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Agricultural Outlook Forum

Presented: February 17, 2006

**SPECIAL TECHNICAL SESSION: THE CHALLENGES OF ESTIMATING
CHINA'S COTTON CONSUMPTION**

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The Difficulties Estimating China's Cotton Consumption

Ladies and Gentleman,

First, please let me give my sincere thanks to the invitation and assistance from Mr. Gerald Bange, Ms. Carol Skelly, and Mr. Francis Tuan, for giving me the opportunity to discuss with you today at the Agricultural Outlook Conference the problems of estimating China's cotton consumption.

First, I would like to give you a brief introduction of the current situation and development of the Chinese cotton textile industry. After many years of rapid growth, particularly since the Reform and Opening period, the Chinese cotton textile industry has already developed into a very large scale industrial sector. China's cotton textile industry now holds a very important position in our national textile industry and in the world cotton textile market.

In China, the cotton textile industry processes over 50% of the total volume of all fibers processed, producing a great number of quality yarns and fabrics for downstream processing industries, such as the knitting, dyeing and finishing, home textiles and apparel industries. In 2004, China's exports of cotton textiles and apparel reached US\$31.226 billion, 32 percent of China's total textile and apparel exports.

The development of the cotton textile and knitting industries is closely interlinked with conditions in agriculture, rural areas, and for rural residents, particularly with respect to rural employment opportunities. At present, total employment in the large-scale cotton textile enterprises is estimated at 2.512 million, 26.5 percent of total employment in China's textile industry, providing a great number of jobs for both urban and rural residents. Of the total employment in the cotton textile industry, approximately 70 percent of the jobs are located in the countryside. Meanwhile, the cotton textile sector is an important consumer of China's agricultural output, utilizing roughly 6 million tons of domestically produced cotton every year and providing important economic opportunities for more than 100 million cotton growers.

Since 2000, spurred by strong domestic and foreign demand, China's yarn production has increased rapidly, rising from 6.6 million tons in 2000 to 12.91 million tons in 2004 (according to the Economic Census), for an average output increase of 14.5 percent per year. Cloth production increased

from 27 billion meters in 2000 to 42 billion meters in 2004, an average rate of increase of 11 percent per year. China is now the world's largest producer of both yarn and cloth. The latest estimate from the National Bureau of Statistics (NBS) of yarn production by large-scale mills in 2005 is more than 14 million tons. (See graph 1).

With growing domestic and international demand, China's exports of cotton textiles and apparel have been growing at an average annual growth rate of 23.3 percent between 2000 and 2004. (See graph 2 and table 1).

One of the most important reasons China has seen such rapid growth in production and export of cotton textile and apparel products is the upgrading and renovation of machinery and equipment that has taken place in the cotton textile industry since 2000. There has been a total investment of RMB 97.84 billion in China's textile industry between 2001 and 2004, of which just under one-half or US\$ 5.556 billion were spent on advanced cotton textile machines and equipment—35.6 percent of the total import value of the textile industry.

Due to the improved technology of the machinery in China's textile mills, the share of combed yarn, knot-free yarn and shuttle-free looms in the total yarn product output mix has increased, rising to 23.8 percent, 55 percent, and 50 percent, respectively. The improved product quality has also sharpened the competitiveness of China's products in international markets.

China has become a large net cotton importer because of the rapid development of its textile industry. Also, the cost of cotton now accounts for approximately 70 percent of the total production costs of the cotton textile industry. I would now like to introduce several factors that deeply influence China's cotton consumption.

1. Where do China's yarn production statistics come from?

There are thousands of cotton textile companies in China. These companies are divided into state-owned companies, privately-run companies, and foreign-invested companies. The cotton textile companies are also divided into large-scale and small-scale companies, with large-scale companies defined as those with an annual sales turnover of over RMB 5 million. In the practice, different type of companies of put different emphasis on data reporting.

NBS adds and releases the data reported from provinces. The monthly yarn production data we see is about the large-scale companies. Because of some occasional problems, such as forgetting, mistaking, the amount of companies reporting data often changes.

Recent years, NBS's end-of-season adjustments adding to total yarn production have been very large. I personally do not think they should have been so large. For instance, it may be that as small-scale companies can become large-scale companies in a short period of time, these estimated adjustments may double count production by such companies. Of course, there are many other factors, which can influence the adjustments, such as different investment cycle.

2. Detailed Statistic

The detailed statistics about main kinds of yarn production, pure cotton yarn, blend yarn and MMF yarn are released just once a year in NBS's Statistical Yearbook. But in fact, companies are always changing their products to respond to market demand, within the confines of their current equipment and technology. So I think it would be much better for estimating cotton consumption if the detailed statistics can be made available monthly.

3. Cotton used to produce one ton of cotton yarn

Two of key factors in determining China's cotton consumption are the amount of cotton used to produce one metric ton of yarn and cotton share (the amount of cotton fiber relative to the total fiber consumed by China's textile industry). First, with respect to the amount of cotton needed to spin one ton of yarn, there are several different data with the scope of between 1.06 to 1.08, which means 1.06 or 1.08 tons of cotton to produce one ton of yarn.

However, with the recent improvement in cotton mill machinery, equipment and management, the cotton used to produce one ton of cotton yarn may be lower. In addition, changes in the yarn product can also have a significant impact on this factor.

In China's case, the emphasis on increasing production of higher quality combed yarns in the last few years seems to see more cotton used. As is well known, a very small change in the amount of cotton used to produce one ton of cotton yarn can result in a significant change in cotton consumption.

4. Cotton Share

Cotton share is the other key factor in determining cotton consumption. I have examined a variety of detailed yarn statistics, such as output of pure cotton yarn, blended yarn, and MMF yarn, and using certain factors to estimate the cotton fiber use within total yarn production. In general in China, the key government agencies and textile trade associations generally accept that the cotton share fluctuates in the range of 63-66 percent.

In examining cotton share, it would also be useful to know what proportion of China's cotton spinning output goes into products destined for domestic use relative to the export market. However, there have not been any rigorous studies of this question in China.

In my opinion, man-made fiber products are distinctly promoted in the areas of home textiles and apparel in recent years, to the detriment of cotton consumption. But I also find that people are buying more cotton clothes and home textiles, which could boost cotton share. The domestic sales of cotton products could be a good indicator of cotton share in China. However, at the current time, we don't have a good handle on Chinese consumer cotton apparel awareness or consumption patterns.

5. Cotton waste

Is cotton waste reused during the spinning process or incorporated into viscose chips? Up until now, no reliable research has answered this question.

6. Non-mill use of cotton

Currently, there are two different opinions with respect to China's annual non-mill use of cotton, such as medical and wadding. One camp estimates that annual non-mill use is 200,000 tons, while another camp

estimates non-mill use at 400,000 tons. Which one is correct? Is either of them correct? Again, no reliable research that I am aware of has really examined the issue of non-mill use of cotton.

Conclusion

As I have described above, estimating China's cotton consumption is a very complicated task. Although it is certainly possible to come with a "story" and an accompanying estimate, I am afraid that it will not be possible to accurately determine China's cotton fiber consumption until a cotton industry statistics system is established. IS ONE OF THESE BEING SET UP? IF NO ONE IS SETTING UP SUCH A SYSTEM, WHY DO YOU THINK IT IS NOT?



The Difficulties on Estimating China Cotton Consumption

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Feb. , 2006

Present Situation of Development in Chinese Cotton Textile Industry

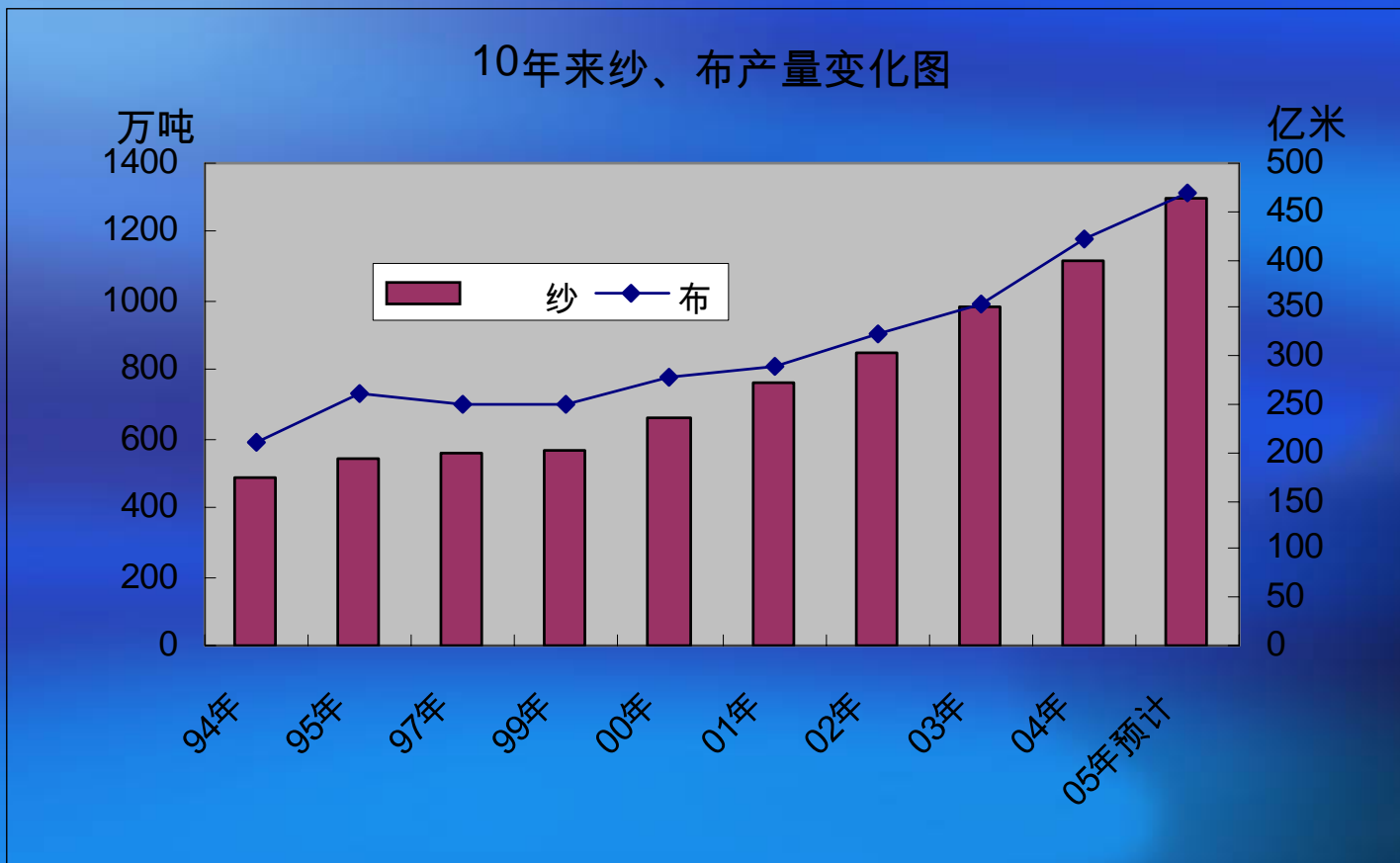
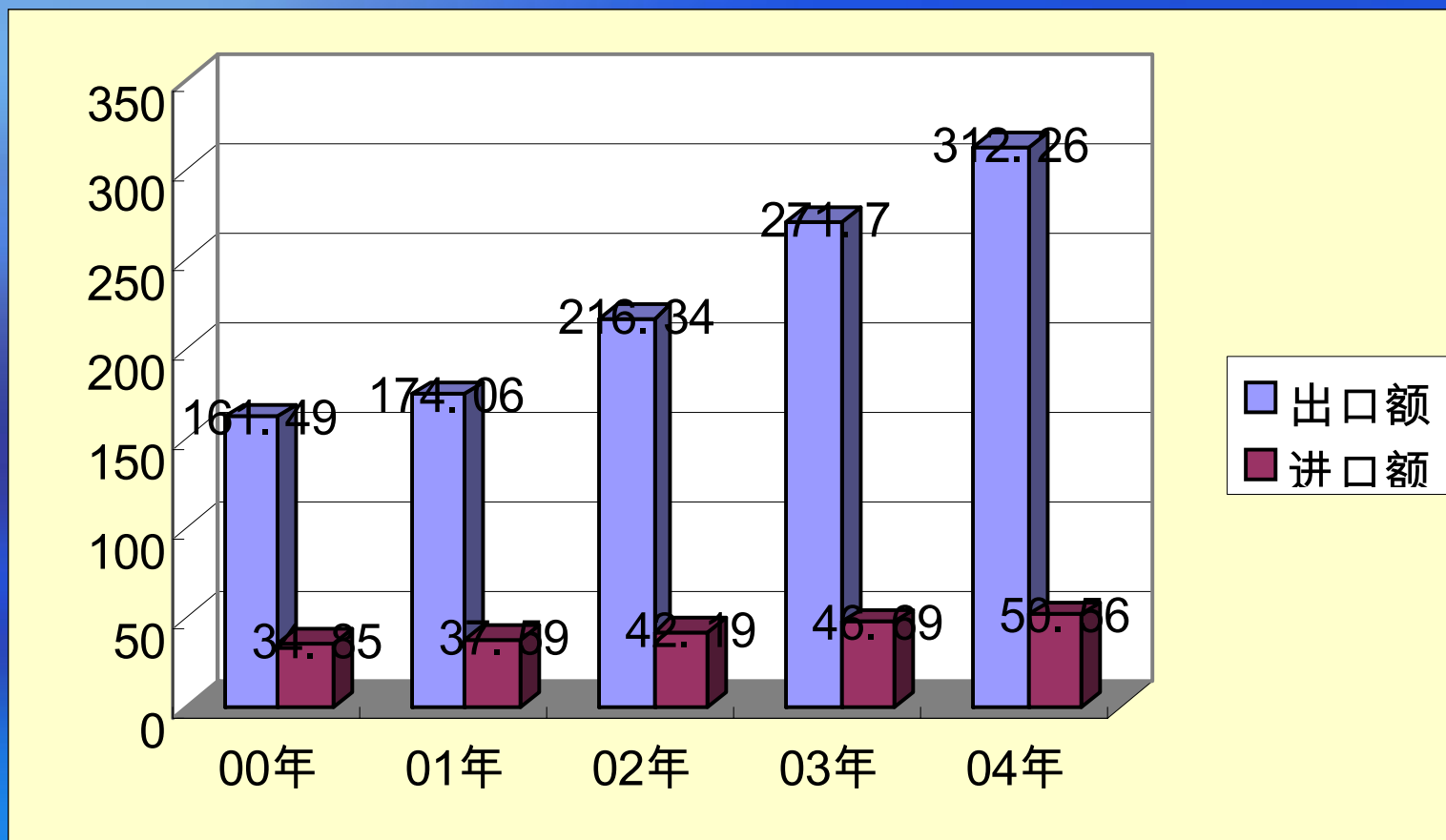


Table 1 Import and Export of Cotton Yarn and Fabric

Year	Export		Import	
	Cotton Yarn (thousand metric tons)	cotton cloth (100 million meters)	Cotton Yarn (thousand metric tons)	cotton cloth (100 million meters)
2000	210.1	29.69	460.8	14.89
2001	245.5	30.6	533.5	14.37
2002	388.4	41.46	613.8	15.12
2003	504.2	50.35	711.6	15.4
2004	431.2	47.92	714.7	16.04

Graph 2 Import and Export of Cotton Yarn and Fabric



Several Factors deeply Influence China's Cotton Consumption

1. Where do China's yarn production statistics come from?
2. Detailed Statistics
3. Cotton used to produce one ton of cotton yarn
4. Cotton Share
5. Cotton Waste
6. Non-mill use of cotton

Thanks!