IMPROVING THE MARKET SHARE OF COTTON

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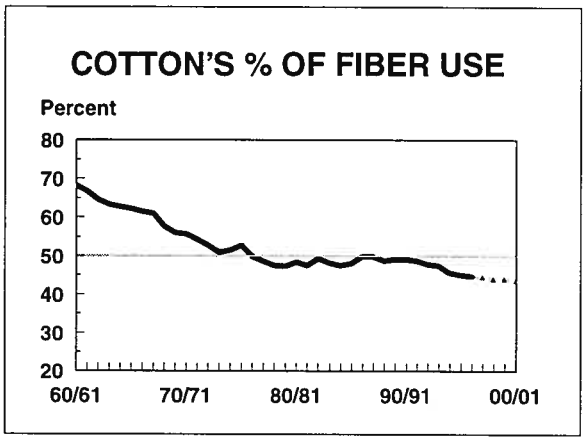
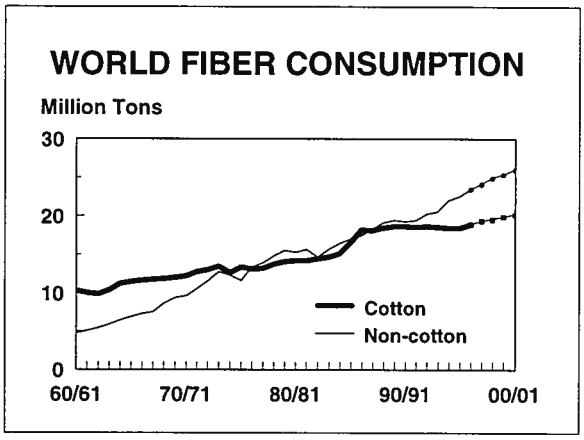
Cotton's Market Share Declining

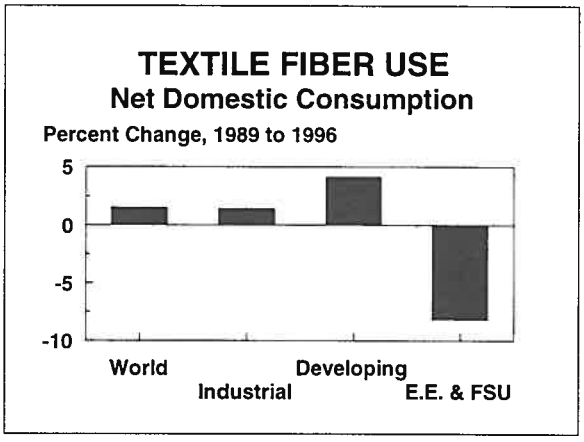
Cotton's share of world textile fiber consumption is falling and now equals less than 45%, down about five percentage points since 1986 when cotton's share was 50%. While cotton remains the single most important textile fiber in the world, the consumption of chemical fiber is rising faster than cotton, especially in developing countries and the former USSR.

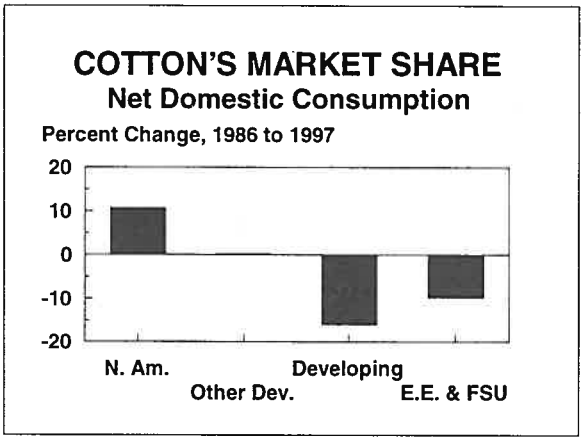


Total textile fiber consumption rose from 15 million tons in 1960 to 38 million in 1989, for an average rate of growth of 3.1% per year. The fastest growth in total fiber consumption occurred in industrial countries, with growth of 6.4% per year, and the slowest increase occurred in Eastern Europe and the USSR, 2.5% per year. Over the same thirty-year period, cotton consumption alone rose from 10 million tons to 19 million, for an average annual rate of growth of 2%, and cotton's share of world fiber consumption dropped from 68% to 49%.



Growth in fiber consumption has slowed in the 1990s. Total fiber consumption climbed at an average annual rate of only 1.2% between 1989 and 1996; total fiber consumption fell by 8.2% per year in Eastern Europe and the former USSR and rose by 1.4% per year in industrial countries. Only developing countries as a group have maintained the former rate of growth in fiber consumption at 4.1% since 1989. Growth in cotton consumption has been very limited this decade, rising only from 18.7 mil-





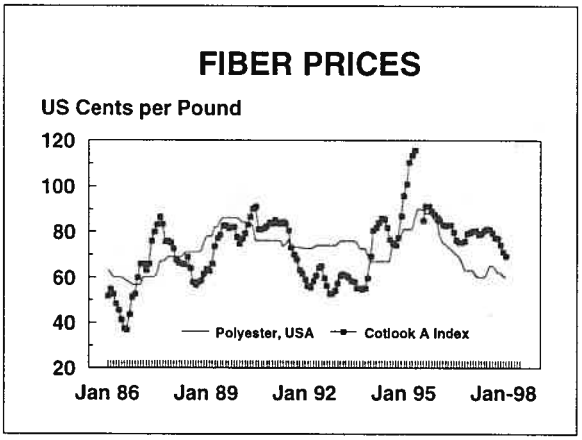
lion tons in 1989 to 18.9 million in 1996, and to 19.4 million in 1997. Between 1989 and 1997, cotton's share of world fiber use dropped to 44.6%. On a per capita basis, cotton consumption has fallen from 3.63 kilograms in 1987 to 3.25 kilograms in 1997.

The greatest loss in market share for cotton since 1986 has occurred in developing countries, where retail-level cotton use rose from 8.7 million tons to 9.6 million tons by 1997. However, consumption of chemical fibers in developing countries rose faster than use of cotton, and cotton's share of retail-level fiber use in developing countries dropped from 62% in 1986 to 46% in 1997. Retail-level cotton consumption in Eastern Europe and the former USSR fell from 2.8 million tons in 1986 to an estimated 1.2 million tons in 1997, and cotton's share of fiber use fell ten percentage points to 39%. In North America, cotton's share of retail-level fiber consumption increased from 36% in 1986 to 47% last year, and cotton's share of fiber consumption held steady over the last eleven years at about 40% in Western Europe and 46% in Japan, Australia and New Zealand as a group.

High Cotton Prices Reduce Competitiveness

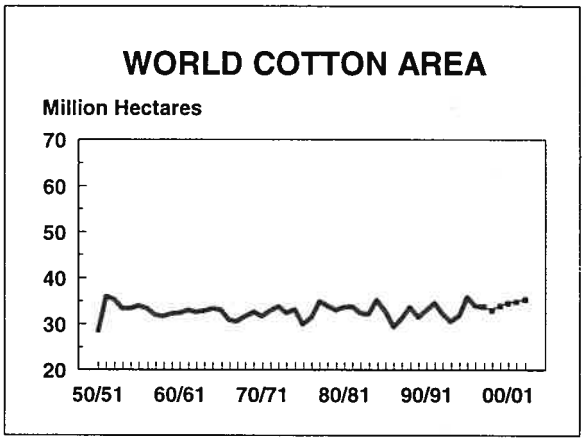
Many factors explain cotton's loss of market share since 1986, including relative prices, government trade policies and shifts in consumer attitudes and preferences. Research based on changes in per capita fiber consumption relative to changes in income suggest that about one-third of the loss of market share since 1986 can be attributed to high prices for cotton relative to the prices of polyester and other fibers. The same research suggests that about two-thirds of cotton's loss in market share over the past decade is linked to factors other than price.

The world cotton yield of lint per hectare has not increased since 1991/92, while production capacity for chemical fiber has expanded, resulting in a shift in relative prices to the disadvantage of cotton. During the three year period from 1985 to 1987, the Cotlook A Index was 94% of the average quote in *Cotton Outlook* for polyester in the USA. However, in the most recent three years, the Cotlook A Index was 112% of average polyester prices, for a shift in favor of polyester of sixteen percentage points in relative prices. Further, much of the growth in chemical fiber use during the past decade has been in polyester filament, rather than polyester staple, and prices of polyester filament are reported to have fallen more than prices of staple fiber, putting cotton at an even greater competitive disadvantage.

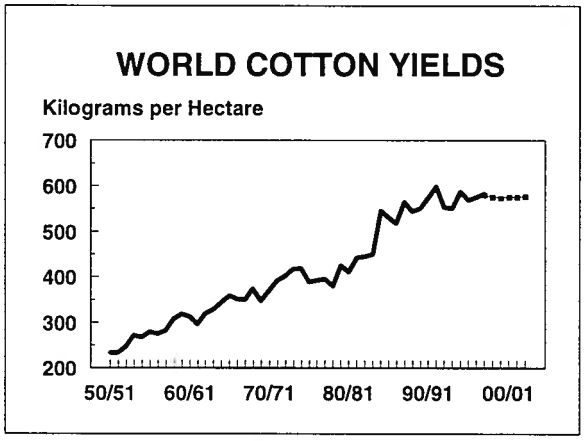


World Cotton Production Problems Persist

World 1997/98 cotton production was 5% below the record of nearly 21 million tons set in 1991/92, and production in 1998/99 is forecast to drop an additional 4% to approximately 19 million tons. Without increased production, cotton consumption can not expand in the long run, and the major reason why world production has not increased during the 1990s is that yields are not rising. World cotton area has been in a range between 29 million and 36 million hectares since 1950/51 and shows no tendency to either rise or fall. Competition with other crops and with urban uses, combined with rising production costs, seem to be preventing a sustained increase in world cotton area. Consequently, increases in world cotton production are dependent on increases in yields per hectare.



Between 1950/51 and 1991/92, the world cotton yield rose an average of 8 kilograms per hectare per year, or 2% per year. However, yields have fallen in the six seasons since 1991/92, and the 1997/98 world cotton yield is estimated at 580 kilograms per hectare, 3% lower than the record of about 600 kilograms set in 1991/92. 1997/98 was the sixth consecutive year in which the world yield did not reach a new record, the first six-year period of no growth in the world yield since World War II. The decline in the world average yield since 1991/92 is reinforcing the impression that the cotton industry is in the midst of a period of no growth in production caused by specific difficulties affecting productivity in several of the largest producing countries. Resistance to pesticides in Eastern China, the existence of the leaf curl virus in Pakistan and North India, changes in the government program in the USA and economic difficulties in Central Asia have affected cotton yields in four of the five largest cotton producing countries during the 1990s. Because yields are not rising, the cotton supply outside China (Mainland) has tightened, and cotton prices are being supported at higher levels than would prevail otherwise.

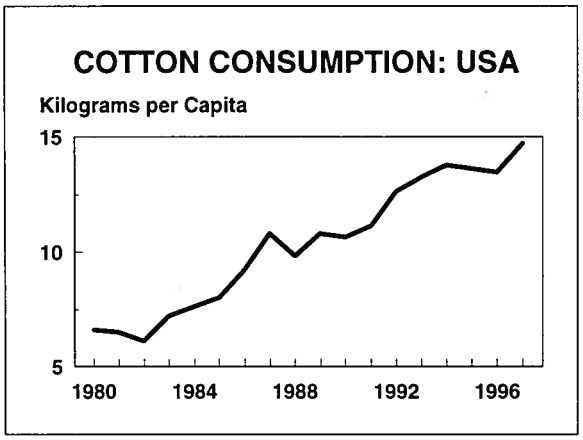


Meanwhile in the 1990s, the world production capacity for chemical fiber has expanded substantially. Production capacity for polyester filament nearly doubled between 1992 and 1997, rising from 5.6 million tons to 9.3 million, and production capacity for all chemical fibers increased by 34% and reached 31 million tons. Some of the gain in capacity is crowding out older, less efficient chemical fiber plants rather than cotton. Further, much of the gain in production capacity is in filament yarn for products like floor

covering in which cotton's market interest is low. Nevertheless, the overall gain in chemical fiber production capacity has been so large that cotton is also losing market share in apparel and home furnishings.

Government Policies and Consumer Attitudes Affect Market Share

While relative prices are always central to the issue of competitiveness, research indicates that factors other than price account for about two-thirds of the erosion in cotton's market share over the last decade. Consumer perceptions, along with changes in fashion, research and development leading to new processing technologies and government policies are among the important non-price factors.

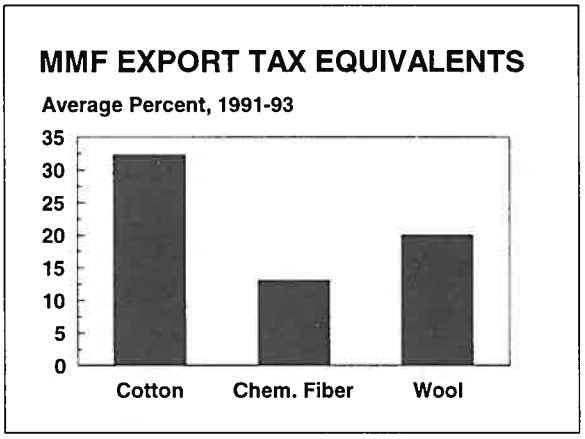


Changes in fashion and clothing styles may be affecting cotton's market share, and indirect evidence suggests that a failure to promote cotton worldwide is having a negative impact on market share. US cotton producers have paid for a market promotion effort focused primarily on US consumers since the 1970s. The promotion effort also includes agronomic research on cotton and technical research on spinning and fabric construction. Expenditures on research and US market promotion escalated in the 1980s and grew to the current magnitude of approximately $60 million per year in the early 1990s. Advocates of market promotion point to the differences in consumption patterns between the USA and other industrial markets as evidence of the efficacy of fiber promotion efforts. Per capita cotton consumption in the USA more than doubled from six kilograms in the early 1980s to nearly 15 kilograms in 1997, and cotton's share of net domestic fiber consumption in the USA rose from about 33% in the early 1980s to 47% in 1997. Meanwhile, cotton consumption per capita and market share have shown no growth in other industrial countries since the early 1980s.

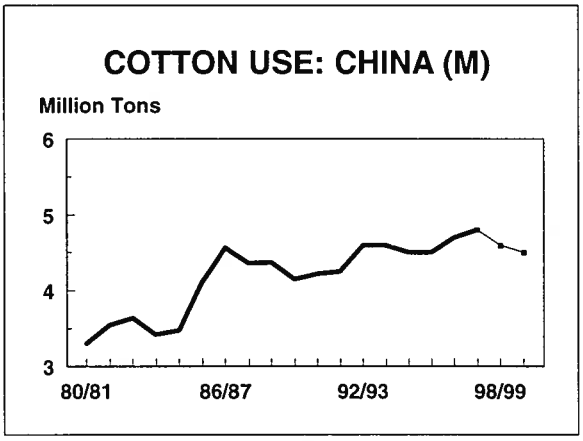
A survey of international cotton promotion activities conducted in 1996 showed that worldwide expenditures by all countries totaled about $80 million. In addition to the domestic US research and promotion program costing about $62 million per year, the USA also spent about $14 million on international cotton promotion, with about $11 million coming from government sources. (These expenditures are separate from spending under the US cotton program for the marketing loan and Step 2 payments.) Outside the USA, there were significant cotton promotion efforts in 1996 in Colombia, spending about $2 million per year, and in Australia and South Africa, with expenditures of about US$250,000 per year. There were promotion activities in, or financed by, India, Sudan and Germany costing up to $100,000 per year apiece. Several consuming countries participate in cooperative promotion programs with the cotton industry of the USA. The survey indicated that only in the USA, and possibly in Colombia, is market promotion conducted on a sufficient scale to achieve the critical mass necessary to significantly affect consumer attitudes.

In some countries, most notably Germany, some consumers are reported to associate cotton with negative environmental consequences. The negative association seems most often linked to damaging Soviet cotton production practices on the environment of Central Asia, and some consumers equate all cotton production with environmental damage. There are also public concerns, again most notably in Europe, about chemical residue and chemical discharge as a by-product of cotton textile production. While in Australia, Colombia, South Africa, USA and perhaps some other countries there are institutions ready to counter negative claims about cotton, there are no focused public relations efforts in Europe today.

Government trade policies that protect domestic textile industries from international competition can have the indirect consequence of discouraging cotton use at the retail level. The textile exports of developing countries are disproportionately cotton based, and textile import quotas and tariffs imposed by North America, the EU and Japan are mainly against cotton products. While trade barriers are designed to protect domestic cotton textile industries, the barriers also serve to raise the retail prices of cotton products, to restrict consumer choices, and to prompt retailers to promote more-easily obtained chemical fiber apparel and home furnishings. By some estimates, quotas under the Multi Fiber Arrangement apply to more than one-half of the volume of world trade in cotton apparel, and almost all trade in cotton products is affected by tariffs. Research indicates that during a three-year period from 1991 through 1993, the average export tax equivalent of MFA quotas was 32% for cotton and just 13% for chemical fiber products[1].



Government industrial policies that encourage increased use of domestically-produced chemical fibers have also affected cotton's market share, with China (Mainland) being the most important example. Approximately one-fourth of world cotton consumption occurs in China (Mainland), and the government has restricted cotton use to approximately 4.5 million tons since the mid-1980s. The restriction is enforced through plans and targets and restrictions on credit and access to raw material, and



[1] Martin, Will, "The Abolition of the Multi-fibre Arrangement and Its Implications for Fiber Markets," International Trade Division, World Bank, May 24, 1996.

represents an explicit government policy published in magazines and newspapers and discussed openly in seminars in China (Mainland). The result has been essentially no growth in cotton use in China (Mainland) since 1986/87. If per capita net domestic cotton consumption in China (Mainland) had been maintained at 3.5 kilograms since 1986, population growth would have boosted cotton use by 600,000 tons by now.

Stagnant Technology, Little Promotion Threaten Market Share

The most important threats to cotton's share of world fiber consumption are stagnant production technology combined with rising input prices. World population and income growth are driving total fiber consumption higher, and unless the world cotton industry can supply the expansion in demand at competitive prices, cotton's share will continue to decline. Other threats include the potential for negative consumer perceptions of cotton and increases in protective tariffs on cotton and cotton textiles. The gradual elimination of MFA quotas on textiles and apparel by 2005 will be helpful to cotton. Increased investment in chemical fiber production capacity is also a threat to cotton. Although, the chemical fiber threat would be much reduced if cotton yields and production were rising.

Meeting the Challenges to Cotton

To meet these challenges, the world cotton industry can encourage research designed to raise yields per hectare and lower production costs per kilogram of lint in order to expand the supply of cotton. Relevant research results must be made available to growers in packages and on credit terms tailored to their needs. Related research into new textile products and better cotton spinning technology can also enhance cotton's competitive position. The industry must continue to grapple with the problems of contamination and lint quality to better meet the needs of spinners. The cotton industry would benefit from reductions in barriers to trade in cotton and cotton textiles, and the industry may wish to highlight government policies that encourage chemical fiber production or dictate that chemical fibers be used. Consumer level promotion, combined with publicity highlighting the facts about cotton and the environment, are necessary to maintain positive consumer attitudes toward cotton.

Some individuals prominent in the world cotton industry have broached the concept of a World Cotton Council (WCC) to represent the interests of all segments of the international cotton industry. Supporters of the concept believe that the gains made for cotton in the USA can be replicated at the international level. As suggested, the WCC would be composed of private industry representatives, not government, and would strive to reduce the cost of world cotton production, ginning and handling and to make the global cotton infrastructure more efficient. The WCC could oversee a world research and promotion program. Funds for the WCC would come from the private sector, raised in a fashion appropriate to structures in each country. Support for the WCC would be a tangible and concrete way of contributing to the solutions needed in the cotton sector.

MARKET SHARE OF COTTON BY REGION (end-use)

	Eastern Europe and former USSR	Industrial Countries				*Developing Countries
		All	North America	Western Europe	Japan, Australia & New Zealand	
	Percent					
1980	46.9	35.2	32.4	35.1	41.9	64.1
1981	45.6	34.3	32.1	33.1	42.5	62.4
1982	44.6	36.6	33.5	36.1	43.8	64.8
1983	46.5	35.8	32.0	37.6	41.6	63.1
1984	48.1	36.7	33.7	37.3	42.6	59.6
1985	48.9	37.5	35.3	37.4	42.8	58.8
1986	49.3	38.9	36.2	39.2	45.2	62.3
1987	48.8	41.4	40.1	41.3	45.2	60.0
1988	47.7	40.4	38.0	41.1	44.2	58.1
1989	47.7	41.9	41.5	40.3	46.0	57.1
1990	47.3	41.8	42.6	41.2	41.7	57.7
1991	47.6	43.8	44.4	43.9	42.5	54.4
1992	49.5	43.7	46.2	41.8	41.9	51.8
1993	47.0	43.6	46.0	40.5	44.1	51.3
1994	39.9	43.6	46.6	39.5	44.7	48.4
1995	38.7	44.2	46.9	40.1	46.3	47.0
1996	39.1	43.5	46.6	38.4	46.4	46.6
1997	39.4	43.8	46.9	39.4	45.3	46.1
1998	40.1	44.3	48.1	39.1	45.5	44.3
1999	40.4	44.7	48.3	39.8	45.7	43.8
2000	40.5	45.0	48.6	40.1	45.8	42.8
2005	41.6	45.6	49.3	40.4	46.3	40.4

WORLD COTTON AND NONCOTTON TEXTILE FIBER CONSUMPTION (END-USE)

	Cotton	Non-cotton	Cotton	Non-cotton	Market Share of Cotton
	Kilograms per capita		Thousand tons		Percent
1960	3.43	1.59	10,355.8	4,797.0	68.3
1961	3.28	1.63	10,085.1	5,017.0	66.8
1962	3.16	1.73	9,902.0	5,437.0	64.6
1963	3.17	1.83	10,146.5	5,856.0	63.4
1964	3.32	1.97	10,829.8	6,426.0	62.8
1965	3.39	2.06	11,318.4	6,864.0	62.2
1966	3.39	2.13	11,538.5	7,257.0	61.4
1967	3.36	2.16	11,695.3	7,517.0	60.9
1968	3.31	2.44	11,763.4	8,671.0	57.6
1969	3.29	2.58	11,911.3	9,337.0	56.1
1970	3.27	2.61	12,105.3	9,636.0	55.7
1971	3.31	2.79	12,493.0	10,544.0	54.2
1972	3.35	2.99	12,903.5	11,514.0	52.8
1973	3.38	3.24	13,287.6	12,743.0	51.0
1974	3.24	3.07	12,986.1	12,281.0	51.4
1975	3.20	2.86	13,046.7	11,670.0	52.8
1976	3.18	3.21	13,211.5	13,326.0	49.8
1977	3.10	3.29	13,116.6	13,908.0	48.5
1978	3.12	3.45	13,414.8	14,831.0	47.5
1979	3.18	3.55	13,897.1	15,543.0	47.2
1980	3.21	3.43	14,294.8	15,285.0	48.3
1981	3.12	3.45	14,124.7	15,607.3	47.5
1982	3.09	3.18	14,247.8	14,647.0	49.3
1983	3.10	3.33	14,547.9	15,617.6	48.2
1984	3.11	3.44	14,829.8	16,421.1	47.5
1985	3.25	3.51	15,767.8	17,044.8	48.1
1986	3.54	3.54	17,462.0	17,494.4	50.0
1987	3.63	3.64	18,225.7	18,320.2	49.9
1988	3.56	3.76	18,210.4	19,231.0	48.6
1989	3.59	3.76	18,677.1	19,549.7	48.9
1990	3.52	3.64	18,607.4	19,284.0	49.1
1991	3.45	3.62	18,569.6	19,499.0	48.8
1992	3.40	3.70	18,631.2	20,264.6	47.9
1993	3.33	3.69	18,553.4	20,603.0	47.4
1994	3.25	3.88	18,451.2	22,020.0	45.6
1995	3.21	3.91	18,506.9	22,525.0	45.1
1996	3.23	4.00	18,941.4	23,453.0	44.7
1997	3.25	4.04	19,395.2	24,103.9	44.6
1998	3.23	4.11	19,554.9	24,902.9	44.0
1999	3.24	4.13	19,942.2	25,413.2	44.0
2000	3.23	4.17	20,188.7	26,052.1	43.7
2005	3.44	4.59	21,812.2	29,114.5	42.8

Sources: ICAC, FAO, IWS and Fiber Economics Bureau.