



INTERNATIONAL COTTON ADVISORY COMMITTEE

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Toward a Lower Long Run Average Cotton Price^{*}

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World production is expected to decline by 9% next season and will likely be six million bales below world consumption, while net imports by China (Mainland) are projected to increase from 230,000 bales this season to 1.6 million bales in 2002/03. As a result the Cotlook A Index is expected to average 53 cents per pound in 2002/03, ten cents higher than the level indicated for this season by the Secretariat's price model. Initial projections for the 2003/04 season suggest that world production will remain near 90 million bales. Even with increases in consumption to record levels over the next two years, the ratio of stocks to use outside China (Mainland) is forecast to remain near 0.50. Consequently, the forecast for the season average Cotlook A Index in 2003/04 is the same as for 2002/03, about 50 cents per pound.

Year-to-year changes in cotton production are determined by marginal production costs, not by total costs. Therefore, cotton prices tend toward the marginal cost of the most efficient producer, and marginal costs are falling. For most U.S. farmers, marginal costs are less than the sum of the loan rate plus equity, and production in the USA will be sustained at an average of about 18 million bales over the next six years. Cotton infrastructure is expanding in Brazil and Turkey, and the strength of the dollar sustains production in many regions, including Africa, Australia and South America. Expanded use of genetically engineered varieties is lowering marginal costs in China, India and elsewhere. The consequence will be lower marginal costs and lower average prices over the next decade compared with the 1970s, 1980s and 1990s. Season averages of the Cotlook A Index are likely to be between 50 and 60 cents per pound most years this decade, 10 to 20 cents per pound lower than the average of the last thirty years.

China (Mainland) Imports To Climb

Statistics indicate that net trade by China (Mainland) explains approximately half of the year-to-year change in cotton prices. On average, an increase in China (Mainland) net imports (imports minus exports) of about 500,000 bales leads to an increase in the season average Cotlook A Index of about two cents per pound. China's net imports are estimated at 1.6 million bales in 2002/03, and this factor alone could add about a dime to average prices.

Production of cotton yarn in China (Mainland), including blended cotton yarn, remained flat at 5.5 million tons per year from 1996/97 through 1998/99. However, cotton yarn production rose to 6.2 million tons in 1999/00, 6.8 million tons in 2000/01 and is expected to reach 7.2 million tons this season. Cotton's share of fiber mill use in China (Mainland) fell during the 1990s, but domestic cotton prices are falling, and cotton is reportedly regaining market share this season. Consequently, mill use of cotton in China is climbing, and consumption is estimated at 25 million bales this season and 26 million in 2002/03.

^{*} Paper presented to the 78th Annual Convention of the American Cotton Shippers Association, May 30-June 1, 2002, Ritz-Carlton, Palm Beach, Florida, USA. The International Cotton Advisory Committee is an association of 43 governments of countries with an interest in cotton. The Secretariat of the Committee publishes information related to world cotton supply, demand and prices, and disseminates information on cotton production technology. Detailed statistics are found bimonthly in *COTTON: Review of the World Situation*, \$150 per year via the Internet or \$175 per year in hard copy by post. A monthly outlook is available for \$225 per year via the Internet or \$275 per year by fax. Access to weekly estimates of world cotton supply and use by the Secretariat is available on the Internet for \$500 per year.

Domestic prices in China have dropped 30% since the second quarter of 2001, and planted area has fallen in 2002. Preliminary indications from Hebei indicate a decline of 20%, cotton sources in Shandong indicate that area is falling 10%, and the cotton organization in Xinjiang is indicating an 18% decline. Total area is expected to be down 13% in 2002 to 10.4 million acres. Using 5-year averages by province to estimate yields, production of 21 million bales is projected for 2002/03, a decline of 16% from this season but about the same as in 2000/01. Production in 2003/04 is estimated at 21 million bales again, assuming that domestic prices in China mirror international prices and remain relatively low.

A 3.7 million-bale quota for cotton imports was issued in 2002. However, the large 2001/02 crop has curtailed the need for imports this season, and the China National Cotton Exchange is resuming auction sales of state-owned stocks. Nevertheless, with consumption estimated at 26 million bales in 2002/03 and production 5 million bales lower, imports are expected to account for at least part of the difference. Ending stocks in China (Mainland) have been declining since 1998/99, and even with imports of a projected 1.8 million bales in 2002/03 and 2.8 million in 2003/04, ending stocks in China (Mainland) are expected to fall to the lowest proportion of use since 1990/91, a previous period of large imports.

Weak Demand Growth

The second variable of statistical significance in determining year-to-year changes in the Cotlook A Index is the ratio of stocks to use outside China (Mainland). During the 15 years between 1986/87 and 2000/01, the non-China (Mainland) stocks-to-use ratio never exceeded 0.44 but is rising to more than 0.50 this season. Slow growth in demand is one factor contributing to the rise in stocks as a percent of use.

Other things equal, a 20% decline in cotton prices leads to a 1% increase in world cotton use. Cotton prices have declined by one-third since December 2000, and the average this season of roughly 41 cents per pound is about 40% below the average of the last three decades. Therefore, even though world economic growth is still slower than in 1999 and 2000, cotton mill use is expected to climb to 94 million bales in 2002/03 and 95 million in 2003/04.

Indian cotton textile exports to its leading markets, the United States, the EU and Canada, fell 9% from a year earlier between April 2001 and January 2002. Consequently, yarn stocks are accumulating and numerous mills have closed. Mill use is falling in India this season, and a return to the 2000/01 level of 13.4 million bales is forecast for 2002/03. Polyester production is encouraged by Indian government policies, and cotton's share of mill use is falling rapidly.

Mill use is forecast to rise by just 200,000 bales, to 11.5 million in the EU, Central Europe and Turkey combined in 2002/03. The recent strengthening of the lira has lessened the competitive advantage of the Turkish textile industry, while boosting imports of raw cotton.

Yarn sales by U.S. mills have improved since the beginning of 2002, and the decline in mill use may have come to a temporary halt. Nevertheless, a reversal of the downward trend is unlikely so long as the dollar remains strong against most currencies. Mill use in the USA is estimated unchanged at 7.6 million bales next season and 7.4 million in 2003/04.

Pakistan and Indonesia have gained market share in exports of textiles and apparel to the USA at the expense of Mexico and the Caribbean Basin Initiative countries. Mill use is rising to 9.5 million bales in East Asia and to 8.6 million bales in Pakistan.

Mill use in Brazil is expected to grow by just 100,000 bales a year to 4.4 million bales in 2002/03 and 4.5 million bales in 2003/04. Mill use of cotton is rising in the CIS and in numerous small developing countries in response to stronger economic growth and/or preferential trade agreements.

Genetic Engineering

Faster growth in supply is another factor contributing to the rise in non-China (Mainland) ending stocks as a percent of use. The development of new technology, production in new cotton areas, the strength of the U.S. dollar and government measures that support farm incomes and prices are sustaining world production despite the lowest prices in three decades.

Cotton area planted to genetically engineered varieties rose from 2% of world cotton area in 1996/97 to 20% in 2001/02. About one-third of world cotton production is accounted for by GE varieties this season. The GE varieties lower production costs and lead to higher yields by providing effective pest protection in regions where pests were previously unmanaged. Small holders who previously were not able to apply effective pest control measures benefit disproportionately from the use of Bt cotton.

Genetic engineering is responsible for much of the rise in cotton production in China since 1999/00. The commercial release of Bt cotton in India is likely to be a major breakthrough and may boost Indian cotton production in the near future. GE technology will continue to spread and is forecast to account for half of world production by 2005/06.

New Cotton Areas

The development of new areas for cotton in Brazil and Turkey are contributing to the rise in world production. Production costs in Mato Grosso are below the world average, and production climbed from 140,000 bales to 2.2 million bales in Mato Grosso between 1995/96 and 2000/01. Cotton production in Brazil is estimated at four million bales in 2002/03 and 4.3 million in 2003/04. Additional development of cotton infrastructure by highly capitalized large-scale farmers is occurring now in the states of Mato Grosso do Sul and Bahia.

The GAP region in east Turkey now accounts for two million bales of production, compared with 750,000 bales in 1994/95 when the Cotlook A Index averaged more than 90 cents per pound. Cotton production in Turkey is forecast to rise to 4.3 million bales in 2002/03. Together, Mato Grosso and East Turkey are accounting for an additional three million bales of world cotton production that did not exist in 1994/95.

Exchange Rates

Despite historically low international prices in dollars, a sharp decline in cotton area in the eleven producing countries of the CFA (currency of Francophone Africa) zone is unlikely in 2002/03 because farmers were generally satisfied with their cotton income in 2001/02. As cotton is the only cash crop with a guaranteed market at a fixed price in West Africa, farmers will continue growing cotton as long as they can cover their cash expenses. In addition, fertilizer and insecticides are supplied to producers on credit repaid when they sell their seedcotton. The cost of production, ginning and shipment is about 50 cents per pound CIF North Europe at the current exchange rate, and there will likely be only modest reductions in producer prices for the coming season. Consequently, cotton production is estimated at 4.3 million bales.

Production in Australia is forecast down by 12% in 2002/03 to 2.6 million bales, because of low water supplies, an unfavorable long-term forecast for rain and prices barely reaching production costs. Nevertheless, production in Australia was supported by the strength of the U.S. dollar. Between 1996/97 and 2000/01, Australian cotton production rose from 2.8 million bales to 3.7 million as the Cotlook A Index dropped from averages of 79 U.S. cents per pound to 57 cents.

Government Measures

The world cotton industry is heavily distorted by government measures. The level of direct assistance to cotton production provided by fourteen countries (Argentina, Benin, Brazil, China (Mainland), Colombia, Cote d'Ivoire, Egypt, Greece, India, Mali, Mexico, Spain, Turkey, and the USA) is estimated to be increasing from \$3.8 billion in 2000/01 to \$4.9 billion in 2001/02. An estimated 73% of world cotton production is benefiting in 2001/02 from direct income or price support programs, 14 percentage points more than in 2000/01.

The new U.S. farm bill ensures that the U.S. will remain a major producer and exporter of cotton through 2007/08. The new farm bill fixes the loan rate at 52 cents per pound of current production. The bill also continues the practice of decoupled payments begun in 1996 by providing a guaranteed payment of 6.67 cents per pound and variable payments when market prices are below 72.4 cents per pound to land holders based on production history. Individual payments per farmer will be limited to \$360,000, \$100,000 less than the previous limit, but the limit can be offset by the use of generic certificates. (Generic certificates are issued by USDA to farmers in lieu of cash. The certificates are used like money

to purchase commodities from government-owned stocks. The stocks can then be sold.) Marketing competitiveness provisions will be maintained and exports boosted by the elimination of the 1.25 cents per pound deduction for Step 2 payment rates. U.S. exports are estimated at 11 million bales both in 2001/02 and in 2002/03.

Much of the criticism of the U.S. farm bill and the cotton program focuses on the cost of the bill and the potential for trade distortions, but there is another point to be made about the programs. The ICAC has conducted cost of production surveys at three-year intervals from the 1960s. There are significant weaknesses in the methodology used in the studies because it is impossible to harmonize accounting systems worldwide to ensure that data are comparable across countries. Even within countries, there are always substantial differences in production costs among individual farmers. Nevertheless, the ICAC has employed the same methodology over the decades, making relative shifts among countries apparent.

In the 1960s and 1970s, the U.S. ended the old programs based on acreage allotments and marketing quotas and implemented the current regimen of target prices and loan rates. Because of rising commodity prices in the 1970s, no program payments were made until 1982, but programs have been in force and payments have been made almost every year during the last two decades. We now have a generation of U.S. farmers who either have difficulty remembering or have no experience growing cotton without the influence of a government program. In 1979/80, the average cost of producing cotton in the USA according to data collected by USDA and used in the ICAC report was 59 cents per pound (excluding land costs and net of the value of cottonseed). Out of 22 countries participating in the survey that year, the U.S. had the eighth lowest cost of production, making the U.S. a relatively efficient, competitive cotton producer in an era when subsidies were not paid.

In contrast, by 1999/2000, the average cost of production in the USA, again using data from USDA, was 68 cents per pound, ranking the USA last among 18 countries participating in the survey. Over the last twenty years, under the influence of farm programs, yields in the USA have risen more slowly than in other countries and costs of production have risen faster, and the USA is now an uncompetitive cotton producer dependent on continued government distortion of the cotton market to maintain its current share of world production. Subsidies paid to cotton farmers result in increased prices for land, machinery and other inputs used in cotton production, keep less-productive farmers in business, thus blocking better farmers from gaining control of land, and the whole political process needed to sustain votes in Congress for subsidies distracts American farmers from the crucial business of remaining competitive. With world average production costs falling, the outlook for the USA under the new farm bill is for a further deterioration in underlying competitiveness and continued, perhaps even growing, reliance on government intervention for market survival.

The solution to the problem of subsidies lies in a successful outcome to the talks on agriculture in the WTO. As noted in ICAC reports, many (although not all) countries provide direct income and price support to their cotton farmers, and successful talks in the WTO to progressively and evenly reduce distortions in the cotton market will be of significant benefit to the U.S. cotton industry. The talks on agriculture in the WTO are targeted for completion by the end of 2004. Members of ACSA, and other guests at this 78th Annual Convention are urged to take an interest in, and provide support for, the process of negotiations in the WTO.

SUPPLY AND DISTRIBUTION OF COTTON

May 31, 2002

Years Beginning August 1

	1998	1999	2000 Est.	2001 Proj.	2002 Proj.	2003 Proj.
	Million Bales					
BEGINNING STOCKS						
WORLD TOTAL	47.030	47.557	43.92	42.4	48.4	42.7
CHINA (MAINLAND)	21.583	21.725	15.71	12.6	12.5	8.9
USA	3.887	3.939	3.92	6.0	7.8	6.6
NET EXPORTERS	13.429	12.910	12.72	14.3	17.7	15.61
NET IMPORTERS 1/	33.601	34.647	31.20	28.1	30.7	27.1
PRODUCTION						
WORLD TOTAL	85.889	87.838	89.13	97.5	88.3	90.5
CHINA (MAINLAND)	20.673	17.587	20.30	24.4	20.6	20.8
USA	13.918	16.968	17.19	20.3	17.6	18.2
INDIA	12.883	12.180	10.93	11.5	11.4	11.7
PAKISTAN	6.862	8.777	8.28	8.5	8.0	8.1
UZBEKISTAN	4.591	5.180	4.48	4.8	4.7	4.7
TURKEY	4.001	3.634	4.03	4.0	4.3	4.4
OTHERS	22.962	23.512	23.93	23.9	21.9	22.7
CONSUMPTION						
WORLD TOTAL	85.793	90.978	90.83	91.6	93.9	95.0
CHINA (MAINLAND)	20.209	22.046	23.19	24.8	25.7	26.1
INDIA	12.775	13.497	13.43	13.1	13.4	13.6
EU, C. EUR. & TURKEY	10.421	11.259	11.01	11.3	11.5	11.6
USA	10.401	10.241	8.86	7.6	7.6	7.4
EAST ASIA & AUSTRALIA	9.171	9.770	9.51	9.4	9.5	9.4
PAKISTAN	7.464	7.808	8.08	8.4	8.6	8.8
BRAZIL	3.659	3.913	4.00	3.9	4.0	4.1
CIS	2.030	2.605	3.06	3.4	3.8	3.9
OTHERS	9.663	9.839	9.68	9.5	9.8	10.0
EXPORTS						
WORLD TOTAL	25.117	28.181	26.29	29.2	29.8	29.5
USA	4.344	6.750	6.76	11.0	11.1	11.0
UZBEKISTAN	4.134	4.100	3.67	3.3	3.4	3.6
CFA ZONE	3.757	3.849	3.06	3.7	4.7	4.2
AUSTRALIA	3.033	3.199	3.90	3.2	2.5	2.6
GREECE	1.144	1.378	1.07	1.2	1.2	1.1
ARGENTINA	1.120	0.364	0.42	0.3	0.1	0.2
CHINA (MAINLAND)	0.681	1.692	0.44	0.2	0.2	0.2
IMPORTS						
WORLD TOTAL	24.974	27.603	26.33	29.2	29.8	29.5
EAST ASIA & AUSTRALIA	9.082	9.419	9.23	9.7	9.2	9.2
EU, C. EUR. & TURKEY	6.392	7.642	6.79	7.0	6.6	6.3
SOUTH AMERICA	2.134	2.421	1.45	1.7	1.9	2.1
CIS	1.164	1.450	1.69	1.7	1.7	1.7
CHINA (MAINLAND)	0.359	0.137	0.24	0.5	1.8	2.8
TRADE IMBALANCE 2/	-0.143	-0.578	0.04	0.0	0.0	0.00
STOCKS ADJUSTMENT 3/	0.574	0.083	0.13	0.0	0.0	0.00
ENDING STOCKS						
WORLD TOTAL	47.557	43.923	42.40	48.4	42.7	38.2
CHINA (MAINLAND)	21.725	15.709	12.61	12.5	8.9	6.1
USA	3.939	3.915	6.00	7.8	6.6	6.4
NET EXPORTERS	12.910	12.724	14.33	17.7	15.6	14.8
NET IMPORTERS 1/	34.647	31.198	28.07	30.7	27.1	23.4
ENDING STOCKS/USE 4/	0.39	0.39	0.44	0.54	0.52	0.50
COTLOOK A INDEX 5/	58.90	52.80	57.20	43*	53*	54*

1/ Includes Brazil, China (Mainland), Colombia, India, Mexico, Pakistan, Turkey and traditional importers.

2/ The inclusion of linters and waste, changes in weight during transit, differences in reporting periods and measurement error account for differences between world imports and exports.

3/ Difference between calculated stocks and actual; amounts for forward seasons are anticipated.

4/ World-less-China (Mainland) ending stocks minus China net exports, quantity divided by world-less-China consumption.

5/ U.S. Cents per pound. The projections for 2001/02, 2002/03 and 2003/04 are based on net China (Mainland) trade and world-less-China (Mainland) ending stocks-to-use ratio.

*/ 95% confidence interval extends 12 cents above and below the point estimate.

SUPPLY AND DISTRIBUTION OF COTTON

May 31, 2002

Years Beginning August 1

	1998	1999	2000 Est.	2001 Proj.	2002 Proj.	2003 Proj.
Million Tons						
BEGINNING STOCKS						
WORLD TOTAL	10.240	10.354	9.563	9.23	10.53	9.31
CHINA (MAINLAND)	4.699	4.730	3.420	2.75	2.72	1.94
USA	0.846	0.858	0.852	1.31	1.69	1.44
NET EXPORTERS	2.924	2.811	2.770	3.12	3.85	3.40
NET IMPORTERS 1/	7.316	7.543	6.793	6.11	6.68	5.91
PRODUCTION						
WORLD TOTAL	18.700	19.124	19.406	21.24	19.22	19.71
CHINA (MAINLAND)	4.501	3.829	4.420	5.32	4.48	4.52
USA	3.030	3.694	3.742	4.42	3.82	3.96
INDIA	2.805	2.652	2.380	2.51	2.48	2.55
PAKISTAN	1.494	1.911	1.802	1.85	1.73	1.77
UZBEKISTAN	1.000	1.128	0.975	1.06	1.02	1.02
TURKEY	0.871	0.791	0.876	0.88	0.93	0.95
OTHERS	4.999	5.119	5.211	5.20	4.76	4.93
CONSUMPTION						
WORLD TOTAL	18.679	19.808	19.775	19.94	20.44	20.69
CHINA (MAINLAND)	4.400	4.800	5.050	5.40	5.60	5.68
INDIA	2.781	2.939	2.924	2.86	2.91	2.96
EU, C. EUR. & TURKEY	2.269	2.451	2.398	2.46	2.51	2.53
USA	2.265	2.230	1.929	1.65	1.65	1.62
EAST ASIA & AUSTRALIA	1.997	2.127	2.071	2.05	2.06	2.06
PAKISTAN	1.625	1.700	1.760	1.83	1.88	1.91
BRAZIL	0.797	0.852	0.871	0.86	0.88	0.90
CIS	0.442	0.567	0.666	0.75	0.82	0.85
OTHERS	2.104	2.142	2.107	2.08	2.13	2.18
EXPORTS						
WORLD TOTAL	5.469	6.136	5.723	6.37	6.48	6.43
USA	0.946	1.470	1.472	2.39	2.42	2.39
UZBEKISTAN	0.900	0.893	0.800	0.73	0.75	0.78
CFA ZONE	0.818	0.838	0.666	0.81	1.01	0.91
AUSTRALIA	0.660	0.696	0.849	0.70	0.55	0.57
GREECE	0.249	0.300	0.234	0.26	0.27	0.25
ARGENTINA	0.244	0.079	0.091	0.06	0.02	0.04
CHINA (MAINLAND)	0.148	0.368	0.096	0.05	0.05	0.05
IMPORTS						
WORLD TOTAL	5.437	6.010	5.732	6.37	6.48	6.43
EAST ASIA & AUSTRALIA	1.977	2.051	2.011	2.11	2.01	2.00
EU, C. EUR. & TURKEY	1.392	1.664	1.478	1.53	1.44	1.37
SOUTH AMERICA	0.465	0.527	0.315	0.37	0.41	0.46
CIS	0.253	0.316	0.368	0.37	0.37	0.37
CHINA (MAINLAND)	0.078	0.030	0.053	0.10	0.40	0.60
TRADE IMBALANCE 2/	-0.031	-0.126	0.009	0.00	0.00	0.00
STOCKS ADJUSTMENT 3/	0.125	0.018	0.028	0.00	0.00	0.00
ENDING STOCKS						
WORLD TOTAL	10.354	9.563	9.232	10.53	9.31	8.32
CHINA (MAINLAND)	4.730	3.420	2.747	2.72	1.94	1.33
USA	0.858	0.852	1.307	1.69	1.44	1.39
NET EXPORTERS	2.811	2.770	3.120	3.85	3.40	3.22
NET IMPORTERS 1/	7.543	6.793	6.112	6.68	5.91	5.10
ENDING STOCKS/USE 4/	0.39	0.39	0.44	0.54	0.52	0.50
COTLOOK A INDEX 5/	58.90	52.80	57.20	43*	53*	54*

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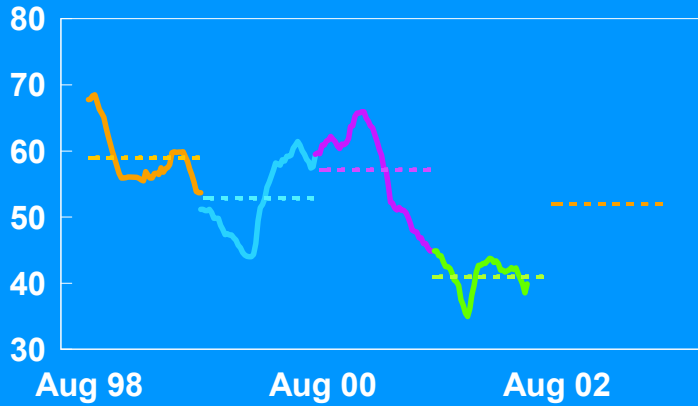
5/ U.S. Cents per pound. The projections for 2001/02, 2002/03 and 2003/04 are based on net China (Mainland)

trade and world-less-China (Mainland) ending stocks-to-use ratio.

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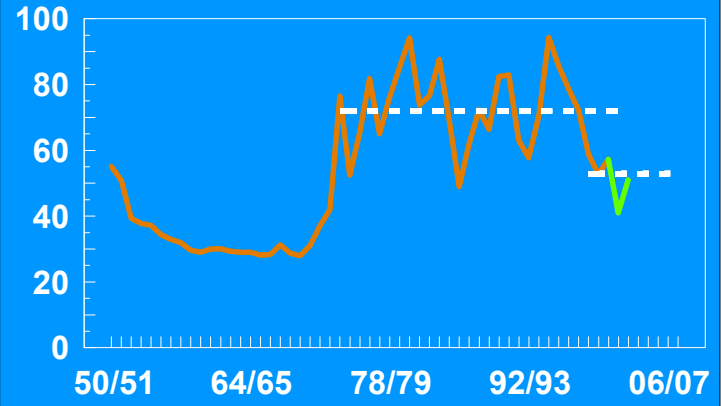
COTLOOK A INDEX

U.S. cents/lb



COTLOOK A INDEX

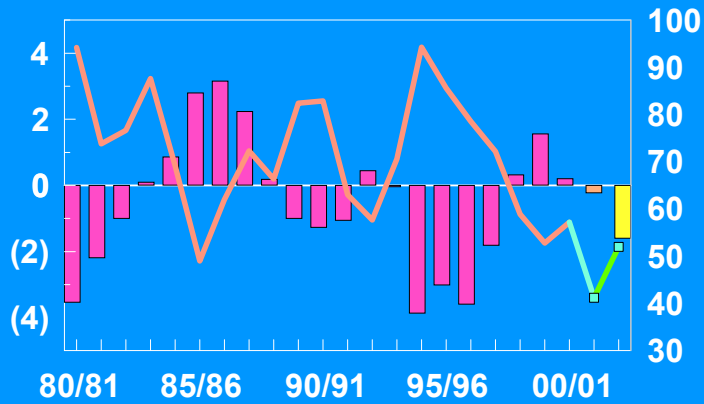
US Cents per Pound



CHINA (M) NET EXPORTS

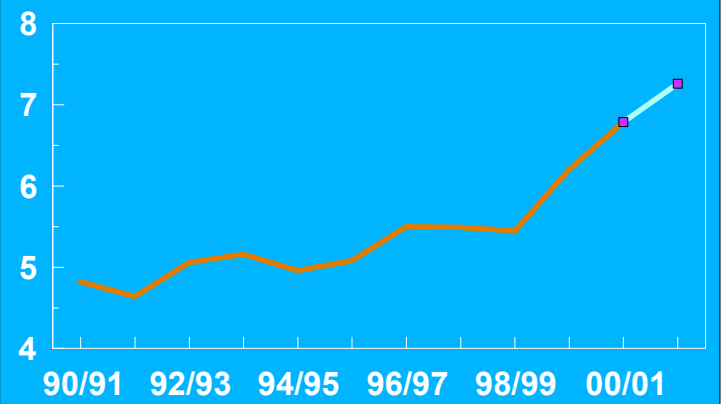
Million Bales

Cents per Pound



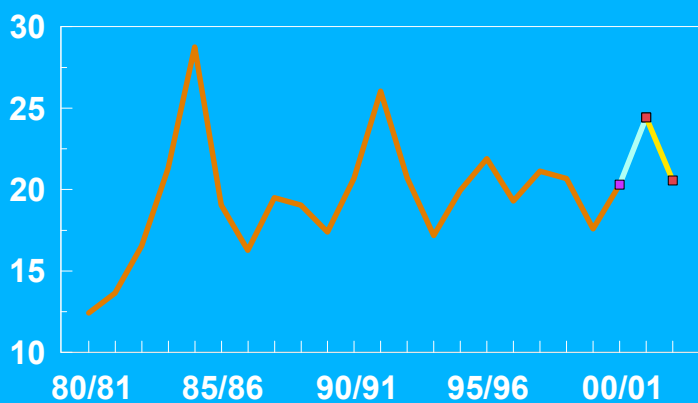
CHINA (M) COTTON YARN PROD.

Million Tons



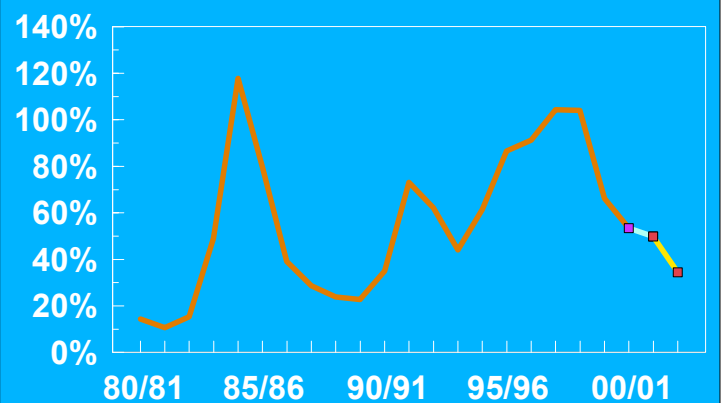
CHINA (M) COTTON PROD.

Million Bales



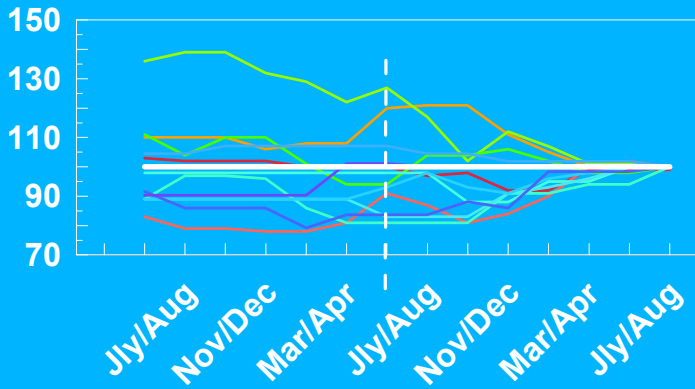
CHINA (M) ENDING STOCKS

Percent of Use



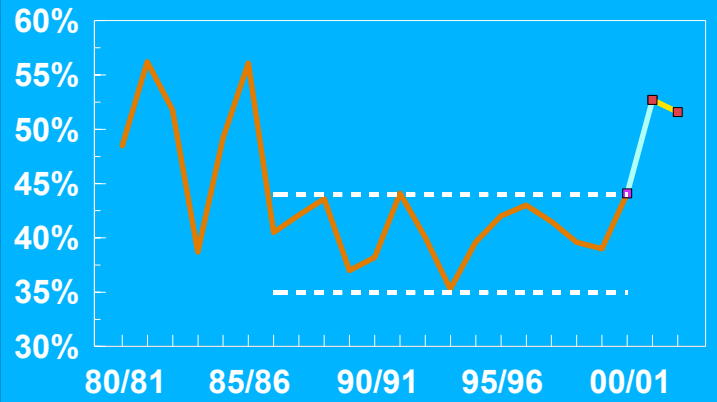
CHINA (M) PROD FORECASTS

Percent of Actual



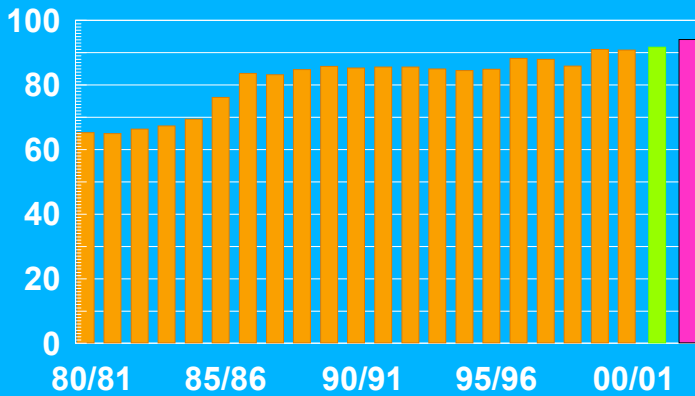
ENDING STOCKS - NON-CHINA

Percent of Use

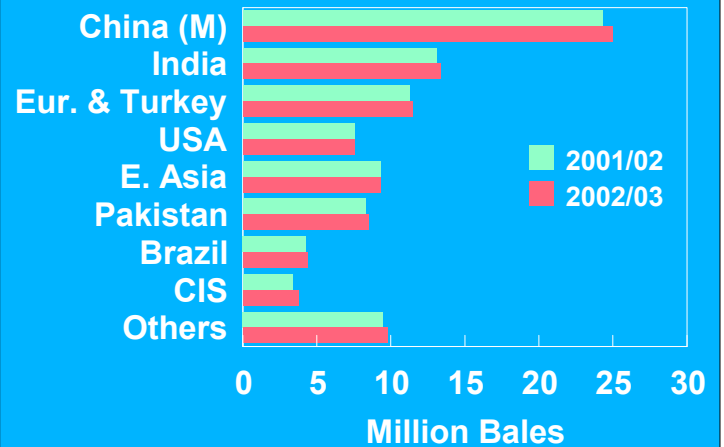


WORLD COTTON MILL USE

Million Bales

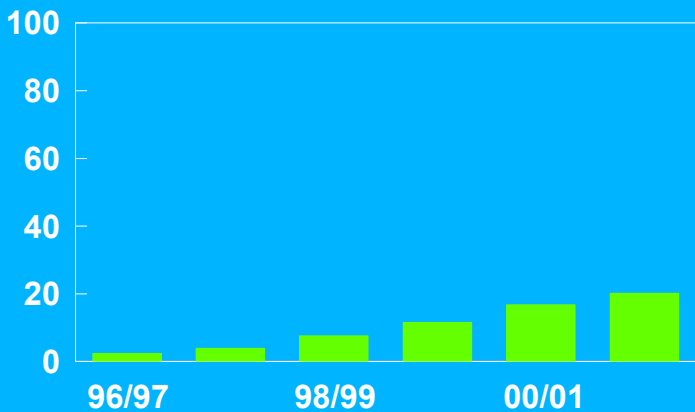


WORLD COTTON USE



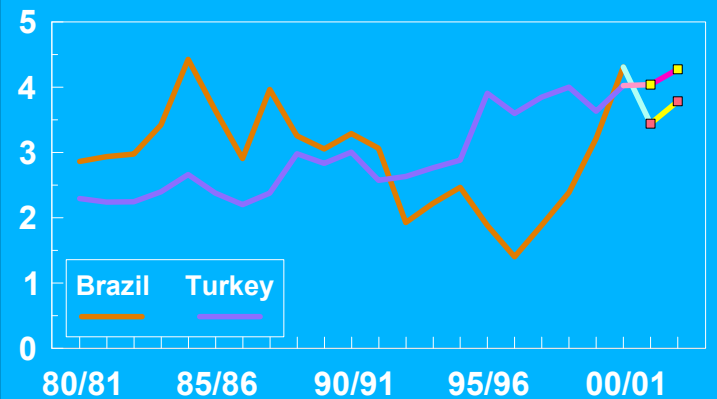
WORLD GE COTTON AREA

Percent of Cotton Area



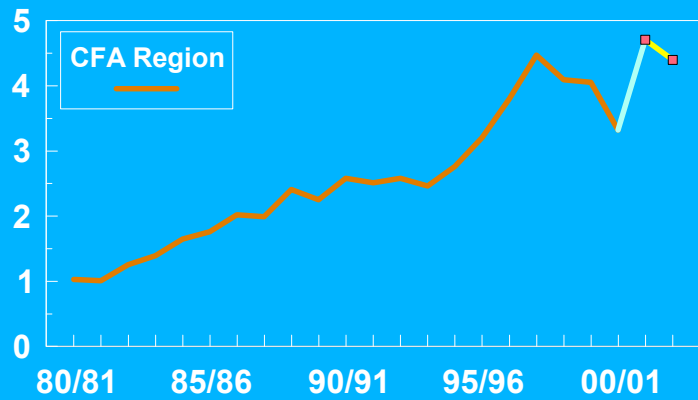
COTTON PRODUCTION

Million Bales



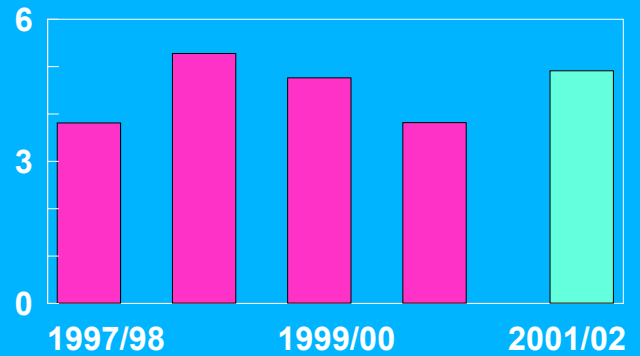
COTTON PRODUCTION

Million Bales



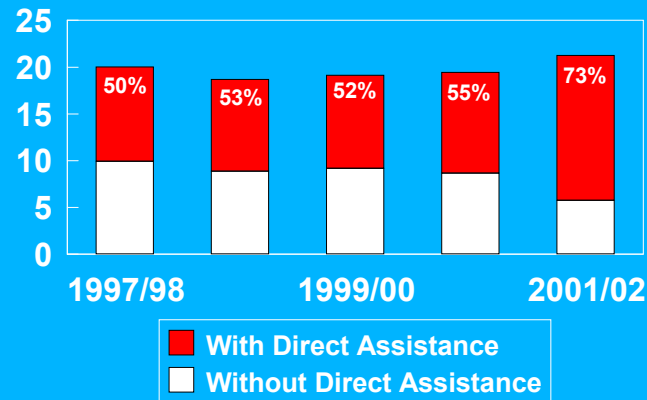
DIRECT ASSISTANCE TO PRODUCTION: WORLD

Billion U.S. dollars



WORLD COTTON PRODUCTION

Million Tons



COST OF PRODUCTION: 1980

Pakistan	25	Madagascar	70
South Africa	41	Syria	73
Thailand	44	Ivory Coast	77
Turkey	53	Iraq	82
El Salvador	53	Iran	89
Colombia	58	Spain	95
Mexico	58	Zaire	101
USA, Avg	59	Kenya	114
Israel	61	CAR	115
Australia	63	Morocco	117
Bolivia	66	Uganda	150

COST OF PRODUCTION: 2000

China, Y. R.	23	Zim, Commerc.	45
Benin, North	31	Thailand	45
Philippines	33	Turkey, C.	45
Zim, Commun.	33	Australia, Irr	46
Pakistan	36	Arg., rainfed	54
Arg., Irr.	37	Syria	59
Brazil, Cerr.	38	Sudan, Gezira	60
Turkey, Aeg.	40	Israel, Upland	62
Iran	41	USA, Avg.	68