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# China, Peoples Republic of

Sugar

# Annual

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> Report Highlights: Sugar production is forecast to jump to 7.47 MMT in MY 02, with a smaller increase forecast for MY 03. Increases are the result of record high sugar prices in MY 01. Imports are forecast to reach 1.5 MMT in MY 02, despite delays in issuing TRQs.

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Area planted to both sugar cane and sugar beets increased in MY 02. This, combined with good weather conditions in cane growing areas has caused led to an overall increase in sugar production. Growth in planted area was largely the result of strong sugar prices. Prices reached a record high of \$548/MT in April, 2001. The start of the MY 02 refining season led to a drop in prices beginning in October as the effects of the larger crop began to be felt, with prices falling to \$331/MT by the end of the calendar year. Over the long term, prices are expected to fall even further, as increased quantities of imported sugar become available.

MY02 production of sugar cane increased an estimated 9.46%, or 7.47 MMT. Most of the increase in production is attributable to a 6.2% (78.6 thousand ha.) increase in planted area, as well as to good weather compared to the drought-damaged crop of MY 01. Although sugar prices have since fallen, planted area is still expected to increase slightly in MY 03. For MY02 the largest increase in area took place in Guangxi, where the total increase was 1,620 ha. (4.43%). Guangdong and Yunnan also saw modest increases, but the fastest growth was in the minor sugar producing regions. This likely reflects opportunism on the part of farmers in marginal areas who find current high prices difficult to resist. Over the long term, however, government policy favors increasing the concentration of cane production within the current main production areas. Concentration of production and increased integration within the refining industry are key elements of the government's effort to streamline the industry in preparation for greater competition under the WTO.

Area planted to sugar beets increased by over 68 thousand ha. in MY02, a remarkable jump of 16.7% after several years of rapid decline. Beet production is estimated to have increased by nearly 1.36 MMT. Geographic distribution of the increase in planted area was extremely uneven, contributing to further concentration of beet production in a few key provinces. Planted area increased by nearly 35% in Xinjiang and by nearly 20% in Heilongjiang. By contrast, area fell in the minor producing provinces of Shanxi (-45.6%) and Hebei (-29.1%). Production is forecast to climb further during MY03, as sugar prices remain relatively high for the time being.

Increased production of both cane and beets is forecast to lead to an increase of 10.2% in sugar production, for a total of 7.63 MMT for MY 02. Production of cane sugar is forecast to increase from 5.9 MMT to 6.52 MMT, while beet sugar production is forecast to climb from 950 TMT to 1.1 MMT: increases of 9.5% and 14.4%, respectively. For MY03, sugar production is forecast to climb further, reaching a total of 7.91 MMT. Sugar refineries have been the primary beneficiaries of high prices, with Guangxi reporting that 60% of previously money-losing refineries now making a profit. Total profits for the sugar refining industry reached \$204.8 million, with tax receipts of \$360.1 million. In an attempt to bring prices down, China actioned off an estimated 1.45 MMT of stocks. Efforts to rebuild these stocks may contribute to increased imports in the coming year.

Sugar imports for MY 01 amounted to 1.083 MMT, including 875 TMT of raw sugar and 208 TMT of refined sugar. This is an increase of 28.3% over MY00. For MY02, imports are forecast to increase to a total of 1.5 MMT, but this may be partially offset by an increase in exports of refined sugar. As a condition of its entry into the WTO, China agreed to an initial tariff-rate quota (TRQ) of 1.64 MMT for sugar. However, imports are unlikely to hit this level as issuance of the quotas continues to be delayed. There is also a great deal of uncertainty as to how the TRQs will be administered, including rumors that a significant portion of the TRQ will be reserved exclusively for reprocessing.

## **Statistical Tables**

#### **Production, Supply and Distribution Tables**

Table 1. Sugar

PSD Table								
Country:	China, Peoples Republic of							
Commodity:	Sugar							
		2001		2002		2003		
	Old	New	Old	New	Old	New		
Market Year Begin		10/2000		10/2001		10/2002		
Beginning Stocks	1851	1851	850	1004	850	1076		
Beet Sugar Production	945	945	1083	1103		1212		
Cane Sugar Production	5954	5904	6540	6522		6701		
TOTAL Sugar Production	6899	6849	7623	7625	0	7913		
Raw Imports	700	875	1132	1300		1400		
Refined Imp.(Raw Val)	300	208	300	200		120		
TOTAL Imports	1000	1083	1432	1500	0	1520		
TOTAL SUPPLY	9750	9783	9905	10129	850	10509		
Raw Exports	6	6	5	5		4		
Refined Exp.(Raw Val)	120	123	250	350		350		
TOTAL EXPORTS	126	129	255	355	0	354		
Human Dom. Consumption	8774	8650	8800	8698		8745		
Feed Dom. Consumption	0	0	0	0	0	0		
TOTAL Dom. Consumption	8774	8650	8800	8698	0	8745		
Ending Stocks	850	1004	850	1076		1410		
TOTAL DISTRIBUTION	9750	9783	9905	10129	0	10509		

Table 2. Sugar Beets

PSD Table						
Country:						
Commodity:	Sugar Beets					
		2001		2002		2003
	Old	New	Old	New	Old	New
Market Year Begin						
Area Planted	329	341	377	409		438
Area Harvested	329	341	377	409		438
Production	8073	8073	9250	9431		10356
TOTAL SUPPLY	8073	8073	9250	9431	0	10356
Utilization for Sugar	8073	8073	9250	9431		10356
Utilizatn for Alcohol	0	0	0	0	0	0
TOTAL UTILIZATION	8073	8073	9250	9431	0	10356

 Table 3.
 Sugar Cane

PSD Table						
Country:						
Commodity:	Sugar Cane C	Centrifugal				
		2001		2002		2003
		New	Old	New	Old	New
Market Year Begin						
Area Planted	1185	1185	1260	1264		1291
Area Harvested	1185	1185	1260	1264		1291
Production	68280	67712	75000	74784		76853
TOTAL SUPPLY	68280	67712	75000	74784	0	76853
Utilization for Sugar	68280	67712	75000	74784		76853
Utilizatn for Alcohol	0	0	0	0	0	0
TOTAL UTILIZATION	68280	67712	75000	74784	0	76853

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#### **Provinicial Production Tables**

Table 4. Refined Sugar Production, by Province, MY 2001 - 2003

	Volume in	1,000 MT				
Marketing Year	2001 (revised)	2002 (estimate)				
Guangxi	2,394	2,845				
Guangdong	1,021	1,027				
Yunnan	1,158	1,204				
Heilongjiang	279	375				
Xinjiang	290	320				
Inner Mongolia	154	145				
Hainan	276	277				
Fujian	67	74				
Jiangxi	112	171				
Gansu	41	49				
Hunan	94	126				
Sichuan	136	127				
Shanxi	23	10				
Ningxia	0	0				
Liaoning	31	32				
Jilin	48	74				
Hubei	83	64				
Hebei	13	11				
Others	180	193				
Total refined sugar	6,401	7,126				
Total sugar (raw basis)	6,849	7,624				
source: SSB and estimates based on SSB cane and beet production data.						

#### Table 5. Sugar Beet Production by Province

Sugar Beet Production by Province (1,000 ha, 1,000 metric tons, ton/ha)								
		2001(revised)			2002(prelim)			
Province	Area	Production	Yield	Area	Production	Yield		
Heilongjiang	146	2,548	17	182	3,430	19		
Xinjiang	56	2,650	48	86	2,927	34		
Inner Mongolia	59	1,413	24	58	1,330	23		
Gansu	10	379	38	11	451	40		
Shanxi	8	210	28	5	92	18		
Jilin	23	444	20	30	680	23		
Liaoning	16	287	17	18	295	16		
Ningxia	0	3	30	0	3	26		
Hebei	10	115	12	8	103	13		
Other	14	24	2	12	120	10		
Total	341	8,073	24	409	9,431	23		

 Table 6.
 Sugar Cane Production by Province

Sugar Cane Production by Province (1,000 ha, 1,000 metric tons, ton/ha)								
		2001(revised)			2002(prelim)			
Province	Area	Production	Yield	Area	Production	Yield		
Guangxi	509	29,379	58	553	34,910	63		
Guangdong	178	12,532	70	190	12,600	66		
Yunnan	260	14,203	55	279	14,771	53		
Hainan	62	3,389	55	61	3,401	56		
Fujian	14	827	57	16	909	57		
Jiangxi	28	1,368	48	35	2,100	59		
Sichuan	31	1,667	54	31	1,561	51		
Hunan	25	1,159	46	33	1,540	46		
Hubei	22	1,017	46	18	784	43		
Other	47	2,171	46	47	2,207	46		
Total	1,185	67,712	57	1,264	74,784	59		

### **Trade Tables**

Table 7. Quarterly Sugar Imports, MY 01

		Quarterly Imports Sept 2000/2001	of Sugar by Origin (MT, raw basis)		
Country	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sept	MY Total
	2000	2001	2001	2001	
Cuba	67,486	0	214,691	136,349	418,525
Thailand	10,432	1,647	134,774	170,312	317,165
Australia	25	4	4	155,374	155,407
South Korea	21,824	14,402	21,515	25,526	83,267
Brazil	0	0	31,050	0	31,050
South Africa	0	0	0	20,652	20,652
India	0	0	17,402	0	17,402
United Kingdom	1,346	1,599	3,182	3,900	10,028
France	2,583	1,521	148	296	4,548
Japan	1,108	610	941	679	3,339
Hong Kong	650	307	810	727	2,495
Belgium	1,182	192	0	0	1,374
China	0	383	260	475	1,118
Nepal	496	157	7	0	660
United States	5	13	58	143	218
Singapore	0	0	13	177	190
Germany	49	3	12	34	99
Malaysia	0	0	35	9	44
Taiwan	3	3	3	3	11
Guatemala	0	0	0	0	0
Others	262	115	974	1	1,351
TOTAL	107,451	20,957	425,879	514,656	1,068,943
Source: PRC Customs	Statistics				

## Table 8. Quarterly Sugar Imports, MY 02 YTD

			of Sugar by Origin (MT, raw basis)		
Country	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sept	MY Total
	2001	2002	2002	2002	
Thailand	119,193				119,193
Brazil	67,275				67,275
Australia	52,275				52,275
South Korea	28,667				28,667
South Africa	21,882				21,882
United Kingdom	3,603				3,603
France	2,018				2,018
Germany	1,871				1,871
China	644				644
Belgium	579				579
Hong Kong	555				555
Japan	334				334
United States	71				71
Nepal	57				57
Singapore	29				29
Saudi Arabia	0				0
U.A.E	0				0
Malaysia	0				0
Cuba	0				0
Guatemala	0				0
Others	30				30
TOTAL	299,083				299,083
Source: PRC Customs	Statistics				

## Table 9. Quarterly Sugar Exports, MY 01

China's Quarterly Exports of Sugar by Destination Oct - Sept 2000/2001 (MT, raw basis)						
Country	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sept	Oct 2000	
	2000	2001	2001	2001	Sept 2001	
Hong Kong	9,265	7,042	8,843	8,638	33,789	
Mongolia	9,460	5,611	0	4,870	19,941	
Saudi Arabia	0	17,952	0	0	17,952	
Indonesia	14,323	0	7	0	14,330	
Yemen	14,311	0	0	0	14,311	
Vietnam	0	0	5,724	5,724	11,449	
Japan	515	2,381	1,418	366	4,679	
Macau	327	377	325	294	1,323	
Canada	125	73	163	165	526	
United States	269	97	109	48	523	
Singapore	78	108	78	58	322	
Australia	53	100	86	54	294	
North Korea	84	140	40	0	264	
Malaysia	25	33	126	18	202	
United Kingdom	59	41	50	0	150	
Taiwan	4	0	0	0	4	
South Korea	0	3	0	0	3	
Aruba	1	1	0	0	2	
Russia	0	0	1	0	1	
Others	124	75	114	143	457	
TOTAL	49,021	34,034	17,086	20,379	120,520	
Source: PRC Customs Statistics						

## Table 10. Quarterly Sugar Exports, MY 02

Country	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sept	Oct 2001-
	2001	2002	2002	2002	Sept 2002
Indonesia	87,393				87,393
Vietnam	34,004				34,004
Hong Kong	10,974				10,974
Mongolia	4,829				4,829
Saudi Arabia	3,435				3,435
North Korea	2,913				2,913
Japan	984				984
Macau	392				392
Canada	358				358
United States	196				196
Australia	115				115
Kyrgyzstan	114				114
Singapore	107				107
Malaysia	38				38
United Kingdom	27				27
Taiwan	0				0
Russia	0				0
Aruba	0				0
South Korea	0				0
others	5,926				5,926
TOTAL	151,805				151,805

### Production

#### **Sugar Beets**

Preliminary data indicate that sugar beet planted area increased by 68,740 hectares in MY02, for a gain of 16.7% as compared to MY2001. This brings sugar beet area to the highest level since MY99. Beet production increased by roughly 1.36 MMT (14.4%), reflecting the increase in planted area. Although planted area posted a strong increase, the geographic distribution of the increase was extremely uneven, with sharp increases in the already dominant producing provinces of Xinjiang (35% increase), Heilongjiang (19.8% increase) and Jilin (24.3% increase). By contrast, many of the smaller sugar beet producing areas suffered sharp declines in planted area, led by Shanxi (45.6% decrease) and Hebei (29.1% decrease).

There are a number of reasons for the uneven distribution in gains for sugar beet area. A key factor was the overall restructuring of agriculture in Xinjiang and Heilongjiang. In Xinjiang the government encouraged the large state farms to diversify away from cotton production, as WTO entry is expected to result in falling prices for cotton. In Heilongjiang, a similar effort is underway to encourage the largest farms to diversify production away from grains. In both provinces, high sugar prices made planting sugar beets an attractive alternative. Another factor is the recent restructuring of the refining industry. The large amounts of beets traditionally sown in Xinjiang and Heilongjiang have allowed the construction of relatively large scale refineries. In most other provinces, the scattered and small-scale nature of beet production has discouraged the construction of large refineries. During the recent restructuring of the industry, the Chinese government focused on shutting down small, unprofitable refineries. Thus, when sugar prices jumped during MY01, many of the refineries in the smaller provinces had already shut down, leaving farmers with no one to sign contracts with. Another factor was a spring drought in Inner Mongolia and Shanxi, which prevented farmers from sowing. Beet production is forecast to continue growing in MY 03. Although sugar prices have fallen, they remain higher than in MY 99, and favorable compared to a number of other crops. A recent survey by the Ministry of Agriculture outlined the cost structure of beet production in China.

Revenue, cost and profit for sugar beet production in selected provinces							
	Inner Mongolia	Heilongjiang	Xinjiang	Average			
Total Revenue (\$US)	1,089	565	1,129	957			
Profit	333	147	235	232			
Seed	26	31	47	45			
Fertilizer	172	73	188	165			
Machinery	8	10	8	11			
Pesticides	13	0	53	13			
Agricultural Film	124	59	163	115			
Labor	295	127	215	253			
Rent	106	82	190	100			
Other	14	37	29	22			
Source: The Survey of Agricultural Products Cost and Profit, Ministry of Agriculture, 2001							

#### Sugar Cane

Total area planted to sugar cane is estimated to have increased by 6.2% (78.6 thousand ha.) in MY02. Cane production is estimated to have increased by an even larger margin of 9.46% (74.78 MMT). Further increases are forecast for MY 03, as sugar prices remain relatively high. The largest increase took place in the Guangxi Autonomous Region, where area increased by 1.62 million ha., but the fastest growth took place in minor producing provinces such as Jiangxi and Hunan. Guangxi is China's dominant sugar cane producer, with over 46% of China's cane coming from this province. In addition to an increase in area, cane yields improved considerably, posting an average increase of 3.5% compared to the previous year. The increase is due primarily to favorable weather in Guangxi: other major producers such as Yunnan and Guangdong suffered a decline due to drought during the spring. Yunnan also suffered from floods during the summer, destroying an estimated 150 TMT of cane. For MY 03, planted area is forecast to increase again, but only by 2.1%, as sugar prices have already started to fall. Yields are also likely to remain relatively high, should the current good weather continue to hold. Sugar yields from cane are also increasing as higher qualities of cane become more prevalent. Average sugar yields are expected to climb from 12% to 14%, as high quality varieties now account for some 70% of cane planted area.

For sugar cane there are two key factors involved in farmers' planting decisions. The first is the contract price offered by the refineries. This is determined primarily by the current price for sugar cane as compared to other crops. During MY 02, cane prices rose by 26% as a result of increases in the price for sugar. The second is the lapse between the time that farmers turn cane over to the refinery and the time that they get paid for it. This is most closely related to farmers' experience in the previous year. In past years it was common for refineries to delay payment. Last year was an exception, however, as refineries' profits were good and they were able to pay farmers promptly. While prices have slipped in recent months, farmers' experience in getting paid promptly was exceptional last year, and this is expected to be the driving force behind a forecast additional increase in planted area for cane in MY03.

Prices for sugar cane are only partially affected by market forces. A minimum 'protection' price is set through discussions between the provincial government and refineries. This price is based on the farmers' cost of production plus an 'average profit,' based on profits from other agricultural products, and is meant to guarantee a minimum standard of living for farmers. Above this base level, prices are linked to the market price for sugar, with cane prices rising when the domestic market price for sugar goes over \$325/MT. For every \$12/MT increase in sugar prices, cane prices rise by \$0.6/MT.

Most sugar cane continues to be purchased on the basis of an advance contract between the farmer and the refinery. In addition to receiving a guaranteed buyer and price, farmers frequently receive assistance in the form of discounts on planting seed, fertilizer, etc. Last year short cane supplies and high sugar prices threw the contract system into chaos, with many farmers breaking their contracts to sell cane to the highest bidder. The resulting losses to refineries were significant, and as a result, provincial governments are reported to be drafting legislation to guarantee the rights of refineries holding such contracts.

China's central government is currently pursuing two policies that are likely to have a significant impact on cane production. The first is an overall effort to restructure agriculture, including cane production, to meet the challenges of participation in the WTO. In the larger sense, the government is encouraging farmers to move away from land-intensive crops such as grains, and into high value cash crops. For sugar cane, the situation is complicated by a history of

overproduction and dependence on import controls and price supports. The government's plan is focused on reducing cane production in those areas where sugar cane is not a key component in the local economy, and where there are a wide range of alternative crops. Cane production will be promoted in those areas where it is already a major crop. This policy is likely to bring about increased concentration of sugar cane production in Guangxi and Yunnan. The other major policy effort concerns the central government's renewed emphasis on improving farm incomes. Central government authorities are reported to have made improvements in rural incomes one of their top criterion for evaluating the performance of provincial officials. Since sugar cane is a key cash crop in the poverty-stricken provinces of Guangxi and Yunnan, local government officials are certain to pay extremely close attention to contract prices for sugar cane paid by the local refineries to farmers. The increased attention being paid to these prices is likely to hinder any market-based reforms for sugar cane.

A survey by the Ministry of Agriculture provided a profile of costs and revenues from sugar cane production in key provinces.

	Cuanari	Cuanadana	Yunnan	Avorago	
	Guangxi	Guangdong	i ulillali	Average	
Total Revenue (\$US)	12,665	17,186	9,739	13,716	
Profit	3,363	5,734	1,749	3,008	
Seed	1,114	1,332	792	1,285	
Fertilizer	2,591	3,016	1,269	2,464	
Machinery	939	695	198	642	
Pesticides	236	228	204	243	
Agricultural Film	3	8	40	116	
Labor	3,270	3,630	4,125	4,185	
Rent	411	1,624	606	1,199	
Other	738	846	781	574	

#### Sugar

Total sugar production for MY 02 is estimated at 7.63 MMT as compared to 6.85 MMT in MY 01. Although some trade sources believe that cane sugar production could be significantly higher than this estimate, the higher number cannot be confirmed at this time. The increase is the result of strong sugar prices and good weather. Increases in beet sugar production were higher than cane sugar (14.4% and 9.5%, respectively), but cane remains by far the dominant source for sugar at over 85%. A somewhat more modest increase in total sugar production to 7.91 MMT is forecast for MY 03.

Sugar prices hit record levels during MY 01 due to an unusual conjunction of factors. Government efforts to reduce planted area finally took hold at precisely the same time that a drought caused a drop in yields for cane. In beet producing regions during the same year, continued financial difficulties that prevented refineries from paying farmers for

their beets led to a sharp drop in beet production. In both regions, the government continued to shut down unprofitable refineries in an effort to streamline the industry. The government also continued to restrict sugar imports in an effort to liquidate surplus stocks of domestic sugar. Prices peaked in April at \$548/MT (as compared to \$348/MT in April 2000). Refineries were the initial beneficiaries of the jump in prices, with average profits for refining rising to \$43/MT. These increases eventually passed to cane and beet farmers, with cane prices rising by 26% during MY 02. This windfall is likely to prove short-lived. Since October, when the refining season began, sugar prices have fallen to levels comparable with MY 00.

Monthly prices for cane sugar in Guangxi Wholesale Market (\$/MT)												
Price	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2000	327	343	373	386	388	393	424	466	413	372	370	396
2001	439	489	520	548	504	504	452	418	408	382	335	331
Source: Guangxi Sugar Wholesale Market												

Efforts to restructure the sugar refining industry are drawing to a close. In the sugar cane producing regions of the south, roughly 90% of state-owned sugar refineries have been converted into one of three ownership structures. The first type is a foreign joint venture, which accounts for roughly one-third of the total. The second type is a joint-stock corporation with the government as a major stockholder. The third type is a private company, with the previously state-owned refinery having been sold to a private individual. The largest and most profitable plants fall into the first two categories. Most of the plants have gone on to streamline their work force, replacing full-time workers with seasonal labor drawn from local farms. The government is also promoting mergers among the refineries and increased integration. In Guangxi province, the government plans to set up 10 sugar industry groups to consolidate the province's scattered refineries. At present, there are three industry groups in the province (Guigang, Fengshan and Nanning), which account for roughly 50% of the province's sugar production. The additional groups would consolidate the remaining refineries.

Restructuring is largely a response to the threat of increased foreign competition as TRQs allow greater imports. A survey by the Guangxi Price Bureau found that the average cost of sugar production in Guangxi is \$331/MT, but that the average cost of imported sugar (imported as raw sugar then refined in China) was only \$277/MT. The primary problem for domestic refiners is the high cost of raw materials, which account for roughly 70% of refiners' costs. The high prices for raw materials (i.e., cane) are a direct result of government supports. Given the increased emphasis on protecting farm incomes, as noted earlier, reform of the pricing system for cane seems unlikely anytime soon. By allowing sugar prices to be determined by market forces while mandating minimum prices for cane, the government has transferred the cost of agricultural supports to the refining industry. But by restructuring and privatizing the refining industry, the government also is removing much of its exposure to the costs of these supports. With increased competition from imported sugar a near certainty, this arrangement seems unstable. Eventually, either the refining industry will require a bailout, or cane prices will have to come down.

Sugar Production Costs, Producer Prices and Profits in Guangxi										
	1997	1998	1999	2000	2001	Average				

Production cost (\$US)	410	381	276	269	318	331	
Tax	69	63	49	51	70	60	
Total cost	479	444	324	320	388	391	
Wholesale price	473	408	273	333	432	384	
Profit	-6	-36	-51	13	44	-7	
Source: Guangxi Price Bureau Industry and Agriculture Products Cost Survey Team							

# Consumption

Sugar consumption continues to grow, albeit at a slow pace: in MY 02 consumption is forecast to reach 8.7 MMT, an increase of 0.5%, with a similar increase forecast for MY 03. Per capita consumption stands at roughly 6.9 kilograms (as compared to roughly 30 kilograms for the U.S.). Retail consumption figures are even lower. In urban areas per capita retail consumption is 1.7 kg, and in rural areas it is 1.28 kilograms. Low retail consumption numbers are the result of several factors. Chinese cooking, particularly in North China, uses relatively little sugar. In addition, there is a growing health-consciousness in urban areas that places a greater emphasis on reduced consumption of sugar. Finally, retail sales numbers are affected by the growing trend toward eating out. The largest consumers of sugar in China remain the candy, biscuit/cookie and soft drink manufacturers. Candy production for CY 2001 was over 700 TMT. Cookie/biscuit production was 900 TMT, but is rising quickly, and government sources expect it to top 1.7 MMT by 2005. Soft drink production is following a similar pattern: CY 2001 production was 15 MMT, forecast to reach as much as 22.6 MMT by 2005.

Artificial sweetners remain a serious problem for increased sugar consumption. Sweetners are often favored by food manufacturers due to the relatively low price and convenience of use. Substitution tends to increase when prices are high, as has been the case recently. Official statistics indicate that the government's efforts to reduce production of artificial sweetners has been largely successful, bringing production of saccharine down to 3,000 MT and aspartame and steviosides down to 200 MT each. However, private industry sources indicate that actual consumption of saccharine alone was somewhere between 7,000 MT and 8,000 MT. (Although these numbers may seem low, it should be kept in mind that saccharine is 300 times sweeter than sugar, which makes the 7,000 MT consumed equivalent to 2.1 MMT of sugar). The central government attempted to limit saccharine use by restricting production to 5 factories, allowing them to produce only 17.6 TMT, of which only 3,000 MT could be sold in the domestic market. However, even these 5 officially approved plants appear to have exceeded their quota, producing a total of 21,404 MT, of which over 4,500 was sold in domestic markets. The remainder of the 7-8 TMT consumed is accounted for by illegal factories. Government efforts to control the use of artificial sweetners have been frustrated by the large number of underground factories and by the small-scale and widely dispersed nature of the food manufacturing industry, which makes it difficult to monitor their use of sweetners. For cookie manufacturing alone, there are over 4,000 registered factories and an unknown number of unregistered manufacturers. For more information on artificial sweetners and their impact on China's sugar demand, see report CH1029.

### Stocks

Sugar prices fell with the start of the refining season, dropping to \$382/MT in October, and reaching \$325/MT in

March, 2002. This drop reflects both improved production and the current uncertain situation. Refiners are selling sugar immediately in order to raise cash to meet current costs and pay down previous debts. Sales are proceeding well, with a total of 2.8 MMT sold during the refining year to date. Wholesalers, however, are reluctant to rebuild stocks, as they fear that increased imports may drive prices down further. As a result, they are buying only to meet immediate needs.

The Chinese government sold large quantities of central and provinicial government stocks during the peak price period in an effort to bring prices down. During the course of the year, the government auctioned off 1.45 MMT of sugar, bringing stocks to a historic low in MY 2001. The government now plans to rebuild stocks using sugar purchased from both domestic and foreign markets. In another effort to rebuild stocks, the National Planning Committee of the People's Bank of China ordered two of China's largest state-owned banks (the Agricultural Bank of China and the Commercial Bank of China) to make 6-month short-term loans available to refiners to help rebuild sugar stocks. The total amount of the loans are to be equivalent to 1.2 MMT of sugar. Ending stocks for MY 02, including national and commercial stocks, are forecast at 1.076 MMT, forecast to increase to 1.41 MMT by the end of MY 03. It should be noted that the loan policy may have the effect of transferring ownership of commercial stocks from wholesalers to refiners, and increasing the burden placed on refiners.

# Trade

Under the terms of its entry into the WTO, China has agreed to open tariff rate quotas (TRQs) for sugar imports. The initial TRQ will permit 1.64 MMT of sugar to be imported at a favorable tariff rate of 20%. This number will rise to 1.945 MMT in 2004. Of the total TRQ, 30% is reserved for use by private traders and another 70% will be available to State Owned Enterprises (SOEs). There remain a number of uncertainties with respect to the TRQs, however. It appears that some 600 TMT of the quota (nearly 1/3) will be reserved for reprocessing trade, i.e., the sugar will only be allowed to be imported for refining purposes, then must be re-exported. Another possible point of contention is the reservation of 450 TMT of the remaining quota exclusively for Cuban sugar. (This last quirk may reflect an attempt to account for the barter trade between China and Cuba, rather than a deliberate effort to skirt WTO commitments).

Total imports for MY 01 amounted to 1.083 MMT, including 875 TMT of raw sugar and 208 TMT of refined sugar, an increase of 28.3% over MY 00. Total imports for MY 02 are forecast at 1.5 MMT. The forecast jump in imports for MY 02 has less to do with TRQs than with current supply and demand conditions, however. With half the marketing year already past, TRQs have yet to be issued. At the same time, industry sources indicate that private traders are hesitant to import due to the uncertainty of domestic prices. The central government, however, plans to rebuild its stocks, and has stated a willingness to use imported sugar to do so. As a case in point, the 166 TMT of Cuban sugar that arrived in February and March were transferred directly to national reserves. This, along with relatively constant demand, indicates that imports may increase despite problem with the TRQs. A further increase is forecast for MY 03.

The Chinese government has already stated its intention to increase exports of refined sugar as a means of reducing pressure on both refineries and domestic sugar markets. Under this scheme, raw sugar imported under the TRQ would be refined in China then re-exported. Such as scheme would allow refiners to take advantage of low prices for foreign sugar, while having a minimal impact on domestic sugar markets. Whether the domestic refining industry is sufficiently competitive to make this practical remains unclear, but the practice is not new: China has consistently exported small

quantities of refined sugar in recent years. As a result, exports of refined sugar are forecast to increase to 350 TMT in MY 02, and remain at that level through MY 03.