Regional focus

China: sleeping giant rapidly

China is one of the largest feed producing countries in the world, importing plenty raw materials for feed. The development of the Chinese feed industry cannot be separated from the world, and the development of the global feed industry relies on China. A healthy development of the feed industry in this country will surely make a significant contribution to the development of the global feed industry.

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A modern feed industry is the physical basis for modern animal husbandry and aquaculture development. The feed industry in China began its development toward the end of the 1970s, and after more than 20 years of growth and vigorous development, has effectively transformed back yard farming towards intensified and modern livestock production. The country has also made great contributions in satisfying the needs for protein by the general public, facilitating the readjustment of the Chinese agricultural structure, prospering the rural economy and increasing farmers' income. This tremendous achievement has, in turn, attracted worldwide attention.

The output of Chinese feed products has maintained stable and rapid growth. Between 1980 and 1990, the overall output of feed across the country gained an annual increase rate of almost 30%, and between 1990 and 2000, the annual increase rate was more than 10%. From 1996, the total feed production in China ranked second place in the world (after the US). In 2005 alone, the production value of the feed processing industry stood at 274.2 billion yuan (€26.36 billion), while the output for industrial feed reached 107 million tonnes. Between 2000 and 2005, the annual increase rate of outputs for industrial feed, compound feed, concentrated feed and feed additive premix was 9.5%, 7.7%, 18.9% and 16.8% respectively. As the backbone of the feed industry, feed additives have also made remarkable progress.

The output of L-Lysine feed grade has risen steadily over recent years, with the total production increasing from 78,000 tonnes in 2003, to 336,000 tonnes in 2005. Vitamin and mineral feed additives can basically satisfy the needs of domestic markets with some volume being exported to foreign countries.

The feed industry in China has already become an important contributor in facilitating a healthy development in the international feed industry.

Production structure

The increasing rate for compound feed, concentrated feed and feed additive premixes has remained on a high level. The proportion of compound feed has seen a small decrease, while the proportion of concentrated feed and feed additive premixes have increased with product structure being matched more closely with the demands of the Chinese livestock industry. The production of compound feed for aquaculture and ruminant concentrated feed supplements have been increasing more rapidly than other feeds.

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Table 1 - Compound feed structure 1995 vs. 2005 (%)

Type of feed	1995	2005
Pig feed	42	35
Layer feed	3	6
Broiler feed	24	26
Aquaculture feed	5	12
Other	26	21

There are over 15,000 feed millers in China, but the top 10 companies manufacture 21% of the total output and the first 30 make up 40% of total output.

(Photo: Xuyi)

China can be split into four main animal feed producing areas (2005 data):

- East - 10 provinces, 48.61 million tonnes (45% of total)
- Middle - 6 provinces, 24.58 million tonnes (23%)
- Northeast - 3 provinces, 14.76 million tonnes (14%)
- West - 12 provinces (no statistics from Tibet), 19.38 million tonnes (18%).

Between 2000 and 2005, the Chinese feed industry experienced the attack of highly pathogenic avian influenza (bird flu) and *Streptococcus suis* pig disease, as well as a big rise on raw material demands. The risk awareness of feed enterprises has since been enhanced. The industry has also become more mature and, in terms of production and profits, has steadily increased. It can therefore be said that the feed industry in China has transformed from volume-specific to both volume- and quality-specific.

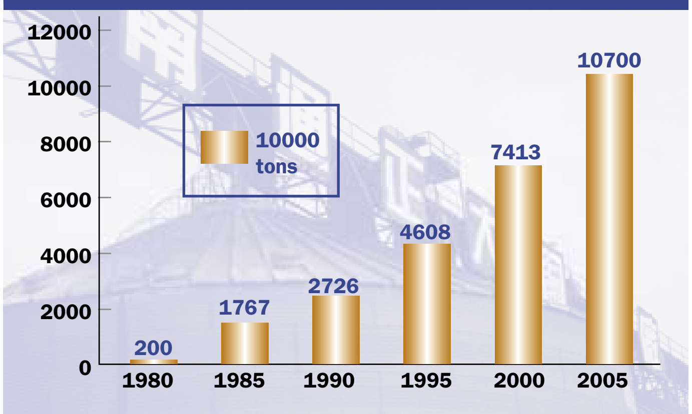
Regulation improvements

Law and regulation systems have gradually improved and the industry has maintained healthy development. The Chinese government has always paid much attention to the safety of feed and, since 1999, has formulated and implemented the "Regulations for Management on Feed and Feed Additives", formulating a series of normative law documents.

With the application of science and technology, feed conversion rate has been greatly improved with raising cycle shortened and efficiency enhanced. Feed science, technological innovation and science transformation have become the main reasons for promoting sustained and healthy development of the industry, animal husbandry and aquaculture.

Through diversified merger activities, the number of feed enterprises has decreased, while produced volume per enterprise has increased. In 2004, the number of feed enterprises, with an annual

Figure 1 - Total feed yield in China from 1980 - 2005




The Chinese feed industry is catching up rapidly.

(Photo: Xuyi)

output of over 100,000 tonnes, reached 70. The top 10 feed enterprises produced more than 20% of the total output of the country.

More open market

China has proactively taken part in international competition. At the beginning of reform, CP Group of Thailand and other foreign large-scale feed companies have entered into the Chinese market. Now, after more than 20 years of vigorous growth and development, some of China's feed products hold a strong position in the competitive international market. The market share of feed grade vitamin A, E and C accounts for 30-50%. The use of L-Lysine is no longer dependent on imports, and China even exports some of its products.

The technology of feed processing equipment and the quality of products have been close to the international level, with export volume of feed processing equipment increasing year by year, which has been warmly welcomed in the Southeast Asian region. A group of feed processing enterprises have invested in running feed processing companies in this region. These companies have the ability to participate in international competition.

The feed industry in China as a whole has sound development, however, since the first three months of 2007, the industry has experienced a decline in output due to the impact of bird flu. A decrease in the overall income of animal husbandry has also been evident. Feed enterprises are facing severe challenges, but, according to market experts, the situation will change from the second half of this year.

Government commitment

The Chinese government has attached great importance to the healthy development of the feed industry and has released guidelines and recommendations in relation to the industry's growth and development, as well as given proactive support in terms of national budget, taxation and finance. China has exempted feed processing enterprises from value-added tax, and even before 1994, feed enterprises had been exempted from income tax, thus safeguarding the feed industry as one sector which supports agriculture to move towards healthy development.

The introduction of the (free) market mechanism is the fundamental reason for the rapid growth of the feed industry which, in China, has benefited from the reform and opening up in 1970s, as well as the establishment of the socialist market system. The Chinese leader of second generation, Deng Xiaoping, pointed out as early as in 1983 that "feed should be operated as an industry, and this would be a big industry".

From its inception, the feed industry has followed the principle of "mass participation", and operated in a diversified manner, such as multi-element investment, market-driven operation system, commercialisation of key technologies, enterprise group development and standardising of sector management. The role of labour, knowledge, technology, management and capital has been brought into full play.

Market development

Privately owned enterprises under severe market competition have finally come into being and have occupied most of the Chinese feed industry, which has become one of the sectors that have enjoyed the highest development towards market operation. The China Feed Industry Association (CFIA) has played an important part in this by strengthening professional ethics and promoting its development. CFIA, established in 1985 after the approval by the State Council of the People's Republic of China, was the earliest industry association in the country with its function of intermediary and professional ethics management, which links government and enterprises. The Association takes a proactive role in the formulation of laws, regulations and development programmes in relation to feed.

Constraints and challenges

Although achievements have been made, the feed industry in China still faces some constraints and new challenges. Firstly, due to the increasingly demand for animal products and the improvement of the commercialisation and degree of scale of production for animal husbandry, there is still a big demand for some raw materials for feed. Fish meal, an important animal protein feed, still relies on imports with annual import volumes reaching 1 million tonnes. About 70% of soybeans for meal production need to be imported with annual imports reaching 20 million tonnes. The resources of protein feed in China will face a long-term shortage situation.

Secondly, there is a big difference among feed enterprises in different regions with unbalanced growth. In China, there are currently 15,000 feed enterprises, of which 2,800 enterprises produce more than 10,000 tonnes of feed annually. There are 77 enterprises with annual production of more than 100,000 tonnes. The feed enterprises in the west operate on a relatively small-scale with rather backward management means.

Future objectives

In the long-term, the Chinese feed industry will establish a safe, qualitative and highly efficient production system, and create a new type of industrialised path through sound science and technology, good economic returns, low resource consumption and a less polluted environment in order to realise a harmonised and coordinated development for safety, quality and high efficiency.

A balance between supply and demand will also be ensured, as well as quality and safety. Industry structure will be optimised, international competitive edge for feed enterprises enhanced, and the laws and regulation system for feed will be further completed and improved.

Sha Husheng: "The Chinese feed industry still faces some constraints and challenges." (Photo: Dick Ziggers)

In order to adapt to the trend of a more intensified livestock industry, feed manufacturers will accelerate the development of concentrated feed, concentrate supplementation and feed additive premixes to realise a diversified feed system and multiple feed structures. The sector is expected to proactively develop new types of feed resources and varieties, and accelerate the updating of feeds with the aim of satisfying the needs for feed products for different livestock varieties and methods.

By doing so, the CFIA realises that it needs to implement and improve the system of production permit and press ahead for GMP and HACCP safety management systems among feed enterprises with the aim of maximum reduction of risks.

The industry should accelerate the speed of integration and updating level for feed enterprises, proactively implement brand strategies to create a group of "Chinese Brands" and support a number of feed enterprises with international competitive strengths, thus giving imputes to the development of medium- and small-scale enterprises so as to raise the modernised level of the Chinese feed industry. ●

This is an edited version of a paper prepared by Yang Hongjie and presented by Chinese feed industry representative Sha Husheng at AFMA-forum in Sun City, South Africa.