced of 10 selected growths.

Cotton Outlook, Liverpool Cotton Services.
U.S. spot prices rose. By early March, the premium was up to 2 cents a pound.

A factor that has helped narrow the spread since December has been light offerings of Soviet cotton. Soviet mill demand appears to be strengthening, and with a smaller and poorer quality crop, there has been a reduction in the amount of Soviet cotton available for export. During the first 2 months of 1983, very little

Soviet cotton was offered for sale in Western Europe. Furthermore, the USSR-the world's second largest exporter-may have recently purchased for importation over a half million bales.

## MANMADE FIBER REVIEW

## Fourth Quarter Improves

Manmade fiber production (including glass) in fourthquarter 1982 was 2 billion pounds, 2 percent more than the third quarter but 10 percent below a year earlier (table 25). Fourth-quarter staple production was about 0.96 billion pounds, 4 percent above the third quarter but 9 percent less than a year earlier. Filament production was about 1.04 billion pounds, the same as the third quarter but 11 percent below a year earlier. Manmade fiber production in 1982 was 7.97 billion pounds, 19 percent less than in 1981. Staple fiber production totaled 3.76 billion, and filament fiber output was 4.2 billion, both 19 percent below 1981.
Manmade fiber capacity in the fourth quarter was 3 billion pounds, the same as the third quarter but 2 percent less than a year earlier. Staple capacity was about 1.33 billion pounds, and filament capacity was 1.67 billion. Manmade fiber capacity for 1982 was 12.1 billion pounds, 2 percent more than in 1981. Staple capacity was 5.39 billion pounds, almost 1 percent greater than the previous year. Filament capacity was 6.68 billion pounds, fractionally less than in 1981. Manmade fiber plants operated at an average rate of 66 percent during 1982, compared with 82 percent in 1981. Staple plants operated at 70 percent, while filament plants produced at 63 percent. To obtain a desired rate of return on investment, fiber producers like to operate at 85 to 90 percent of capacity.

Manmade fiber plant capacity in 1984 is expected to increase at an average annual rate of 1.2 percent from 1982. The average annual expansion rate of plant capacity for staple fibers will likely be about 0.7 percent; the rate for filament fiber plants will be 1.6 percent. The major fiber types with their higher capacity growth rates and growth markets are: olefin filament, 5 percent, upholstery and carpets; glass filaments, 3.2, reinforced plastics and roofing shingles; nylon staple, 2.9 , cut pile carpets; and olefin staple, 2.2 , carpets and nonwovens. The major fiber types with a shrinking capacity and their declining markets are: polyester filament, 0.5 percent, doubleknit outerwear, and acetate filament, 0.3 percent, knit tricot apparel.

Total shipments (domestic plus exports) of nonglass manmade fibers in fourth-quarter 1982 were 1.76 billion pounds, almost 2 percent above the third quarter but 10 percent less than a year ago. Total shipments for 1982 were 7.07 billion pounds, 18 percent less than in 1981. They were divided between noncellulosic fibers, 6.51 billion pounds or 92 percent, and cellulosic fibers, 0.56 billion pounds or 8 percent.

Domestic shipments of noncellulosic fibers were 1.49 billion pounds in the fourth quarter, 1.5 percent below the previous quarter and 1 percent less than a year earlier. Cellulosic fibers were 0.11 billion pounds, the same as in the third quarter and 18 percent below a year earlier. Domestic shipments of noncellulosic fibers for 1982 were 5.92 billion pounds, 13 percent below 1981. Filament shipments experienced a greater decline, 17 percent, than did staple fiber, 9 percent. Filament markets in textured woven and doubleknit apparel experienced continued consumer dissatisfaction. Cellulosic fiber shipments were 0.46 billion pounds, 26 percent below 1981. Use of acetate and rayon fibers is declining because of depressed consumer demand and loss of markets to noncellulosic fibers.

Table 6-Major manmade fiber markets ${ }^{1}$

| Fiber type | 1981 |  |  |  | 1982 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1Q | 2Q | 3Q | 4Q | $1 Q$ | 2Q | 3Q | 4Q |
|  | Million pounds |  |  |  |  |  |  |  |
|  | Woven products |  |  |  |  |  |  |  |
| Total | 580.7 | 646.0 | 614.6 | 553.8 | 480.5 | 491.0 | 476.8 | N.A. |
| Polyester | 380.3 | 440.8 | 410.2 | 358.8 | 318.1 | 322.1 | 318.6 | N.A. |
| Rayon | 56.5 | 58.2 | 57.6 | 52.4 | 38.2 | 34.4 | 35.1 | N.A. |
| Olefin | 58.5 | 59.2 | 57.5 | 55.2 | 49.3 | 53.6 | 48.8 | N.A. |
| Nylon | 43.5 | 43.2 | 44.0 | 44.9 | 41.3 | 43.5 | 39.8 | N.A. |
| Acetate | 24.3 | 29.9 | 31.8 | 27.2 | 23.2 | 24.0 | 21.9 | N.A. |
| Acrylic | 17.6 | 14.7 | 13.5 | 15.3 | 10.4 | 13.4 | 12.6 | N.A. |
|  | Knit products |  |  |  |  |  |  |  |
| Total | 402.2 | 427.7 | 384.1 | 325.6 | 318.7 | 332.6 | 318.8 | N.A. |
| Polyester | 201.0 | 203.0 | 189.5 | 160.1 | 153.4 | 153.8 | 152.9 | N.A. |
| Nylon | 82.8 | 85.3 | 76.7 | 73.6 | 63.6 | 60.2 | 61.9 | N.A. |
| Acrylic | 87.2 | 96.8 | 90.5 | 72.7 | 79.1 | 95.6 | 85.1 | N.A. |
| Rayon | 28.5 | 39.3 | 24.8 | 16.9 | 20.6 | 21.2 | 17.1 | N.A. |
|  | 2.7 | 3.3 | 2.6 | 2.3 | 2.0 | 1.8 | 1.8 | N.A. |
|  | Carpets |  |  |  |  |  |  |  |
| Total | 487.0 | 507.5 | 399.6 | 333.5 | 359.4 | 412.9 | 439.2 |  |
| Nylon | 369.7 | 379.6 | 282.9 | 218.8 | 248.7 | 291.5 | 319.8 | $293.9$ |
| Olefin <br> Polyester | 90.3 | 90.3 | 87.3 | 84.4 | 86.1 | 89.2 | 91.7 | N.A. |
| Polyester Acrylic | 27.0 | 37.6 | 29.2 | 30.2 | 24.6 | 32.0 | 27.6 | 30.6 |
| Acrylic Rayon | - | - | - 0.2 | - 0.1 | - | 0.2 | - | N.A. |
| Filament | - | - | 0.2 | 0.1 | - | 0.2 | 0.1 | N.A. |

[^2]Compiled from Textile Organon.

Exports of manmade fibers, particularly polyester staple, were the lowest in 5 years. Overseas shipments in 1982 were 0.69 billion pounds, 42 percent less than in 1981. The smaller shipments primarily resulted from reduced sales to the Far East.

## Major Markets: Textile and Carpet Uses Down

The three major manmade fiber markets are shown in table 6. The largest market, woven textiles, consumed 477 million pounds in third-quarter 1982, 3 percent less than the second quarter and 22 percent less than a year earlier. Polyester fibers continue to dominate ( 67 percent) this market. Polyester staple was 77 percent of the manmade staple fibers used in weaving, while polyester filament made up 53 percent of the filament fibers.

Carpet use of manmade fibers, 439 million pounds in the third quarter, increased 6 percent from the second quarter and was 10 percent greater than a year earlier. The increase reflects the improvement in construction activity, particularly residential housing.

Preliminary fourth-quarter data indicate that nylon use in carpets declined about 6 percent because of rising inventories. At 73 percent, nylon is the most important manmade fiber used in carpets. Nylon staple accounts for 78 percent of the manmade staple fibers used in carpets, while nylon filament makes up 68 percent of total filament fibers used in carpets.

The quantity of manmade fibers used to make knitted products, 319 million pounds, declined 4 percent from the second quarter and 17 percent from a year earlier. Most of this decline occurred in filament knit fibers, which are used to make doubleknit and tricot apparel.

The market for the chemicals that go into the making of manmade fibers has been mixed. Virgin xylene, a precursor for polyester fibers, has recently been in short supply. In the last 2 years, some production facilities have been closed because of reduced fiber output. The price dropped from $\$ 1.25$ to $\$ 1.30$ a gallon last summer to $\$ 1.18$ in mid-January. However, low inventories and rather strong interest in xylenes in the Far East caused the price to rise to $\$ 1.20$ in early February.

The demand for caprolactam promises to improve if construction activity rises. Caprolactam, one of the major raw materials for nylon, has been selling for 85$1 / 2$ to $86-1 / 2$ cents a pound since last summer, with some discounting reported. Propylene, used to make polypropylene and acrylic fibers, has been quoted by producers at 18-1/2 cents for chemical grade and 20 cents for polymer grade. Nevertheless, spot sales are reportedly taking place below these levels.

## WOOL SITUATION

## U.S. Situation

## Fine Wool Use Strong

Mill consumption of raw wool in 1982 was 114.8 million pounds, clean, 17 percent below the previous year (table 7). The quantity of raw wool used in carpet manufacture was 9.8 million pounds, 10 percent less than in 1981. Wool use in apparel was 105 million pounds, down 18 percent from 1981. The strong mill demand for the finer grades continues. Compared with a year earlier, the consumption of raw wool in the worsted system

Table 7-U.S. mill consumption of raw wool, scoured basis

| Year | Apparel <br> wool |  |  |  | Carpet <br> wool | Total |
| :---: | ---: | :---: | :---: | :---: | :---: | :---: |
| 1,000 pounds |  |  |  |  |  |  |
| 1975 | 94,117 | 15,908 | 110,025 |  |  |  |
| 1976 | 106,629 | 15,117 | 121,746 |  |  |  |
| 1977 | 95,485 | 12,526 | 108,011 |  |  |  |
| 1978 | 102,246 | 13,009 | 115,255 |  |  |  |
| 1979 | 106,533 | 10,513 | 117,046 |  |  |  |
| 1980 | 113,423 | 10,020 | 123,443 |  |  |  |
| 1981 | 127,752 | 10,896 | 138,648 |  |  |  |
| $1982^{1}$ | 105,009 | 9,825 | 114,843 |  |  |  |
| Preliminary |  |  |  |  |  |  |
| Compiled from reports of the Bureau of the Census. |  |  |  |  |  |  |

Table 8-Wool supply and disappearance, annually, 1979-84, ciean content

| Item | 1979 | 1980 | 1981 | 1982 | $1983^{1}$ | $1984^{1}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Million pounds |  |  |  |  |  |
| Stocks, Jan. 1 | 48.5 | 46.8 | 50.6 | 52.0 | 56.8 | 53.4 |
| Production | 56.0 | 56.4 | 58.8 | 58.6 | 53.1 | 53.9 |
| Imports | 42.3 | 56.5 | 74.3 | 64.4 | 60.0 | 60.0 |
| Diff. unacc. | 17.3 | 14.6 | 7.2 | - | - | - |
| Total supply | 164.1 | 174.3 | 190.9 | 173.0 | 169.9 | 167.3 |
| Mill use | 117.0 | 123.4 | 138.6 | 114.8 | 112.0 | 115.0 |
| Exports | 0.3 | 0.3 | 0.3 | 1.4 | 4.5 | 0.7 |
| Total use | 117.3 | 123.7 | 138.9 | 116.2 | 116.5 | 115.7 |
| Stocks, Dec. 31 | 46.8 | 50.6 | 52.0 | 56.8 | 53.4 | 51.6 |

'Estimated.
Compiled from reports of the Bureau of the Census.

Table 9-U.S. imports of dutiable and duty-free raw wool for consumption, clean content

| Year | Dutiable | Duty-free | Total |
| :--- | :---: | :---: | ---: |
| 1,000 pounds |  |  |  |
| 1975 | 16,605 | 17,021 | 33,626 |
| 1976 | 38,387 | 19,076 | 57,463 |
| $1977^{1}$ | 36,303 | 22,655 | 258,958 |
| 1978 | 27,000 | 23,404 | 50,404 |
| 1979 | 20,283 | 22,047 | 42,330 |
| 1980 | 30,491 | 25,992 | 56,483 |
| 1981 | 48,106 | 26,146 | 74,252 |
| 1982 | 39,989 | 21,433 | 61,422 |

${ }^{1}$ Beginning November 1977 duty-free wools include all 46's and coarser grades of wool by Public Law 95-162. ${ }^{2}$ Revised.
Compiled from reports of the Bureau of the Census.
declined less ( 10 percent) than in the woolen system ( 25 percent). In both 1981 and 1982, about 60 percent of the raw wool for apparel in both the woolen and worsted systems was 60's and finer. By comparison, the percent for 1978-80 was 56 percent. Depressed consumer demand is expected to limit mill consumption in 1983 to around 112 million pounds (table 8).
Imports of raw wool were 61.4 million pounds, clean, in 1982, compared with 74.3 million in 1981 (table 9). Duty-free imports were 21.4 million pounds, 82 percent of
1981. Most of this type of raw wool comes from New Zealand ( 71 percent), the United Kingdom ( 15 percent), and Argentina ( 7 percent). Dutiable raw wool imports were 40 million pounds, 83 percent of 1981. About 92 percent came from four countries: Australia ( 62 percent), the Republic of South Africa (12 percent), Argentina (11 percent), and Uruguay ( 8 percent).

The finer grades of imported raw wool continue to be important. In 1982, raw wool finer than 58 's was 81 percent of the dutiable grades, compared with an average of 79 percent for the previous 4 years. The raw wool content of imported textile products was 112 million pounds, 1 percent less than last year (table 26).

The inventory of stock sheep on January 1, 1983, was reported to be 10.3 million, 10 percent below the previous year. It was the lowest number since estimates were started in 1867. Therefore, wool production in 1983 is forecast at 53 million pounds, clean, compared with 58.8 million in 1981 and an estimated 58.6 million in 1982 (table 8).

Exports of raw wool in 1982 were 1.35 million pounds, clean, four times the average of the previous 4 years. Four countries received 87 percent of these shipments: France ( 36 percent), Canada ( 19 percent), Uruguay (16 percent), and the United Kingdom (16 percent). The relatively large overseas shipments are due to a halving of the price from last year. The raw wool content of exported textiles was 11.9 million pounds in 1982, 3 percent less than in 1981 (table 27).

## Wool Prices Remain Low

The market for wool so far this current season has been characterized by smaller purchases. The quantity of territory wool (Texas, Rocky Mountains, and the Pacific Coast) purchased by mills has been insufficient to identify a market price since early September. Market prices for fleece wools (east of the Rocky Mountains) have not been quoted since January 1982. Because of the oligopsonistic nature of the domestic wool business, the mills have been operating with a minimum inventory, causing wool stocks to be maintained by wholesalers and producers.

In December 1982, USDA's Agricultural Stabilization and Conservation Service announced the support price for 1983 marketings, $\$ 1.53$ a pound, shorn wool. Pulled wool will continue to be supported at a level comparable to the support price for shorn wool through payments on unshorn lambs.

The average farm price in January dropped to 53.2 cents a pound, greasy, from an average of 61 cents during September-December. It rose to 57.7 in February (table 10). This relatively low price reflected a predominance of medium and coarser wool sales. The January price was the lowest since January 1976, when it was 51 cents. In February, the price of territory wool varied from 46 to 80 cents, while the fleece wool price ranged from 31 to 50 cents. By late February, shearing was underway in most of the United States, although it was still only in the early stages.

The 1982 price for the finer grades of imported wool declined about 17 to 20 percent from the spring high to the season's low during November-December. Meanwhile, the medium and coarser grades of imported wool declined about 14 percent. Since then, the price of all types of imported wool has risen an average of about 4 percent.

Table 10-Average U.S. farm prices per pound for shorn wool, grease basis

| Month | 1978 | 1979 | 1980 | 1981 | $1982^{1}$ | $1983^{9}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| January | 72.6 | 78.7 | 82.1 | 84.6 | 80.4 | 52.3 |
| February | 68.9 | 77.3 | 86.8 | 88.3 | 80.4 | 57.7 |
| March | 71.2 | 79.5 | 93.5 | 91.8 | 83.4 |  |
| April | 73.7 | 86.9 | 92.2 | 101.0 | 89.1 |  |
| May | 73.9 | 88.0 | 86.6 | 99.8 | 88.5 |  |
| June | 76.2 | 89.4 | 86.5 | 101.0 | 79.6 |  |
| July | 74.8 | 87.7 | 85.8 | 94.4 | 74.5 |  |
| August | 74.6 | 81.8 | 85.5 | 84.8 | 68.3 |  |
| September | 72.7 | 84.9 | 84.7 | 84.3 | 66.7 |  |
| October | 77.1 | 87.5 | 89.4 | 87.3 | 59.2 |  |
| November | 81.2 | 89.0 | 92.1 | 91.1 | 61.6 |  |
| December | 73.6 | 86.5 | 90.9 | 84.2 | 57.1 |  |
| Weighted |  |  |  |  |  |  |
| season |  |  |  |  |  |  |
| $\quad$ average | 74.5 | 86.3 | 88.1 | 94.5 | 70.0 |  |

[^3]
## World Overview

## Drought Affects Flock Size

The latest information indicates that world raw wool production for 1982/83 is 3.58 billion pounds, clean. The plus and minus changes from last season in the individual wool-producing countries largely balanced each other, making the current world clip only slightly more than last season's.

The revised forecast of this season's Australian wool production is 1.53 million pounds, clean, about 3 percent less than in 1981/82. The decline resulted from the worst Australian drought in a century. Sheep numbers there this spring are expected to be 3 percent less than a year earlier, resulting in a lower clip next year, at least 6 percent smaller.

Wool output in the Soviet Union, the largest sheepraising country, is expected to show a slight increase because slaughterings have not been as high as earlier reported. Despite a good lambing season in New Zealand (the main source of crossbred and carpet wools), a long winter drought has limited the clip to 816 million pounds, greasy, only a 2 -percent increase from last season. Dry weather will also keep wool production in South Africa the same as last year. Sheep numbers and wool production in China, Pakistan, and Uruguay are expected to continue their earlier growth trends.

Because of the smaller Australian output, the merino share of this season's clip, 39 percent, is less than 1 percent smaller than last season. The shares for the coarser grades are: crossbred, 34 percent, and carpet wools, 27 percent-both about the same as last year.

This season's world carryin of 364 million pounds, the highest in 5 years, was mainly the result of the purchasing by wool marketing authorities to maintain prices in the first half of 1982. About two-thirds of the carryin was held by wool marketing authorities in Australia, New Zealand, and South Africa.

## Moderate Price Rise Expected

World wool prices and demand continue to be very sensitive to economic conditions. The major wool-consuming countries are experiencing high unemployment and subdued consumer spending. Yet, falling interest and inflation rates point to some economic recovery.

The season-average price in the Australian market, as measured by its market indicator (a weighted-average index across 11 wool categories), is expected to be about 440, 2 percent above $1981 / 82$. In fall 1982, the market indicator averaged about 433 to 432 before dropping to 426 in December. To maintain prices above the 422 floor, the Australian Wool Corporation had to purchase almost one-third of the wool offered for sale in the first half of the season. As a result, corporation stocks doubled, ending the year at almost 1.1 million bales.

Australian prices in January and early February rose to 438 as a result of increased buying from Eastern Europe, the European Community, and China. They are expected to strengthen in the season's second half because of an improvement in world economic activity and, therefore, in wool demand. Other factors also influencing higher prices are a decline in Australian wool production (especially if the drought continues beyond next fall), a possible increase in the price of noncellulosic fiber, and a relatively strong Australian dollar.

In fourth-quarter 1982, New Zealand prices weakened almost continuously, reaching a low of 231 as measured by the New Zealand market indicator in mid-January. At that point, it was 11 percent below the season's high in August. With moderate interest from European, Chinese, and Japanese buyers, the market indicator rose about 4 percent to 240 by mid-February. Because the New Zealand Wool Board allowed their wool to flow steadily on to the world market, they were able to reduce their stockpile 8 percent from the season's opening level.

The South African wool market was characterized last fall by an abnormal supply of wool being available at a time of depressed demand. The market indicator fell 9 percent from the season's high of 556 in September to a low of 504 in December. Stocks at the end of 1982 were 76 percent higher than at the season's opening. However, in January, there was a much better tone to the market, with the indicator rising to 513 at month's end. By mid-February, the market indicator climbed to 535 as a combined result of the continually improving demand for wool and a weakening in the exchange rate of the Rand.

## MOHAIR SITUATION

The U.S. angora goat inventory on January 1, 1983, was estimated at 1.14 million head, up almost 1 percent from a year earlier. Shearing started in mid-January and should be completed by late March. Because of dry range conditions last fall, the clip, which is forecast at 4.25 to 4.5 million pounds, will be finer than usual, contain less grease, and have less hair per fleece. At yearend, U.S. mohair stocks were estimated at 500,000 pounds, the lowest in several years.
Mohair sales were quite strong in late November and December. The price of adult hair rose from $\$ 1.70$ in November to $\$ 1.90$ at year's end; it stood at $\$ 2.05$ to $\$ 2.10$ in late January. Support prices for mohair in 1983 will be $\$ 4.627$ a pound, up 16.3 percent from last year. Mohair is being supported at the same percent of parity as wool. The weighted-average price of mohair during 1982 was probably $\$ 2.60,74$ percent of the 1981 price.
Returns from a referendum held in December 1982 among mohair producers show that over 78 percent voted to authorize deductions from CCC incentive payments to finance promotion efforts. The voters in favor of the deductions represented almost 85 percent of the angora goats. The proposed agreement authorizes deductions from payments made under the National Wool Act on mohair marketed during 1982-85.

Mohair exports in 1982 were 7.74 million pounds valued at $\$ 28.5$ million. The export volume was about 9 percent above 1981, while the value was 7 percent less. Four countries received most of U.S. exports: the United Kingdom ( 60 percent), the Federal Republic of Germany ( 15 percent), Italy ( 11 percent), and Spain ( 7 percent).
In South Africa, the yearend supply of mohair was 3.2 million pounds. However, heavy sales in January reduced it to about 1 million pounds at month's end. Prices ranged from $\$ 2.40$ to $\$ 2.80$ a pound. Because of poor range conditions, this spring's clip, at 8.4 million pounds, will be a little smaller than last year. Most of the clip is reported to have been purchased by a top dealer who later exported it to Japan.
World demand for mohair has been quite strong, with Japan and Eastern Europe among the principal buyers. The Soviet Union has been importing substantial quantities by way of India for hand-knitting yarns.

# An Economic Analysis of the 1983 <br> Upland Cotton Program 

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#### Abstract

This article examines factors affecting participation in the 1983 acreage reduction, cash diversion, and payment-in-kind (PIK) programs for upland cotton. Net returns are calculated for a sample farm under different planting strategies. Participation in the PIK is shown to give the highest returns above variable costs for a wide range of expected prices and yields. The formula for cotton deficiency payments, which uses a calendar-year average farm price, boosts the incentive to participate because farm prices in early 1983 are well below the target price.


KEYWORDS: Upland cotton, acreage reduction, cash diversion, payment-in-kind (PIK), target price, participation.

Although U.S. upland cotton production fell sharply in 1982, it still exceeded use. As a result, 1982/83 carryover stocks are expected to reach 8.4 million bales, about double the amount generally considered to be an adequate carryover. In spite of an announced 20 -percent acreage reduction and a 5 -percent cash diversion program, there was little prospect in late 1982 for a reduction in stocks during 1983/84. So, on January 11, 1983, USDA announced a payment-in-kind (PIK) program, giving producers who participate in the 20 -percent reduction an opportunity to idle an additional 10 to 30 percent of their cotton base acreage in return for a payment in cotton. The PIK program strengthens the prospects for a reduction in cotton stocks during 1983/84 and sets the stage for further improvement in the supply/demand picture for 1984/85.

## Program Example

The minute details of the 1983 cotton program are not presented in this article. Rather, examples are developed to illustrate how the basic provisions of the program may be assessed by growers in making planting decisions. The examples should also be of interest to market analysts who must make judgments about the aggregate effects of the 1983 cotton program. The basic provisions of the 1983 program are:

- Acreage reduction-Eligibility for program benefits and for participation in the PIK program requires growers to participate in the 20 -percent acreage reduction program.
- Acreage diversion-Although diversion is not required for program benefits, as in the grain programs, a farmer may idle up to an additional 5 percent of the base acreage in return for a cash diversion payment rate of 25 cents a pound.
- Target price and loan rate - The 1983 target price will be 76 cents a pound, and the national average loan rate will be 55 cents a pound for SLM 1-1/16inch cotton at average location.
- Payment limitation-A person is limited to a maximum of $\$ 50,000$ in cash payments from all crop programs, including both deficiency and diversion payments.
- PIK program-Growers may reduce acreage by 10 to 30 percent of the farm's cotton base. The payment-in-kind amount is determined by multiplying the designated PIK acreage by 80 percent of the farm progrm yield. They may also submit bids to take the entire cotton base out of production-whole-base bids will be accepted at the discretion of USDA. The PIK entitlement does not count against the $\$ 50,000$ cash payment limit.
The program provisions are further explained in table 11, which shows returns above variable costs for different planting strategies. Basic assumptions for the table include the following:
- The example farm has 100 acres of cotton base. Four planting options are considered: (1) nonparticipation-the whole base is planted; (2) 80 acres are planted and 20 are idled under the acreage reduction program-20/0/0 option; (3) 75 acres are planted, 20 are idled under the acreage reduction, and 5 are idled under the cash diversion program-20/5/0 option; and (4) 50 acres are planted, 20 are idled under the acreage reduction, and 30 are idled for PIK-20/0/30 option. The cash diversion is not considered in option 4 because a PIKcotton market price of just 31.3 cents a pound (cash diversion payment rate divided by the PIK payoff rate, or 25 cents/0.8) will match returns from diversion.
- Yields per acre increase as more acreage is idled, because producers idle the less productive land.
- The program payment yield is 600 pounds an acre, close to the projected U.S. average payment yield for 1983.
- The average farm price next fall is assumed to be 55 cents a pound, the national average loan rate.

Table 11 -Returns above variable costs on 100 acres of cotton base

|  | Nonparticipant | Participant |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 20/0/0 | 20/5/0 | 20/0/30 |
| Income: |  |  |  |  |
| 1. Acres planted | 100 | 80 | 75 | 50 |
| 2. Yield per acre (ibs) | $\times 500$ | $\times 530$ | $\times 530$ | $\times 550$ |
| 3. Production (Ibs) | 50,000 | 42,400 | 39,750 | 27,500 |
| 4. Average price (\$/lb) | $x .50$ | x. 55 | x. 55 | X. 55 |
| 5. Market receipts (\$) |  | 23,320 | 21,863 | 15,125 |
| 6. Payment yield (b) |  | 600 | 600 | 600 |
| 7. Acres planted |  | $\times 80$ | $\times 75$ | $\times 50$ |
| 8. Program prod. (lb) |  | 48,000 | 45,000 | 30,000 |
| 9. Deficiency payment rate ( $\$ / / b$ ) |  | x. 20 | x. 20 | x. 20 |
| 10. Deficiency payments (\$) |  | 9,600 | 9,000 | 6,000 |
| 11. Payment yield (Ib) |  |  | 600 |  |
| 12. Acres diverted |  |  | $\times 5$ |  |
| 13. Diverted production (b) |  |  | 3,000 |  |
| 14. Diversion payment rate ( $\$ / \mathrm{lb}$ ) |  |  | x. 25 |  |
| 15. Diversion payments (\$) |  |  | 750 |  |
| 16. PIK payoff rate (Ib) |  |  |  | 480 |
| 17. PIK acres |  |  |  | $\times 30$ |
| 18. PIK (Ib) |  |  |  | 14,400 |
|  |  |  |  | $x .50$ |
| 20. PIK value (\$) |  |  |  | $7,200$ |
| 21. Gross income $(5+10+15+20, \$)$ | 27,500 | 32,921 | 31,613 | 28,325 |
| Expenses: |  |  |  |  |
| 22. Acres planted | 100 | 80 | 75 | 50 |
| 23. Variable costs (\$/acres) | $\times 245$ | $\times 245$ | $\times 245$ | $\times 245$ |
| 24. Total (\$) | 24,500 | 19,600 | 18,375 | 12,250 |
| 25. Conservation use acres |  | 20 | 25 | 50 |
| 26. Cover costs (\$/acres) |  | $\times 20$ | $\times 20$ | $\times 20$ |
| 27. Total (\$) |  | 400 | 500 | 1,000 |
| 28. Total variable costs $(24+27, \$)$ | 24,500 | 20,000 | 18,875 | 13,250 |
| Net return: |  |  |  |  |
| 29. Income less variable costs (21 minus $28, \$$ ) | 3,000 | 12,921 | 12,738 | 15,075 |

The average farm price for January-July 1983 is assumed to be 57 cents a pound. Therefore, the assumed deficiency payment on eligible 1983 production is 20 cents a pound- 76 cents less the calendar 1983 average farm price.

- Variable production costs-excluding ginning costs, which are expected to be matched by the value of cottonseed-are $\$ 245$ per planted acre. The cost of putting the idled acres in an approved conservation use is $\$ 20$ an acre.
- The value of the PIK cotton is 90 percent of the 1983 loan rate, or 50 cents a pound. In February, PIK cotton was reportedly being contracted for about 90 percent of the loan rate.


## Participation Pays

The decision to participate in the program requires the cotton grower to weigh potential program benefits against the net revenue that is given up by idling land. Table 11 shows that the nonparticipant, who relys solely on market receipts, nets $\$ 3,000$ above variable costs. By participating in the 20 -percent acreage reduction, the
example producer increases net returns to $\$ 12,921$. However, if the grower diverts an additional 5 percent, the net return drops slightly to $\$ 12,738$. Although the cash diversion payment rate is 25 cents a pound, the grower gives up the 20 -cent deficiency payment plus returns from the cash market on production from the diverted acres.

The example clearly shows the attractiveness of the PIK program-the 20/0/30 option. When the participant idles an additional 30 percent of the base for PIK, net returns jump to $\$ 15,075,17$ percent more than returns from the second-best alternative. Under the 20/0/30 option, the cost savings greatly outweigh the sacrificed gross income.

The whole-base bid was not considered in the example. If the grower produces no cotton in return for PIK on the entire base acreage, deficiency payments on normal production from 50 percent of the base are forgone, as are net returns from cash sales. The bid percentage (of program yield) which makes net returns from PIK on 100 percent of the base equal to net returns under the most attractive option in the example-the 30 percent PIKis:

Breakeven bid $=$ net returns, 20/0/30 option + cover-crop

$$
\begin{aligned}
& \frac{\text { costs, } 100 \text { acres }}{100 \text { acres } \times \text { program yield } \times \text { PIK price }} \\
&=\quad \frac{\$ 15,075+100 \times \$ 20}{100 \times 600 \times \$ 0.50}=0.57
\end{aligned}
$$

The payoff rate for the 10 - to 30 -percent PIK is 80 percent of the program yield. Because the breakeven whole-base bid is well under 80 percent, the whole-base reduction option may be attractive for many cotton producers. Thus, a high proportion of the growers signing up for the regular PIK program are likely submitting whole-base bids.

## Importance of Assumptions

The estimated gains from participation implied by table 11 greatly depend on certain assumptions, particularly those concerning: (1) the relationship between the expected yield and the payment yield, (2) the expected market price, and (3) the value of the PIK cotton. Obviously, gains from participation decline as the expected yield and the market price increase and as the price of the PIK cotton drops relative to the market price.
The following data show how net revenues per 100 acres of cotton base differ as the assumptions change. Because participation in the PIK program is by far the better strategy under the basic assumptions, the purpose of the changes shown in table 12 is to gain some idea of the combination of circumstances that would favor nonparticipation.
The data in table 12 show that, even if the average farm price equals the 76 -cent target price, and yields per planted acre equal the national average payment yieldan unlikely combination of high price and high yieldparticipation in the PIK program is still the more profitable planting strategy. Participation in the PIK program is uneconomical when the expected yield exceeds the program yield by 5 percent or more. Even in this case, however, participation in the 20 -percent acreage reduction is more profitable than nonparticipation.
The gains from participating in the PIK program are much more sensitive to changes in the ratio of expected yield to program yield than to changes in expected price. This results from the price for PIK cotton being positively related to new-crop prices and from the reduction in the cotton deficiency payment rate being less than the increase in the expected price.

Because cotton deficiency payments are calculated as the difference between the target price and the higher of the loan rate or the average farm price for the calendar year, payments would be made even if the farm price averages 76 cents a pound next fall; prices are currently 20 to 22 cents below the 1983 target price. If deficiency payments were calculated for cotton as they are for the grains-if the average farm price for the first 5 months of the marketing year were used instead of a calendaryear average-net returns under the 20/0/0 option would be lower by $\$ 4,560$ when the expected price is 76 cents a pound (table 12). Participation in the 20/0/0 option would yield smaller net returns under all the yield assumptions. The breakeven market price-the price at which returns from participation in the 20/0/0 option equal those of nonparticipation-is about 10 cents a pound higher under the cotton formula than under the one for grains. So, the formula for cotton deficiency payments provides an additional participation incentive when prices during the early months of the calendar year are below the new-crop target price, as is the case in 1983.

Although a small number of growers may find participation undesirable for economic or other reasons, current economic conditions point to the participation rate exceeding the 78 percent of the 1982 program. Because the value of the PIK does not count against the $\$ 50,000$ limitation, the PIK program should particularly encourage higher participation in the West-California and Arizona - where participation was lowest last year.

## Other Factors Affecting Participation

The above analysis focuses primarily on the participation incentives provided by program payments. There are numerous other factors that make participation attractive. The program reduces the risk of a low net return. The deficiency payment, diversion payment, and payment-in-kind are not affected by the actual yield, so these provisions provide insurance against crop failure. However, a higher price risk is assumed by the grower, because PIK cotton is not eligible for price support. The regular loan is a participation incentive because it provides price protection for what is produced. In addition, the Federal Crop Insurance Corporation provides higher yield coverage and lower premiums for PIK participants. Also, fewer planted acres mean more time to manage the farm and less wear and tear on machinery.

Table 12-Returns above variable cost, dollars per 100 acres of base

| Expected yield |  | ${ }^{1} 55$ |  | ${ }^{1} 76$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Payment yield | 2010/0 | 20/0/0 | 20/0/30 | 0/0/0 | 20/0/0 | 20/0/30 |
| $0.833^{3}$ | 3,000 | 12,921 | $\begin{gathered} 15,075 \\ 4(14,211) \end{gathered}$ | 13,500 | 16,784 | $\begin{gathered} 20,350 \\ (19,256) \end{gathered}$ |
| . 90 | 5,200 | 14,680 | $\begin{gathered} 16,175 \\ (15,311) \end{gathered}$ | 16,540 | 19,216 | $\begin{gathered} 21,870 \\ (20,775) \end{gathered}$ |
| 1.0 | 8,500 | 17,320 | $\begin{gathered} 17,825 \\ (17,591) \end{gathered}$ | 21,100 | 22,864 | $\begin{gathered} 24,150 \\ (23,055) \end{gathered}$ |
| 1.1 | 11,800 | 19,960 | $\begin{gathered} 19,475 \\ (18,611) \end{gathered}$ | 25,660 | 26,512 | $\begin{gathered} 26,430 \\ (25,334) \end{gathered}$ |

[^4]
# The Raw Cotton Equivalent Of U.S. Textile Imports By Country Of Origin 

## by

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#### Abstract

This article introduces a new data series that provides for the first time country-of-origin detail on the quantity of raw cotton contained in U.S. textile imports. These data will appear annually in the March issue of the Cotton and Wool Outlook and Situation report. Estimates for calendar 1982 are presented in this article.


KEYWORDS: Textile imports, raw cotton equivalent, foreign exports, cotton trade.

## Introduction

The rapid growth in U.S. textile imports and our worsening trade deficit have caused much concern in recent years. The increasing strength of the U.S. dollar in relation to other currencies, in addition to the decline in economic conditions in foreign importing nations, has limited the expansion of U.S. textile exports. In the meantime, U.S. imports of foreign textile products have increased by record amounts. In calendar 1982, imports of cotton textiles accounted for almost 30 percent of total U.S. domestic cotton consumption-or the equivalent of about 1.9 million bales of domestically produced cotton.

To more closely monitor these conditions and to provide information for analysis of the wide-ranging issues surrounding international textile trade problems, import data must be developed on a country-by-country basis and by type of textile product involved.

A critical element in analyzing the full impact of U.S. textile imports on domestic cotton producers, the textile industry, and consumers is the means of estimating how much of the raw cotton contained in imported foreign textiles is actually U.S. raw cotton returning as processed products. For example, since countries such as Korea and Taiwan obtain most of their raw cotton requirements from the United States, it must be assumed that imported textile products from these countries contain, for the large part, U.S.-produced cotton.

Currently, USDA estimates only show the raw cotton equivalent of U.S. imports (in pounds) from all countries combined; i.e., world totals. Textile products are grouped into four categories of semimanufactured products and nine categories of primarily manufactured products. Approximately 2,200 individual textile items are contained in the 13 categories. The data are calculated monthly and have been published quarterly for many years in the Cotton and Wool Outlook and Situation report (see tables 17 to 20 ).

However, beginning with this issue, cotton textile import data will also be published by country of origin. Cumulative totals for the previous calendar year and for each of the 13 broad product categories will be shown. The data, when combined with information on foreign mill consumption and U.S. raw cotton exports to each
country, will provide a basis for approximating the U.S. raw cotton content of these imported textile products.

## Method of Measurement

The Bureau of the Census reports textile import anc export data in both units (such as 1,000 dozen) and in actual pounds. For trade negotiations and other purposes, the U.S. Department of Commerce converts the pounds of product into an equivalent square-yard basis. The USDA, however, uses the reported pounds of product and adjusts these data to their "raw fiber equivalent," and then expresses the results in terms of a standard 480 -pound bale. For commodity analysis, this procedure facilitates comparisons with other data series, such as production, mill consumption, and exports. The basic procedure is as follows:
(1) A cumulative import data tape for all commodities is obtained from the Bureau of the Census and then sorted to create a new tape containing only apparel and other textile items.
(2) For each of the approximately 2,200 apparel and other textile items, a conversion factor is applied to the number of pounds to obtain a raw fiber equivalent. This factor adjusts the actual weight of the textile products by adding the waste resulting from the various manufacturing operations. That is, all textile products are adjusted to allow for the waste loss in the yarn-making operation. In addition, fabric weights are corrected for any known sizing remaining on the fabric as it leaves the mill. For apparel, the loss of fabric from cutting operations is also accounted for. Where it is known that the imported product is a blend of cotton with manmade, wool, or other fibers, the percent of cotton is included in the conversion factor for the particular textile product or apparel item. In cooperation with apparel and tex tile manufacturers, USDA has developed and modified these factors over the years.
(3) The raw fiber equivalent data for each item are then grouped into one of the appropriate 13 import categories by country of origin.
(4) Country of orgin data are then aggregated into region and world totals.

## Results

The raw fiber equivalents of U.S. textile imports by country of origin for 1982 are shown in table 13. Data are in units of pounds (raw fiber basis) and can be converted directly to 480 -pound bales.
During 1982, the United States imported textiles totaling about 0.9 billion pounds of cotton or about 1.9 million bales from 103 countries. The 35 countries listed in the tables, account for over 97 percent of total textile imports, with the remaining minor countries aggregated into "all other" groupings for the appropriate region of the world.
Imports from countries in the Western Hemisphere accounted for about 12 percent of total textiles imported, with most products in the form of yarns and cloth. About 4 percent of the total was imported from Western and Eastern Europe ( 3 percent and 1 percent, respective-
ly), and 83 percent was from countries grouped under Asia and Oceania. The remaining 1 percent originated in African nations.

Over 26 percent of all cotton textiles were imported into the United States from Hong Kong during 1982-or the equivalent of 490,000 bales. China, Korea, and Taiwan also accounted for a major share of total imports. In most cases, these Far Eastern countries purchase large quantities of U.S. raw cotton. However, data in table 13 reveal that a significant volume of cotton textiles was imported from countries that purchase very little or no U.S. cotton, such as India, Pakistan, and Egypt. For 1982, approximately 35 to 40 percent of all U.S. cotton textile imports came from countries that accounted for only about 8 to 10 percent of total U.S. exports of raw cotton.

As the country-of-origin import series are developed and monitored over time, further analysis of the U.S. raw cotton content of imported cotton products will be possible. This will provide useful information for investigating various trade policy implications, such as market development efforts and alternative export promotion programs.

Table 13-Raw cotton equivalent of U.S. Imports by country, 1982

| Country of origin | Yarn, thread, and woven fabric |  |  |  | Primarily manufactured products |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sewing thread, crochet, knitting yarn | Woven fabric |  | Total semi-manufactured | Pile fabrics and mfrs. | Table damask and mfrs. | Bed clothes and towels | Gloves, hosiery and hdkfs. |
|  | Yarn |  | 100 percent cotton | Blends |  |  |  |  |  |
|  | 1,000 pounds |  |  |  |  |  |  |  |  |
| Western Hemisphere: |  |  |  |  |  |  |  |  |  |
| Canada | 163 | - | 3,621 | 95 | 3,879 | 40 | - | 548 | 5 |
| Mexico | 2,223 | - | 232 | - | 2,455 | - | - | 89 | 10 |
| El Salvador | 1,045 | - | 2 | - | 1,047 | 1 | - | 2,108 | 2 |
| Jamaica | , | - | - | - | - | - | - |  |  |
| Haiti | 45 | - | 2 | - | 47 | - | - | 6 | 71 |
| Dominican Republic | 2 | - | 255 | 7 | 264 | - | - | - | - |
| Colombia | 304 | 25 | 5,170 | 250 | 5,749 | 61 | - | 374 | 84 |
| Peru | 8,098 | - | 21,554 | 26 | 29,678 | - | - | - | 84 |
| Brazil | 8,693 | 19 | 7,736 | 131 | 16,581 | 224 | 26 | 3,416 | - |
| All other | 2,395 | - | 3,272 | 11 | 5,678 | 27 | - | 285 | 169 |
| Total | 22,969 | 45 | 41,844 | 520 | 65,379 | 354 | 26 | 6,825 | 341 |
| Western Europe: |  |  |  |  |  |  |  |  |  |
| United Kingdom | 37 | 13 | 1,136 | 142 | 1,328 | 11 | - | 257 | 5 |
| Ireland | 1 | - | 2 | 13 | 16 | 2 | - | 20 | - |
| France | 90 | 902 | 955 | 153 | 2,100 | 74 | 11 | 77 | 7 |
| West Germany | 225 | 22 | 1,639 | 291 | 2,177 | 314 | 2 | 206 | 5 |
| Switzerland | 22 | 27 | 710 | 58 | 817 | - | - | 1 | 22 |
| Spain | 431 | 64 | 454 | 192 | 1,141 | - | 2 | 81 | 4 |
| Portugal | 291 | 33 | 3,158 | 45 | 3,527 | 3 | - | 558 | 43 |
| Italy | 20 | 59 | 1,287 | 1,142 | 2,508 | 95 | - | 47 | 22 |
| All other | 45 | 46 | 1,027 | 709 | 1,826 | 242 | 57 | 247 | 34 |
| Total | 1,162 | 1,167 | 10,368 | 2,744 | 15,441 | 742 | 72 | 1,493 | 142 |
| Eastern Europe: |  |  |  |  |  |  |  |  |  |
| East Germany | - | - | 13 | 2 | 15 | - | - | - | - |
| Poland | - | - | 19 | 1 | 20 | - | - | 238 | - |
| Romania | - | - | 110 | 1 | 111 | - | - | 12 | - |
| All other | - | - | 239 | 19 | 258 | 4 | 98 | 328 | 6 |
| Total | - | - | 380 | 23 | 403 | 5 | 98 | 578 | 6 |
| Asia/Oceania: |  |  |  |  |  |  |  |  |  |
| India | - | - | 8,105 | 665 | 8,770 | 220 | - | 5,916 |  |
| Pakistan | 18 | 4 | 17,938 | - | 17,959 | 2,225 | - | 19,694 | 486 |
| Sri Lanka | - | - | - | - | - | 2,20 | - | 21 | 712 |
| Thailand | 122 | - | 8,157 | 4,949 | 13,228 | 44 | - | 163 | 414 |
| Singapore |  | - | 6,307 | 443 | 6,750 | 1 | - | 18 | 38 |
| Indonesia | - | - | 1,530 | 8 | 1,537 | - | - | 19 | - |
| Philippines | - | - | 10 | 1 | 12 | 1 | - | 34 | 1,151 |
| Macao | - | - | - | - | - | 3 | - | 1 | 329 |
| China-Mainland | - | - | 27,915 | 13,390 | 41,305 | 815 | 115 | 21,447 | 8,468 |
| Korea | 233 | - | 10,828 | 4,999 | 16,060 | 133 | - | 416 | 1,204 |
| Hong Kong | - | 1 | 43,806 | 3,695 | 47,503 | 426 | 12 | 2,726 | 6,497 |
| Taiwan | 50 | 3 | 27,536 | 7,066 | 34,654 | 731 | 42 | 4,080 | 783 |
| Japan | 301 | 23 | 7,910 | 2,651 | 10,884 | 550 | 116 | 199 | 1,512 |
| All other | - | - | 1,670 | 364 | 2,034 | 72 | - | 403 | 172 |
| Total | 724 | 31 | 161,711 | 38,230 | 200,697 | 5,219 | 286 | 55,138 | 22,157 |
|  |  |  |  |  |  |  |  |  |  |
| Egypt | 2,406 | - | 4,308 | - | 6,714 | - | - | 25 | - |
| All other | 3 | - | 7 | - | 11 | 22 | - | 3 | 2 |
| Total | 2,409 | - | 4,315 | - | 6,725 | 22 | - | 28 | 2 |
| World total | 27,264 | 1,244 | 218,619 | 41,518 | 288,645 | 6,342 | 481 | 64,060 | 22,652 |

Table 13-Raw cotton equivalent of U.S. Imports by country, 1982-Continued

| Country of origin | Primarily manufactured products |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Other wearing apparel | Lace fabrics and articles | Household and clothing articles | Misc. products | Floor covering | Total primarily manufactured |  |
|  | 1,000 pounds |  |  |  |  |  |  |
| Western Hemisphere: |  |  |  |  |  |  |  |
| Canada | 1,807 | 9 | 39 | 309 | 1 | 2,758 | 6,637 |
| Mexico | 7,205 | 4 | 62 | 133 | - | 7,504 | 9,958 |
| El Salvador | 218 | - | - | 3 | - | 2,331 | 3,379 |
| Jamaica | 1,406 | - | - | - | - | 1,406 | 1,406 |
| Haiti | 4,955 | 10 | 8 | 64 | 1 | 5,115 | 5,162 |
| Dominican Republic | 7,822 | 314 | 8 | 58 | - | 8,203 | 8,467 |
| Colombia | 233 | 2 | 1 | 1 | - | 756 | 6,505 |
| Peru | 302 | 1 | 45 | - | - | 349 | 30,026 |
| Brazil | 1,954 | 8 | 449 | 16 | 672 | 6,764 | 23,345 |
| All other | 4,263 | 6 | 22 | 10 | - | 4,781 | 10,459 |
| Total | 30,164 | 355 | 634 | 593 | 674 | 39,967 | 105,346 |
| Western Europe: |  |  |  |  |  |  |  |
| United Kingdom | 588 | 99 | 130 | 296 | 1 | 1,389 | 2,716 |
| Ireland | 23 | 2 | 10 | 1 | - | 58 | 74 |
| France | 889 | 32 | 221 | 120 | - | 1,430 | 3,530 |
| West Germany | 336 | 22 | 180 | 213 | - | 1,278 | 3,455 |
| Switzerland | 36 | 16 | 21 | 10 | - | 106 | 923 |
| Spain | 189 | 1 | 80 | 19 | - | 377 | 1,519 |
| Portugal | 528 | 1 | 3 | 8 | 4 | 1,147 | 4,674 |
| Italy | 1,523 | 64 | 150 | 116 | - | 2,016 | 4,524 |
| All other | 658 | 14 | 98 | 130 | 1,034 | 2,513 | 4,339 |
| Total | 4,769 | 251 | 892 | 912 | 1,041 | 10,314 | 25,755 |
| Eastern Europe: |  |  |  |  |  |  |  |
| East Germany | 442 | - | - | - | - | 443 | 458 |
| Poland | 3,167 | - | 1 | 117 | - | 3,523 | 3,542 |
| Romania | 4,575 | - | - | - | - | 4,587 | 4,698 |
| All other | 544 | - | 172 | 20 | 1 | 1,173 | 1,431 |
| Total | 8,729 | - | 172 | 136 | 1 | 9,725 | 10,128 |
| Asia/Oceania: |  |  |  |  |  |  |  |
| India | 16,260 | 1,976 | 1,035 | 141 | 425 | 26,365 | 35,135 |
| Pakistan | 8,736 | 1 | 1,208 | 41 | 7 | 32,398 | 50,357 |
| Sri Lanka | 11,699 | - | 1 | - | - | 12,433 | 12,434 |
| Thailand | 6,976 | 15 | 126 | 31 | - | 7,769 | 20,997 |
| Singapore | 17,297 | - | 1 | 1 | - | 17,355 | 24,105 |
| Indonesia | 15,064 | - | 9 | 4 | - | 15,097 | 16,635 |
| Philippines | 17,000 | 98 | 50 | 273 | - | 18,607 | 18,618 |
| Macao | 11,316 | - | - | 16 | - | 11,665 | 11,665 |
| China-Mainland | 58,446 | 1,089 | 1,467 | 2,018 | 21 | 93,887 | 135,192 |
| Korea . | 30,129 | 8 | 666 | 1,227 | 2 | 33,785 | 49,844 |
| Hong Kong ${ }^{\text { }}$ | 173,654 | 63 | 2,856 | 1,618 | - | 187,852 | 235,355 |
| Taiwan | 47,536 | 127 | 513 | 2,542 | 3 | 56,357 | 91,011 |
| Japan | 18,189 | 43 | 119 | 454 | 226 | 21,409 | 32,293 |
| All other | 9,299 | 19 | 878 | 10 | 4 | 10,858 | 12,893 |
| Total | 441,602 | 3,440 | 8,928 | 8,378 | 688 | 545,837 | 746,534 |
| Africa: |  |  |  |  |  |  |  |
| Egypt | 395 | - | - | - | 3 | 423 | 7,137 |
| All other | 241 | - | 1 | 1 | - | 271 | 282 |
| Total | 636 | - | 1 | 1 | 3 | 694 | 7,419 |
| Worid total | 487,867 | 4,046 | 10,628 | 10,053 | 2,408 | 608,537 | 897,182 |

Totals may not add because of rounding.

Table 14-Cotton: Supply and disappearance, by type, United States

| Year beginning August 1 | Supply |  |  |  | Disappearance |  |  | Difference unaccounted ${ }^{4}$ | Ending stocks July 31 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning stocks August $1^{1}$ | Production ${ }^{2}$ | Imports | Total | Mill consumption ${ }^{3}$ | Exports | Total |  |  |
| 1,000 480-pound net weight bales ${ }^{5}$ |  |  |  |  |  |  |  |  |  |
|  | All kinds |  |  |  |  |  |  |  |  |
| 1980 | 3,000 | 11,122 | 28 | 14,150 | 5,891 | 5,926 | 11,817 | 335 | 2,668 |
| 1981 | 2,668 | 15,646 | 26 | 18,340 | 5,264 | 6,567 | 11,831 | 123 | 6,632 |
| $1982^{7}$ | 6,632 | ${ }^{812,019}$ | 23 | 18,674 | 5,397 | 5,013 | 10,410 | 152 | 8,416 |
| Upland |  |  |  |  |  |  |  |  |  |
| 1980 | 2,962 | 11,018 | 27 | 14,007 | 5,828 | 5,893 | 11.721 | 328 | 2,614 |
| $1981 .$ | 2,614 | 15,566 | 18 | 18,198 | 5,216 | 6,555 | 11,771 | 140 | 6,567 |
| $1982{ }^{7}$ | 6,567 | $8_{11,911}$ | 15 | 18,493 | 5,350 | 5,000 | 10,350 | 157 | 8,300 |
| Extra-long staple ${ }^{6}$ |  |  |  |  |  |  |  |  |  |
| 1980 | 38 | 104 | 1 | 143 | 63 | 33 | 96 | 7 | 54 |
| 1981 | 54 | 80 | 8 | 142 | 48 | 12 | 60 | -17 | 65 |
| $1982{ }^{7}$ | 65 | ${ }^{8} 108$ | 8 | 181 | 47 | 13 | 60 | -5 | 116 |

Compiled from Bureau of the Census data and adjusted to an August 1480 -pound 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. For upland cotton, this difference primarily reflects an increase of an estimated 1 percent in average bale weights due to moisture absorbtion once cotton is ginned and begins to flow through marketing channels. Additional moisture is absorbed by cotton moving in export channels. For ELS cotton, this difference reflects, in part, reporting discrepancies for stocks, mill consumption, and exports. ${ }^{5}$ Factors used to convert running bales to equivalent 480-pound net weight bales for carryover and consumption of domestic cotton are based on the relationship between 480 pounds and the gin weight of a running bale, raised by 1 percent (molsture factor). ${ }^{\text {I }}$ Includes American Pima, Sea Island, and foreign grown ELS cotton. ${ }^{7}$ Preliminary and estimated. ${ }^{8}$ Crop Reporting Board report of January 11, 1983.

Table 15 -Cotton: Supply and disappearance of all kinds; by months,

| Date | Supply |  |  |  |  |  |  | Disappearance |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning stocks ${ }^{2}$ |  |  |  |  |  |  | Mill <br> con- <br> sump- <br> tion ${ }^{4}$ | Exports |  | Ending stocks ${ }^{5}$ |
|  | At mills | In public storage $^{6}$ | Other ${ }^{7}$ | Total | Ginnings ${ }^{3}$ | Imports | Total |  |  | Total |  |
|  | 1,000 480-pound net weight bales |  |  |  |  |  |  |  |  |  |  |
| 1982/83 |  |  |  |  |  |  |  |  |  |  |  |
| August | 865 | 5,495 | 272 | 6,632 | 468 | 2 | 7,102 | 448 | 360 | 808 |  |
| September | $788$ | $5,259$ | $247$ | $6,294$ | $1,112$ | 2 | $7,408$ | $435$ | $370$ | $805$ | $6,603$ |
| October | $700$ | $5,521$ | 382 | $6,603$ | $3,886$ | 1 | $10,490$ | $455$ | $308$ | $763$ | $9,727$ |
| November | $639$ | 7,919 | $1,169$ | $9,727$ | $3,638$ | 3 | $13,368$ | $448$ | $399$ | $847$ | $12,521$ |
| December | 663 | $10,644$ | $1,214$ | $12,521$ | $1,809$ | 0 | 14,330 | $404$ | 395 | 799 | 13,531 |
| January ${ }^{8}$ | $731$ | $11,619$ | 1,181 | 13,531 | 743 |  |  | 444 |  |  |  |
| February ${ }^{8}$ | 807 | $11,590$ |  |  |  |  |  |  |  |  |  |
| Season | 865 | 5,495 | 272 | 6,632 |  |  |  |  |  |  |  |

[^5] clude preseason ginnings. ${ }^{3}$ August data include preseason ginnings. ${ }^{4}$ Adjusted to a calendar month. ${ }^{5}$ Supply less disappearance. End of season
 conversion factors for mill stocks. ${ }^{7}$ Primarily cotton on farms and in transit. Estimated by subtracting public storage and mill stocks from total stocks. 8 Preliminary.

Table 18 - Eetimated mill consumption of raw cotton by major type of textile product

| Item | 1981 |  |  |  |  | 1982 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 10 | 20 | 3 Q | 4 Q | Year | 1 Q | 20 | 30 |
|  | 1,000 bales ${ }^{1}$ |  |  |  |  |  |  |  |
| Wholly or chiefly cotton |  |  |  |  |  |  |  |  |
| Duck | 26 | 34 | 34 | 33 | 127 | 38 | 33 | 33 |
| Sheeting \& allied coarse | $128$ | $126$ | $121$ | $119$ | $494$ | $109$ | $92$ | $76$ |
| Print cloth | 73 | 69 | 70 | 84 | 296 | 85 | 83 | 77 |
| Denim | 239 | 248 | 255 | 227 | 969 | 207 | 194 | 207 |
| Towellng | 146 | 143 | 133 | 138 | 560 | 122 | 130 | 107 |
| Blanketing | 24 | 25 | 21 | 17 | 87 | 14 | 17 | 16 |
| Fine cotton | 8 | 10 | 11 | 10 | 39 | 23 | 27 | 24 |
| Corduroy | 73 | 73 | 68 | 61 | 275 | $67$ | $68$ | 55 |
| Drapery | 7 | 6 | 5 | 4 | 22 | $(2)$ | (2) | (2) |
| Miscellaneous | 5 | 11 | 10 | 5 | 31 | 17 | 19 | 18 |
| Total | 729 | 745 | 728 | 698 | 2,900 | 682 | 663 | 613 |
| Polyester/cotton fabrics |  |  |  |  |  |  |  |  |
| Batiste | $13$ | 12 | 12 | 11 | 48 | 11 | 10 | 9 |
| Bed sheeting | $105$ | $103$ | 105 | 95 | $408$ | 92 | 82 | 73 |
| Broadcloth | 11 | 12 | 16 | 14 | 53 | 14 | 13 | 12 |
| Twills | 53 | 53 | 49 | 46 | 201 | 53 | 57 | 48 |
| Oxfords | 10 | 10 | 10 | 10 | 40 | 3 | 3 | 4 |
| Poplins | 22 | 25 | 29 | 27 | 103 | 23 | 22 | 19 |
| Sateens | 4 | 3 | 2 | 2 | 11 | 2 | 2 | 2 |
| Yarn dyed fabric | 26 | 26 | 23 | 22 | 97 | 23 | 21 | 21 |
| Print cloth | 44 | 42 | 46 | 44 | 176 | 45 | 35 | 33 |
| Corduroy | $11$ | 11 | 10 | 8 | $40$ | (3) | (3) | (3) |
| Other | 40 | 36 | 30 | 27 | 133 | 32 | 30 | 26 |
| Total | 339 | 333 | 332 | 306 | 1,310 | 298 | 275 | 247 |
| Other textile products |  |  |  |  |  |  |  |  |
| Knit fabric | 395 | 420 | 340 | 328 | 1,483 |  | 312 | 287 |
| Narrow | 19 | 19 | 18 | 17 | $73$ | 14 | 14 | 10 |
| Thread | 26 | 26 | 23 | 20 | $95$ | 20 | 20 | 16 |
| Rope | 15 | 15 | 13 | 12 | 55 | 12 | 12 | 8 |
| Total | 455 | 480 | 394 | 380 | 1,709 | 360 | 358 | 321 |
| Grand Total | 1,523 | 1,558 | 1,454 | 1,384 | 5,919 | 1,340 | 1,296 | 1,181 |
| Actual mill consumption | 1.,451 | 1,467 | 1,412 | 1,327 | 5,657 | 1,299 | 1,325 | 1,252 |
| Residual | +72 | +91 | +42 | +57 | +262 | +41 | -29 | -71 |

1/480-pounds, net welght. "Included in miscellaneous". "Included in other".
Besed on data from Bureau of the Census reports and National Cotton Councli.

Table 17-Raw cotton equivalent of U.S. imports for consumption of cotton manufactures

| Year and month | Yarn, thread, and woven fabric |  |  |  |  |  | Primarily manufactured products |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sewing thread, crochet, knitting yarn | Woven fabric |  | Total |  |  | Table | Bed | Gloves, |
|  | Yarn |  | $100$ percent cotton | Blends ${ }^{1}$ | ${ }^{1}$ Weight | Bales | and mfrs. ${ }^{2}$ | and mfrs. | and towels ${ }^{3}$ | and hdkf. |
|  | 1,000 pounds |  |  |  | $\begin{aligned} & 1,000 \\ & \text { bales }^{8} \end{aligned}$ |  | 1,000 pounds |  |  |  |
| 1981 | 23,048 | 1,035 | 296,607 | 47,179 | 367,869 | 766.4 | 6,484 | 475 | 56,460 | 23,113 |
| 1982 | 27,264 | 1,244 | 218,619 | 41,518 | 288,645 | 601.3 | 6,342 | 481 | 64,060 | 22,652 |
| 1982 |  |  |  |  |  |  |  |  |  |  |
| January | 2,171 | 119 | 25,028 | 4,604 | 431,922 | 66.5 | 478 | 35 | 4,878 | 1,832 |
| February | 953 | 91 | 21,331 | 4,075 | 5 26,450 | 55.1 | 357 | 15 | 4,404 | 1,832 |
| March | 1,990 | 136 | 16,937 | 3,669 | 22,732 | 47.4 | 311 | 43 | 5,580 | 1,772 |
| April | 1,476 | 128 | 16,747 | 3,450 | - 21,801 | 45.4 | 434 | 21 | 4,608 | 1,662 |
| May | 3,281 | 169 | 19,257 | 3,266 | - 25,973 | 54.1 | 664 | 53 | 7,096 | 2,218 |
| June | 2,901 | 168 | 16,344 | 3,550 | - 22,963 | 47.8 | 716 | 17 | 6,374 | 2,266 |
| July | 2,384 | 62 | 14,604 | 2,834 | 4 19,884 | 41.4 | 498 | 10 | 4,108 | 1,347 |
| August | 2,800 | 75 | 16,834 | 3,677 | 7 23,386 | 48.7 | 803 | 41 | 6,204 | 2,355 |
| September | 2,670 | 68 | 17,479 | 3,434 | 23,651 | 49.3 | 528 | 17 | 5,298 | 2,096 |
| October | 1,691 | 56 | 16,370 | 3,212 | 2 21,329 | 44.4 | 382 | 26 | 4,894 | 2,287 |
| November | 2,645 | 85 | 19,960 | 3,032 | 25,722 | 53.6 | 524 | 107 | 5,614 | 1,794 |
| December | 2,302 | 87 | 17,728 | 2,715 | 5 22,832 | 47.6 | 647 | 96 | 5,002 | 1,191 |
|  | Primarily manufactured products |  |  |  |  |  |  |  | Total |  |
|  | Other Wearing apparel ${ }^{4}$ | Lace fabric and articles ${ }^{5}$ | Household and clothing articles ${ }^{0}$ |  | Misc.products ${ }^{7}$ | Floor covering | Total |  |  |  |
|  |  |  |  |  | Weight |  | Bales | Weight | Bales |
|  |  | 1,000 pounds |  |  |  |  |  | $\begin{array}{r} 1,000 \\ \text { bales }{ }^{8} \end{array}$ | $\begin{gathered} 1,000 \\ \text { pounds } \end{gathered}$ | $\begin{aligned} & 1,000 \\ & \text { bales }^{8} \end{aligned}$ |
| 1981 | 480,864 | $\begin{aligned} & 4,730 \\ & 4,046 \end{aligned}$ | $\begin{aligned} & 10,483 \\ & 10,628 \end{aligned}$ |  |  | $\begin{array}{r} 8,861 \\ 10,053 \end{array}$ | $\begin{aligned} & 2,561 \\ & 2,408 \end{aligned}$ | $\begin{aligned} & 594,031 \\ & 608,537 \end{aligned}$ | $\begin{aligned} & 1,237.6 \\ & 1,267.8 \end{aligned}$ | $\begin{aligned} & 961,900 \\ & 897,182 \end{aligned}$ | $\begin{aligned} & 2,004.0 \\ & 1,869.2 \end{aligned}$ |
| 1982 | 487,867 |  |  |  |  |  |  |  |  |  |  |
| 1982 |  |  |  |  |  |  |  |  |  |  |  |
| January | 34,052 | 265 |  |  | 918 | 155 | 43,553 | 90.7 | 75,475 | 157.2 |  |
| February | 35,369 | 362 |  |  | 769 | 228 | 44,136 | 92.0 | 70,586 | 147.1 |  |
| March | 32,739 | 327 |  |  | 801 | 114 | 42,718 | 89.0 | 65,450 | 136.4 |  |
| April | 26,761 | 328 |  |  | 638 | 194 | 35,310 | 73.6 | 57,111 | 119.0 |  |
| May | 39,442 | 382 |  |  | ${ }^{9} 936$ | 223 | 951,732 | 9107.8 | 977,705 | 9161.9 |  |
| June | 51,590 | 442 |  |  | ${ }^{9} 1,027$ | 208 | 963,519 | ${ }^{9} 132.3$ | 986,482 | ${ }^{9} 180.2$ |  |
| July | 46,021 | 270 |  |  | ${ }_{9} 936$ | 242 | 953,992 | 9112.5 | 973,876 | ${ }^{9} 953.9$ |  |
| August | 60,537 | 315 |  |  | ${ }^{9} 854$ | 258 | 972,336 | ${ }^{9} 150.7$ | 995,722 | 9199.4 |  |
| September | 46,366 | 364 |  |  | ${ }^{9} 1,088$ | 193 | ${ }^{9} 56,752$ | 9118.2 | ${ }^{9} 80,403$ | ${ }^{9} 167.5$ |  |
| October | 39,251 | 317 |  |  | ${ }^{9} 931$ | 134 | ${ }^{9} 49,104$ | ${ }^{9} 102.3$ | -970,433 | ${ }^{9} 146.7$ |  |
| November | 42,206 | 338 |  |  | 9937 | 246 | 952,814 | ${ }^{9} 110.0$ | 978,536 | ${ }^{9} 163.6$ |  |
| December | 33,533 | 336 |  |  | ${ }^{9} 818$ | 213 | ${ }^{9} 42,571$ | ${ }^{9} 88.7$ | ${ }^{9} 65,403$ | ${ }^{9} 136.3$ |  |

[^6]Table 18-Raw cotton equivalent of U.S. exports of domestic cotton manufactures


[^7]Table 19-Manmade fiber equivalent of U.S. Imports for consumption of manmade fiber manufactures

| Year and month | Tops, yarn, thread, and woven fabric |  |  |  |  |  |  | Primarilymanufacturedproducts |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sliver tops and roving | Yarns thrown or plied ${ }^{1}$ | Yarns spun | Sewing thread and handwork yarns | Rayon tire fabric including cord fabrics | Woven fabric | Total | Wearing apparel |  |
|  |  |  |  |  |  |  |  | Knit | Not knit |
|  | 1,000 pounds |  |  |  |  |  |  |  |  |
| 1981 | 3,736 | 4,793 | 23,479 | 2,854 | 277 | 95,382 | 2 130,521 | 184,704 | 252,162 |
| 1982 | 2,724 | 6,642 | 26,470 | 2,324 | 1,087 | 93,335 | 132,582 | 193,087 | 292,224 |
| 1982 |  |  |  |  |  |  |  |  |  |
| January | 448 | 622 | 1,877 | 169 | 28 | 7,740 | 1-10,884 | 12,464 | 24,013 |
| February | 320 | 143 | 1,408 | 208 | 65 | 6,583 | 8,727 | 11,222 | 22,724 |
| March | 207 | 434 | 1,648 | 191 | 29 | 6,818 | 8 9,327 | 10,548 | 21,744 |
| April | 118 | 326 | 2,114 | 231 | 2 | 6,788 | 9,579 | 8,565 | 16,823 |
| May | 82 | 477 | 2,774 | 196 | 0 | 8,739 | 12,268 | 15,317 | 25,132 |
| June | 138 | 520 | 2,438 | 239 | 1 | 9,143 | 312,479 | 21,755 | 31,280 |
| July | 348 | 330 | 2,050 | 115 | 80 | 6,581 | 1 9,504 | 17,801 | 25,780 |
| August | 192 | 611 | 2,847 | 176 | 135 | 10.438 | 8 14,399 | 26,414 | 34,499 |
| September | 423 | 618 | 2,566 | 147 | 106 | 9,087 | 712,947 | 21,522 | 26,856 |
| October | 68 | 515 | 2,337 | 231 | 84 | 7.413 | 310,648 | 20,041 | 20,546 |
| November | 209 | 1,080 | 2,280 | 241 | 280 | 7,693 | 11,783 | 16,642 | 21,174 |
| December | 171 | 966 | 2,131 | 180 | 277 | 6,312 | 210,037 | 10,796 | 21,653 |
|  | Primarily manufactured products |  |  |  |  |  |  |  |  |
|  |  |  | Laces and lace articles ${ }^{3}$ | Narrow fabrics ${ }^{4}$ | Knit fabric |  | Other manufactures ${ }^{5}$ | Total | manufactured imports |
|  | 1,000 pounds |  |  |  |  |  |  |  |  |
| 1981 |  |  | 4,497 | 8,703 | 2,149 |  | 56,148 | 508,555 | 639,076 |
| 1982 |  |  | 4,782 | 10,089 | 2,284 |  | 61,749 | 565,377 | 697,959 |
|  |  |  |  |  |  |  |  |  |  |
| January |  |  | 343 | 761 | 220 |  | 4,418 | 42,300 | 53,184 |
| February |  |  | 277 | 821 | 141 |  | 4,052 | 39,345 | 48,072 |
| March |  |  | 295 | 847 | 243 |  | 4,650 | 38,409 | 47,736 |
| April |  |  | 213 | 943 | 187 |  | 3,767 | 30,563 | 40,142 |
| May |  |  | 452 | 1,158 | 161 |  | ${ }^{6} 5,303$ | 647,613 | 659,881 |
| June |  |  | 529 | 1,060 | 214 |  | 66,595 | $6_{61,561}$ | ${ }^{6} 74,040$ |
| July |  |  | 384 | 774 | 159 |  | 65,586 | ${ }^{6} 50,629$ | ${ }^{6} 60,133$ |
| August |  |  | 536 | 931 | 242 |  | ${ }^{6} 5,732$ | ${ }^{6} 68,492$ | ${ }^{6} 82,891$ |
| September |  |  | 561 | 801 | 236 |  | ${ }^{6} 5,749$ | ${ }^{6} 55,831$ | 668,778 |
| October |  |  | 465 | 606 | 101 |  | 65,353 | ${ }^{6} 47,199$ | 657,847 |
| November |  |  | 368 | 865 | 242 |  | ${ }^{65} 5,070$ | 644,416 | 656,199 |
| December |  |  | 359 | 522 | 138 |  | ${ }^{6} 5,474$ | ${ }^{8} 39,019$ | ${ }^{6} 49,056$ |

${ }^{1}$ Not Included in these data are quantities of imported textured non-cellulosic yarn not over 20 turns per inch. ${ }^{2}$ Includes gloves, hosiery, un derwear, outerwear, and hats. 3 includes veils and veilings, nets and nettings, lace window curtalns, edging, insertings, flouncings, allovers, etc., embroderies, and ornamented wearing apparel. ${ }^{4}$ Includes braids (except hat braids), fabrics with fast edges not over 12 inches wide, garters, suspenders, braces, tubing, cords, tassels, gill nets, webs, seines, and other nets for fishing. ${ }^{5}$ Not elsewhere classified. ${ }^{6}$ Does not include quantitles In the TSUSA 706 luggage categories. These raw fiber equivalent quantities for May-December 1982 are $7,965,17,894,17,203,17,160,13,969$ $12,289,12,558$, and 10,099 thousand pounds respectively.

Compiled from reports of the Bureau of the Census.

Table 20-Manmade fiber equivalent of U.S. exports of domestic manmade fiber manufactures

|  | Tops, yarn, thread, and woven fabric |  |  |  |  |  | Primarily manufactured products |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year and month | Sliver tops, and roving | Yarns spun | Sewing thread and handwork | Tire cord and tire cord fabric | Woven fabric ${ }^{2}$ | Total | Hosiery | Underwear and nightwear | Outer wear |
|  | 1,000 pounds |  |  |  |  |  |  |  |  |
| 1981 | 11,046 | 45,693 | 5,522 | 48,155 | 208,478 | 318,894 | 4,896 | 16,970 | 98,783 |
| 1982 | 6,730 | 28,169 | 5,270 | 27,854 | 132,569 | 200,589 | 3,813 | 12,884 | 58,537 |
| 1982 |  |  |  |  |  |  |  |  |  |
| January | 811 | 2,111 | 433 | 3,126 | 9,117 | 16,197 | 293 | 985 | 5,405 |
| February | 995 | 2,936 | 367 | 2,703 | 10,130 | 17,132 | 342 | 1,134 | 6,476 |
| March | 712 | 2,554 | 561 | 2,794 | 11,484 | 18,104 | 305 | 1,090 | 5,486 |
| April | 336 | 2,153 | 483 | 2,108 | 10,588 | 15,669 | 245 | 1,156 | 5,809 |
| May | 375 | 2,427 | 446 | 3,059 | 12,110 | 18,417 | 328 | 1,208 | 5,433 |
| June | 506 | 3,561 | 706 | 2,522 | 13,359 | 20,654 | 447 | 1,192 | 5,496 |
| July | 957 | 1,882 | 311 | 2,311 | 10,664 | 16,125 | 464 | 971 | 4,544 |
| August | 334 | 2,728 | 343 | 1,976 | 9,317 | 14,698 | 359 | 987 | 4,097 |
| September | 571 | 1,939 | 372 | 1,890 | 11,292 | 16,063 | 313 | 1,199 | 4,969 |
| - October | 397 | 1,859 | 550 | 2,051 | 12,029 | 16,886 | 276 | 1,172 | 4,500 |
| November | 503 | 1,928 | 381 | 1,438 | 11,529 | 15,778 | 240 | 934 | 2,301 |
| December | 233 | 2,091 | 317 | 1,876 | 10,350 | 14,866 | 201 | 856 | 4,021 |
|  | Primarily manufactured products |  |  |  |  |  |  |  |  |
|  | House furnishings |  | Knit or crocheted | Narrow fabrics ${ }^{3}$ |  | Other manufactures ${ }^{4}$ |  | Total | manufactured exports |
|  | 1,000 pounds |  |  |  |  |  |  |  |  |
| 1981 | 84,18965,904 |  | 21,673 | $\begin{aligned} & 26,210 \\ & 26,614 \end{aligned}$ |  | 66,116 | 318,839 |  | 637,733 |
| 1982 |  |  | 15,645 |  |  | 54,566 |  | 237,960 | 438,551 |
| 1982 |  |  |  |  |  |  |  |  |  |
| January | 4,537 |  | 1,142 |  |  | 3,527 |  | 18,705 | 34,902 |
| February | 6,039 |  | 978 |  |  | 4,513 |  | 21,219 | 38,351 |
| March | 6,706 |  | 1,474 |  |  | 4,749 |  | 21,613 | 39,717 |
| April | 4,673 |  | 1,023 |  |  | 4,761 |  | 20,290 | 35,959 |
| May | 7,905 |  | 1,307 |  |  | 5,325 |  | 23,589 | 42,007 |
| June | 7,202 |  | 1,193 |  |  | 5,273 |  | 23,557 | 44,211 |
| July | 4,397 |  | 1,219 |  |  | 4,218 |  | 17,802 | 33,927 |
| August | 4,218 |  | 1,395 |  |  | 4,434 |  | 18,436 | 33,134 |
| September | 5,511 |  | 1.600 |  |  | 4,460 |  | 19,795 | 35,858 |
| October | 4,526 |  | 1,903 |  |  | 4,992 |  | 19,982 | 36,868 |
| November | 6,043 |  | 1,373 |  |  | 4,109 |  | 16,763 | 32,542 |
| December | 4,147 |  | 1,038 |  |  | 4,205 |  | 16,209 | 31,075 |

[^8]Table 21 - Flber prices: Landed Group B mill points, cotton prices and manmade staple fiber prlces at f.o.b. producing plants, actual and estimated raw fiber equivalent

| Year beginning January 1 | Cotton ${ }^{1}$ |  | Rayon ${ }^{2}$ |  | Polyester ${ }^{3}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual | Raw fiber equivalent ${ }^{4}$ | Actual | Raw fiber equivalent ${ }^{4}$ | Actual | Raw fiber equivalent ${ }^{4}$ |
|  | Cents per pound |  |  |  |  |  |
| 1982 | 68 | 76 | 85 | 88 | 77 | 80 |
| 1982 |  |  |  |  |  |  |
| October | 66 | 74 | 82 | 85 | 75 | 78 |
| November | 65 | 73 | 82 | 85 | 73 | 76 |
| December | 68 | 75 | 80 | 83 | 73 | 76 |
| 1983 |  |  |  |  |  |  |
| January | 69 | 76 | 78 | 81 | 72 | 75 |

'SLM-1-1/16" 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. ${ }^{4}$ Actual prices converted to estimated raw fiber equivalent as follows; cotton, divided by 0.90 , rayon and polyester, divided by 0.96 .
Agricultural Marketing Service and Trade reports.

Table 22-Cotton: Strict low middling, spot prices in designated U.S. markets, loan rates, and prices received by farmers for upland cotton

| Year beginning August 1 | Average spot market prices per pound (net weight) ${ }^{1}$ |  |  |  |  |  | Price per pound received by farmers for upland cotton (net weight) ${ }^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $15 / 16$ inch | $\begin{gathered} 1 \\ \text { inch } \end{gathered}$ | $1-1 / 32$ inches | $\begin{aligned} & 1-1 / 16 \\ & \text { inches } \end{aligned}$ | $\begin{aligned} & 1-3 / 32 \\ & \text { inches } \end{aligned}$ | $\begin{gathered} 1-1 / 8 \\ \text { inches } \end{gathered}$ |  |
|  | Cents |  |  |  |  |  |  |
| 1981/82 | 49.92 | 54.13 | 58.28 | 60.48 | 60.89 | 62.07 | ${ }^{3} 54.00$ |
| 1982/83 |  |  |  |  |  |  |  |
| August | 50.86 | 54.82 | 58.21 | 60.38 | 60.76 | 61.71 | 52.80 |
| September | 49.81 | 53.89 | 56.71 | 58.98 | 59.36 | 60.10 | 55.50 |
| October | 49.12 | 53.14 | 56.35 | 58.58 | 58.97 | 59.62 | 59.80 |
| November | 48.87 | 52.80 | 55.98 | 58.20 | 58.57 | 59.09 | 59.90 |
| December | 50.14 | 54.04 | 57.40 | 59.65 | 60.02 | 60.90 | 57.30 |
| January |  |  |  | 60.16 |  |  |  |
| February |  |  |  |  |  |  |  |
| March |  |  |  |  |  |  |  |
| April |  |  |  |  |  |  |  |
| May |  |  |  |  |  |  |  |
| June |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |
| Average |  |  |  |  |  |  | ${ }^{3} 58.10$ |
| Loan rate | 48.73 | 52.68 | 55.73 | 57.73 | 58.13 | 58.38 | ${ }^{4} 57.08$ |

[^9]Table 23-Cotton: Acreage, production and yield per acre on harvested acreage

| Year beginning August 1 | Planted |  | Harvested |  | Production |  | Yield |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 1,000 \\ & \text { acres } \end{aligned}$ | Percent of total | $\begin{aligned} & 1,000 \\ & \text { acres } \end{aligned}$ | Percent of total | $\begin{aligned} & 1,000 \\ & \text { bales }^{1} \end{aligned}$ | Percent of total | Pounds ${ }^{2}$ | Pounds ${ }^{3}$ |
| West ${ }^{4}$ |  |  |  |  |  |  |  |  |
| 1980 | 2,302 | 15.8 | 2,259 | 17.1 | 4,650 | 41.8 | 988 | 969 |
| 1981 | 2,318 | 16.2 | 2,276 | 16.4 | 5,287 | 33.8 | 1,115 |  |
| $1982^{8}$ | 2,003 | 17.4 | 1,980 | 20.0 | 4,367 | 36.4 | 1,059 |  |
| Southwest ${ }^{5}$ 2,003 ${ }^{\text {a }}$ |  |  |  |  |  |  |  |  |
| 1980 | 8,588 | 59.2 | 7.438 | 56.3 | 3,550 | 31.9 | 229 | 317 |
| 1981 | 8,128 | 56.7 | 7,858 | 56.8 | 6,103 | 39.0 | 373 |  |
| $1982{ }^{8}$ | 6,300 | 54.8 | 4,779 | 48.3 | 2,972 | 24.7 | 298 |  |
|  |  |  |  |  |  |  |  |  |
| 1980 | 2,955 | 20.3 | 2,846 | 21.5 | 2,424 | 21.8 | 409 | 556 |
| 1981 | 3,107 | 21.7 | 2,943 | 21.3 | 3,394 | 21.7 | 554 |  |
| $1982^{8}$ | 2,528 | 22.0 | 2,490 | 25.1 | 3,716 | 30.9 | 716 |  |
| Southeast ${ }^{7}$ ( 089 2, |  |  |  |  |  |  |  |  |
| 1980 | 689 | 4.7 | 672 | 5.1 | 498 | 4.5 | 355 | 515 |
| 1981 | 777 | 5.4 | 764 | 5.5 | 862 | 5.5 | 541 |  |
| $1982^{8}$ | 668 | 5.8 | 656 | 6.6 | 964 | 8.0 | 705 |  |
| U.S. |  |  |  |  |  |  |  |  |
| 1980 | 14,534 | 100.0 | 13,215 | 100.0 | 11,122 | 100.0 | 404 | 499 |
| 1981 | 14,330 | 100.0 | 13,841 | 100.0 | 15,646 | 100.0 | 543 |  |
| $1982{ }^{8}$ | 11,499 | 100.0 | 9,906 | 100.0 | 12,019 | 100.0 | 582 |  |

Table 24-Cotton: Acreage, production, and yield, by States

| State | Harvested acres |  |  |  | Lint yield per harvested acre |  |  |  | Production |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average $1976-80$ | 1981 | $1982^{\dagger}$ | Change from 1981 | Average $1976-80$ | 1981 | $1982^{1}$ | Change from 1981 | Average $1976-80$ | 1981 | $1982^{1}$ | Change from 1981 |
|  | $\begin{aligned} & 1,000 \\ & \text { acres } \end{aligned}$ | $\begin{aligned} & 1,000 \\ & \text { acres } \end{aligned}$ | $\begin{aligned} & 1,000 \\ & \text { acres } \end{aligned}$ | Percent | Pounds | Pounds | Pounds | Percent | $\begin{aligned} & 1,000 \\ & \text { bales }^{2} \end{aligned}$ | $\begin{aligned} & 1,000 \\ & \text { bales }^{2} \end{aligned}$ | $\begin{aligned} & 1,000 \\ & \text { bales }^{2} \end{aligned}$ | Percent |
| Alabama | 351 | 372 | 300 | -19.4 | 420 | 545 | 736 | +35.1 | 303 | 422 | 460 | +9.0 |
| Arizona | 542 | 633 | 533 | -15.8 | 1,054 | 1,221 | 1,104 | -9.6 | 1,183 | 1,610 | 1,226 | -23.9 |
| Arkansas | 763 | 560 | 420 | -25.0 | 444 | 518 | 606 | +17.0 | 704 | 604 | 530 | -12.3 |
| Californla | 1.428 | 1.530 | 1,370 | -10.5 | 936 | 1,109 | 1,069 | -3.6 | 2,746 | 3,535 | 3,050 | -13.7 |
| Georgia | 167 | 175 | 175 | - | 367 | 436 | 631 | +44.7 | 126 | 159 | 230 | +44.6 |
| Louisiana | 527 | 695 | 605 | -12.9 | 523 | 512 | 690 | +34.8 | 567 | 742 | 870 | +17.3 |
| Mississippi | 1,237 | 1,200 | 1,040 | -13.3 | 533 | 626 | 812 | +29.7 | 1,351 | 1,565 | 1,760 | +12.5 |
| Missour | 216 | 183 | 155 | -15.3 | 428 | 441 | 650 | +47.4 | 184 | 168 | 210 | +25.0 |
| New Mexico | 120 | 113 | 76 | -32.7 | 476 | 600 | 564 | -6.0 | 118 | 141 | 90 | -36.2 |
| North Carolina | 61 | 82 | 72 | -12.2 | 429 | 558 | 667 | +19.5 | 53 | 95 | 100 | +5.3 |
| Oklahoma | 517 | 640 | 460 | -28.1 | 310 | 330 | 261 | -20.9 | 339 | 440 | 250 | -43.2 |
| South Carolina | 128 | 118 | 95 | -19.5 | 432 | 667 | 783 | +17.4 | 112 | 164 | 155 | -5.5 |
| Tennessee | 281 | 305 | 270 | -11.5 | 380 | 496 | 615 | +24.0 | 218 | 315 | 346 | +9.8 |
| Texas | 6,182 | 7.218 | 4,319 | -40.2 | 336 | 377 | 302 | -19.9 | 4,303 | 5,663 | 2,722 | -51.9 |
| Other States ${ }^{3}$ | 7 | 18 | 15 | -16.7 | 501 | 607 | 651 | +7.3 | 8 | 23 | 20 | -13.0 |
| Upland | 12,456 | 13,783 | 9,833 | -28.7 | 470 | 542 | 581 | +7.2 | 12,221 | 15,566 | 11,911 | -23.5 |
| American-Pima ${ }^{4}$ | 71 | 58 | 73 | +25.9 | 647 | 659 | 710 | +7.7 | 95 | 80 | 108 | +35.0 |
| United States | 12,527 | 13,841 | 9,906 | -28.4 | 471 | 543 | 582 | +7.2 | 12,315 | 15,646 | 12,019 | -23.2 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 25-Manmade fiber production and capacity, quarterly, 1981 -844

| Fiber | 1981 | 1982 |  |  |  |  | 1983 |  |  |  |  | $\begin{aligned} & \text { Projected } \\ & 1984 \end{aligned}$capacity | Averageannualchange$1984 / 1982$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Year | 1Q | 2Q | 3Q | 4Q | Year | 1Q | 2Q | 3Q | 4Q | Year |  |  |
|  | Million pounds |  |  |  |  |  |  |  |  |  |  |  | Percent |
| Grand total ${ }^{1,2}$ all fibers |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 12,042 | 3,033 | 3,027 | 3,009 | 2,996 | 12,065 | 3,005 | 3,020 | 3,030 | 3,047 | 12,102 | 12,357 | 1.2 |
| Prod | 9,819 | 2,028 | 1,975 | 1,962 | 2,001 | 7,966 |  |  |  |  |  |  |  |
| Percent | 82 | 67 | 65 | 65 | 67 | 66 |  |  |  |  |  |  |  |
| Total staple ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 5,347 | 1,362 | 1,360 | 1,341 | 1,325 | 5,388 | 1,326 | 1,330 | 1,331 | 1,334 | 5,321 | 5,464 | 0.7 |
| Prod | 4,657 | 963 | 919 | 921 | 959 | 3,762 |  |  |  |  |  |  |  |
| Percent | 87 | 71 | 68 | 69 | 72 | 70 |  |  |  |  |  |  |  |
| Total filament ${ }^{1,2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 6,695 | 1,671 | 1,667 | 1,668 | 1,671 | 6,677 | 1,679 | 1.690 | 1,699 | 1,713 | 6,781 | 6,893 | 1.6 |
| Prod | 5,162 | 1,065 | 1,056 | 1,041 | 1,042 | 4,204 |  |  |  |  |  |  |  |
| Percent | 77 | 64 | 63 | 62 | 62 | 63 |  |  |  |  |  |  |  |
| Polyester total |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 4,616 | 1,132 | 1,105 | 1,091 | 1,076 | 4,404 | 1.078 | 1,081 | 1.082 | 1,082 | 4,323 | 4,389 | -0.2 |
| Prod | 4,176 | 870 | 778 | 728 | 793 | 3,169 |  |  |  |  |  |  |  |
| Percent | 90 | 77 | 70 | 67 | 74 | 72 |  |  |  |  |  |  |  |
| Staple |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 2,767 | 707 | 704 | 690 | 675 | 2,776 | 677 | 680 | 680 | 680 | 2,717 | 2,778 | 0 |
| Prod | 2,607 | 539 | 460 | 447 | 510 | 1,956 |  |  |  |  |  |  |  |
| Percent | 94 | 76 | 65 | 65 | 76 | 70 |  |  |  |  |  |  |  |
| Filament |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 1,849 | 425 | 401 | 401 | 401 | 1,628 | 401 | 401 | 402 | 402 | 1,606 | 1,611 | -0.5 |
| Prod | 1,569 | 331 | 318 | 281 | 283 | 1,213 |  |  |  |  |  |  |  |
| Percent | 85 | 78 | 79 | 70 | 71 | 75 |  |  |  |  |  |  |  |
| Nylon total |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 2.946 | 740 | 739 | 731 | 723 | 2,933 | 726 | 729 | 733 | 736 | 2,924 | 3,008 | 1.3 |
| Prod | 2,333 | 441 | 478 | 503 | 510 | 1.932 |  |  |  |  |  |  |  |
| Percent | 79 | 60 | 65 | 68 | 71 | 66 |  |  |  |  |  |  |  |
| Staple 080 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 989 | 249 | 247 | 246 | 245 | 987 | 245 | 244 | 246 | 247 | 982 | 1,045 | 2.9 |
| Prod | 752 | 141 | 169 | 191 | 185 | 686 |  |  |  |  |  |  |  |
| Percent | 76 | 57 | 68 | 78 | 76 | 70 |  |  |  |  |  |  |  |
| Filament 76 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 1,957 | 491 | 492 | 485 | 478 | 1,946 | 481 | 485 | 487 | 489 | 1,942 | 1,963 | 0.4 |
| Prod | 1,581 | 300 | 309 | 312 | 325 | 1,246 |  |  |  |  |  |  |  |
| Percent | 81 | 61 | 63 | 63 | 68 | 64 |  |  |  |  |  |  |  |
| Olefin total |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 1,192 | 315 | 317 | 322 | 327 | 1,281 | 331 | 334 | 337 | 340 | 1,342 | 1,397 | 4.4 |
| Prod | 785 | 190 | 178 | 180 | 176 | 724 |  |  |  |  |  |  |  |
| Percent | 66 | 60 | 56 | 56 | 54 | 57 |  |  |  |  |  |  |  |
| Staple 030 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 239 | 68 | 69 | 68 | 70 | 273 | 68 | 68 | 68 | 68 | 282 | 285 | 2.2 |
| Prod | '142 | 36 | 31 | 37 | 34 | 138 |  |  |  |  |  |  |  |
| Percent | 59 | 53 | 45 | 54 | 50 | 51 |  |  |  |  |  |  |  |
| Filament |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 953 | 247 | 248 | 254 | 259 | 1,008 | 263 | 266 | 269 | 272 | 1,070 | 1,112 | 5.0 |
| Prod | 643 | 154 | 147 | 143 | 142 | 586 |  |  |  |  |  |  |  |
| Percent | 67 | 62 | 59 | 56 | 55 | 58 |  |  |  |  |  |  |  |
| Acrylic staple |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 833 | 210 | 211 | 209 | 208 | 838 | 208 | 209 | 209 | 210 | 836 | 842 | 0.2 |
| Prod | 691 | 150 | 171 | 158 | 145 | 624 |  |  |  |  |  |  |  |
| Percent | 83 | 71 | 81 | 76 | 70 | 74 |  |  |  |  |  |  |  |
| Non-cellulosic non-glass total ${ }^{1}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 9,610 | 2,403 | 2,380 | 2,360 | 2,342 | 9,485 | 2,350 | 2,361 | 2,368 | 2,376 | 9,455 | 9,666 | 1.0 |
| Prod | 8,007 | 1,658 | 1,612 | 1.576 | 1,631 | 6,477 |  |  |  |  |  |  |  |
| Percent | 83 | 69 | 68 | 67 | 70 | 68 |  |  |  |  |  |  |  |
| Staple |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 4,828 | 1,234 | 1,231 | 1,213 | 1,196 | 4,874 | 1,198 | 1,201 | 1,203 | 1,205 | 4,807 | 4,950 | 0.7 |
| Prod | 4,192 | 866 | 831 | 833 | 874 | 3,404 |  |  |  |  |  |  |  |
| Percent | 87 | 70 | 68 | 69 | 73 | 70 |  |  |  |  |  |  |  |
| Filament ${ }^{1}$ - ${ }^{\text {P }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 4,782 | 1,169 | 1,149 | 1.147 | 1,146 | 4,611 | 1,152 | 1,160 | 1,165 | 1,171 | 4,648 | 4,716 | 1.1 |
| Prod | 3,815 | 792 | 781 | 743 | 757 | 3,073 |  |  |  |  |  |  |  |
| Percent | 80 | 68 | 68 | 65 | 66 | 67 |  |  |  |  |  |  |  |
| Rayon staple |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 512 | 127 | 128 | 127 | 128 | 510 | 127 | 128 | 127 | 128 | 510 | 510 | 0 |
| Prod | 461 | 96 | 87 | 88 | 84 | 355 |  |  |  |  |  |  |  |
| Percent | 90 | 76 | 68 | 69 | 66 | 70 |  |  |  |  |  |  |  |
| Acetate filament |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 330 | 81 | 80 | 79 | 80 | 320 | 79 | 80 | 79 | 80 | 318 | 318 | -0.3 |
| Prod | 257 | 53 | 53 | 46 | 43 | 195 |  |  |  |  |  |  |  |
| Percent | 78 | 65 | 66 | 58 | 54 | 61 |  |  |  |  |  |  |  |
| Glass filament |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap | 1,525 | 407 | 424 | 427 | 429 | 1,687 | 432 | 434 | 440 | 446 | 1,752 | 1,796 | 3.2 |
| Prod | 1,041 | 208 | 210 | 241 | ${ }^{3} 230$ | ${ }^{3} 889$ |  |  |  |  |  |  |  |
| Percent | 68 | 51 | 50 | 56 | 54 | 53 |  |  |  |  |  |  |  |

Table 26-Raw wool content of United States imports for consumption of wool manufactures ${ }^{1}$

| Year and month | Noils | Wastes ${ }^{6}$ | Tops and advanced wool | Yarns | Woven fabrics ${ }^{2}$ | Wool blankets ${ }^{3}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1,000 pounds |  |  |  |  |  |
| 1977 | 19,426 | 11,289 | 842 | 5,804 | 18,651 | 407 |
| 1978 | 23,067 | 14,130 | 563 | 5,550 | 25,830 | 572 |
| 1979 | 17,216 | 11,778 | 368 | 3,801 | 21,687 | 457 |
| 1980 | 10,638 | 7,546 | 311 | 3,864 | 21,152 | 375 |
| 1981 | 12,299 | 8,233 | 326 | 4,720 | 27,783 | 400 |
| 1982 | 7,174 | -4,569 | 466 | 7,239 | 25,633 | 315 |
| 1982 |  |  |  |  |  |  |
| January | 808 | 574 | 69 | 555 | 1,628 | 12 |
| February | 480 | 382 | 25 | 634 | 1,843 | 13 |
| March | 1,064 | 543 | 103 | 715 | 2,643 | 10 |
| April | 702 | 389 | 25 | 680 | 2,629 | 21 |
| May | 429 | 445 | 83 | 951 | 3,419 | 25 |
| June | 591 | 562 | 111 | 593 | 3,487 | 14 |
| July | 424 | 303 | 1 | 650 | 2,368 | 9 |
| August | 527 | 317 | 14 | 776 | 2,814 | 21 |
| September | 388 | 215 | 5 | 459 | 1,763 | 34 |
| October | 625 | 315 | 10 | 380 | 1,174 | 86 |
| November | 503 | 309 | 12 | 479 | 959 | 34 |
| December | 633 | 215 | 8 | 367 | 906 | 36 |
|  | Wearing apparel |  | Other manufactures ${ }^{5}$ |  | Carpets and rugs | Total |
|  | Knit | Other than knit $^{4}$ |  |  |  |  |
|  | 1,000 pounds |  |  |  |  |  |
| 1977 | 25,808 | 18,264 |  |  | 14,838 | 116,553 |
| 1978 | 22,339 | 22,559 |  |  | 13,914 | 129,369 |
| 1979 | 19,114 | 20,072 |  |  | 13,937 | 109,543 |
| 1980 | 24,431 | 17,252 |  |  | 16,931 | 103,228 |
| 1981 | 22,789 | 18,098 |  |  | 18,076 | 113,626 |
| 1982 | 25,649 | 20,714 |  |  | 19,642 | 112,240 |
| 1982 |  |  |  |  |  |  |
| January | 775 | 816 |  |  | 1,632 | 6,943 |
| February | 1,011 | 769 |  |  | 1,267 | 6,490 |
| March | 829 | 732 |  |  | 1,595 | 8,326 |
| April | 1,065 | 937 |  |  | 1,368 | 7,915 |
| May | 1,569 | 1,009 |  |  | 1,764 | 9,758 |
| June | 2,768 | 2,006 |  |  | 1,692 | 11,900 |
| July | 3,192 | 2,345 |  |  | 1,543 | 10,903 |
| August | 4,644 | 4,020 |  |  | 1,912 | 15,098 |
| September | 3,482 | 3.237 |  |  | 1,352 | 10,999 |
| October | 2,974 | 2,247 |  |  | 1,799 | 9,672 |
| November | 2,285 | 1,682 |  |  | 1,756 | 8,089 |
| December | 1,055 | 914 |  |  | 1,962 | 6,147 |

${ }^{1}$ Includes manufactures of mohair, alpaca, and other wool-like specialy hair. ${ }^{2}$ Includes pile fabric and manufactures, tapestry and upholstery goods press and billard cloths. ${ }^{3}$ Includes carriage and automobile robes, steamer rugs, etc. ${ }^{4}$ Includes laces, lace articles, veils and veilings, nets and nettings, when reported in pounds. ${ }^{5}$ Includes knit fabrics in the piece and miscellaneous manufactures not elsewhere specified. ${ }^{6}$ Not including rags.
Compiled from reports of the Bureau of the Census.

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Table 27-Raw wool content of United States exports of domestle wool manufactures'

| Year and month | Noils \& wastes ${ }^{2}$ | Tops and advanced wool | Yarns | Woven fabrics | Wool ${ }^{2}$ blankets | Wearing appare knit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1,000 pounds |  |  |  |  |  |
| 1977 | 1,591 | 1,702 | 1,476 | 677 | 706 | 586 |
| 1978 | 929 | 1,299 | 1,266 | 1,094 | 33 | 1,218 |
| 1979 | 1,323 | 3,213 | 951 | 1,162 | 22 | 1,471 |
| 1980 | 566 | 4,258 | 577 | 1,342 | 65 | 2,689 |
| 1981 | 537 | 2,641 | 994 | 1,652 | 88 | 2,031 |
| 1982 | 1,069 | 4,283 | 663 | 1,297 | 47 | 1,762 |
| 1982 |  |  |  |  |  |  |
| January | 6 | 119 | 123 | 87 | 8 | 547 |
| February | 91 | 200 | 90 | 162 | 2 | 122 |
| March | 117 | 380 | 40 | 128 | 3 | 125 |
| April | 95 | 291 | 74 | 106 | 5 | 128 |
| May | 76 | 435 | 56 | 101 | 3 | 142 |
| June | 103 | 560 | 141 | 108 | 7 | 138 |
| July | 36 | 357 | 34 | 102 | 5 | 74 |
| August | 67 | 359 | 22 | 184 | 2 | 114 |
| September | 35 | 501 | 46 | 88 | 4 | 173 |
| October | 161 | 342 | 28 | 56 | 3 | 101 |
| November | 96 | 317 | 3 | 75 | 3 | 28 |
| December | 186 | 422 | 6 | 103 | 2 | 70 |
|  | Wearing apparel other than knit | Felts | Other manufactures ${ }^{3}$ | Carpets and rugs | Knit fabrics | Total |
|  | 1,000 pounds |  |  |  |  |  |
| 1977 | 1,830 | 233 | 2,054 | 1,986 | 201 | 13,042 |
| 1978 | 1,235 | 274 | 1,247 | 733 | 152 | 9,480 |
| 1979 | 1,335 | 192 | 1,867 | 297 | 297 | 12,488 |
| 1980 | 1,903 | 198 | 1,878 | 301 | 214 | 13,989 |
| 1981 | 1,945 | 294 | 1,729 | 201 | 211 | 12,332 |
| 1982 | 1,131 | 235 | 1,173 | 180 | 107 | 11,945 |
| 1982 |  |  |  |  |  |  |
| January | 71 | 15 | 176 | 26 | 4 | 1,185 |
| February | 81 | 27 | 91 | 5 | 15 | 887 |
| March | 70 | 21 | 76 | 15 | 22 | 995 |
| April | 83 | 9 | 76 | 22 | 3 | 892 |
| May | 91 | 16 | 88 | 18 | 7 | 1,032 |
| June | 262 | 15 | 173 | 12 | 29 | 1,549 |
| July | 70 | 2 | 109 | 6 | 3 | 798 |
| August | 113 | 44 | 95 | 15 | 3 | 1,013 |
| September | 104 | 16 | 92 | 7 | 6 | 1,072 |
| October | 65 | 1 | 80 | 7 | 7 | 852 |
| November | 33 | 31 | 47 | 37 | 7 | 675 |
| December | 88 | 38 | 70 | 10 | 1 | 995 |

Tincludes manufactures of mohair, alpaca, and other wool-like speclality hair. ${ }^{2}$ Not including rags. ${ }^{3}$ Census Bureau's Schedule $B$ classification designated manufactures, n.e.c.
Compiled from reports of the Bureau of the Census.


[^0]:    ${ }^{1}$ Prellminary. N.A. $=$ not available.
    Compiled from reports of the Bureau of the Census.

[^1]:    ${ }^{1}$ Data are for crop years. In 1965, stocks-to-use ratio was. 135 percent, and the price ratio was 0.97 .

    Figure 5

[^2]:    N.A. $=$ Not avallable.

[^3]:    ${ }^{1}$ Preliminary.

[^4]:    Expected market price, cents per pound. ${ }^{2} 0 / 0 / 0$ - nonparticipant; 20/0/0-20-percent acreage reduction; 20/0/30-20-percent acreage reduction plus 30 -percent PIK. ${ }^{3}$ From table $11: 500 / 600=.833$. ${ }^{4}$ Dollars in parentheses are based on assumption that the PIK price is 80 percent of market price.

[^5]:    ${ }^{1}$ Compiled from Bureau of the Census data and adjusted to a 480 -pound net weight basis. ${ }^{2}$ August stocks adjusted to an August 1 basis and $\begin{aligned} & \text { ax- }\end{aligned}$

[^6]:    ${ }^{1}$ Includes tapestry and upholstery fabrics, tire cord fabrics, and cloths in chief value cotton containing other fibers. ${ }^{2}$ includes velvets and velveteens, corduroys, plushes and chenilles, and manufactures of pile fabrics. ${ }^{3}$ Includes blankets, quilts, bedspreads, sheets and pillow cases. ${ }^{4}$ Includes knit and woven underwear and outerwear (collars and cuffs, shirts, coats, vests, robes, pajamas, and ornamented wearing apparel). 5 Includes nets and nettings, veils and veilings, edging, embroideries, eic., and lace window curtains. ${ }^{6}$ Includes braids (except hat braids) tubing, labels, lacing, wicking, loom harness, table and bureau covers, polishing and dust cloths, fabric with fast edges, cords, and tassels, garters, suspenders and braces, corsets and brassieres etc. ${ }^{7}$ Includes belts and belting, fish nets and netting, and coated, filled or waterproof fabrics. 8480 -pound net weight bales. ${ }^{9}$ Does not include quantities in the TSUSA 706 luggage categories. These raw fiber equivalent quantities for May-December 1982 are $891,894,726,1,362,711,481,690$, and 854 thousand pounds respectively.
    Compiled from reports of the Bureau of the Census.

[^7]:    Includes fabrics, tire cord and cloth for export to the Philippines to be embroidered and otherwise manufactured and returned to the United States
    ${ }^{2}$ Includes tapestry and upholstery fabrics, table damask, pile fabrics and remnants. ${ }^{3}$ Includes curtains and draperies, house furnishings not elseWhere specified. ${ }^{4}$ Includes gloves and mitts of woven fabric. ${ }^{5}$ Includes underwear and outerwear of woven fabric, handkerchiefs, and wearing apparel containing mixed fibers (corsets, brassieres, and girdies, garters, armbands and suspenders, neckties and cravats). Includes canvas articles and manufactures, braids and narrow fabrics, elastic webbing, waterproof garments, and laces and lace articles. ${ }^{7}$ Includes rubberized fabrics, bags, and industrial belt and belting. ${ }^{8} 480$-pound net weight bales.
    Complled from reports of the Bureau of the Census.

[^8]:    ${ }^{1}$ Includes products made from waste. ${ }^{2}$ Includes pile and tufted fabric such as corduroy. ${ }^{3}$ Includes ribbons, trimmings, and braids (except hat braids). ${ }^{4}$ Not elsewhere classified.

    Compiled from,reports of the Bureau of the Census.

[^9]:    ${ }^{1}$ Spot market loan rates and prices are for cotton with micronaire readings of 3.5 through 4.9. ${ }^{2}$ Exciudes domestic allotment payments, price support and diversion payments. ${ }^{3}$ Weighted average. ${ }^{4}$ SLM 1-1/16" average location.

    Agricultural Stabilization and Conservation Service, Agricultural Marketing Service, and Statistical Reporting Service.

