MILLING IN FLUX

by David McKee

China's flour milling sector faces rationalization amid changing consumption and quality demands

China's wheat flour industry is by far the largest in the world, grinding up 115 million tonnes annually. Given its size, the rapid pace at which it is evolving is remarkable.

The changes are many and varied according to the segment, but the major trends can be neatly summarized as bigger mills and improved quality. With roughly two-thirds of milling capacity unused, rationalization has been inevitable. At the same time, higher incomes and diversifying diets have increased the demand for better flour.

The industry is structured along the lines of China's economy, with one group of mills, many of them foreign owned, catering to the increasingly upscale tastes of the country's prosperous urban residents. International retailing giants like Carrefour and Wal-Mart are becoming ever more commonplace in China's big cities. It is no longer just the highest income groups but now also the mainstream urban shoppers who are buying routinely in such supermarkets. These stores tend to carry large selections of packaged baked goods, instant noodles and other wheat-based products, frequently supplied by joint venture food processing companies.

Many mills are exploiting the increasing demand for special purpose flour from these food processors that — with their brand reputations at stake — will pay a premium to get consistent quality with the right functionality.

Traditionally Chinese millers produced only medium gluten flour that was suitable for the noodles, steamed bread and rolls and dumplings that constituted the bulk of China's wheat-based diet. Now with eating habits changing, and convenience foods playing a bigger part, the demand for high quality wheat has risen. In China "high quality" means either high gluten flour needed to make premium noodles and pan bread, or the low gluten flour that is best for soft products and biscuits.

The wheat varieties for these flours have had to be imported in the past, but now Chinese plant breeders are coming out with similar varieties adapted to China's growing conditions. Farmers who make the transition to these varieties are getting a premium for their grain, which more than compensates them for the typically lower yields. Many villages are now limiting their members to only high-quality seed to simplify shared combine harvesting and avoid segregation problems.

MAJOR PLAYERS

When its economy began opening to the world, China proved irresistible as an investment target to flour milling enterprises in the neighboring countries of East and Southeast Asia, where flour

The Zhong Liang Flour Mill, owned by China's largest flour miller, COFCO, is based in Shenyang Province and is expected to be operating early next year at nearly 1,300 tonnes per day capacity. Image courtesy of Golden Grain International (GGI), which designs flour, starch and rice mills and storage systems.

consumption had in many cases long ago stopped growing.

Most of the leading millers in Japan, Taiwan, Hong Kong, Singapore and Malaysia have built, acquired or taken a share in flour mills in China, with the biggest wave of activity taking place from the late 1980s and throughout the early and mid-90s. Asian companies involved in this phase include Lam Soon, Prima Limited, Great Wall, Lien Hwa, Uni-President Enterprises as well as Federal Flour Mills and Malayan Flour mills.

Competing with these international players in the high quality segment is a number of domestic agribusiness groups. Four of them are beginning to consolidate their position in two of China's major wheat provinces, where they have easier access to the lowest price wheat.

The Wudeli Group and Hualong Group in Hebei Province are both private companies and have total daily capacities of 3,000 tonnes and 2,400 tonnes respectively. To the south in Henan Province are the Lianhua Group and Jinyuan Flour Co., two state-owned enterprises with 2,500 tonnes and 2,200 tonnes of capacity, respectively. Along with Beijing's Guchuan Group at 1,800 tonnes and situated in the same zone, these enterprises make up five of the six largest milling companies in China.

The biggest flour miller in China is COFCO (China National Cereals, Oils and Foodstuffs Import and Export Corporation). As its name suggests, COFCO is the former national grain trade monopoly. Now that China's international and domestic grain trade has been semi-liberalized, COFCO has been repositioning itself by taking up stakes in grain and oilseed processing concerns. It controls seven flour mills with six brands in six provinces in the wheat zone and further south, approaching 4,000 tonnes of total capacity. COFCO reports it annually grinds 1.2 million tonnes of wheat for a total flour production of 850,000 tonnes.

More recently COFCO has partnered with ADM at their giant Zhanjiagang port grain and oilseeds processing complex to expand a flour mill to 750 tonnes per day.

ADM has expressed considerable interest in expanding its wheat flour milling operations in China, most recently voiced in June by the company's chairman and chief executive officer, G. Allen Andreas. Following those comments, ADM later said its flour milling partners have expressed interest in significant expansion in a number of processing areas.

Milling in China — at a glance:

75 mills greater than 400 tonnes daily capacity
1,550 mills of 200 to 400 tonnes daily capacity
7,800 mills 50 to 100 tonnes daily capacity
40,000 mills of less than 50 tonnes daily capacity
8 largest milling companies' total daily capacity: 20,000 tonnes
Grinding capacity: 350 million tonnes per year
Capacity of small mills (<50 tpd): 100 million tonnes
2003 wheat utilization: 105 million tonnes
2003 milled wheat: 90 million tonnes
2003 flour consumption: 77 million tonnes
Flour consumption per capita: 58 kg
Flour consumption growth since 1997: less than 1% per year
Non-commercial (on farm) production/consumption: 60%
Flour end products: 50% noodles

RURAL MILLING

At the opposite end of the industry spectrum there is extreme fragmentation. China's official government statistics state there are 40,000 rural flour mills in China that have less than 50 tonnes daily capacity each, with a total annual milling capacity of 100 million tonnes among these mills. As much as 50% of farming

Chinese miller's acquisition expands geographic reach, product mix

HONG KONG, CHINA — New Dragon Asia Corp. has acquired the assets of a flour manufacturing facility valued at $1.33 million, which is located in Penglai City of Shandong Province.

"The acquisition will expand New Dragon Asia's production capacity by approximately 30% and contribute an estimated U.S.$3.0 million in additional sales annually. Furthermore, it will provide resources to address China's rapidly growing economy and strong consumer and commercial demand for instant noodles and other flour-related products," said Heng Jing Lu, chief executive officer.

The newly acquired facility, which utilizes Swiss machinery as well as production technology from Japan and Korea, has daily production capacity of 100 tonnes.

Lu said that the acquisition complements the company's ongoing strategy to expand New Dragon's geographic reach and product mix, with a particular focus on attracting commercial customers. As an example, he cited an order for specific-use flour from purchasing agents of KFC in China, potentially worth over U.S.$1 million. KFC, a subsidiary of Yum! Brands, has opened 700 locations in approximately 150 cities in China since 1987. "The production of flour with specific commercial applications represents an important component of New Dragon's growth strategy," said Lu.

He added that the company is focused on expanding its presence in international markets, as well as urban markets in China.

In July 2004, the company's flour products received Grade A certification by the China Green Food Development Center, an organization solely authorized by the Chinese government to issue the "green" and organic label to food producers.

"As our customer base expands in and outside of China, the green food label is particularly important," said Lu.

Export sales in 2003 represented approximately U.S.$1.14 million. Lu noted that the company is supplying trial orders to the Canadian market and that Korea continues to be an important market, with New Dragon exporting approximately 80 million (35g) packets of noodles to Korea in 2003, representing approximately 3% of total sales.

Lu noted the company is continuing its efforts to penetrate supermarkets and chain stores in China's urban areas by focusing on raising consumer awareness of New Dragon's brand name and products.

Headquartered in Shandong Province, New Dragon Asia markets its product line through a network of 216 key distributors and 16 regional offices in 27 Chinese provinces with an aggregate production capacity of approximately 110,000 tonnes of flour and more than 1.1 billion packages of instant noodles.

Circle No. 96 on the Reader Service Card or see page 74.

Circle No. 97 on the Reader Service Card or see page 74.

is at a subsistence level, with peasants receiving flour back from village mills such as these for the wheat they have grown.

What is not known is the utilization of these tiny family and village run mills. Many are only operated in fits and starts on a tolling basis as farmers bring their wheat to them. It is probably safe to assume that the vast majority of these mills will vanish sooner rather than later, perhaps in the next 10 to 20 years, as subsistence farming declines in China's drive toward modernization.

At the next level up are 7,800 mills classified as "small scale" with capacities of 50 to 100 tonnes per day. The bulk of these are owned by rural cooperatives that compete fiercely to provide low cost flour to a rural population whose income has been growing at barely half the rate of city dwellers.

Here the margins between wheat and flour are tiny, and the pace of rationalization has been rapid as well. In recent years groups of rural cooperatives have been forming loose alliances and building large modern mills with daily capacities of 200 tonnes or more, while closing their own individual small, inefficient mills in the process.

These new milling enterprises keep capital costs to a minimum by using 100% domestically manufactured equipment for which there are many suppliers, such as the leading Chinese mill designer, Golden Grain in Zhengzhou. Joint ventures such as Buhler Wuxi and Satake Suzhou ensure that the latest international milling technology is also available on a locally manufactured basis. This allows even the joint venture milling companies that service the high quality end of the market to

One of the first joint venture mills in China was launched in 1988 by Singapore-based Prima Limited and Xinyan Foods Company Limited. Located in Yantai, Shandong Province, the mill has 250 tonnes per day capacity and produces flours for various types of premium wheat-based products.

keep investment costs down by buying in-country.

Much of the rural milling activity is concentrated in China's prime wheat zone in the northern provinces of Hebei, Henan and Shandong. The three provinces account for 70% of China's wheat production. (See map on page 40.) Average annual per capita wheat consumption in these provinces is 170 kg in contrast to just 2 kg in Guangdong province in southern China where rice predominates.

MIDDLE SEGMENT GETTING SQUEEZED

Getting squeezed between the high quality special flour producers at the top end and the low cost rural millers at the bottom are hundreds of medium-sized mills of 200 to 400 tonnes per day capacity.

This middle segment has the most state-owned enterprises. A high proportion of them are outfitted with expensive imported equipment. Neither able to match the quality parameters or marketing prowess of the top end producers, nor able to meet the low capital and operating costs of the rural millers, hundreds of these mills have been stilled. Included among them are a great many fully imported, top-of-the-line, European-made mills. The likeliest scenario for these nearly bankrupt companies is takeover by healthy milling groups.

Total flour consumption in China has increased at a rate of only 1% per year since 1997, and per capita consumption at only 0.3%. This is reflective of a higher living standard and diversified diets, and it has partly mitigated official worries over the steadily declining wheat harvests in China.

On the other hand, no growth or even a likely decline in flour consumption will speed the consolidation now taking place among millers.

LONG VIEW

The restructuring of China's milling industry began only in the mid-90s. Minimal profitability in all but the still limited specialty end of the business has so far precluded participation by international milling concerns in this process.

Still, a long period of consolidation of domestic millers seems inevitable. Is it fair to conjecture that in China a level of concentration will eventually be reached equal to Europe and the United States? If that were the case then the Middle Kingdom would end up with just a few companies each milling 25 to 35 million tonnes of wheat per year.

Supposing that China's milling industry becomes reasonably profitable by that time, these few companies would easily have the scale and resources to become global players themselves. •