

I-1.2.2 Summary of Production Situation

- Production Technology

Theoretically, there are two methods used in the production of xylose, neutralization technology and ion exchange resin technology.

Currently, all manufacturers in China adopt ion exchange resin technology to produce xylose.

- Raw material

Theoretically, the xylose can be produced with corn cobs, cane, etc. As the corn cobs are easy to obtain and its price is low, all of domestic manufacturers produce xylose with corn cobs as raw material.

Although corn cobs are abundant in China, it is wildly used in furfural industry, too. Currently, most of xylose manufacturers claimed that the supply of corn cobs is tense.

- Increasing Production Capacity and Output

In recent years, driven by the rapid development of xylitol industry, the domestic xylose industry developed with a rapid speed. In 2003, the domestic production capacity of xylose was estimated to 26,800t/a, while it jumped to 53,500t/a in 2006, nearly two times as much as that in 2003. Furthermore, the output of Chinese xylose in 2006 rose to 43,750t, three times as much as that in 2003.

However, the domestic supply of xylose in 2006 still far from meet the market demand. By January 2007, most domestic xylose manufacturers claimed all their products have been ordered by their clients and none of xylose could sell to new clients in the beginning half of 2007.

As the expanding projects of production capacity among xylose manufacturers will be finished in the later half of 2007, CCM predicted that the tense supply situation would be relieved.

I-1.2.4 Market Size of Xylose in 2001-2006

From the below table, we can see that the export ratio of Chinese xylose has been declined in recent years. In 2001, 49% of xylose is exported, while it went down to 14% in 2006. The major reasons were that the consumption of xylose which used in xylitol industry has been increased year-by-year.

Table: I-1.2.4-1The market size of xylose in 2001-2006 by volume (Unit: tonnes)

Years	Output	Growth rate	Import volume	Growth rate	Export volume	Growth rate	Apparent consumption	Growth rate	Export ratio
2001	9,300	-	-	-	4,558.635		4,741.37		49.02%
2002	11,600	24.7%	1.600	-	4,162.263	-8.7%	7,439.34	56.9%	35.88%
2003									
2004									
2005									
2006									

Table: I-1.2.4-2The market size of xylose in 2001-2006 by value (Unit: RMB)

Years	Output value	Growth rate	Import Value	Growth rate	Export value	Growth rate	Apparent consumption	Growth rate
2001	116,250,000				66,681		59,267,063	
2002	133,400,000	14.8%	52.494		60,883	-8.7%	85,552,376	44.4%
2003								
2004								
2005								
2006								

I-2 Corn Cob Supply Situation for xylose in 2001~2006 in China

I-2.1 Production of corn cob

According to the actual condition in China, corn cob is the best option of raw material for producing xylose. Corn plantation has long history in China. China is the second largest country in the production of corn in the world.

Since middle 1990s, corn output maintained at about 100 million tonnes. Since 1993, corn output increased fast and then declined later, which was mainly led by government. In 1994 and 1996, China raised the prices of farm products twice in the range of about 40%, which improved the positivity of farmers greatly. Finally the corn output reached a historic peak, being 133 million tonnes in 1998. From 2000 to 2005, the output of corn increased stably. In 2005, the output reached 139 million tonnes, being 6.9% up from 2004.

In 2006, the plantation area of corn was 27,050,000 hectares, and the output of corn climbed to 142 million tonnes in 2006, increased 2.1% year-on-year. The increase mainly resulted from the better production situation for corn in the northeast of China. In 2006, the frost season in the northeast came later than it usually had, which benefited the production of corn.

The rate between corn and corncob is about 10:1. That is to say, once 100 million corn is harvested, 10 million corn cob is gained. The output of corn and corncob in recent years is listed in following table.

Table I-2.1-1 The output of corn and corn cob in China from 2000 to 2006

Year	Output of corn (t)		Corncob (t)	
2000	106,000,000		10,600,000	
2001	115,000,000		11,500,000	
2002				
2003				
2004				
2005				
2006				