AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Agricultural Outlook Forum 2005 Presented: Friday, February 25, 2005

THE UNITED STATES AND WORLD COTTON OUTLOOK

James Johnson, Stephen MacDonald, Teresa McKeivier, Leslie Meyer, and Carol Skelly
U.S. Department of Agriculture

Introduction

Record world cotton production and consumption characterize the 2004/05 marketing year. With large world supplies fueled by significant increases in planted area combined with record yields in many of the world's largest cotton-producing countries, the world price A-index (Northern Europe) has averaged just over 50 cents per pound thus far this season, compared with an average of 69 cents last season. Lower prices and robust world economic growth are in turn stimulating world consumption, which is rising 7.5 percent, well above the long-run average growth rate. The phenomenal growth of the current season poses unusual challenges in forecasting for 2005/06. A significant decrease is projected for world production as area falls and yields return to more normal levels. Consumption is likely to expand further, but at a slower growth rate. World stocks are thus likely to decline and the stocks-to-use ratio is projected to fall modestly below the recent historical average.

World Cotton Situation, 2004/05

World Cotton Production, 2004/05

World cotton area increased 3.4 million hectares to 35.9 million hectares, or 10.5 percent over last year's area, the largest percentage increase since the 1995/96 season. More area shifted into cotton production in 04/05 due to higher cotton prices relative to other crop alternatives. Average cotton prices were up 24 percent over the 2003/04 season. World production in 2004/05 increased 21.8 million bales to an estimated 116.7 million bales, a record and nearly 23 percent above last year's production. The record world crop results partly from the increase in harvested area, but the unexpected record yields in several of the largest producing countries is the primary driver. Very favorable weather this year in most countries of the world led to record yields, particularly in India, Pakistan and the United States.

China

China's 2004/05 cotton crop recovered from last year's devastating late season rainfall, increasing 6.7 million bales to a new record of 29 million bales. Harvested area expanded nearly 12 percent to 5.7 million hectares mostly due to very high cotton prices last spring. Area planted with Bt cotton seed increased nearly 1 million hectares this year reaching a total area to 3.7 million hectares, approximately 65 percent of total cotton area. Overall yields remained average, however, in spite of increased Bt cotton use. In Shandong, Henan, and Hubei provinces, below-normal temperatures and above normal rainfall last August delayed crop development and dampened yields. Xinjiang, Jiangsu, Anhui and Hebei enjoyed mostly favorable weather in August and early September. Excellent yields in these provinces more than offset any yield problems in other areas of the country.

India

India's 2004/05 cotton production is forecast at a record 16.0 million bales, up 2.2 million from last year. The forecast area is 9.0 million hectares, up 1.2 million from last year. Area increased in response to higher domestic cotton prices last year. Although India's cotton area is the world's largest, its yields have been among the world's lowest. However, yields have improved recently. 2004/05 yields are currently forecast at a record 387 kg/ha, barely exceeding last year's record. Area planted with BT cotton seed expanded by 400,000 hectares reaching a total of 500,000 hectares this year. The use of additional hybrid varieties also increased substantially. In addition, this season's unusual monsoon rainfall pattern extended sowing in Maharashtra, Andhra Pradesh, and Gujarat through early September compared to the normal end of sowing in late July. Despite deficient mid-monsoon rainfall, weather during August and September improved and favored crop development.

Pakistan

Pakistan's 2004/05 cotton production is also forecast at a record 11.5 million bales, up 3.75 million bales from last year. Higher cotton prices motivated farmers to increase area 108,000 hectares to 3.2 million hectares. Higher cotton returns spurred farmers to increase the use of quality pesticides and other inputs. In Pakistan, and other South Asian cotton areas, the crop often performs better with a lower rainfall seasonal pattern. This season, the weak monsoon combined with adequate irrigation supplies and favorable temperatures created positive growing conditions. Cotton farmers in the largest producing state of Punjab planted earlier than normal due to an early wheat harvest, and relatively dry weather suppressed insect reproduction resulting in minor pest infestations that were easily controlled through pesticide applications. Yields are forecast at a record 782 kg/ha. This is most likely an anomaly due to the early planting in Punjab this year.

Uzbekistan

Uzbekistan's MY 04/05 production is up an estimated 900,000 bales from last year. Although area is little changed, the weather played a significant role in this year's increased yields. A relatively warm spring allowed cotton planting to be completed on time and without significant replanting. In addition, this year's favorable weather conditions during the vegetation period and harvesting in September and October considerably benefited the crop. Incidents of major pest infestation were not reported this year. The government of Uzbekistan continues to determine planted area and set production targets, provide inputs (fertilizer, plant-protection chemicals, irrigation water, etc), and procure the crop from the farmers. The quality of inputs is reported to be poor and it is becoming increasingly difficult to reach state targets.

Franc-Zone Africa

Francophone Africa, or the cotton "Franc Zone" of west and central Africa, includes the following nine countries in order of raw cotton production: Mali, Burkina Faso, Benin, Cote d'Ivoire, Cameroon, Togo, Chad, Senegal, Central African Republic, and Niger. This region harvested a record 4.7 million bales in 2004/05, an increase of 300,000 bales over last year. Cotton within the Franc- Zone is typically planted from May-July and harvested from October-December. The previous record production was set in 2001/02 with an output of 4.50 million bales. Area increased approximately 260,000 ha, or 11 percent, largely as a result of higher cotton prices. For the most part, adequate rainfall was received throughout the season. Overall yields are down about 4 percent, with variability in inputs and weather among countries the most likely cause.

Australia

Estimated 2004/05 cotton area increased 129,000 ha to 325,000 ha, but is still well below the highs in the late 1990's and early 2000's. With a widespread drought in 2002 and 2003, irrigation water supplies for cotton were reduced substantially, sharply constraining the area devoted to cotton. Precipitation has returned to more normal conditions thus helping to refill depleted irrigation water supplies. Since most of Australia's cotton is produced on irrigated land, the return to improved irrigation supplies is expected to boost production 900,000 bales or 52 percent from last year.

Brazil

Production and area are currently forecast as unchanged from last year. Falling cotton prices combined with soaring input costs not only constrained area expansion this year, but average yields may suffer as a result of fewer fertilizer and agrochemical applications. Soybean and cotton prices have both declined over the last year. Farmers have invested in machinery and equipment to assist in more efficient cotton production and it is therefore unlikely to sit idle.

World Cotton Consumption, 2004/05

World cotton consumption made one of its most decisive upward moves ever in 2004/05, reaching an estimated 105.8 million bales and capping a 6-year run that has seen world cotton consumption grow by 25 percent. This increase is all the more startling for having followed a decade that saw cotton consumption essentially unchanged between 1988 and 1998. During the last decade, cotton consumption has grown 2.1 percent annually, compared with a 1.7 percent average rate over the last 40 years. In 2004/05, world cotton consumption is forecast to grow 7.5 percent. Strong world economic growth is boosting consumer demand, especially in the developing Asian economies, at the same time that large global supplies are depressing cotton prices—cotton prices are lower both in absolute terms and relative to polyester. The combined forces of modernization and trade liberalization have accelerated the growth in cotton spinning in China, which now accounts for 35 percent of world cotton consumption.

The elimination of textile quotas for WTO members on January 1, 2005 is having a significant impact on the geography of world cotton spinning. China, India, Pakistan, Brazil, and Turkey together more than account for this season's strong world consumption growth; other smaller increases are expected to occur in Vietnam, Bangladesh, and Central Asia. Consumption is relatively stable in the remainder of the developing world and is declining in the United States, Europe, Japan, and South Korea. Mexican consumption is estimated at 2.0 million bales, the same level as last season, as quota liberalization is increasing competition from other textile exporters for the U.S. domestic market.

The textile industry's demand for cotton is driven by the volume of consumer demand for clothing, the proportion of cotton to other fibers used to meet this demand, and inventory changes along the supply chain from fiber to clothing retailing. The following section will review some general trends in these factors.

Global Demand for Clothing

Consumer demand for clothing is a function of consumers' income. While consumer incomes may generally track gross domestic products (GDP), some years may be exceptions, and the relationship between GDP and consumer spending may change over time. In recent years, world cotton demand has

been driven by increased consumption in developing Asian countries. Robust GDP growth and changes in some countries' financial sectors which have also given households greater access to lending have supported consumption.

Consumer demand for clothing is also a function of clothing prices. In the United States, Canada, and the European Union (EU), clothing prices have been falling for several years. The end of the Multifibre Arrangement's (MFA) quotas removed a barrier that had raised clothing prices in these countries. If everything else were unchanged, the end of the MFA would lower clothing prices in North America and Europe, but raise the price of clothing elsewhere. However, major textile exporters—like China, India, and Pakistan—have undertaken significant investments in textile and clothing capacity. If additional capacity has been recently created to meet the increased demands of the markets recently freed from the MFA quotas, then it may be possible to see increased clothing consumption in both importing and exporting countries.

Cotton's Share of World Fiber Consumption

After stability during the 1980's, cotton's share of world fiber consumption fell throughout much of the 1990's. Since 1999, cotton's share again has been relatively stable, only recently dipping below 40 percent. In contrast, between 1990 and 1999, cotton's share fell from 49 percent to 40 percent.

Cotton's share of fiber consumption is in large part a function of prices, but consumer preferences, changes in textile technology, and economic policy shifts in some countries can also be important. During the 1990's, cotton prices tended to become less and less competitive compared with polyester prices. However, starting with 1999/2000, the trend has been reversed. Polyester prices rose for the third consecutive year in 2004/05 (through February), leaving cotton prices in 2004/05 in their most favorable relationship to polyester prices since the mid-1980's.

While changes in "tastes" or consumer preferences are hard to document, policy changes affecting the cotton/polyester mix have been more evident. In India, cotton consumption has risen in recent years in part reflecting favorable policy trends, especially the elimination of tax policies which favored chemical fibers. After falling for several years, cotton's share of India's household consumption of textile products stabilized, and cotton consumption has grown with the economy there in recent years.

In China, petroleum subsidies were reduced significantly between 1990 and 1995, constraining the profitability of synthetic fiber production. Synthetic fiber production has continued to grow, but almost certainly at a slower rate than if China's energy policy had remained unchanged. Authoritative data is scant, but it seems plausible that pressure driving cotton's share lower in China lessened to some extent after 1995. Since April 2004, the growth rate for man-made fiber production in China has decreased dramatically while the yarn production growth rate has risen, further indicating a possible rise in cotton's fiber share.

North America is the world's largest consuming region for cotton products, but has seen a decline in cotton's share of household fiber consumption. North America's economies lack the obvious policy interventions of India and China favoring particular fibers; however, cotton's fiber share is supported by the longstanding and successful U.S. cotton research and promotion program, which is funded by levies on producers and textile importers. The shift in fiber use may represent changes in consumer sentiment, or may be some more complex function of economic growth. Cotton's share in Western Europe and Japan has tended to weaken as economic growth has lagged, and while U.S. economic growth has been more robust, higher energy prices have constrained spending by large numbers of consumers.

Finally, oscillations in demand from the interaction of changes in inventory sales at each stage of the production chain—yarn, fabric, and clothing—are the least understood aspect of changes in cotton demand. Retailers have famously reduced their inventory needs in recent years, in part through increased efficiency and in part by shifting inventory functions to textile and apparel producers, but the impact of inventory changes on cotton fiber demand is much more of a hypothesis than an observed fact. The most tangible indication of this behavior is that years of unusually large consumption growth have most often followed years of unusually low, or negative, growth. This was the case in 2004/05, which followed a year when consumption growth was one of the lowest levels over the last decade.

China's Domestic Consumption and Trade

China's consumption of cotton at the mill level has grown 75 percent during the last 5 years and now accounts for 35 percent of world consumption, or 37.5 million bales. Investment in spinning equipment, competitiveness of labor, economies of scale, and trade liberalization have resulted in overwhelming dominance of the world textile market. While consumption is rising sharply, increases in 2004/05 production are even larger, and therefore import requirements are similar to last season's.

The much larger production is, however, changing the timing of China's 2004/05 cotton trade. A significant failure of the 2003 crop on the North China Plain forced China's mills onto the world market in the fall of 2003, raising world prices early in the 2003/04 season. Ultimately, China's production was larger than many anticipated; at the same time, tightening of credit by the central government prompted mills to reduce stocks rather than continue importing, and monthly imports fell sharply in the fall of 2004. With the 30-percent larger crop anticipated for 2004/05, China had limited early season import requirements. However, explosive growth in spinning levels will cause consumption to outpace production, and import levels are expected to rise beginning in the early spring. China's 2004/05 imports are forecast at 9.0 million bales, reflecting a marginal increase from 2003/04.

World Ending Stocks and Prices

World ending stocks are forecast at nearly 47 million bales for 2004/05, the largest level since 2001/02. However, due to a significant increase in world consumption since 2001, the stocks-to-use ratio is about 44 percent, well below 2001/02's 52 percent. Stocks in China are forecast at a minimal level of just over 8.0 million bales, thereby concentrating surplus world stocks in the U.S. and foreign countries outside China. The A-index (Northern Europe) has averaged about 52 cents through early February, compared with 69.2 cents for the 2003/04 season.

U.S. Cotton Situation, 2004/05

Area and Production

As planting time approached for the 2004 crop, U.S. cotton futures prices had risen modestly from those of the previous season. Despite relative prices for competing crops—like corn and soybeans—slightly more attractive than a year earlier, area planted to cotton rose marginally in 2004. However, area did not rise as high as the March *Prospective Plantings* report indicated, as some area intended for cotton was planted to alternatives.

U.S. producers planted nearly 13.7 million acres of cotton in 2004, one percent above 2003 but a million acres below the 5-year average. Upland cotton area in 2004 totaled 13.4 million acres, 100,000 above

2003. Meanwhile, extra-long staple (ELS) acreage jumped about 40 percent to 249,600 acres, as stocks were reduced by two-thirds in 2003/04, boosting prices to $1.15.

U.S. cotton harvested acreage expanded by more than a million acres in 2004 as a result of the excellent growing season across the Cotton Belt. In 2004, harvested area approached 13.1 million acres, 9 percent above 2003 and slightly above the previous 5-year average. A national abandonment rate of only 4 percent was the lowest since 1997.

U.S. cotton production in 2004/05 is estimated at a record 23.0 million bales, compared with the nearly 18.3 million produced in 2003/04. The dramatic production gain is attributable to the impressive crop conditions across the nation this season resulting in a low abandonment and a record national average yield. Crop conditions were well above any recent season and the best since 1987/88. The U.S. yield is estimated at a remarkable 846 pounds per harvested acre in 2004/05, 16 percent above last season's 730 pounds. Upland production is currently estimated at nearly 22.3 million bales with an average yield of 835 pounds per harvested acre, both records. Similarly, the ELS crop is projected at a high of 736,000 bales, significantly above the relatively low 2003 crop. A record ELS yield that is estimated at 1,425 pounds per harvested acre accompanied the higher area.

Compared with last season, 2004/05 upland cotton production was also higher in all four regions of the Cotton Belt, a first since 1990/91. In the Southwest region, the upland crop is estimated at 7.9 million bales, 3.3 million above a year earlier and a record. The region reaped the benefits of an excellent growing season with the average yield of 677 pounds per harvested acre, more than 100 pounds above the previous record. Similarly, the Delta crop rose dramatically in 2004/05 despite slightly lower area. The record average yield of 1,011 pounds for the region pushed output there to nearly 7.2 million bales, 600,000 bales above last season and also a record. In the Southeast region, cotton production and yield are up only slightly from 2003/04. Production is estimated at 4.6 million bales, while the Southeast yield averaged 755 pounds per harvested acre.

In the West region, upland area rose for the second consecutive season but remained below 900,000 acres for the third year in a row. Nevertheless, a record yield for the region helped push production to nearly 2.6 million bales in 2004/05, the highest in three years. In 2004/05, the upland yield in the West reached 1,439 pounds per harvested acre, about 40 pounds above the previous high of 2002/03. Similar to upland cotton, ELS production in the West region is projected higher in 2004/05, the result of larger area and yields—particularly for California. ELS production remains dominated by California where over 90 percent of the 2004 ELS crop was produced.

Domestic Mill Use

Domestic mill use is forecast at 6.3 million bales for 2004/05, down only 3 percent from a year earlier after four seasons that saw cotton mill use decline an average of 10 percent per year. Seasonally adjusted annual rates of domestic mill use have remained fairly stable over the past 12 months, reflecting the modest textile and apparel import growth of only 3 percent in calendar year 2004. The recent strength in mill activity is expected to continue through the end of the marketing year as cotton remains competitively priced with polyester staple fiber. In addition, textile and apparel exports have experienced a slight growth in 2004 as textile mill inventories continue to remain at below-average levels relative to shipments.

Retail use of cotton, as measured by domestic mill use plus net textile trade, is expected to rise again in 2004/05 if the 2004 calendar year trend continues. In 2004, U.S. domestic consumption of cotton

approached 21.5 million bale-equivalents, up from 21.2 million in 2003. U.S. consumers continue to support world demand for cotton. On a per capita basis, U.S. cotton consumption reached an estimated 34.9 pounds in calendar 2004, similar to the preceding year.

Exports and Ending Stocks

USDA is forecasting total 2004/05 U.S. exports at 13.0 million bales, down 6 percent from last year's record of 13.8 million bales. Exports are supported by a record U.S. crop, which resulted in the largest exportable supply in 35 years. Continued strengthening of foreign mill demand has not resulted in increased foreign import demand, as record or near record production in major consuming/producing countries (China, India, Pakistan, Brazil, and Turkey) has offset increases in consumption. Shipments in the first half of the season have been near last year's pattern, and cumulative exports reached about 5.0 million bales by the end of January, 500,000 bales behind last year, but on track to meet the forecast. Weekly exports will have to be quite strong, averaging above 300,000 bales per week for the second half of the season, to achieve the forecast total of 13.0 million. Strong sales to foreign markets outside China have sustained sales in the first half of the year, while second-half import demand by China is expected to be robust. U.S. upland cotton exports of 12.35 million bales are expected to be lower than last season. With larger domestic supplies and a supportive ELS cotton competitiveness payment, ELS cotton exports are estimated to increase by 20 percent to a record level to 650,000 bales.

U.S. ending stocks are forecast at 7.3 million bales this season, more than twice the 2003/04 level. At this stock level, the U.S. would hold about 16 percent of global stocks, higher than in the last 15 years. The U.S. stocks-to-use ratio would more than double from last season's 17.3 percent to 37.8 percent, however, but is still lower than in 2000/01 or 2001/02. Upland stocks are estimated at 7.2 million bales, while ELS stocks are expected to be below 130,000 bales.

Prices and Farm Income

Gross upland cotton farm income from the 2004 crop is estimated to reach a record $8.75 billion, owing mainly to record yields. The upland cotton marketing year price has averaged 46.0 cents per pound for August through December 2004, a reduction of 25 percent from the 2003/04 average; however, market receipts are expected to decline only 11.5 percent because of the increase in volume. Higher farm program expenditures activated by lower prices will more than offset the reduction in market income. Relative to variable costs, 2004 net returns and net returns/acre are rising sharply.

World Cotton Outlook, 2005/06

World Production, 2005/06

Lower world production is foreseen for 2005/06, as lower prices around the world in 2004/05 reduce planting incentives. World production is expected to total 103 million bales, falling 14 million bales from the year before. In absolute terms, this would be the largest one year decline ever, and in percentage terms (12 percent) the largest since 1992/93. Lower production is expected across virtually the entire northern hemisphere.

Based on data through February, world cotton prices fell 24 percent in 2004/05. Soybean prices fell about the same amount on the world market, while corn prices fell 17 percent and wheat fell 5 percent. Groundnut prices fell negligibly, and rice prices rose 16 percent. Therefore, in addition to the direct

impact of lower cotton prices on farmers' expectations for 2005/06, cotton's attractiveness also deteriorated relative other crops on average, further bolstering the outlook for lower area in 2005/06.

Yields were above-average in a number of countries in 2004/05, so lower production in 2005/06 is expected to reflect generally lower yields in addition to a reduction in area planted. The largest expected reduction, the 4.3-million-bale decline expected in the United States, is a case in point. U.S. cotton yields rose 16 percent to a record-high in 2004/05, and are expected to decline about 17 percent, accounting for most of the expected decline in U.S. output.

India's yields are also foreseen lower in 2005/06, but not to the same degree. Area planted to cotton in India could fall about 10 percent, and a 3-million-bale decline in production is foreseen. Substantial uncertainty remains about the size of India's 2004/05 crop, indicating the tentative nature of estimates for 2005/06. The introduction of genetically-modified cotton and the surge of textile investment in India are helping drive substantial structural change in the way India's cotton is produced and distributed. India's cotton yields have been substantially above average for the past 2 years, and are not expected to return to pre-2003/04 levels.

In contrast with the United States and India, China's yields remained below average in 2004/05, and are expected to increase slightly in 2005/06. After a strong upward run, China's yields have been dampened by weather during the last 2 years, and the impact of Bt adoption appears to have run its course. Yields in 2004/05 rose substantially from the previous year's remarkably low level, but represented a setback from the previous trend. Farmers reportedly intend to plant less area to cotton in eastern China in 2005/06, and even at the conservative end of these expected reductions—and assuming no change in Xinjiang's area—China's total cotton area could fall about 12 percent. Output is expected to fall only 2 million bales however, as yields return to 2002/03 levels.

In Pakistan, despite significant purchases by the government's Trading Corporation of Pakistan, cotton prices have fallen below the minimum support price. At the same time, prospects for sugar production are more positive. Pakistan is importing sugar for the first time since 2001, and domestic sugar prices are the highest in years. Pakistan's cotton area is typically relatively stable, but is expected to fall 200,000 hectares to 3 million hectares. Pakistan experienced one of the world's largest year-to-year increases in yields in 2004/05, and a likely return to more normal yields will mean a decline. Output is expected to decrease by 22 percent or 2.5 million bales in 2005/06.

Declines in Uzbekistan and Franc Zone Offset Increases in Australia and Brazil

Output is also expected to fall in Uzbekistan and West Africa's Franc Zone, the United States' two major competitors in the world export market. Uzbekistan's government has indicated its cotton area target for 2005/06 is little changed from the year before, but yields are likely to retreat after jumping 21 percent in 2004/05. In contrast, the Franc Zone's yields were unremarkable in 2004/05, but area jumped to a record-high. Lower area in the Franc Zone and more normal yields in Uzbekistan are expected to reduce production almost 500,000 bales in each case.

In contrast with declines in the northern hemisphere, larger crops are likely in major southern hemisphere producing countries. Assuming Australia sees a continuation of more normal rainfall during 2005/06, reservoir levels should increase, permitting an increase in irrigated area and production compared with 2004/05. Brazil's 2005/06 crop will be planted late enough to avoid the impact of 2004/05's decline in prices, and area is likely to rise there as well.

World Cotton Consumption, 2005/06

World cotton consumption is forecast to rise 3 percent from the year before in 2005/06, to 109 million bales. The forecast rate of growth is down substantially from 2004/05, but remains twice the long term average rate. Cotton consumption in 2005/06 will be determined by economic conditions during that time, by expectations formed before that time, and by a number of as yet unforeseeable developments. Forecasts, however, inevitably depend on a more limited number of variables. Consumption in 2004/05 is a case in point, with an enormous increase in consumption that far outpaces the rate suggested by past relationships between cotton consumption and world economic growth and cotton prices. This suggests the importance of other developments and implies caution in forecasting events in 2005/06.

World GDP growth in 2005 and 2006 is expected to slow compared with 2004, but remain above average. World growth in 2004 was the strongest since the 1970's, rising 5 percent according to the International Monetary Fund. A slowdown to 4.3 percent is foreseen for 2005, but this would be stronger growth than over 2001-2003.

Table A--Real annual GDP changes

	Average 2001-03	2004e	2005f	2006f
		Percent		
World	3.1	5.0	4.3	4.3
EU	1.3	2.1	1.9	2.1
US	1.9	4.4	3.5	3.1
Japan	0.4	2.9	1.5	2.0
China	8.2	9.5	8.2	7.6
India	6.0	5.7	6.3	6.0

Source: IMF and GlobalInsight.

Cotton prices fell 26 percent in real terms during 2004/05, and economists typically have observed a relationship between cotton prices and consumption after a one year lag. Consumption in 2004/05 behaved counter to that intuition, rising despite a 22-percent price inflation-adjusted increase during the year before. This does not necessarily rule out a lag between cotton price and consumption changes, but it does suggest caution in assuming 2005/06's consumption will receive a significant boost from this year's decline in prices.

Table B--Real annual fiber price changes

	Average 1999-2001	2002	2003	2004e
		Percent		
Cotton	-12	31	22	-26
Polyester	-1	8	10	8

Source: Cotlook Ltd.

Examination of past episodes of significantly large consumption gains suggests a pattern. Since 1970, there have been only 5 other years with an expansion in global cotton consumption comparable to 2004's. In three of those years, the preceding year's consumption shrank; thus, it seems reasonable to assume that inventory demand was responding significantly to changes in income growth, and the

significant increase was partly a function of the previous year's decline. On average, in the years just before these high growth years, world consumption fell on average by 0.3 percent.

In the year after these high growth years, consumption typically grew at a below average rate. The one exception came in the mid-1980's, when two high growth years followed consecutively. On average, world consumption has grown at a 2.6 percent rate in the year following an unusually large increase.

In 2005/06, global income patterns will remain relatively favorable for cotton consumption, although not quite as favorable as in 2004/05. Price movements have also been favorable for cotton consumption. The outlook for cotton's share of household fiber consumption is positive in North America and Europe, since the end of the Multifibre Arrangement's quotas should reduce prices and increase consumption. Finally, inventory oscillations along the textile supply chain will probably have a negative effect on 2005/06 consumption growth, as consumers, manufacturers, and retailers refrain from further stock-building.

China's 2005/06 cotton consumption will continue to expand at faster than world average growth rates as the elimination of trade barriers provides improved access to foreign textile markets, and rising incomes support growth in demand by Chinese consumers. Consumption is forecast at 41.0 million bales, a 9-percent increase from the estimated 2004/05 level.

Trade

Continued rapid growth of consumption by China is projected to boost imports for both China and the world significantly. China's consumption is forecast to exceed production by 14.0 million bales; with limited stocks to draw upon, the shortfall will have to be supplied by imports, currently forecast at 14.5 million bales, or an increase of 60 percent from the 2004/05 estimate. Similarly, world trade is also expected to rise to a record 38 million bales. Strong imports will provide opportunities for many of the world's cotton exporters, including the United States, to reduce surplus stocks accumulated in 2004/05.

U.S. Outlook for 2005/06

Area, Production, and Supply

U.S. planted area in 2005 will once again be influenced by a number of factors, including price prospects for cotton and alternative crops, weather during planting, crop rotation benefits, and the additional concern over soybean rust this season.

As planting time for the 2005 crop approaches, U.S. cotton prices are lower than a year ago, but so are prices for competing crops. The weighted upland cotton farm price has averaged 46 cents per pound during the first 5 months of 2004/05, well below last season's farm price of 61.8 cents. With cotton prices below the loan rate, lower market returns this season are being offset by higher marketing loan benefits. For 2005/06, cotton futures prices are currently below the loan rate. In contrast, futures prices for competing crops—like corn, sorghum, and soybeans—are slightly higher than their loan rates. As a result, planting decisions in 2005 are likely to be based on expectations of both market returns as well as program benefits for the individual crops.

Last season, U.S. cotton planted area was approximately 13.66 million acres and the general consensus within the industry is that cotton acreage will increase in 2005. At the end of January, the National Cotton Council published results from its annual acreage survey that indicated cotton area in 2005

would rise by less than 1 percent to 13.73 million acres. However, USDA is currently projecting that cotton acreage will rise to between 14.0 and 14.5 million acres in 2005. Area is likely to rise across the Cotton Belt, although the West region's cotton area may remain near that of a year ago. Attractive cotton prices—relative to alternative crop prices—and the excellent cotton yields obtained across the Cotton Belt in 2004 are expected to push cotton acreage to USDA's initial 2005 area projection of 14.2 million acres, 4 percent above 2004. At the end of March, USDA's National Agricultural Statistics Service will provide its first survey-based producer intentions for 2005 crop acreage.

Although total cotton planted area is projected to rise in 2005, a more normal abandonment rate of 9-10 percent is expected compared with the relatively low 4 percent reported for 2004. This higher abandonment rate implies a projected harvested area that is below the current season's 13.1 million acres, ranging between 12.7 and 13.0 million acres. At the same time, the average yield in 2005 is projected to decline from last season's record of 846 pounds per harvested acre and approximate the average of the 2001-2003 crop yields, or about 700 pounds.

Based on these assumptions, U.S. cotton production in 2005 would range between 18.5 and 19.0 million bales. This range is well below last season's record of 23 million bales and slightly below the 19.2-million-bale average over the last 5 years, a period that included two record crops. As a result, despite the current beginning stock estimate of 7.3 million bales—more than double the 2004/05 level—total U.S. cotton supplies next season would decrease half a million bales to just over 26 million, but would remain one of the largest of the past four decades.

Mill Use and Exports

The U.S. cotton industry faces ever-increasing competition for its own retail market with the elimination of textile import quotas. Domestic mill use fell slightly in 2004/05, as robust economic growth and a weaker dollar partially offset the effects of trade liberalization; this trend is forecast to continue in 2005/06 and mill use is projected at 6.0 million bales.

USDA is projecting that exports will likely meet or exceed the 2003/04 record of 13.8 million bales. A large U.S. exportable supply, coupled with strong foreign demand, led by China, will be supportive. With an expected increase of nearly 20 percent in foreign imports, U.S. exports would exceed 14.0 million bales even with a slightly reduced market share. A projection of record U.S. exports is consistent with recent years' growth, which has resulted mainly from the shift in cotton spinning from domestic to foreign mills.

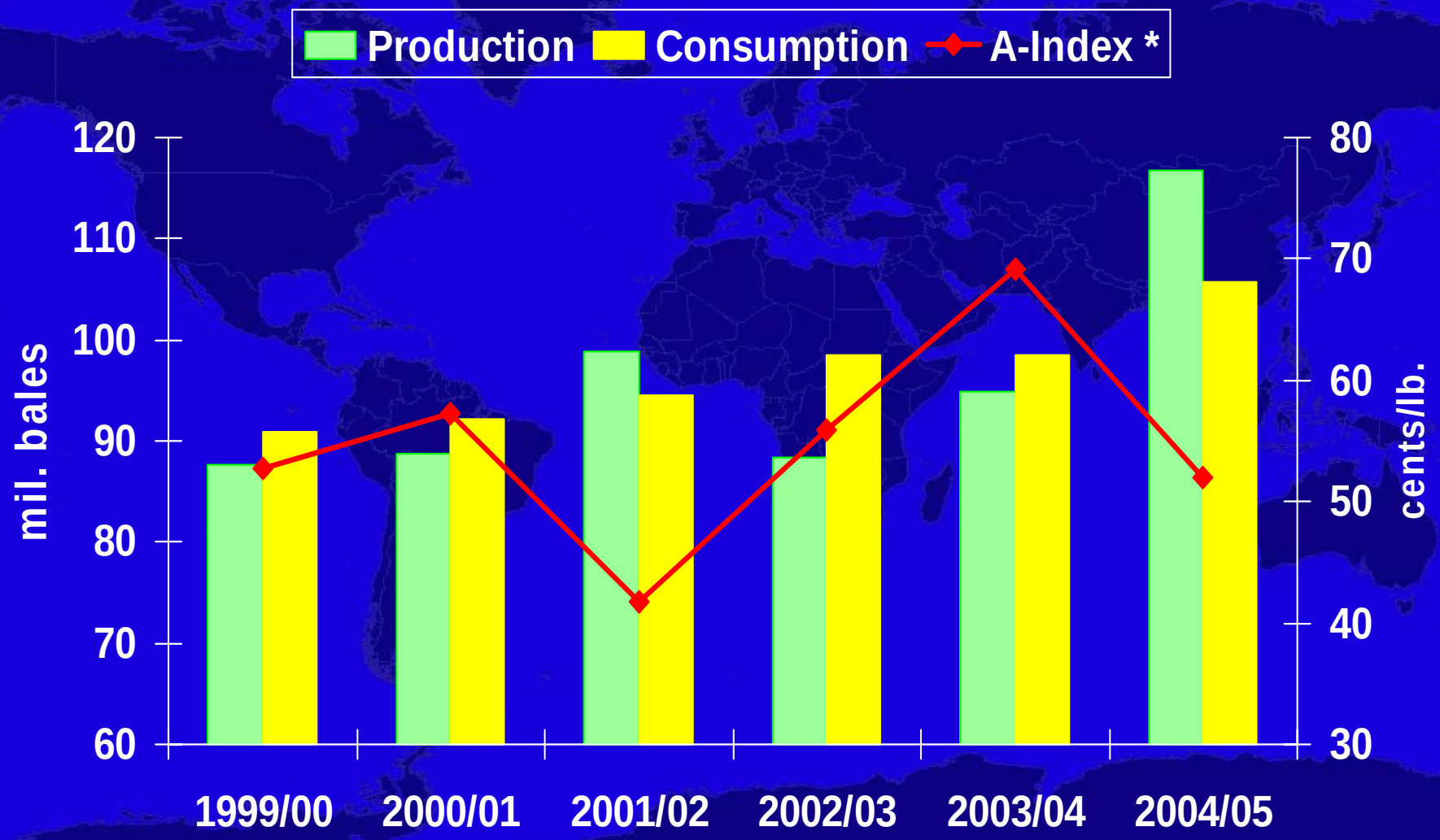
U.S. and Foreign Ending Stocks, 2005/06

USDA's projections include a 12-percent reduction in world ending stocks to a level of 41.0 million bales and a stocks-to-use ratio of just under 38 percent, well below the 5-year average of about 43.5 percent. World stocks are declining over time partly because China, the world's largest consumer and importer, is holding a minimal stocks pipeline, allowing its suppliers to maintain any excess raw cotton inventory. Projected U.S. stocks of 6.1 million bales are roughly equal to the 5-year average; however, stocks are slightly below the 5-year average when measured relative to rising disappearance. Stocks in foreign countries outside China are projected to decline about 5 million bales or 15 percent, as the surpluses accumulated in 2004/05 move into market channels.

The U.S. and World Cotton Outlook

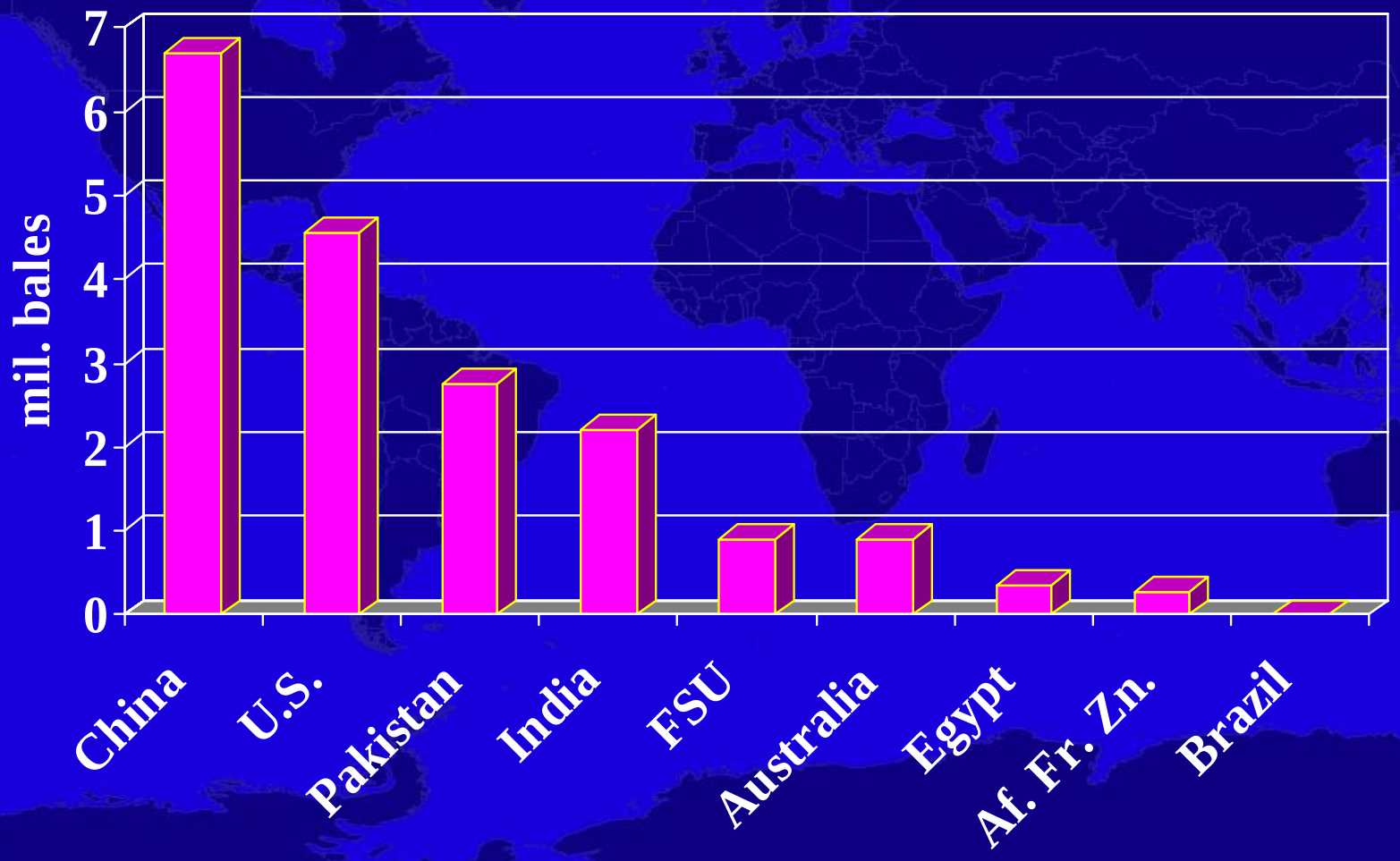
USDA Outlook Forum
February 25, 2005
Interagency Cotton Estimates Committee
Presented by: James Johnson, Foreign Agricultural Service

World Production, Consumption, and Prices 1999/00 to 2004/05



* 2004/05 through Jan. 2005

Estimated Changes in World Production, 2004/05 vs. 03/04

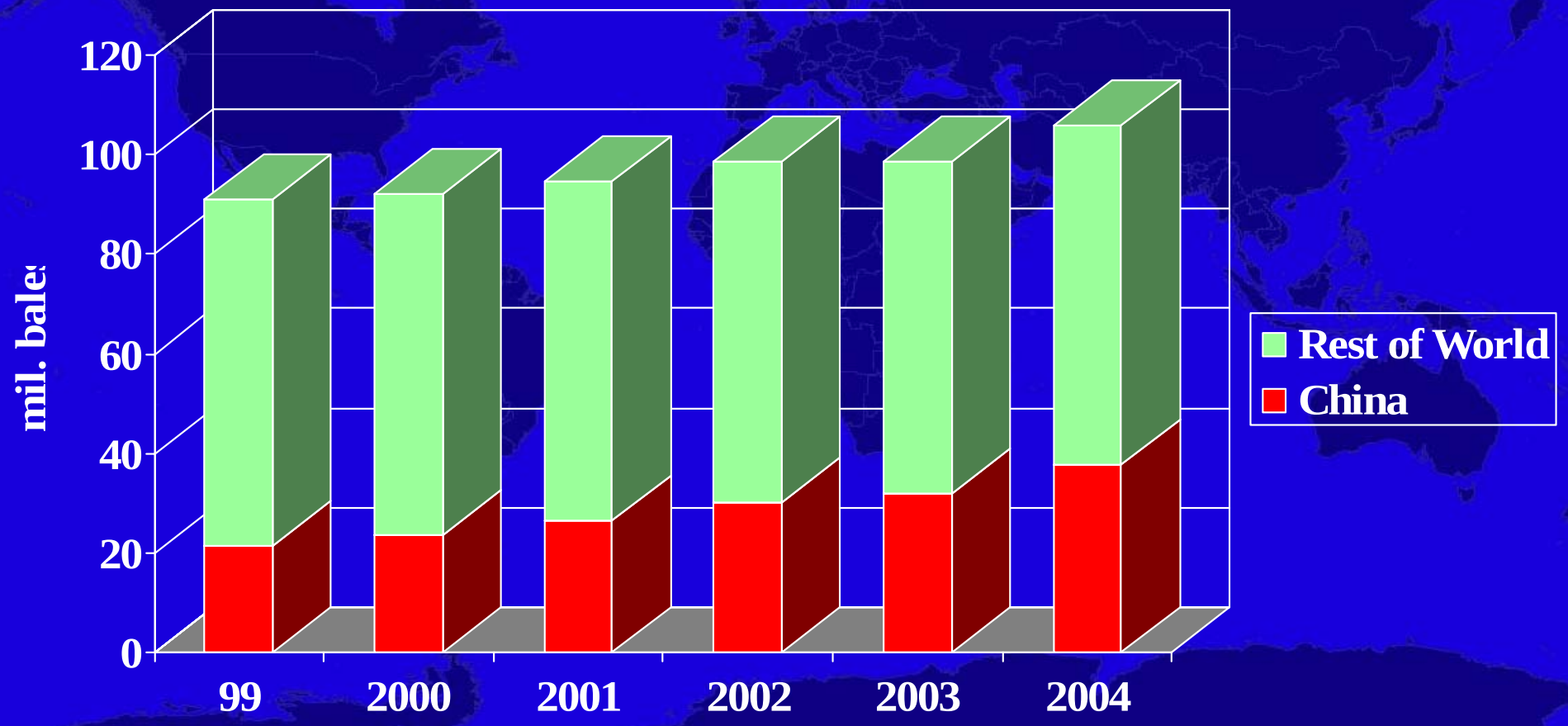


2004/05 Prices Supported by:

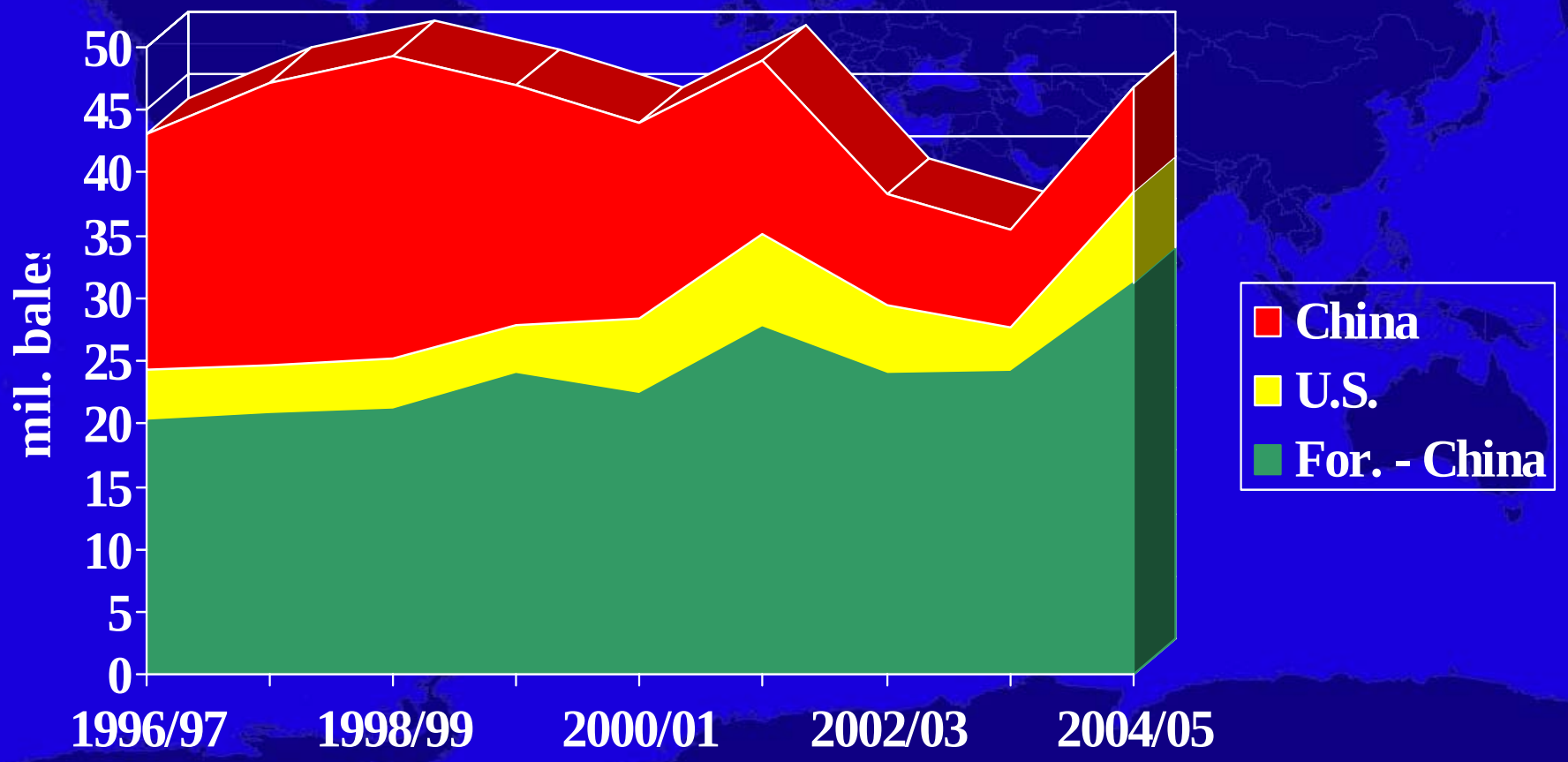
- weakness of the U.S. dollar,
- stronger consumer demand, especially in developing Asian, and
- optimism about future demand.

World Cotton Consumption,

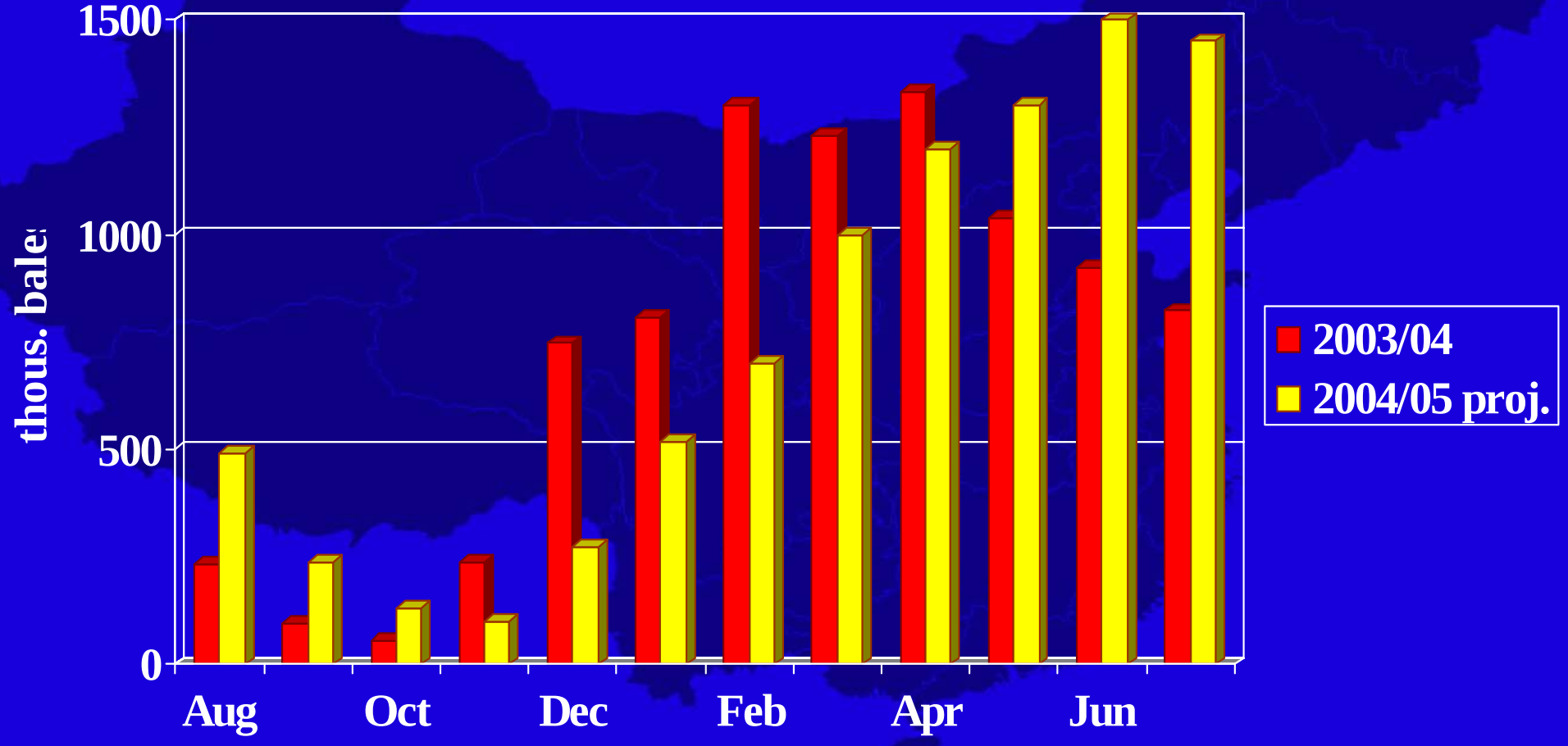
1999/2000 through 2004/05 est.



U.S., China, and Other Foreign Stocks through 2004/05



China Monthly Imports Forecast for 2004/05, compared with 2003/04

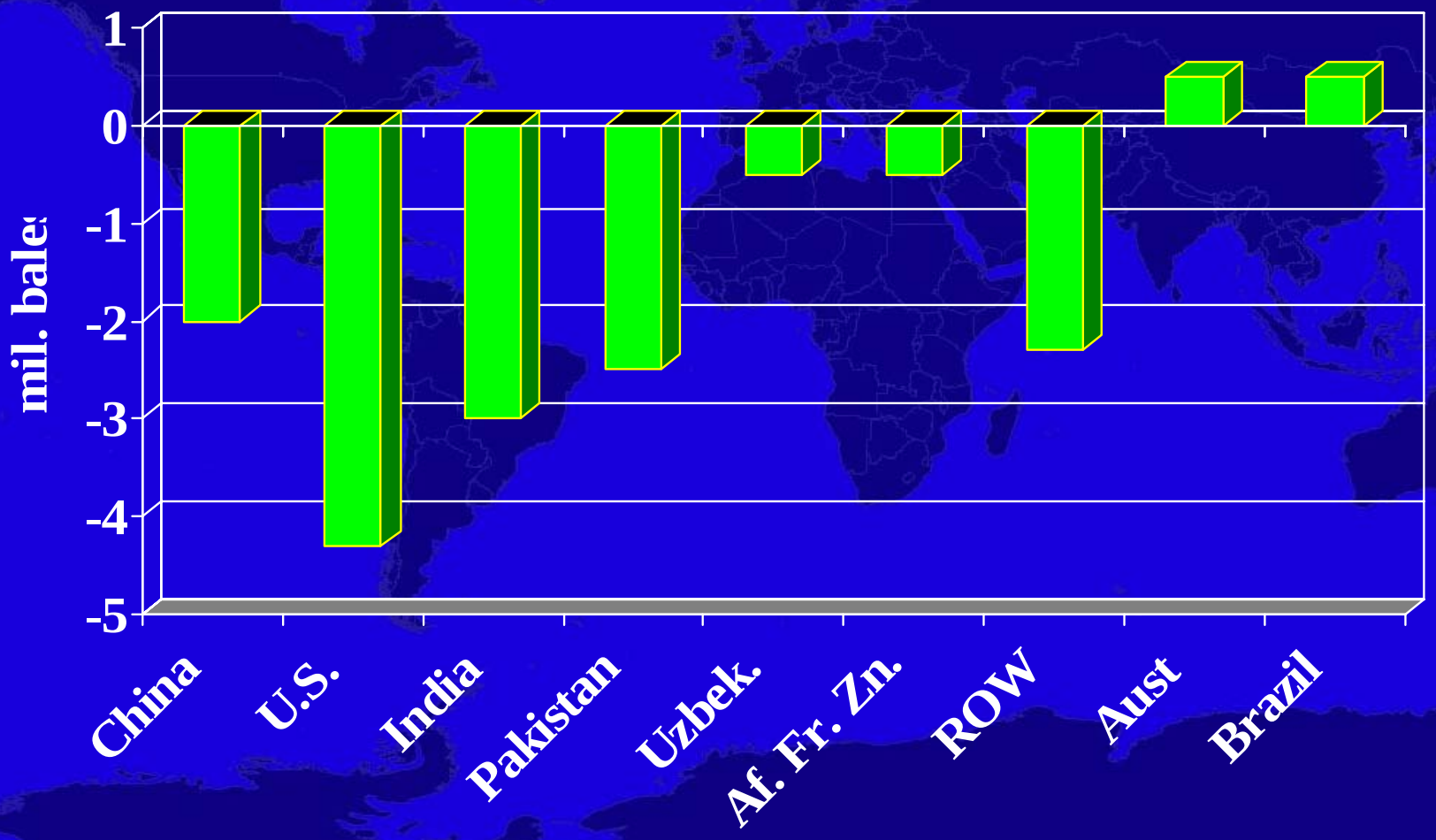


U.S. Cotton Balance Sheet

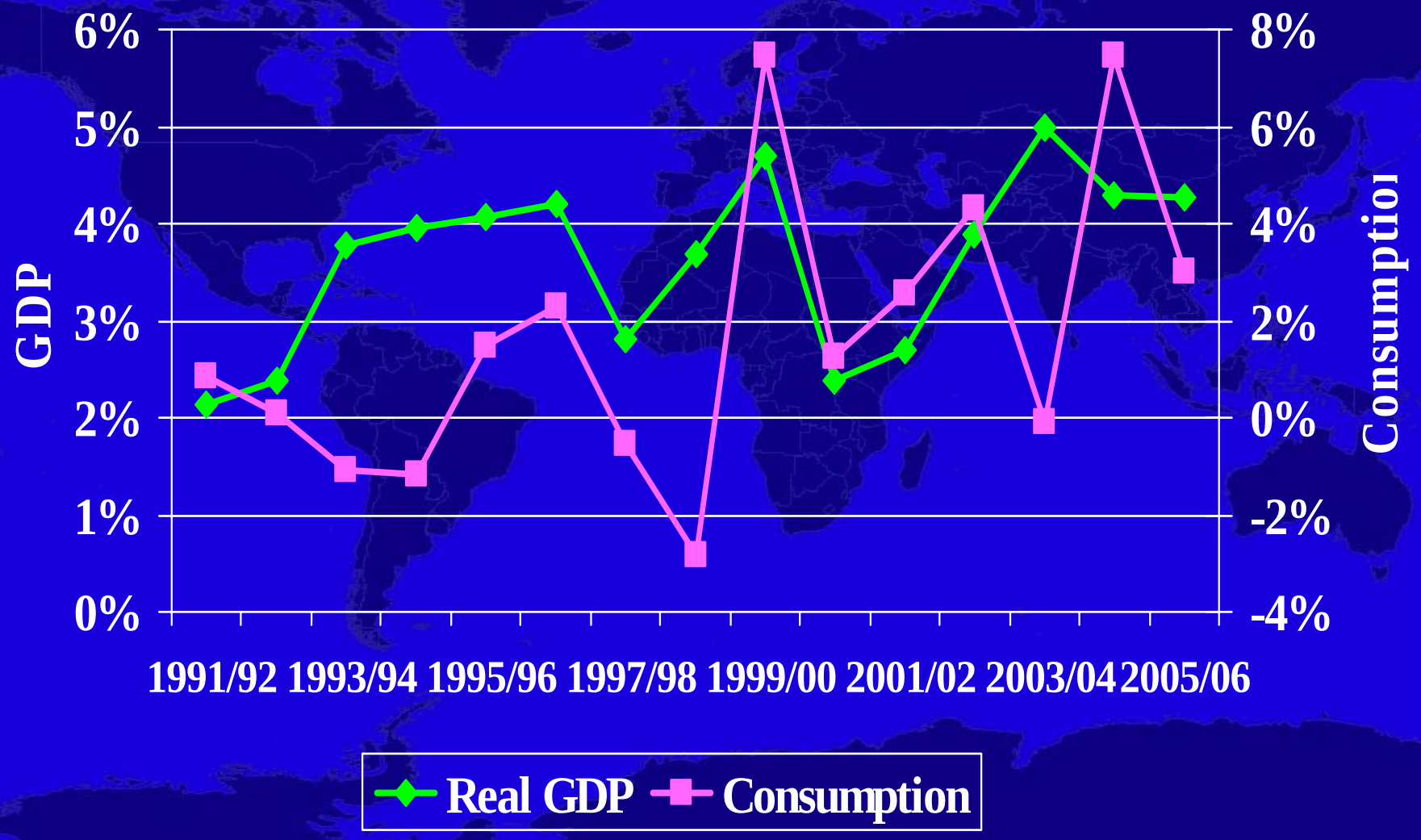
(mil. bales)

	2003/04	2004/05
Beg. Stocks	5.4	3.5
Production	18.3	23.0
Imports	0.1	0.0
Total Supply	23.7	26.6
Consumption	6.5	6.3
Exports	13.8	13.0
Total Use	20.3	19.3
Ending Stocks	3.5	7.3

Forecast Changes in World Production, 2005/06 vs. 04/05



2005/06 World Consumption Growth Slows



China Cotton Balance Sheet

(mil. bales)

	2004/05	2005/06
Beg. Stocks	7.8	8.2
Production	29.0	27.0
Imports	9.0	14.5
Total Supply	45.8	49.7
Consumption	37.5	41.0
Exports	0.2	0.2
Total Use	37.7	41.2
Ending Stocks	8.2	8.5

U.S. Cotton Balance Sheet

(mil. bales)

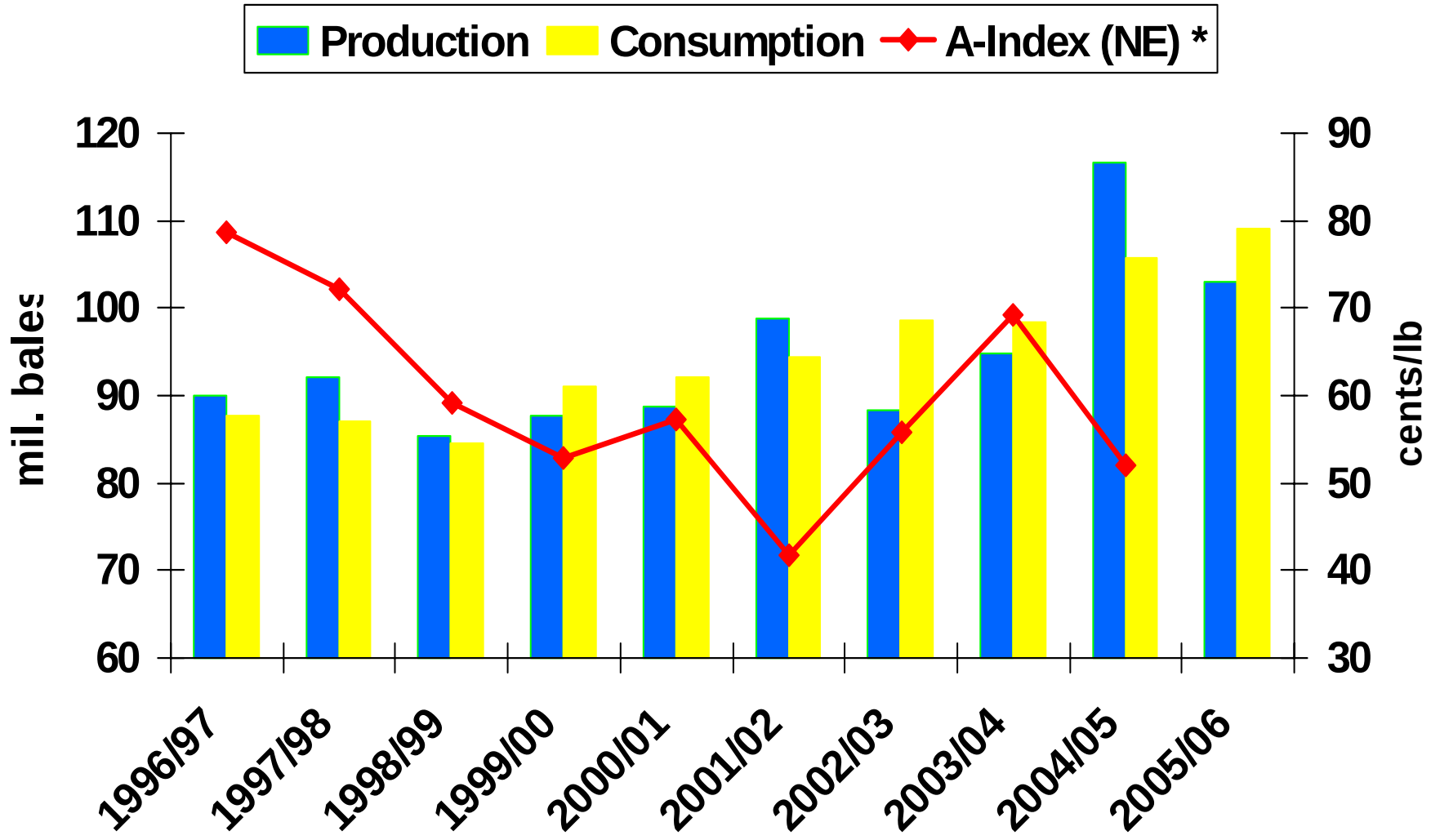
	2004/05	2005/06
Beg. Stocks	3.5	7.3
Production	23.0	18.7
Imports	0.0	0.0
Total Supply	26.6	26.1
Consumption	6.3	6.0
Exports	13.0	14.0
Total Use	19.3	20.0
Ending Stocks	7.3	6.1

World Cotton Balance Sheet

(mil. bales)

	2004/05	2005/06
Beg. Stocks	35.5	46.7
Production	116.7	103.0
Imports	33.6	38.3
Total Supply	183.8	188.0
Consumption	105.8	109.0
Exports	33.3	38.0
Total Use	139.1	147.0
Ending Stocks	46.7	41.0

World Production, Consumption, and Prices
1996/97 to 2005/06



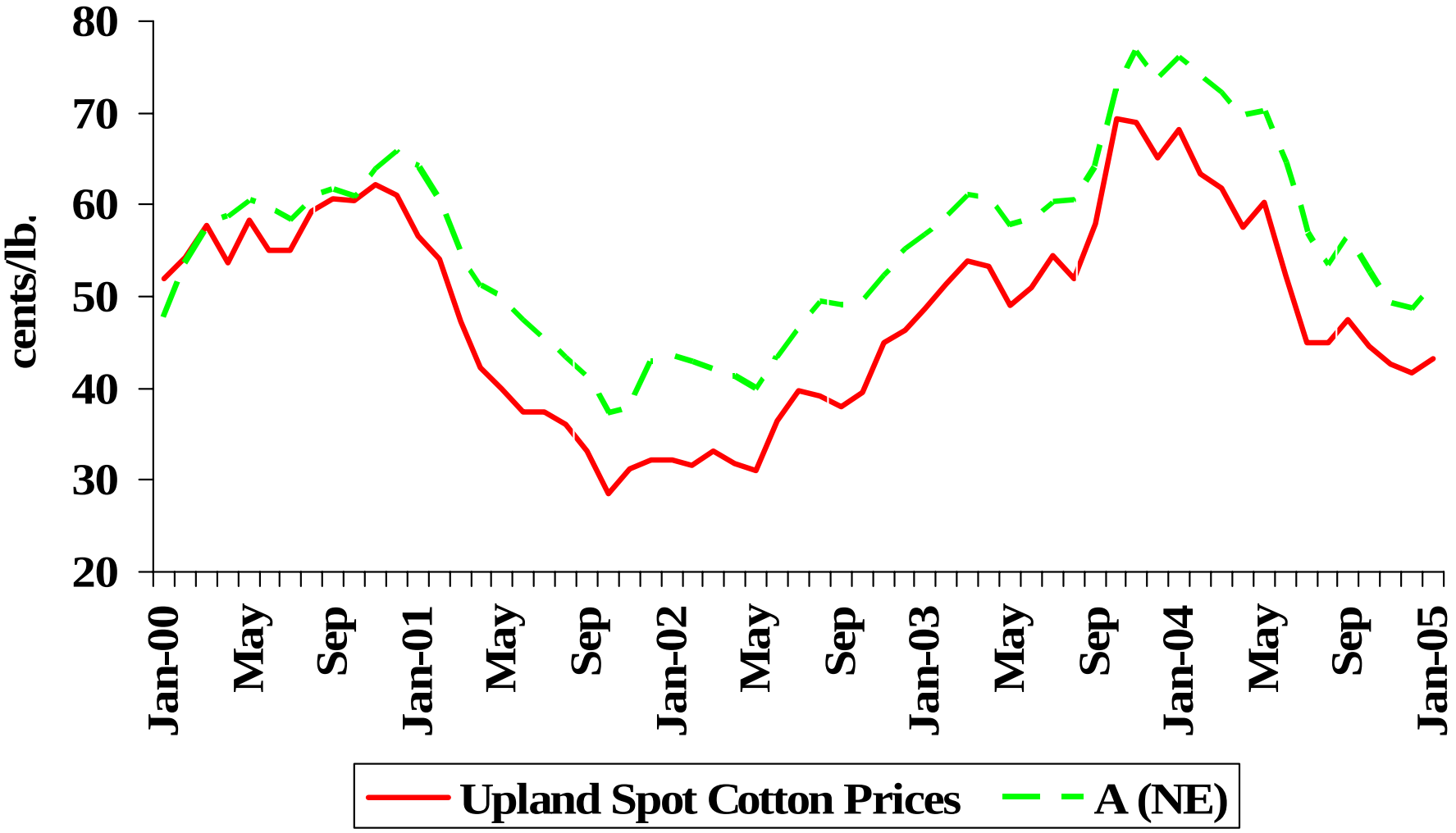
* 2004/05 through Jan. 2005

World Cotton Balance Sheet

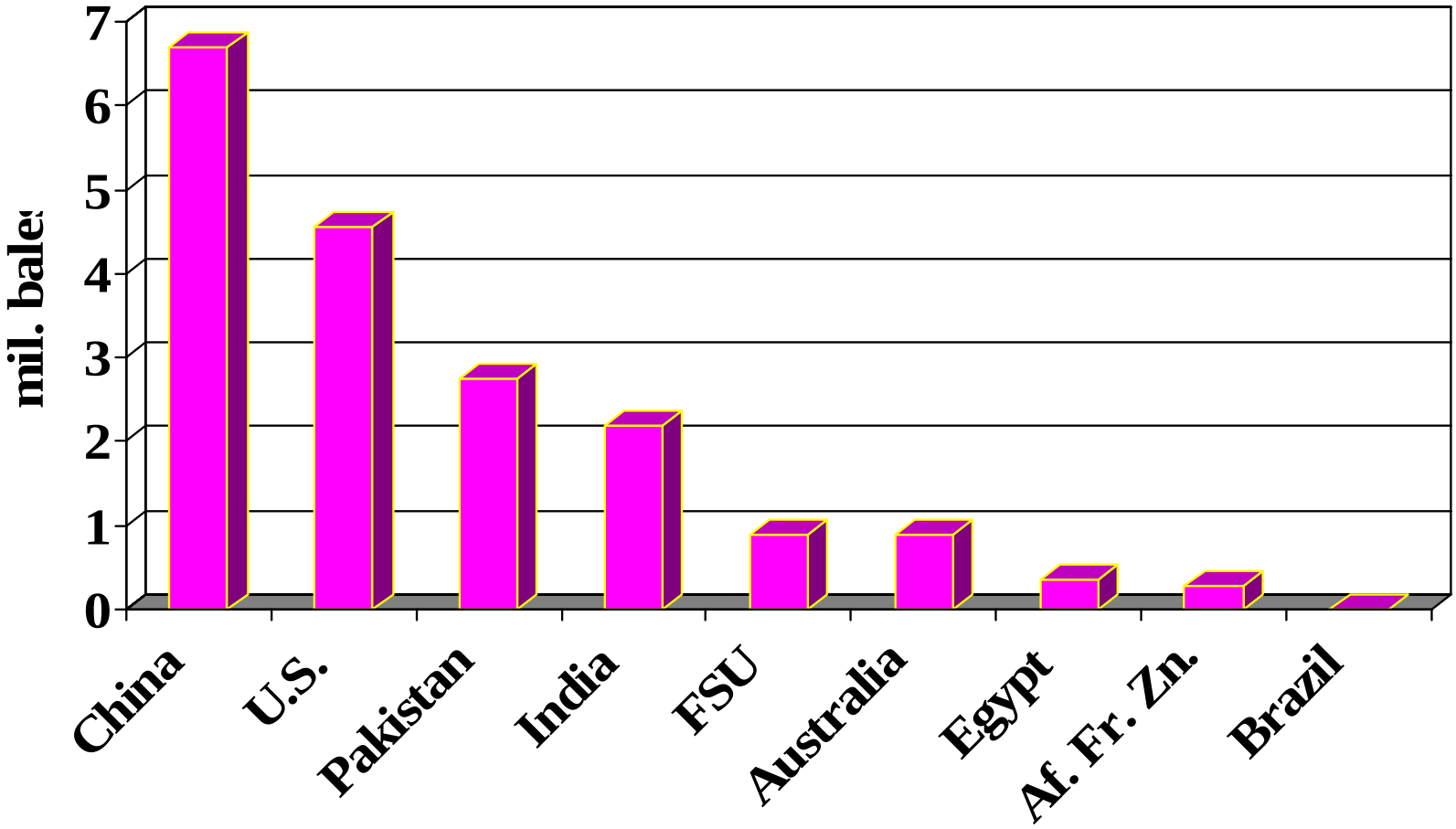
(mil. bales)

	2002/03	2003/04	2004/05
Beg. Stocks	49.0	38.2	35.5
Production	88.3	94.9	116.7
Imports	30.2	33.9	33.6
Total Supply	167.5	167.0	183.8
Consumption	98.6	98.5	105.8
Exports	30.4	33.1	33.3
Total Use	129.0	131.6	139.1
Ending Stocks	38.2	35.5	46.7

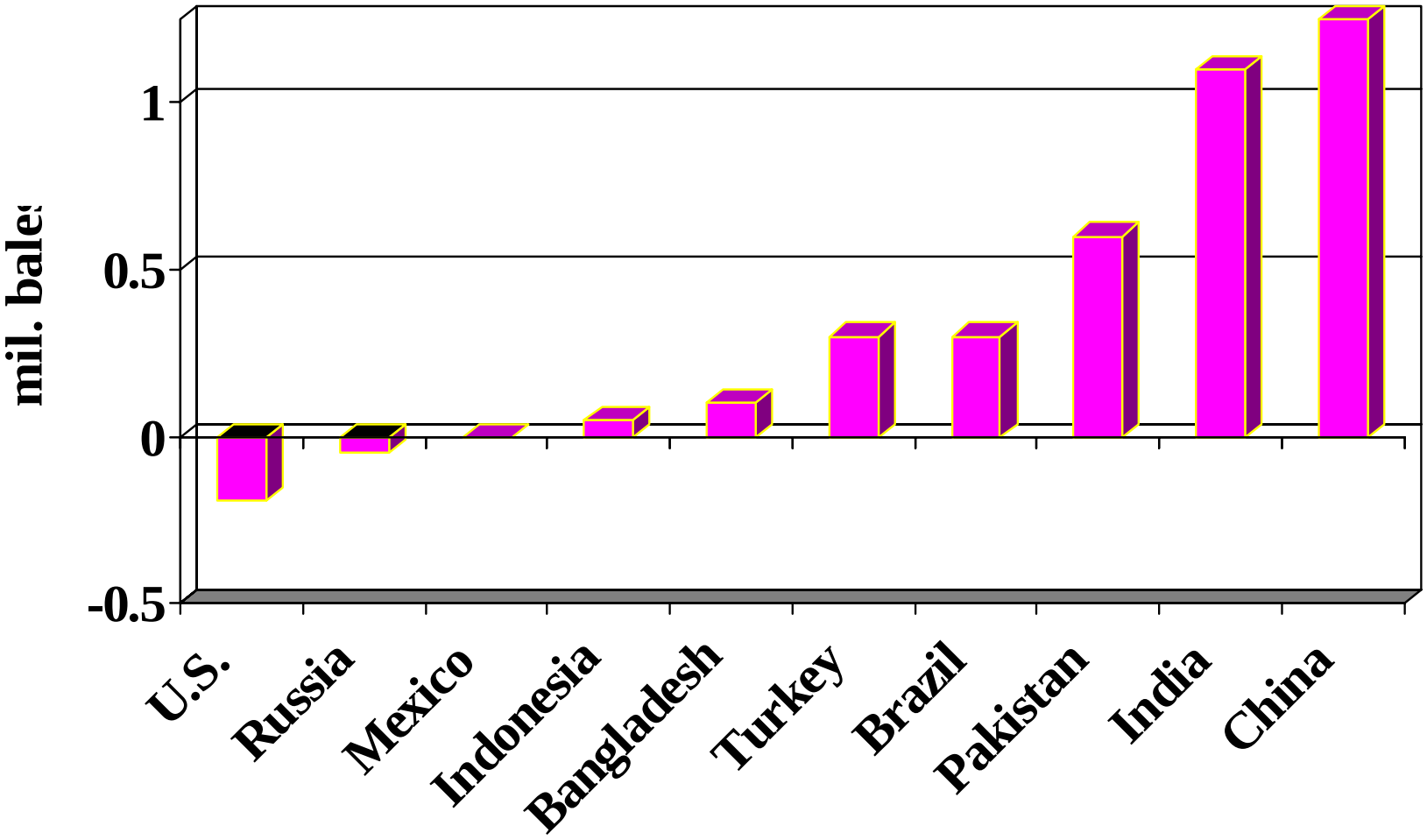
World and U.S. Spot Cotton Prices
Jan 2000 to Jan 2005



Estimated Changes in World Production, 2004/05 vs. 03/04



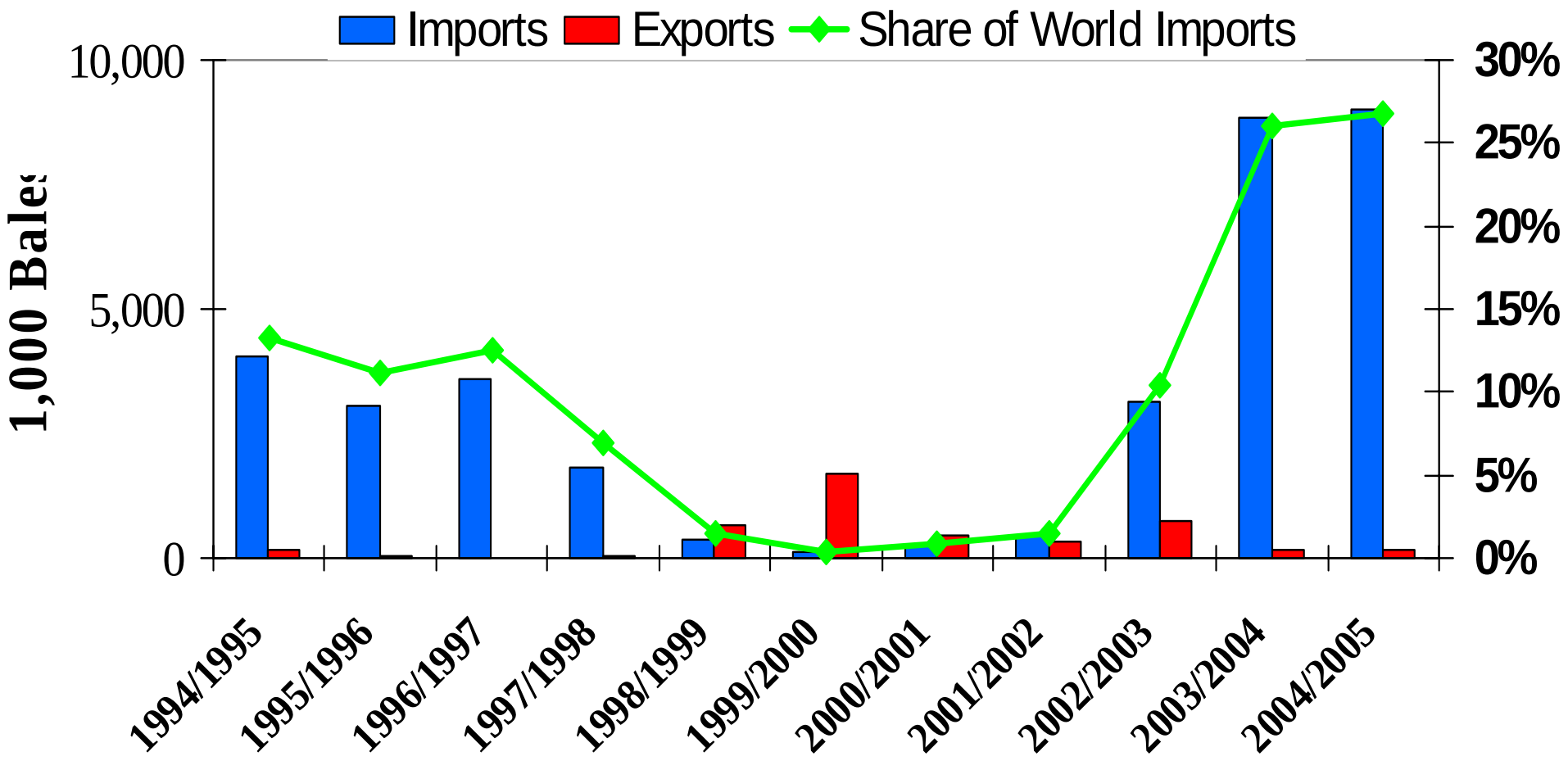
Estimated Changes in World Consumption, 2004/05 vs. 03/04



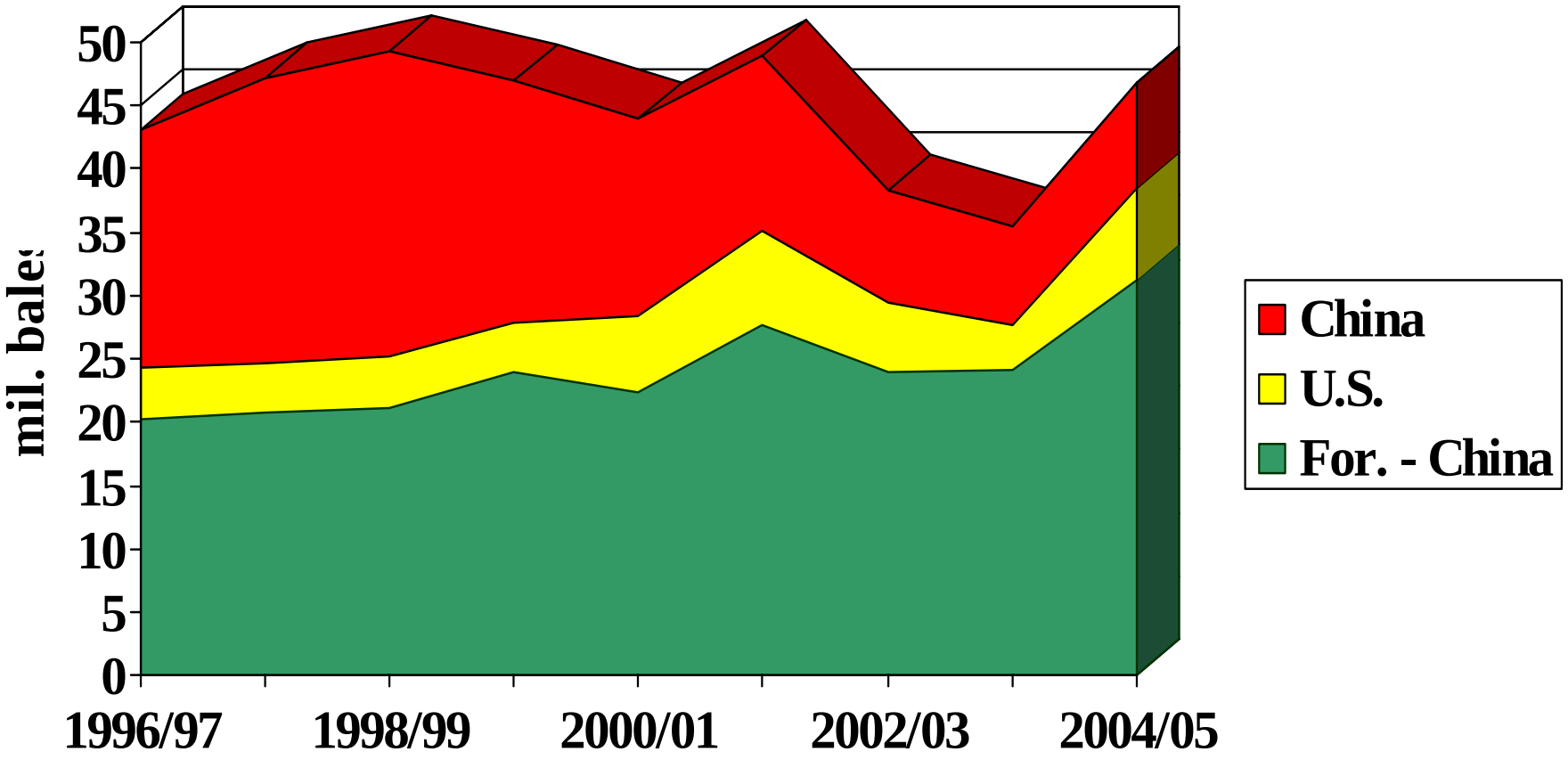
China Cotton Balance Sheet

	2002/03	2003/04	2004/05
Beg. Stocks	13.8	8.9	7.8
Production	22.6	22.3	29.0
Imports	3.1	8.8	9.0
Total Supply	39.5	40.0	45.8
Consumption	29.9	32.0	37.5
Exports	0.8	0.2	0.2
Total Use	30.7	32.2	37.7
Ending Stocks	8.9	7.8	8.2

China's Import and Export Projections through 2004/05



U.S., China, and Other Foreign Stocks through 2004/05

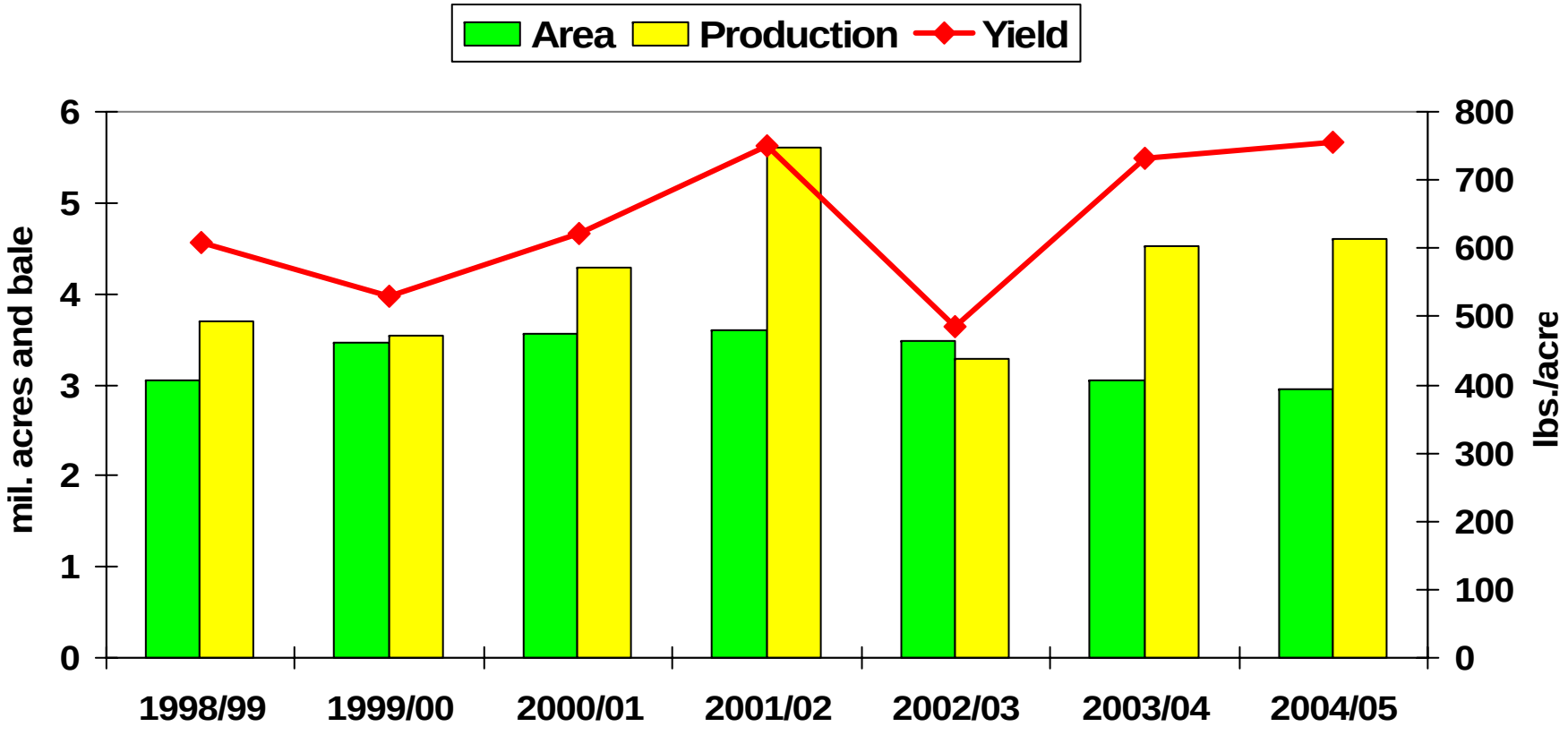


U.S. Cotton Supply-Demand Estimates

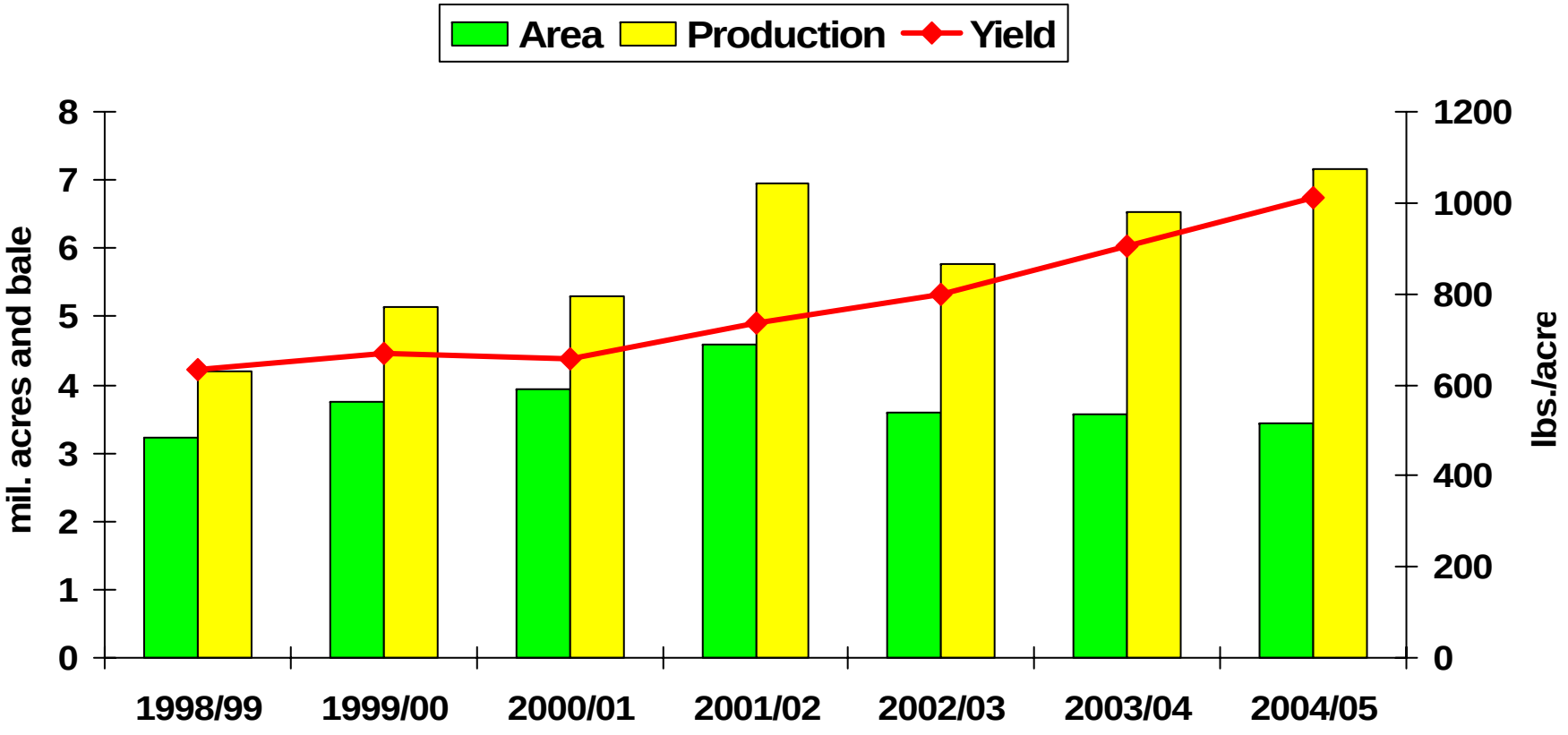
mil. bales

	2002/03	2003/04	2004/05
Beg. Stocks	7.4	5.4	3.5
Production	17.2	18.3	23.0
Imports	0.1	0.0	0.0
Total Supply	24.7	23.7	26.6
Consumption	7.3	6.5	6.3
Exports	11.9	13.8	13.0
Total Use	19.2	20.2	19.3
Ending Stocks	5.4	3.5	7.3

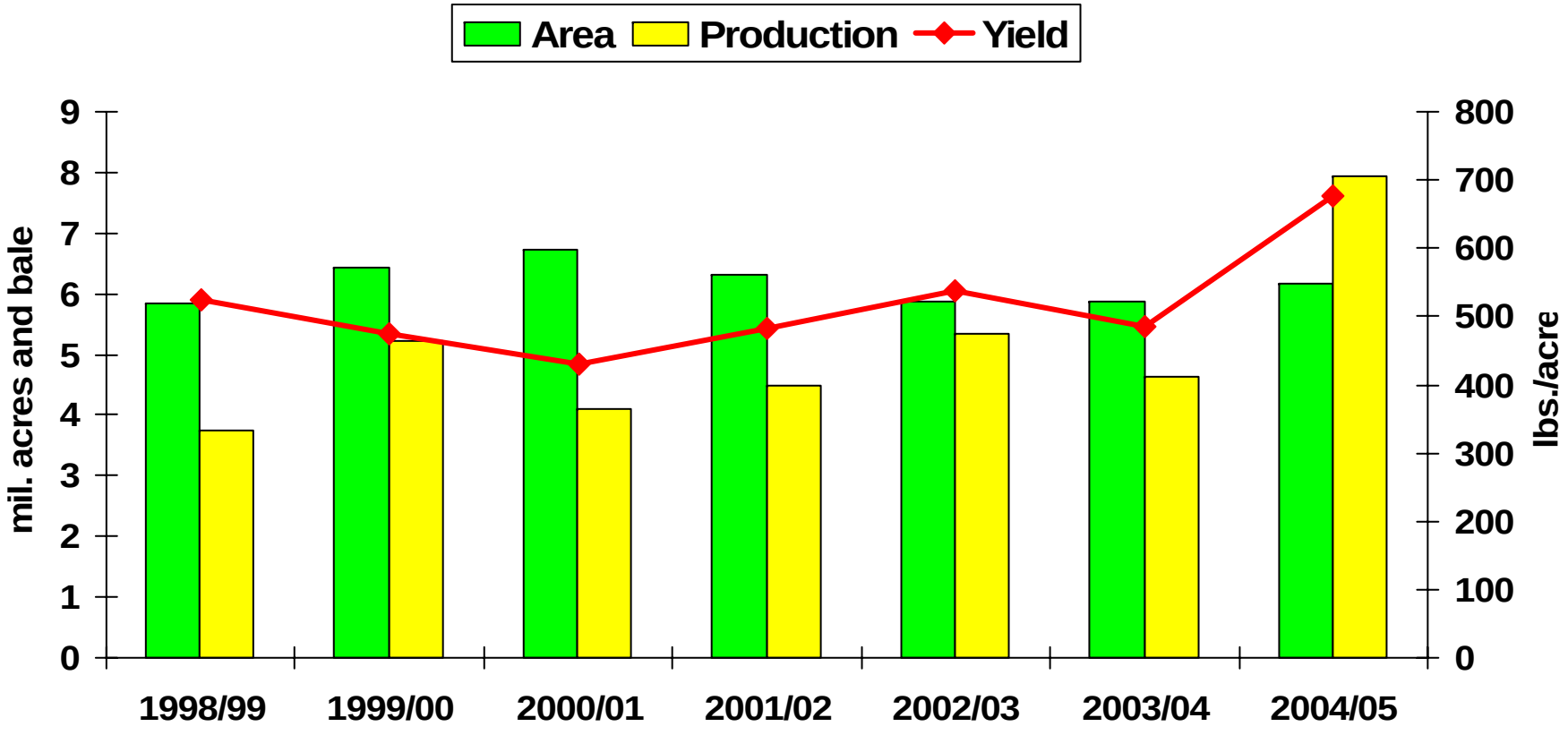
Southeast Region
Upland Cotton Area, Production, and Yield
1998/99 to 2004/05



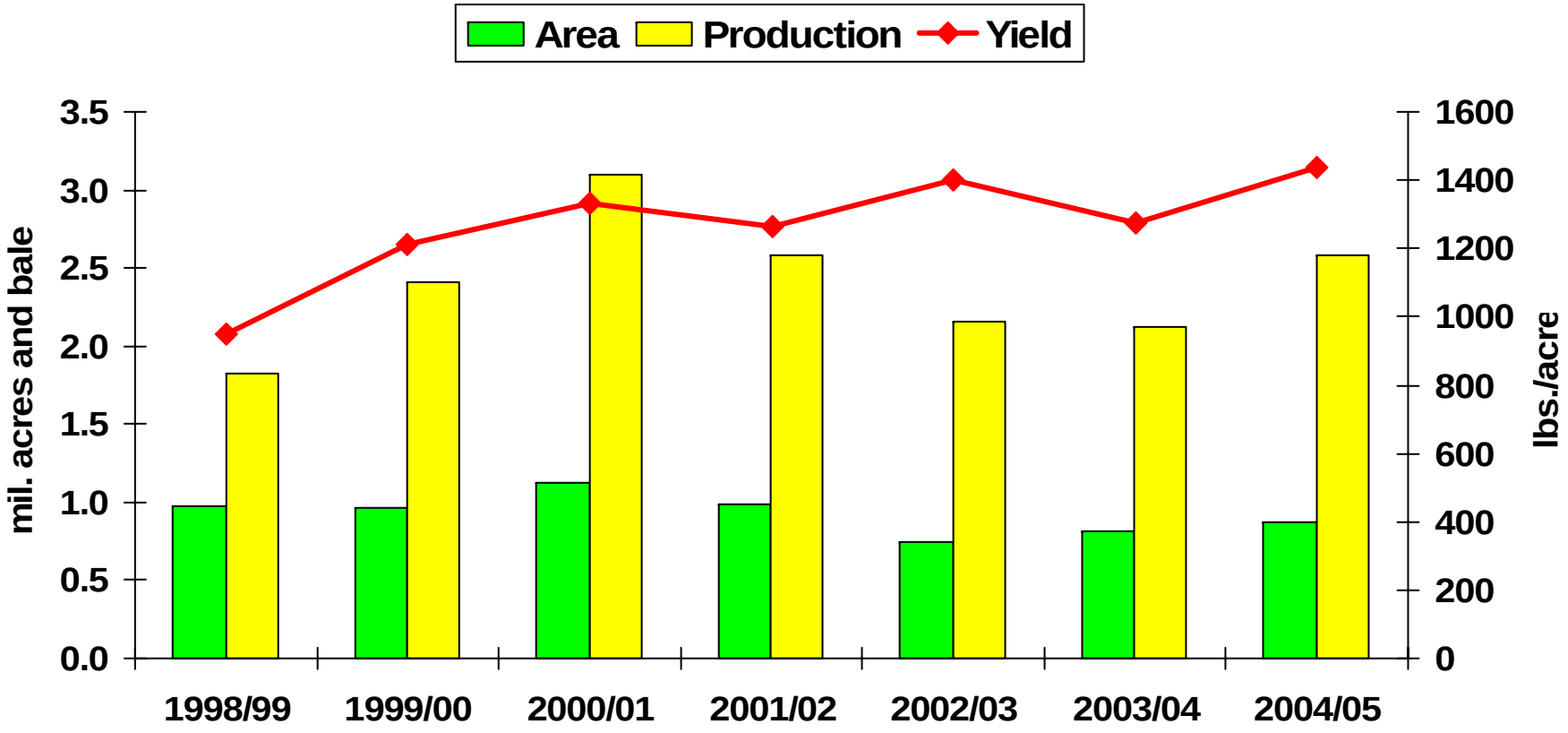
Delta Region
Upland Cotton Area, Production, and Yield
1998/99 to 2004/05



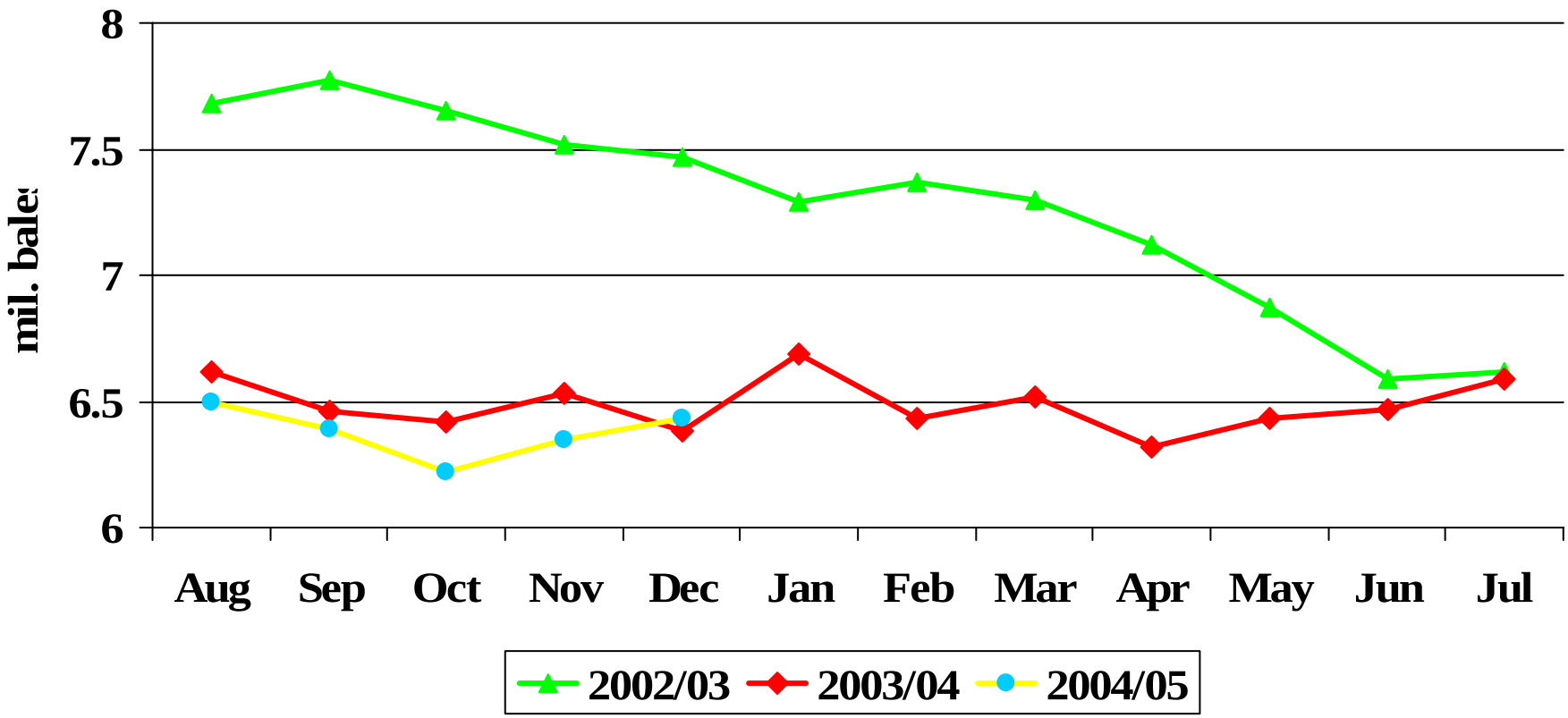
Southwest Region
Upland Cotton Area, Production, and Yield
1998/99 to 2004/05



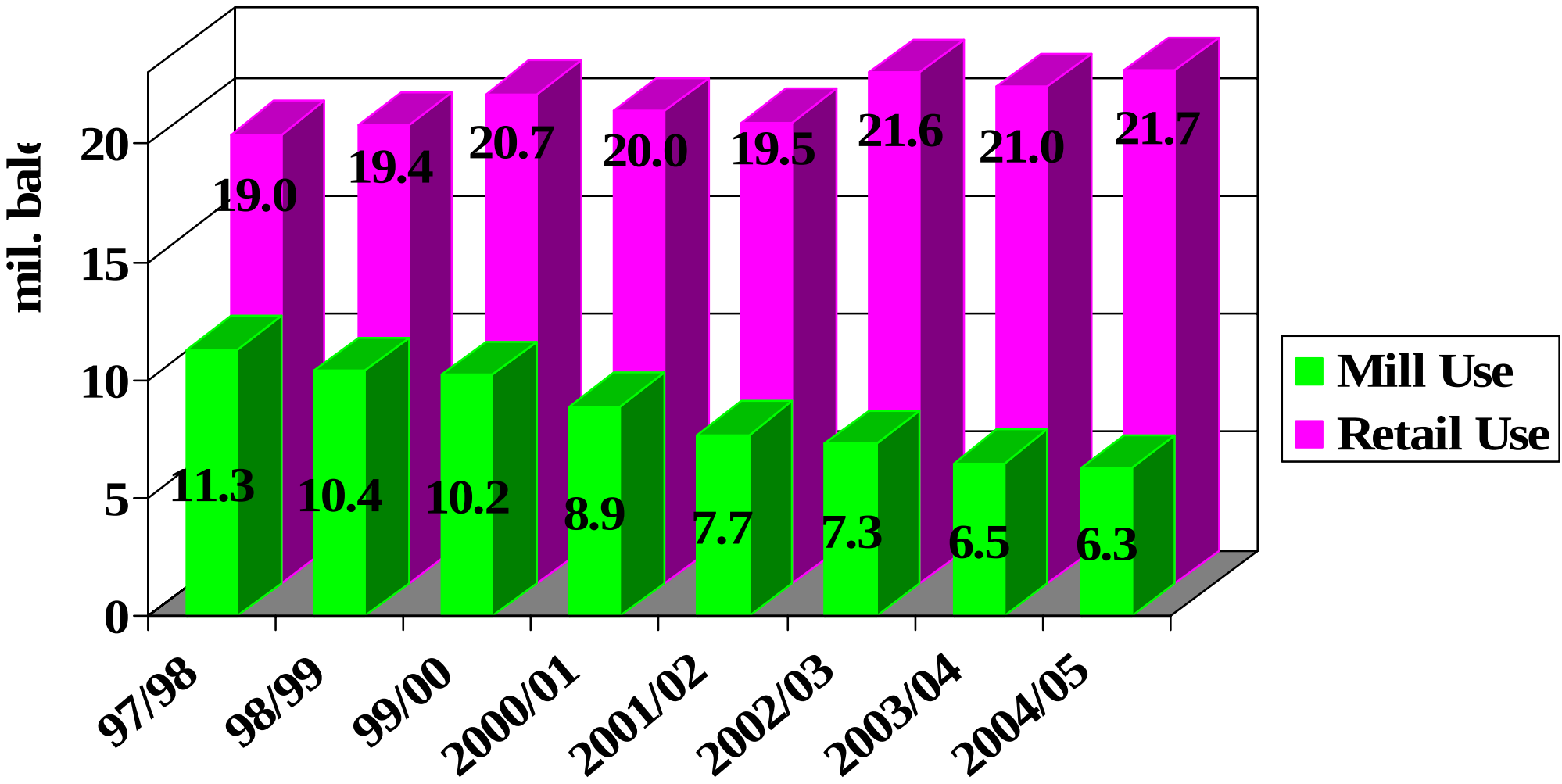
Far West Region
Upland Cotton Area, Production, and Yield
1998/99 to 2004/05



Seasonally Adjusted Annual Mill Use Rates
by month since August 2002

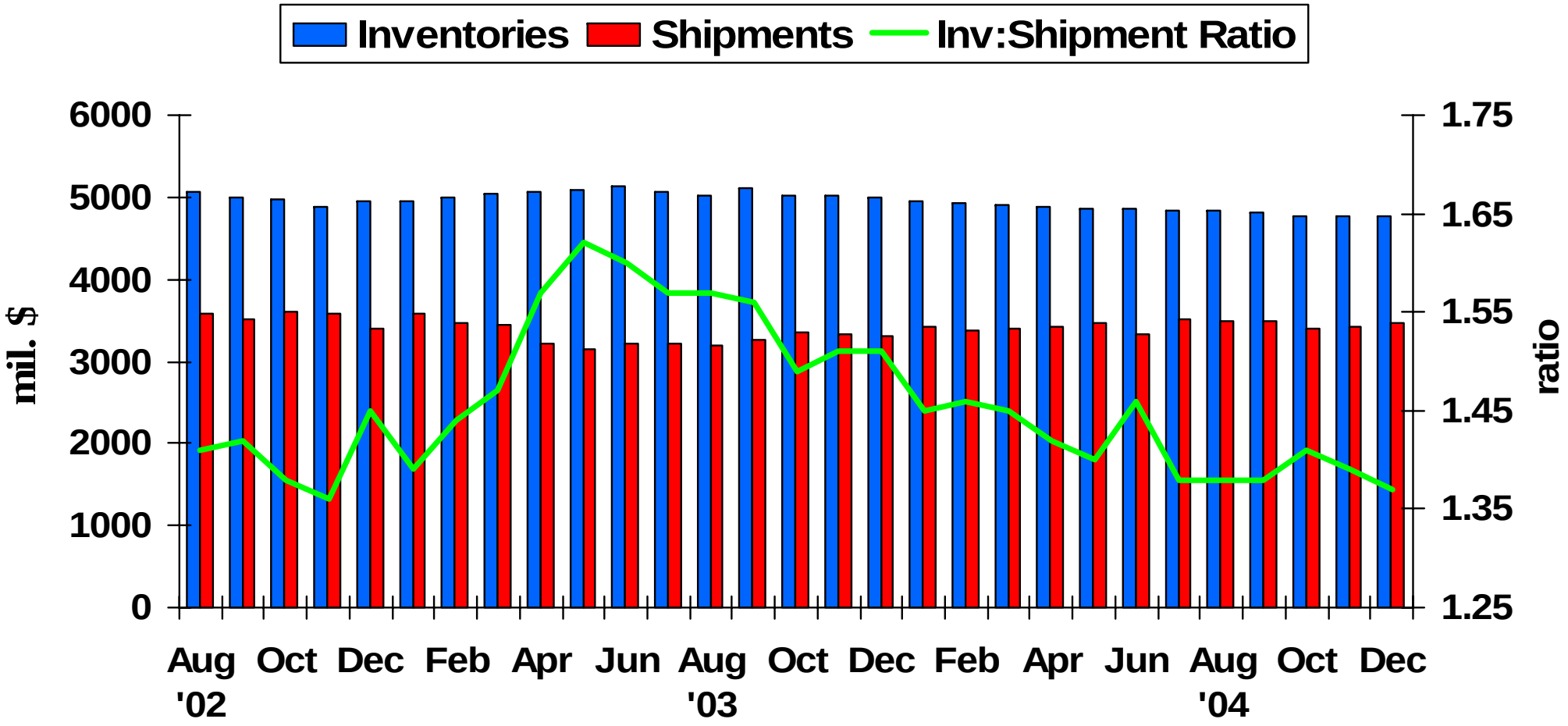


U.S. Retail Consumption and Share of U.S. Mills



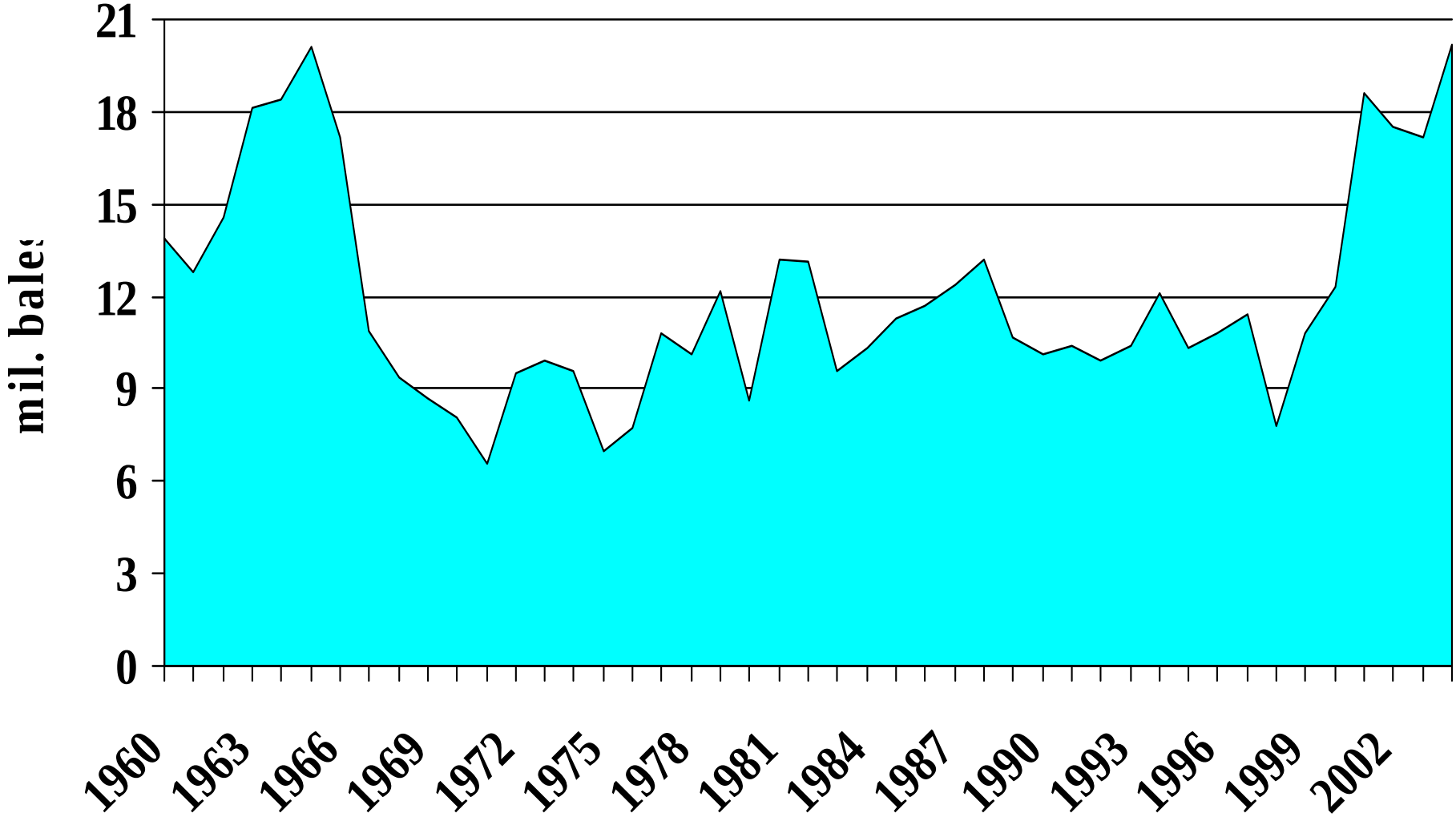
U.S. Textile Mill Inventories and Shipment Values

August 2002 to December 2004

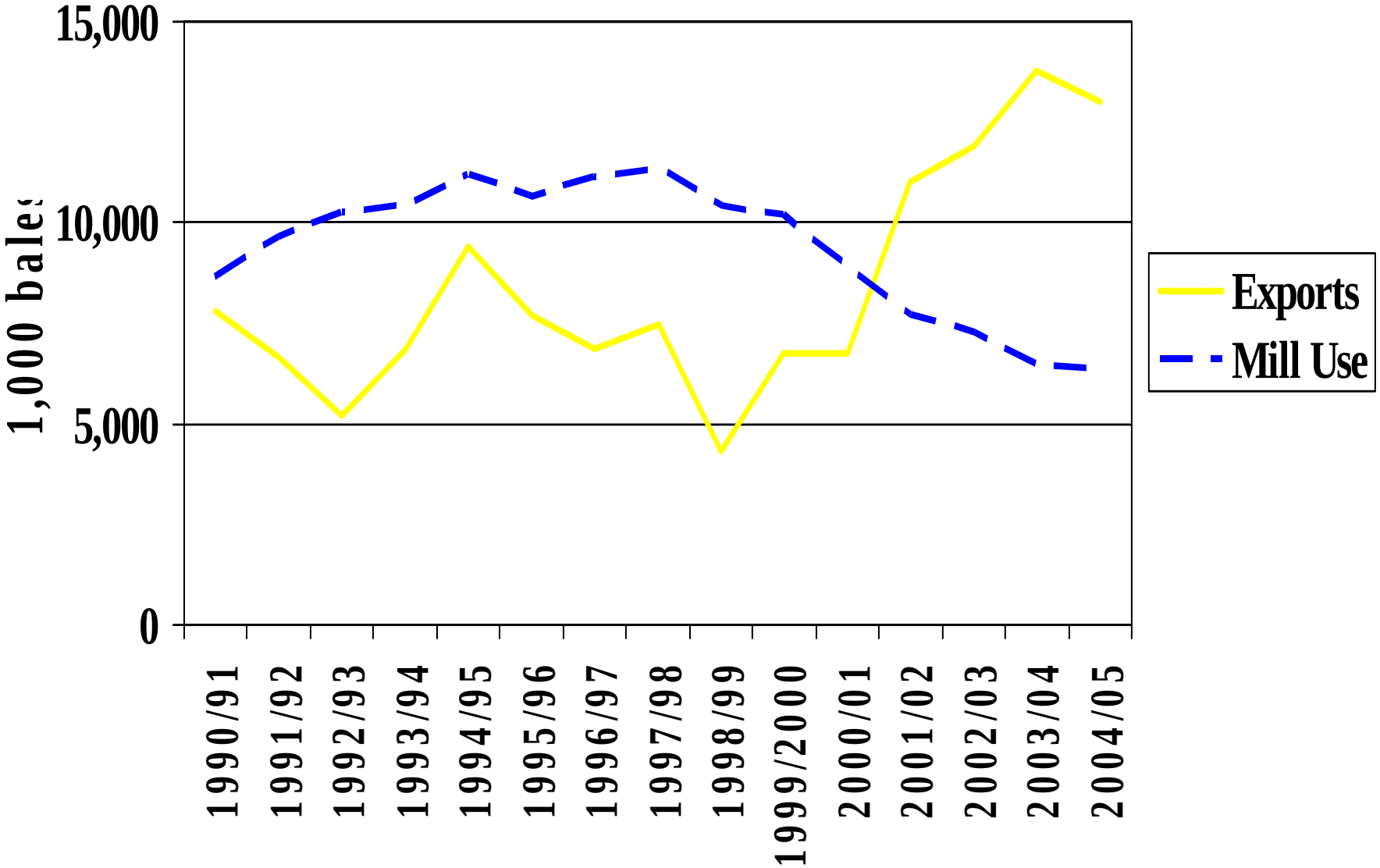


US Exportable Supply During Last 3 Years Highest in over 30 Years

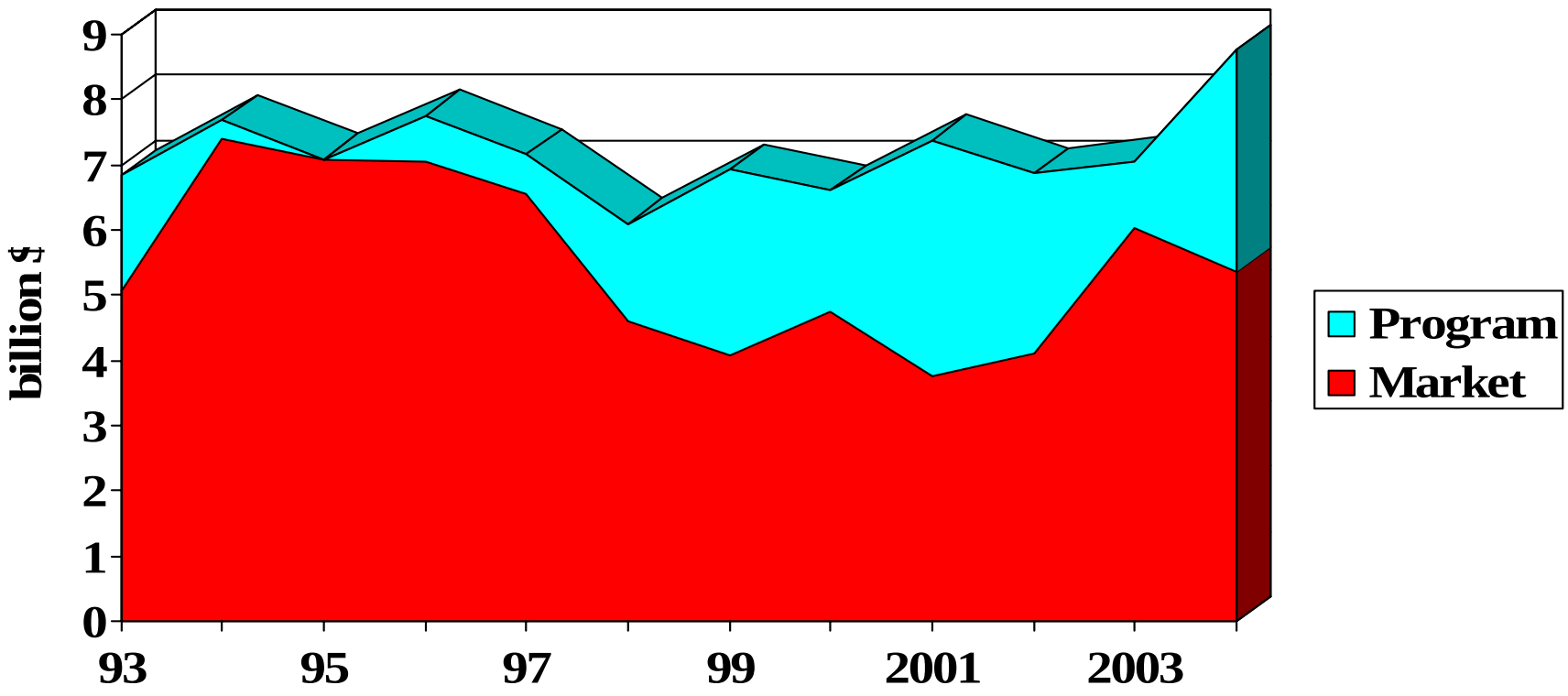
(exportable supply = total supply - mill use)



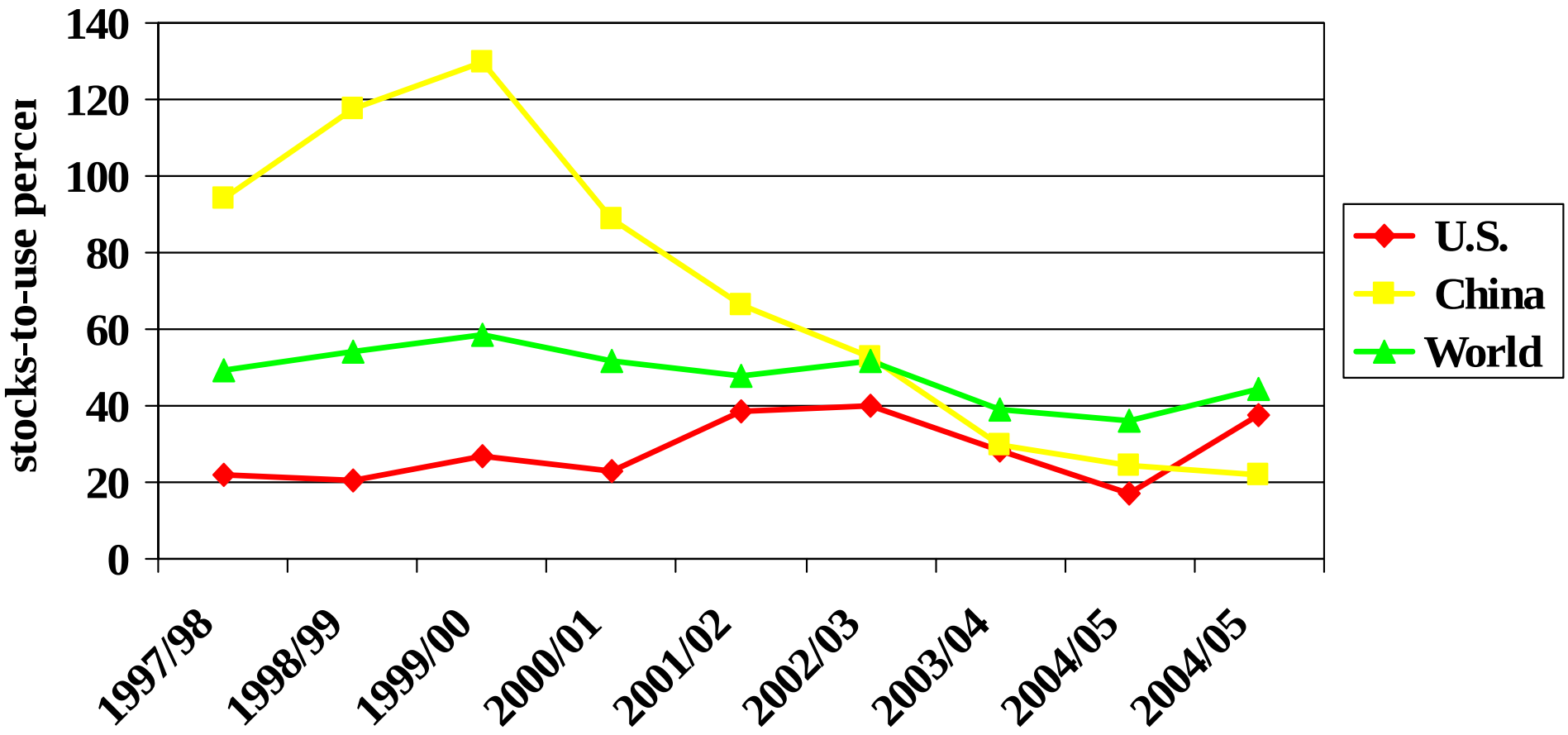
U.S. More Dependent on Exports



Gross Cotton Farm Income
1993/94 through 2004/05 est.



U.S., China, and World S/U Ratios
1997/98 to 2004/05

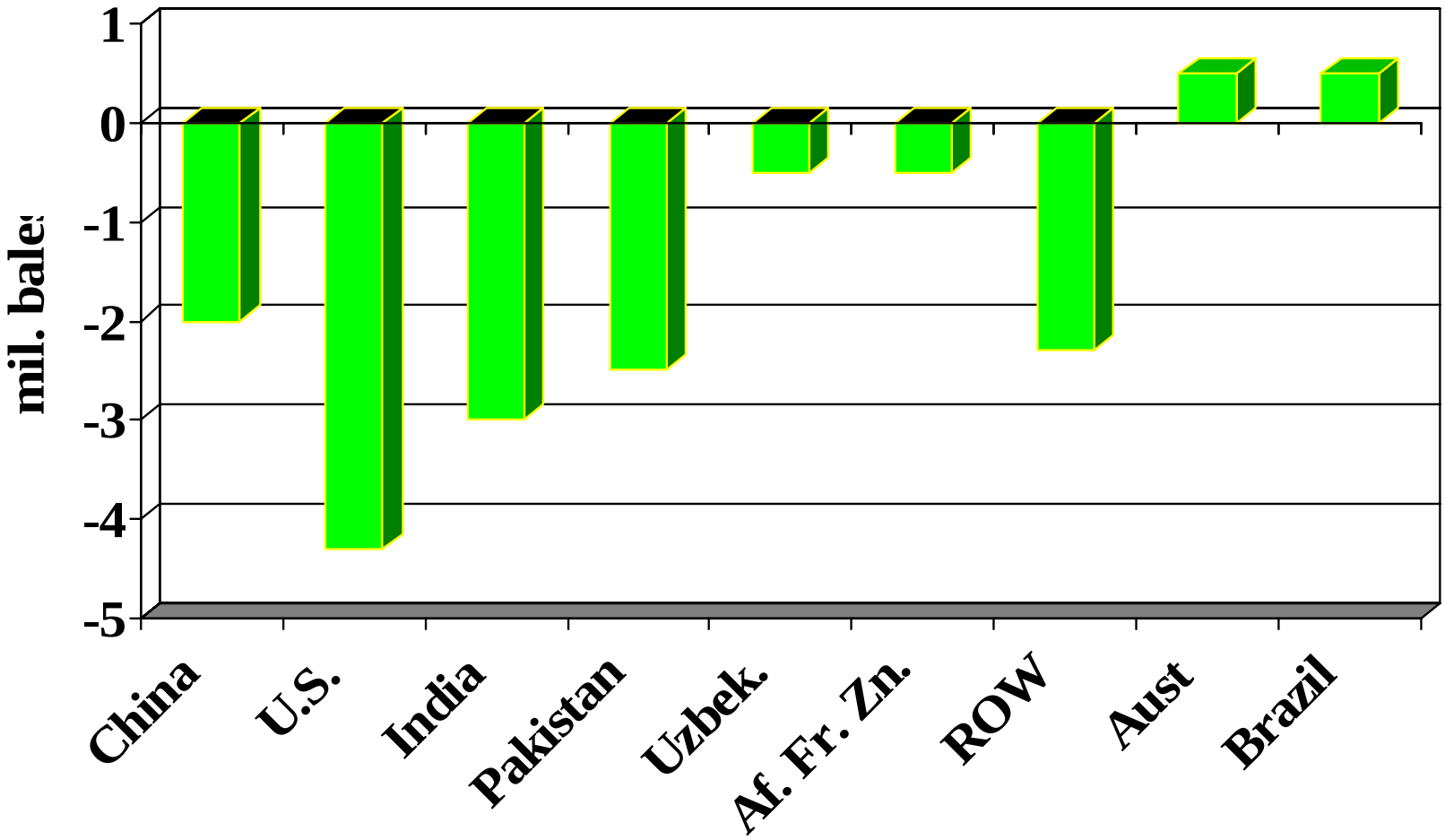


World Cotton Balance Sheet

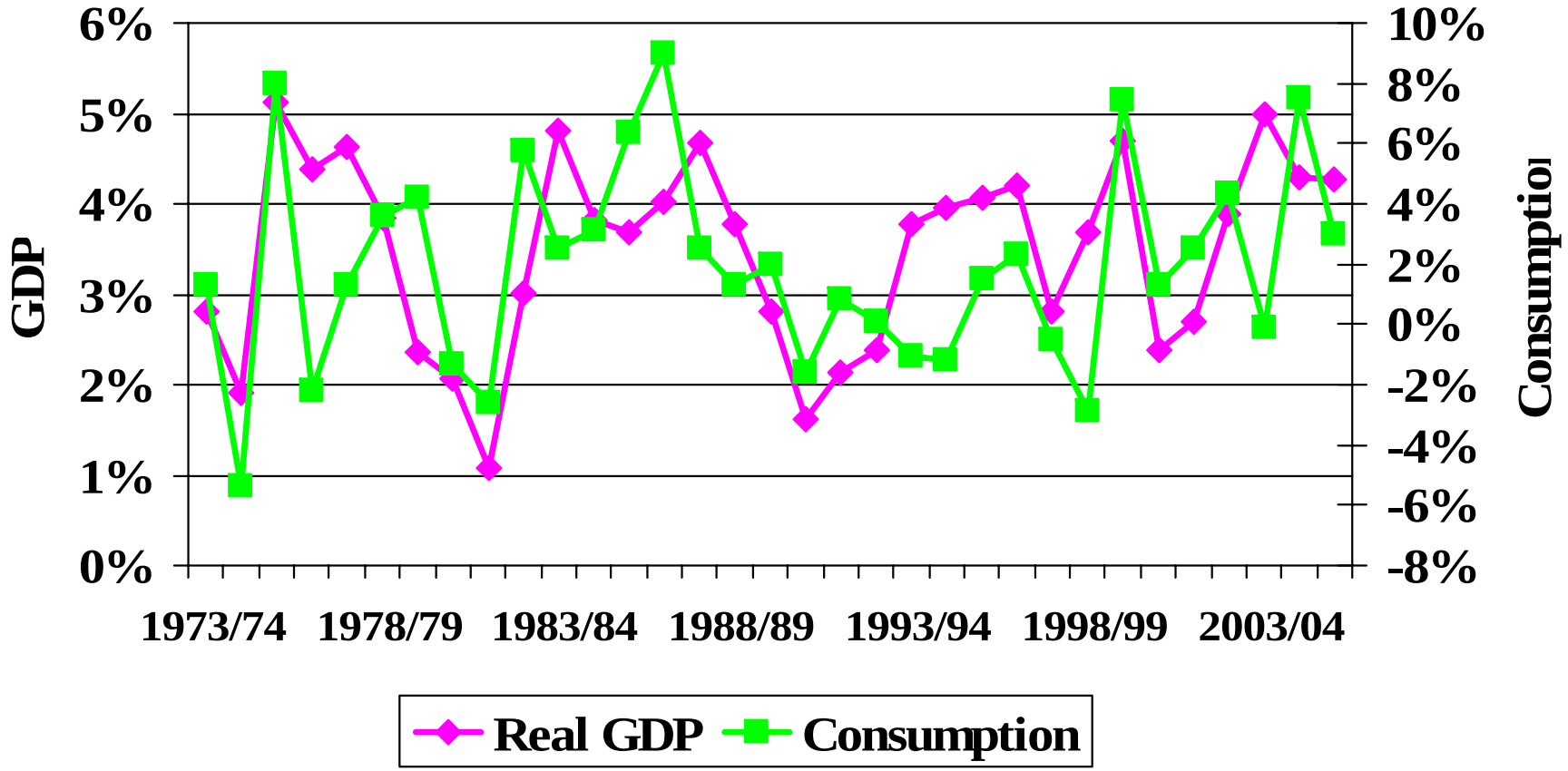
(mil. bales)

	2004/05	2005/06
Beg. Stocks	35.5	46.7
Production	116.7	103.0
Imports	33.6	38.3
Total Supply	183.8	188.0
Consumption	105.8	109.0
Exports	33.3	38.0
Total Use	139.1	147.0
Ending Stocks	46.7	41.0

Forecast Changes in World Production, 2005/06 vs. 04/05



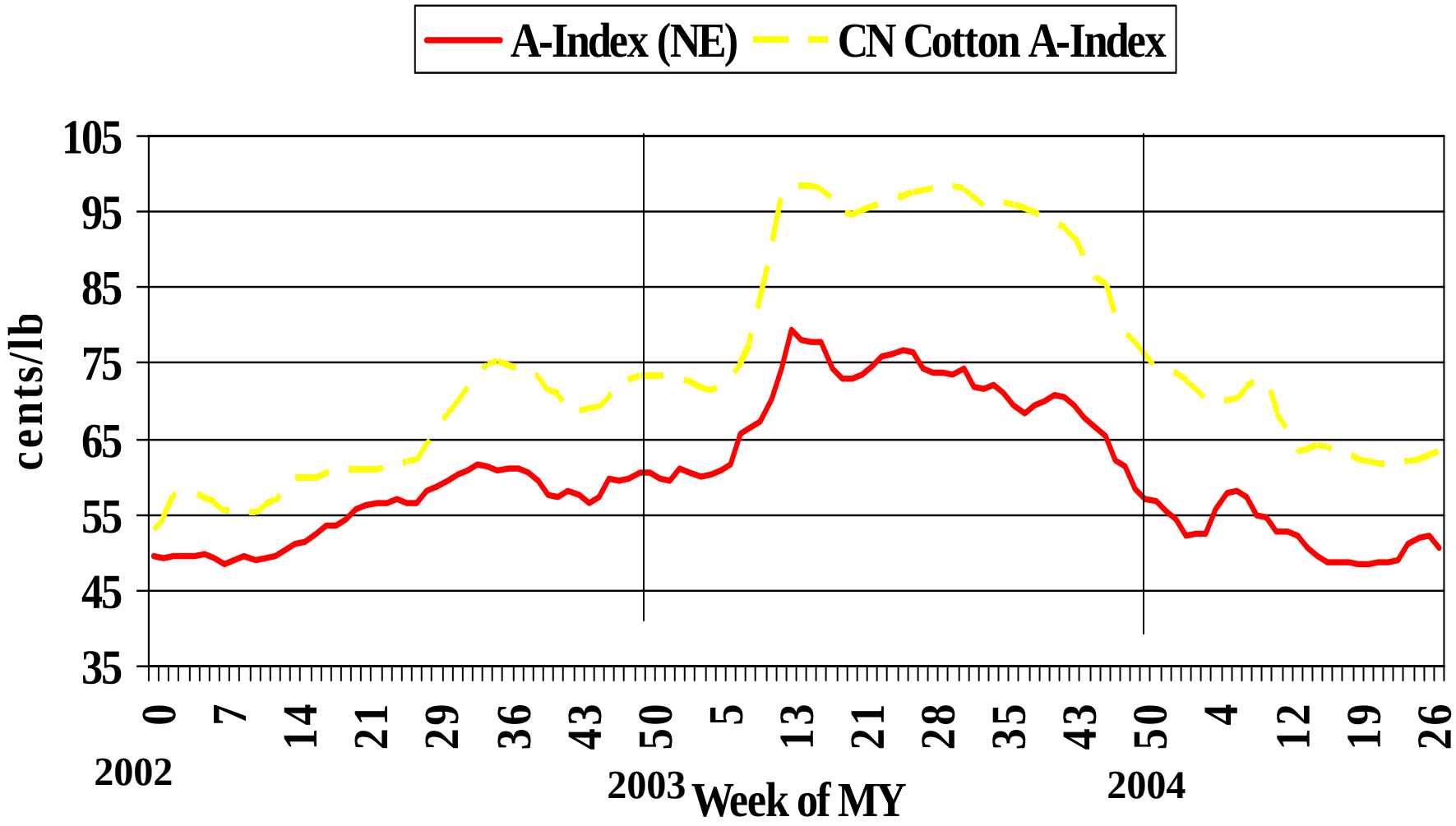
2005/06 World Consumption Growth Slows



China Cotton Balance Sheet

	2004/05	2005/06
Beg. Stocks	7.8	8.2
Production	29.0	27.0
Imports	9.0	14.5
Total Supply	45.8	49.7
Consumption	37.5	41.0
Exports	0.2	0.2
Total Use	37.7	41.2
Ending Stocks	8.2	8.5

A-Index and China Cotton-A Index

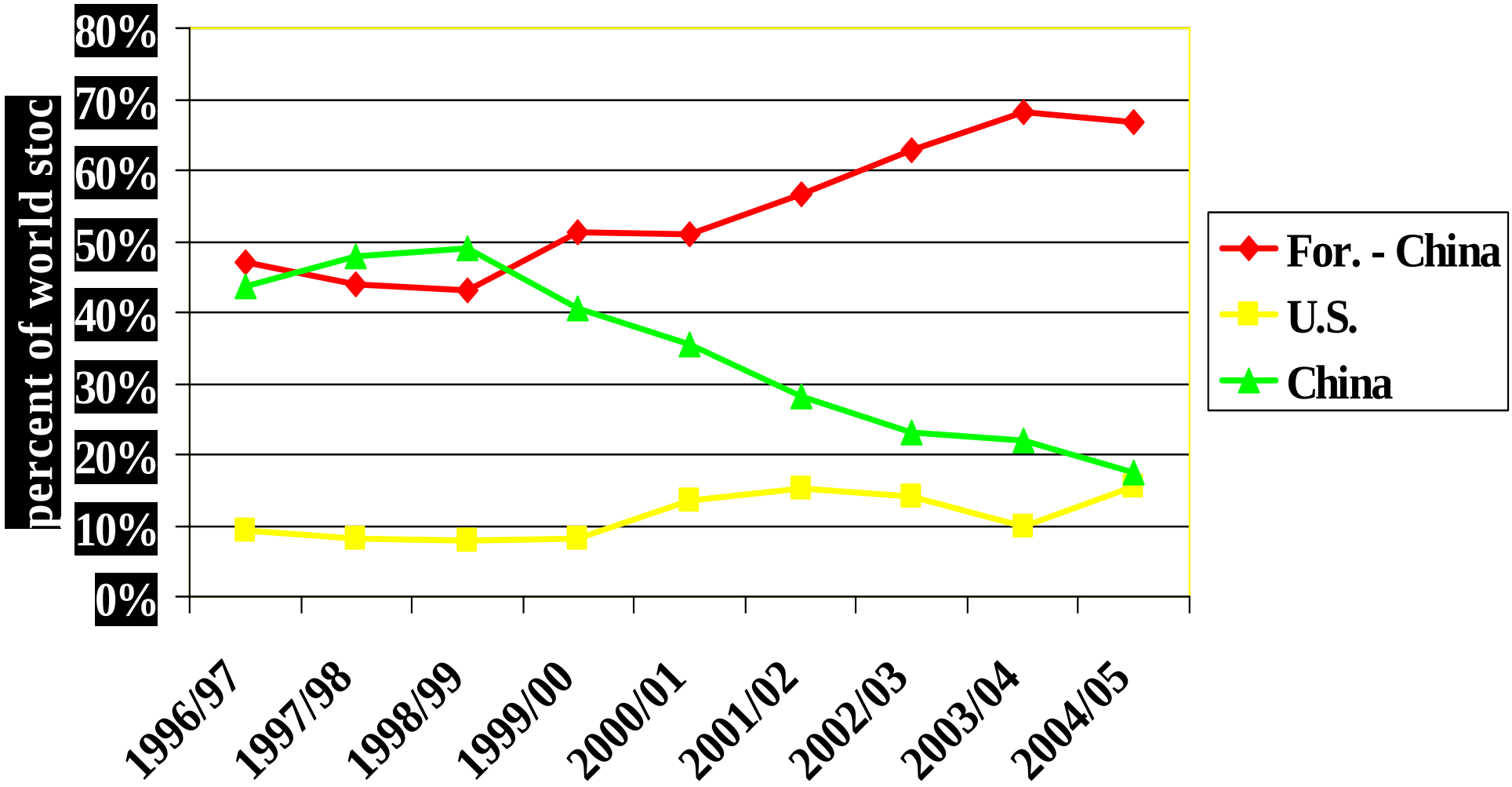


U.S. Cotton Supply-Demand Estimates

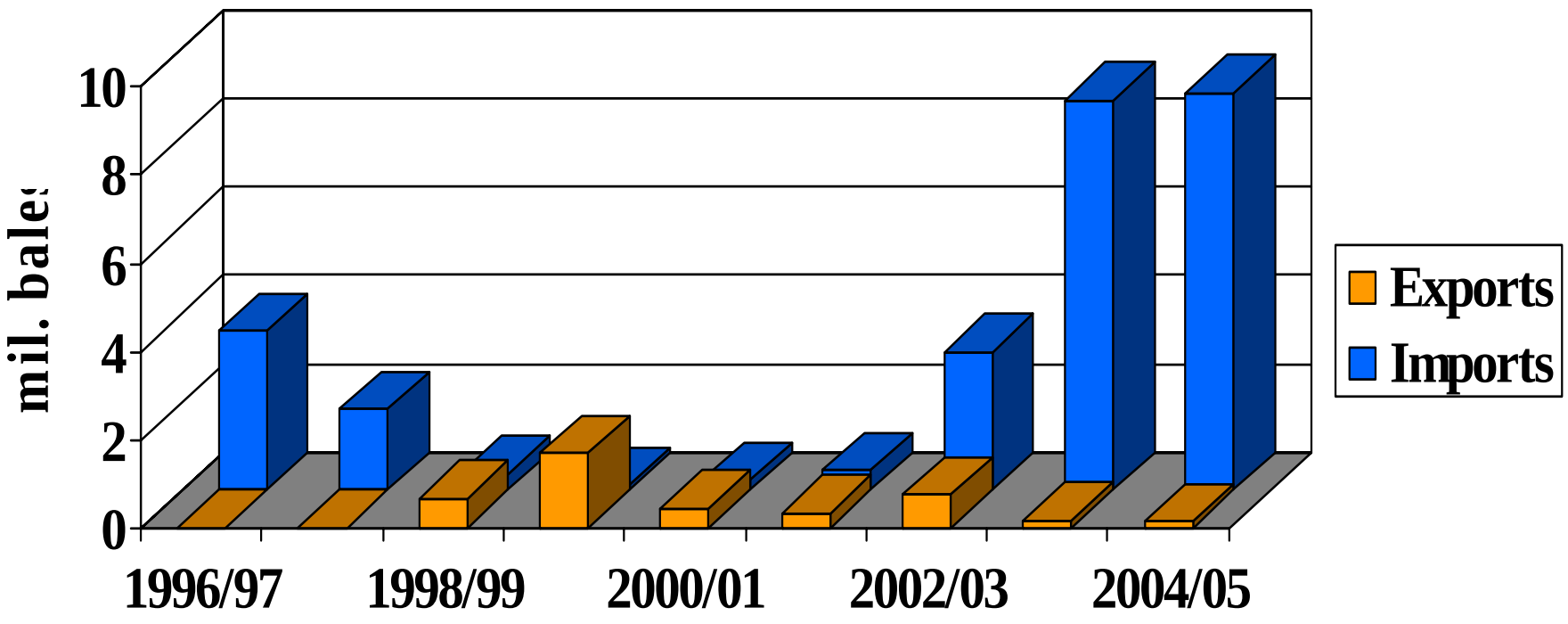
mil. bales

	2004/05	2005/06
Beg. Stocks	3.5	7.3
Production	23.0	18.7
Imports	0.0	0.0
Total Supply	26.6	26.1
Consumption	6.3	6.0
Exports	13.0	14.0
Total Use	19.3	20.0
Ending Stocks	7.3	6.1

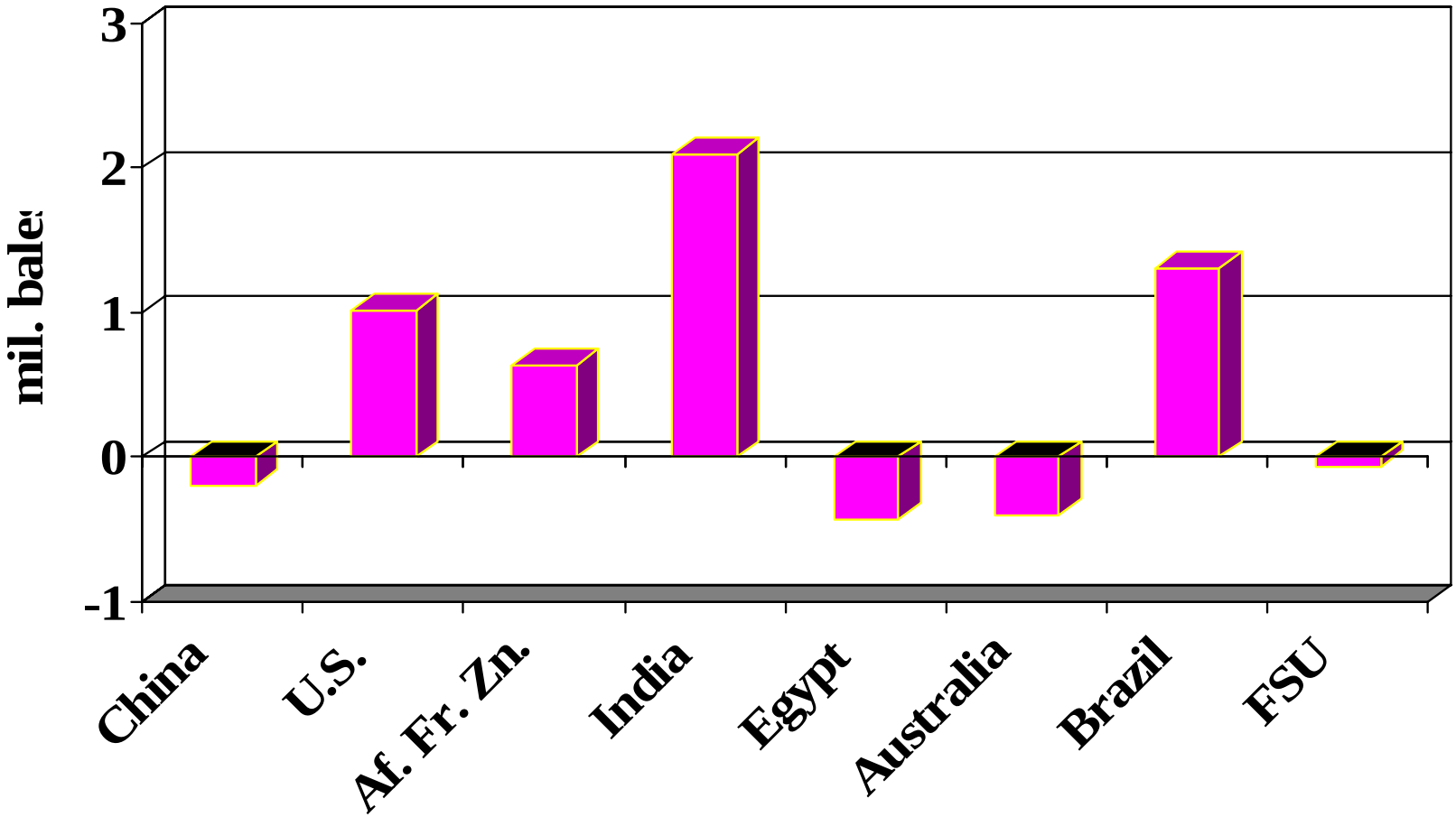
U.S. and China Share of World Stocks
1996/97 to 2004/05



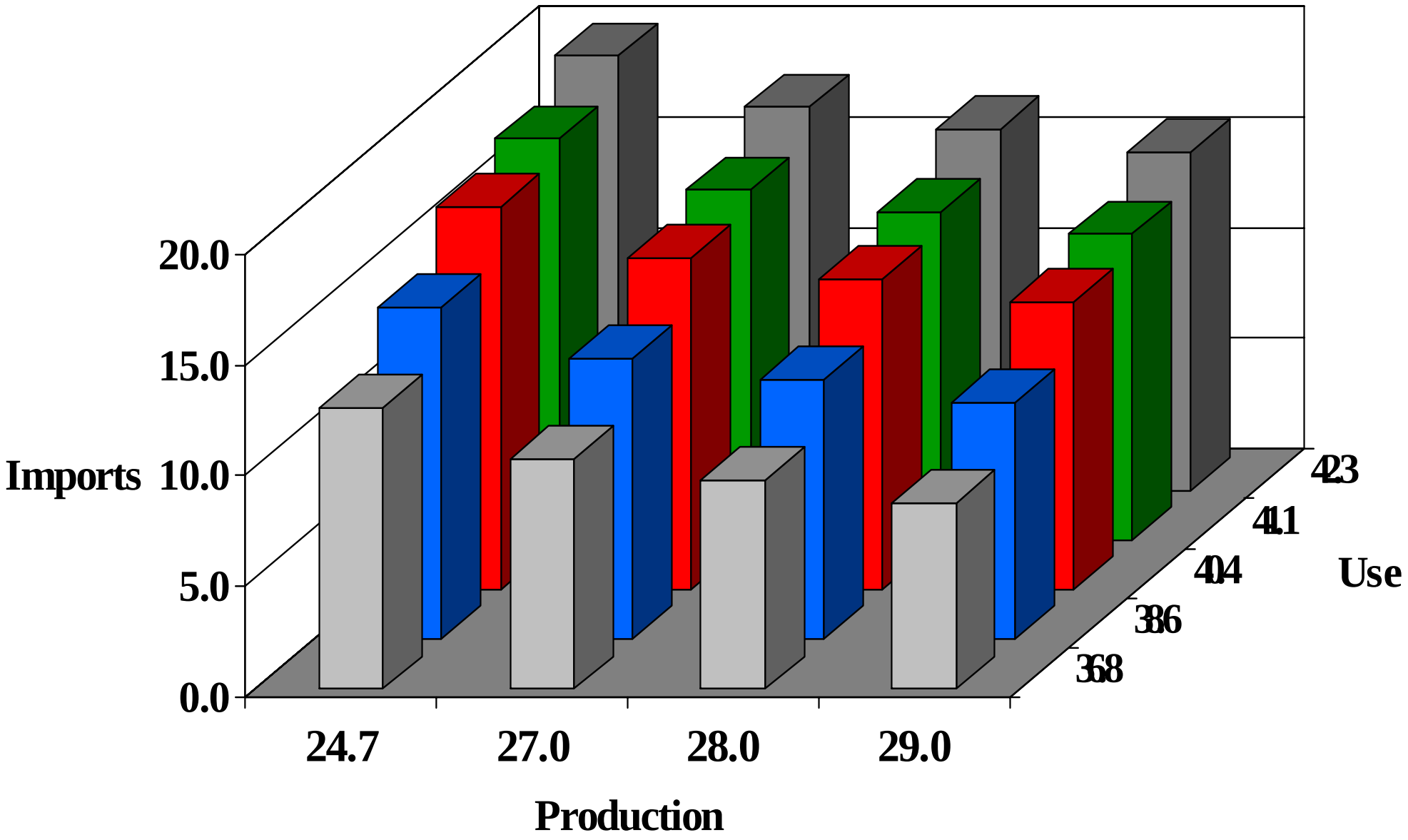
China's Import and Export Projections through 2004/05



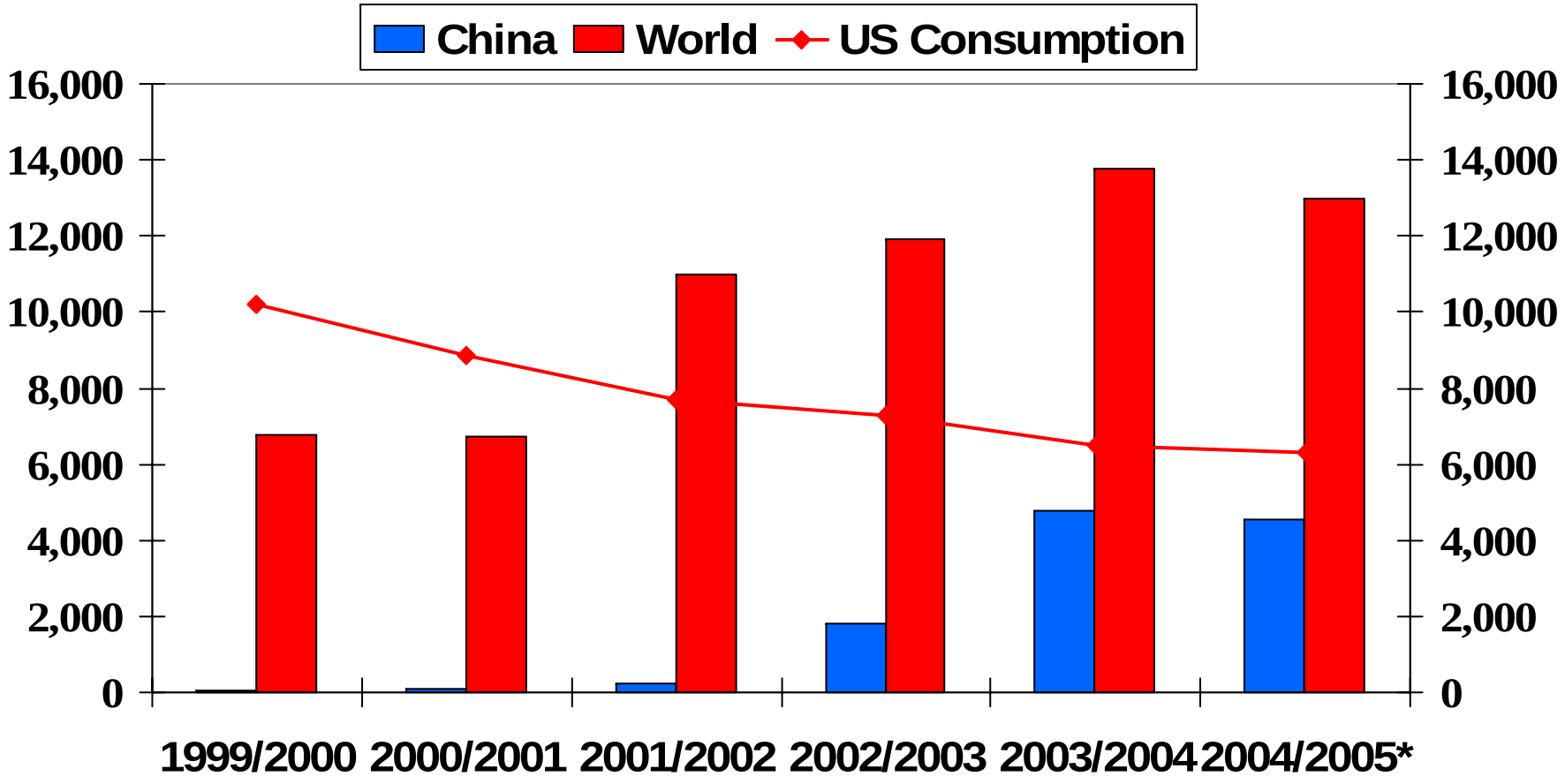
Projected Changes in World Production, 2003/04 vs. 02/03

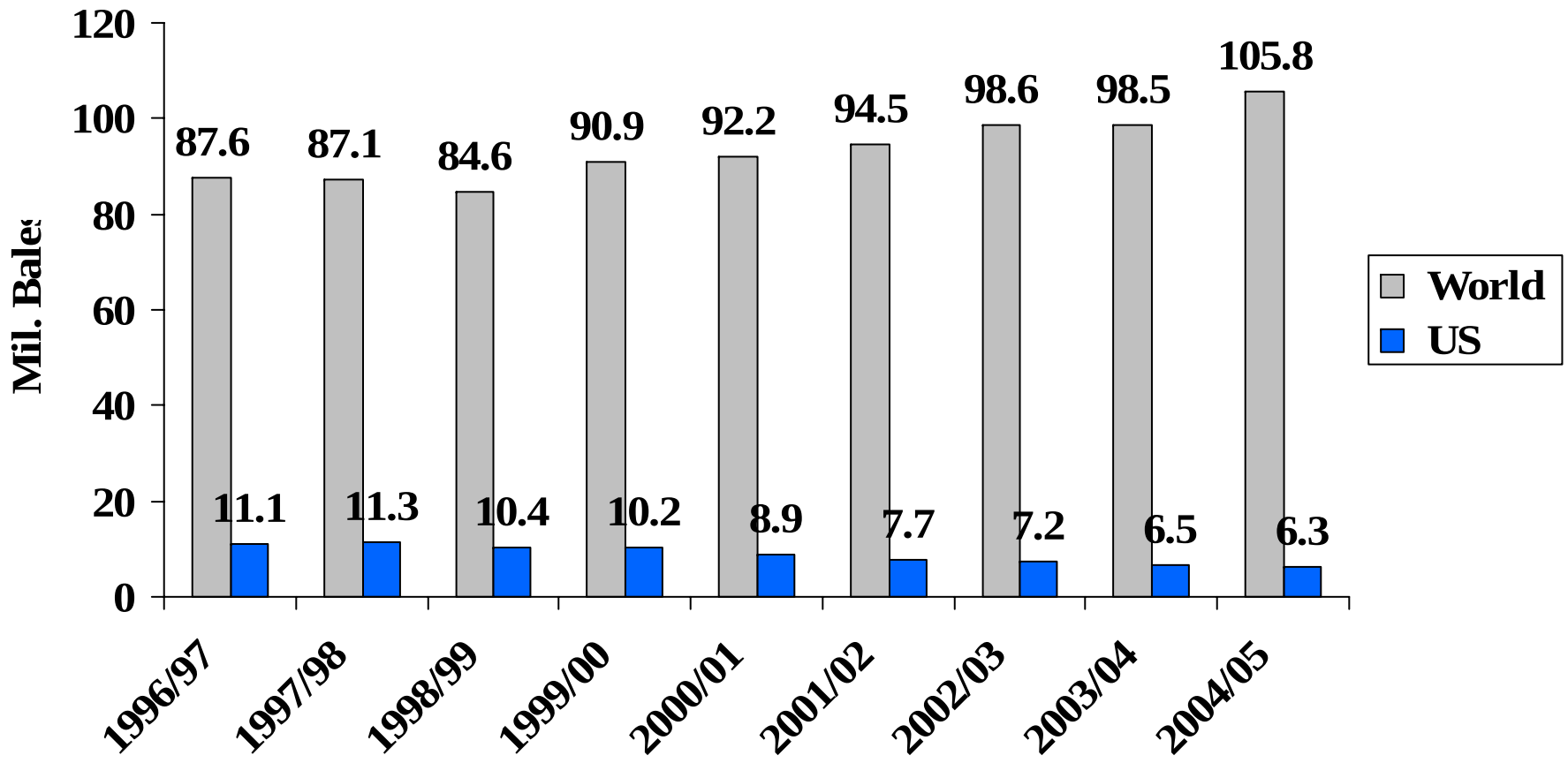


China Imports in 2005/06



U.S. More Dependant on Exports and Particularly Exports to China



Based on 2003/04 Market Share in China

World and U.S. Consumption, 1996/97 thru 2004/05