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Futureproofing world flour supplies

World's largest mill sets milestone in global milling history

by Raymond Ma, China

The Autumn of 2021 saw the Chairman of Wudeli Group, Dan Zhimin push the button to launch the Suiping factory, which with a 6000t/d capacity, is widely considered to be the biggest wheat milling factory in the world.

The Suiping is the Wudeli Group's eighteenth subsidiary corporation, and with that the group's current total capacity goes to 61000t/d, occupying about 25 percent of the wheat flour market share in China.

The factory is located in the Henan province that can be found right in the centre of China, surrounded by an abundance of high-quality wheat.

The facility boasts a proud total of eight milling lines, seven of

which are producing general flour with one producing specialised flour.

It is also equipped with the very latest machines and automation technology including roller mills, purifiers, and plansifters, which is mostly manufactured by Bühler.

It also has the biggest automatic AR/RS warehouse with 22,400t of finished products storage capacity. It will also be most efficient, using the lowest labour as it employs just 266 workers in total. Over the next two years, with the new factory and old factory's expansion finished, Wudeli's whole capacity will exceed 80000t/d, making it without a doubt the world's highest capacity flour mill, but who are Wudeli?

From a single mill to 11 million tonnes per year

Founded in 1989, the Wudeli Flour Mill Group (WFMG) is a private enterprise that specialises in flour production. Following 32 years of effort and practice, the once small single factory has now developed into a large-scale flour-producing group that includes 35 large milling workshops, 78 modern flour production lines and more than 5000 staff.

The Group invites five parties, including clients, farmers, workers, the state and other enterprises, organically into a profitable community of sorts – a principle that it believes to be at the root of much of its success, and one that closely resembles the co-operatives that were popular in the UK during the twentieth century.

Since 2003, when the group targeted becoming the world's leading experts in flour production, it has expanded its product sales all over China, covering 97 percent of the domestic market,



which has increased by as much as 16 percent. The group's share of the Beijing market has reached more than 40 percent, and the Group has been rightfully and continuously ranked number one in flour sales in the domestic market.

Combining science & technology

Wudeli Group also has large investments in scientific and technological innovation, the introduction of international advanced equipment and technology and was capable of low-ash and high-precision flour production. The flour production series includes more than 140 varieties, with products of good quality and stability favoured by many customers.

The Group's special powder series, which includes products for dumplings, steamed buns and fried sticks, noodles and steamed bread, is predominantly aimed at the market of high-class food factories, large chain restaurants, large steamed bread and noodle processing companies.

These special flours, combined with the trend in the development of China's wheat flour sector, meets the needs of different consumer groups and fills a number of special powder production gaps.

For example, the high-gluten buns powder has the very good re-steaming abilities and solves the steamed bread from turning black which produces a poor visual effect after cooking; the strong gluten dumpling powder solved the problem of dumpling packaging adhesion after cooking and make dumplings available for take-out packaging.

In production technology, for example, the group created a set of scientific and practical wheat auto-weighing system to achieved accurate warehousing and human labour saving; the brush bran machine application improved flour extraction rates.

The development of the bran-drying technology also solved the bran's short expiration date and transportation problems in summer months. It has also developed automatic warehousing and online loading systems.

It was introduced the world's first-class Bühler pulverising equipment, at high cost, and bought quality inspection equipment from Bühler, and from companies based in Sweden and France, which was also at great expense.

Wudeli also set up many stations to supervise the quality of incoming raw materials, ensuring that it uses only the highest quality wheat for the highest quality flour. It established a thorough and advanced online quality control system complete with advanced test equipment, professional baking and steaming experiments, strict quality control procedures and quality control methods.

From raw materials to the implementation of a quality monitoring system, WFMG has formed an interlocking quality management system that is tailored specifically to inspect every procedure.



The Chairman of Wudeli Group, Dan Zhimin, pushes the button to launch the Suiping factory.



Connected industries

The Wudeli Flour Mill Group's production scale and product property requires a huge supply of wheat, which helped the farmers of the nearby counties and cities to optimise plantation structure and quality, whilst also being of great benefit to their incomes.

In 2017 for example, the group purchased wheat from more than three million farmers, increasing their income by more than 100 million yuan (US\$5,706,230.00) each year. The Wudeli Group also currently employs more than 5000 rural workers.

Wudeli Group's establishment of a new factory helps drive the local transportation, retailing, catering and other industries in development.



Over the next two years, with the new factory and old factory's expansion finished, Wudeli's whole capacity will exceed 80000t/d, making it the world's highest capacity flour mill



The biggest automatic AS/RS warehouse with 22400t of finished products storage capacity

Other facts and figures include: each subsidiary requires investment of at least 300-500 million yuan (~US\$47m–US\$78m), which generates huge profits to local building material industries; Wudeli's everyday wheat purchase and product sales reached more than 80,000 tonnes of throughput, which needs 3000 transporting vehicles, meaning nearly one million vehicles are used a year for local transportation industries.

Every new company also requires a corresponding staff canteen, supermarkets and other supporting facilities, which benefits the supermarkets, food, clothing and other related companies from nearby counties and cities.

Social responsibilities

The greater the group develops, the greater is perceived its level of social responsibility to be.

The Wudeli Flour Mill Group always strives to do its best to shoulder its level of obligation to society. As the pioneer of China's flour industry, WFMG always takes food security and the industry's steady development of its social responsibilities seriously.

In 2010, influenced by multiple factors, the market prices kept rising and the consumer prices are high. In order to stabilise people's livelihood and lower prices, the state launched a number of measures to control prices.

WFMG actively responded to the state's policies and took



The vast range of equipment featured at the Suiping facility includes purifiers and planifiers supplied by Swiss manufacturing company Bühler



the initiative, allowing the maintenance of a stable flour price in the domestic markets, whilst also completely supporting the state in market regulations.

The founders of the Group, who are the descendants of farmers, haven't forgotten their roots. They kept the city supplied with flour during the Covid outbreak, provided free flour to stricken areas suffering the Yellow River flood, the Guangxi Province's snow disaster and funds to the Wenchuan, Yushu earthquake disaster areas, and donated to repair the ancient gate tower reconstruction, amongst many other valuable projects.

As part of the food industry chain, WFMG also connects with the upstream and downstream industry from grain cultivation, collection, storage and transportation, to processing, warehousing, transporting and finally to thousands of families.

The company's strict requirement as to the quality of raw grain and product has promoted food safety requirements at every stage and made a contribution to national flour industries' healthy and sustainable development.

WFMG also takes great pride in contributing towards the food security of every family and to the national food safety of China.