

## COTTON PRODUCTION AND USE IN PAKISTAN AND INDIA

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### Abstract

Pakistan and India are one of the world's major producers, consumers and exporters of raw cotton. Due to pest and disease problems, Pakistan's 1996/97 cotton crop is down 17 percent while a near perfect season has pushed India's production to near record level. The textile industry is the largest industry in both these countries, and raw cotton and value-added cotton (especially cotton yarn) are major foreign exchange earners. The outlook for the two countries indicates continued growth in cotton production and consumption, although cotton's share of total fiber is expected to decline. With the implementation of more open global trade policies in the future, Pakistan and India are expected to increase their production and exports of apparel and "other finished products."

### Pakistan

Pakistan has a favorable climate for cotton production with very high daytime temperatures and cool nights. The cultivation of cotton is based on a well-developed system of flood irrigation that is composed of canals and tube wells. Although the land area that can be devoted to cotton is limited, there is great potential for increasing yields. Research to improve yields is being conducted at the Central Cotton Research Institute near the city of Multan. Pakistan has already developed some very good high-yielding varieties; however, most of these are highly susceptible to diseases. In the recent past, Pakistan's cotton production has been sharply reduced by pests and diseases, especially the whitefly and Leaf-Curl-Virus (LCV). Current research has focussed on these problems, and for the 1997/98 production year, the institute has released two new varieties that are LCV resistant.

Pakistan's 1996/97 crop is estimated at 6.8 million bales, down 1.4 million or 17 percent from last year's (Table 1). Area is forecast at a record 3.2 million hectares, up 0.2 million or 5 percent from last season, with increased areas in both the Punjab and the Sindh provinces. However, as a result of severe insect damages, the yields in most of the cotton growing areas are reported to be down in the range of 10-33 percent compared to last year. The damages from

the whitefly alone are reported to be substantially larger than that occurring during the 1993/94 season which resulted in yields of 488 kilograms per hectare and a crop size of 6.3 million bales. Unlike its normal mid-September emergence, this year's whitefly emerged in August when the crop was at early developmental stages and vulnerable. This factor combined with increasing pest resistance to chemical control has severely damaged the 1996/97 cotton crop.

The textile industry is the largest industry in Pakistan and the textile sector accounts for about 65 percent of the country's GDP. The industry grew from 6,217 installed spinning capacity in 1991/92 to 8,734 in 1995/96. Conversely, the weaving sector declined over the same period from 15,000 to 14,000 looms. Despite the growth in spinning capacity between 1991/92-1995/96, the percentage of active spindles declined from 85 to 77 percent. The textile sector is currently recovering from a combined shock of rising input cost for electricity and cotton, and high cost of capital. Many textile firms are in financial troubles and are failing to make principal or interest payments on existing loans; while others have closed. However, as the recently announced government relief package is expected to rejuvenate the industry, Pakistan's cotton consumption forecast for 1996/97 is set at 7.1 million bales, slightly above last year's.

Since January 1995, Pakistan has liberalized cotton trade. There is no duty on raw cotton exports, however, cotton imports, until last month, were subject to a 5 percent import duty and a 10 percent general sales tax. Textile mills complained that this policy resulted in high cotton prices in the domestic market. As a result of a change in Pakistan's government, and because of the short fall in this year's crop, the Government of Pakistan withdrew a 5-percent applied duty on cotton imports, and reduced to 5 percent the current regulatory duties of 15 and 10 percent on polyester and viscose fiber imports, respectively. The 10-percent regulatory duty on raw materials for manufacturing polyester also was withdrawn. In addition, the 4-percent withholding tax on raw cotton imports was reduced to 1 percent, and the 10-percent regulatory duty on various textile machinery was withdrawn. These changes in import regulations were made to stimulate Pakistan's declining textile industry. The new regulation is expected to provide relief by allowing competitively priced imports into Pakistan. Most of Pakistan's upland import needs are generally sourced from Central Asia, while the 30,000 bales of annual ELS cotton needs are met mainly by imports from the United States and Egypt.

Cotton is Pakistan's most important cash crop and foreign exchange earner. Pakistan is the world's largest exporter of cotton yarn and a major exporter of raw cotton. The value of raw and value-added cotton exports accounts for about 60 percent of Pakistan's total annual export value (Table 2). Japan, Indonesia, S. Korea and Thailand are the major

destinations for Pakistan's cotton and textile exports. Excepting the years of major crop failures (such as 1993/94, 1994/95 and 1996/97), Pakistan has been a major exporter of raw cotton. Based on the reduced level of production forecast, Pakistan is expected to export only 400,000 bales of cotton during the 1996/97 season.

The long-term outlook indicates that Pakistan will continue to be a major producer, consumer and exporter of raw cotton. Pest and disease problems experienced this year should diminish with extensive use of the two new LCV resistant varieties, CIM 1100 and CIM 448, recently released by the Central Cotton Research Institute in Multan. The new relief package announced by the government is expected to stimulate the declining textile industry by allowing competitively priced imports to enter Pakistan. With the continuation of the current domestic trade policies and the eventual removal of the textile quotas by the year 2005, Pakistan's cotton consumption and value-added cotton exports are expected to increase. However, as government policies encourage the use of man-made fibers, the growth in mill use of cotton is expected to be slower than the growth in the overall textile sector.

### **India**

India's cotton production for 1996/97 is estimated at a near record 12.3 million bales, down 0.2 million or 2 percent from last year's record crop of 12.5 million bales (Table 3). While lower cotton prices pushed 1996 area below the record 1995 level, area is still projected to be the second largest on record, and early harvest results throughout much of India indicate higher yields than last season's. Weather conditions have been generally good throughout much of the 1996 monsoon season with very few cotton producing areas receiving poor or erratic rainfall. Except for heavy rains in the southern state of Andhra Pradesh, harvest conditions have been good, and quality is expected to improve over last year's. Heavy rains are not unusual in Andhra Pradesh at this time of the year and cotton production in the area has usually weathered heavy late season rains without significant declines in production. Harvest is underway in the north and central zones and so far market arrivals are slightly ahead of the 1995/96 pace. Weather conditions in December and January, such as storms in the south or rains in central India, could still affect harvest and the final production level.

The cotton crop in India is best characterized by its diversity. Cotton is cultivated from India's most northern state of Punjab to its most southern state of Tamil Nadu, about 2,000 kilometers to the south. India's cotton area covers over 8.0 million hectares. This area encompasses a wide range of agronomic and climatic conditions. In addition, there are many different farming methods and a large number of cotton varieties grown with different duration, yield, and fiber quality. Because of these characteristics, both the planting and marketing seasons of cotton in India are quite prolonged. In fact, cotton is being

planted or harvested in every month of the year, although a large percentage of the crop is sown between May and July and harvested from October to December.

The main cotton growing areas are divided into three distinct regions: the northern zone encompassing parts of Punjab, Haryana, and Rajasthan; the central zone consisting of parts of Gujarat, Madhya Pradesh, and Maharashtra; and the southern zone consisting of Andhra Pradesh, Karnataka, and Tamil Nadu. In the northern zone, cotton is generally planted in May and is of medium and short staple (Bengal Deshi) lengths. Almost all of the area is irrigated. The central zone has the largest area under cotton, but as most of this is rainfed, cotton yields are low. In this region, cotton is generally planted in mid-June. The southern zone grows most of India's long and extra long staple cotton. Cotton is planted during August/September and harvested in February. However, in the state of Tamil Nadu, cotton may be grown year-round.

Along with the expansion of cotton production, India has experienced significant increases in cotton consumption (Table 3). During the past 5 years, mill use of cotton increased by 31 percent, reaching 11.4 million bales in 1995/96. Cotton consumption for the 1996/97 season is forecast at 11.8 million bales. The rapidly expanding textile industry is the largest industry in India. It accounts for 7 percent of GDP, 20 percent of the country's total industrial output and 38 percent of the country's total export earnings.

The Indian textile industry consists of three distinct sectors: the mill sector; the powerloom sector; and the handloom sector. Of the 1569 textile mills in the country, over 82 percent are exclusively spinning units, while the remaining are composite mills. The mill sector produces most of the yarn in India, but accounts for only about 8 percent of total fabric production. Powerlooms produce about 70 percent of India's total fabrics, while handlooms account for the remaining 22 percent. Powerlooms and handlooms purchase yarn from the spinning mills and converts it to cloth at a cost 20 percent lower than that of a large mill. Powerlooms are mainly concentrated in the states of Maharashtra, Gujarat, and Tamil Nadu. The handloom sector, operated largely at the household level, provides employment to over 3 million weaver households and 12.9 million weavers.

Depending on the volume of domestic production, India has oscillated from exporting over a million bales in some years to being a net importer of cotton in others (Table 3). India exported an estimated 620,000 bales of cotton during 1995/96, and is forecast to export a million bales this marketing year. The main markets for Indian cotton are Japan, Western Europe, and Bangladesh. This year, India is expected to ship a significant amount of cotton to Pakistan which has experienced a severe crop failure due to pests and disease.

In addition to raw cotton exports, cotton yarn is one of India's major textile sector exports (Table 4). Recently, fabric and apparel are increasingly being exported from the newer composite mills. The major markets for cotton yarn are Bangladesh, Hong Kong, Korea, Italy, Mauritius, Japan, and Israel; while fabric and apparel are mainly exported to the United States, European Union, and other countries.

The Indian textile industry is regulated to promote domestic production of value-added products. Mills designated as Export Oriented Units (EOU) are allowed to import machinery and raw materials duty free as long as 75 percent of their production is exported. In addition, the Export Promotion Capital Good Scheme (EPCG) allows other mills reduced duty on imports of machinery against export obligations. Since 1994, raw cotton can be freely imported but value-added cotton imports are restricted. There is a 50-percent duty and a 2-percent surcharge on yarn imports. Cotton fabric and apparel are classified as consumer goods and their import requires special import licenses. The EOUs and firms importing against export obligations get duty discounts on yarn and fabric imports.

To ensure adequate supplies of raw material at a reasonable price for the domestic textile industry, exports of raw cotton and cotton yarn are restricted. Based on domestic supplies, export quotas are announced each year and may be revised several times during the year. India's total raw cotton export quota for the 1996/97 crop season is currently set at 1 million 170-kg bales (780,800 480-lb bales). The yarn export quota is distributed among exporters with 80 percent of the quota based on the past performance of the exporter and 20 percent allotted on a first come first served basis. However, yarn exports by EOUs, EPCG mills and exports against cotton imports under export obligations, or exports of yarn exceeding 40 counts to non-quota countries may be effected over and above Indian quota limits.

The long-term outlook indicates that India's cotton based textile sector will continue to expand. With the removal of textile quotas by the year 2005, India is expected to increase its production of apparel and other "finished" products. Growth in cotton production is expected mainly through increases in yield. As most cotton area in India is rainfed, Indian cotton yields are currently among the lowest in the world. With the expansion of large scale irrigation systems in Central and South India, adoption of better seed varieties, and better management practices, cotton yields are expected to increase. Although the Indian textile sector is expected to continue its rapid expansion, the growth in mill use of cotton is expected to be relatively slower. The government of India is promoting increased use of manmade fiber to achieve its goal of raising manmade fiber share of use from the current 30 percent to 50 percent. Accordingly, the import duty for polyester fiber was lowered in July 1996 from 45 to 30 percent. Despite the large supply of domestically produced cotton, given its rapidly expanding

textile sector, India will continue to be an erratic exporter and from time to time an importer of cotton.

**Table 1. Pakistan's Cotton Production and Use (in 1,000 480-Lb Bales).**

Year	Area 1,000 Ha	Prod- uction	Cons- umptio n	Imports	Exports
1987/88	2,568	6,744	3,810	4	2,358
1988/89	2,508	6,551	3,726	5	3,780
1989/90	2,599	6,687	4,880	17	1,371
1990/91	2,662	7,522	5,748	2	1,357
1991/92	2,836	10,000	6,582	20	2,059
1992/93	2,836	7,073	6,734	24	1,175
1993/94	2,805	6,282	6,784	350	318
1994/95	2,650	6,250	6,800	696	148
1995/96	3,048	8,200	7,023	122	1,433
1996/97	3,200	6,800	7,125	200	400

Source: USDA/FAS

Note: 1996/97 figure is a forecast.

**Table 2. Pakistan's Cotton and Value-Added Cotton Exports (in Million U.S.\$).**

Item	1992/93	1993/94	1994/95	Jul-Jan 1995/96
Raw Cotton	271	80	62	142
Value-Added Cotton	3,772	3,790	4,714	2,390
Total Cotton Sector	4,043	3,870	4,776	2,532
Pakistan's Total Exports	6,813	6,754	8,137	4,163
Cotton Sector's Share	59%	57%	59%	61%

Source: E.P.B., Ministry of Commerce, Pakistan.

**Table 3. India's Cotton Production and Use (in 1,000 480-Lb Bales).**

Year	Area 1,000 Ha	Prod- uction	Cons- umptio n	Imports	Exports
1987/88	6,471	7,140	7,990	117	34
1988/89	7,343	8,276	8,115	176	78
1989/90	7,331	10,599	8,667	0	1,070
1990/91	7,440	9,135	9,018	0	929
1991/92	7,695	9,291	8,674	234	60
1992/93	7,543	10,775	9,761	90	1,075
1993/94	7,440	9,487	9,916	234	305
1994/95	7,861	10,814	10,544	460	84
1995/96	8,650	12,493	11,400	78	620
1996/97	8,500	12,300	11,800	80	1,000

Source: USDA/FAS

Note: 1996/97 figure is a forecast.

**Table 4. India's Cotton and Value-Added Cotton Exports.**

Year	Raw Cotton 1,000 Bales	Cotton Yarn & Thread* Million Kgs	Cotton Fabric* Million Sq. Meters
1992/93	1,075	128.63	1129.36
1993/94	305	178.84	1244.16
1994/95	84	228.53	1538.46
1995/96	665	261.33	1582.30

\* The Cotton Textiles Export Promotion Council, India.