

Market

GBT in China operates to do

China is one of the largest producers of amino acids in the world. Low-key operating Global Bio-Chem Technology (GBT) plays an important role in this highly competitive business. Recently, the company lost a lysine patent lawsuit in The Netherlands, but it does not feel disheartened. Feed Tech spoke with Ford Zheng of GBT to shed some light on this issue and to discover their market strategies.

By Dick Ziggers



With an enormous bounce the pilot literally drops the plane on the landing strip of Changchun airport in Northeast China. As I walk towards the exit I notice the sweet smoky smell that affirms the image I already saw through my window when approaching the airport. Small fires scatter the landscape and smoke limits vision as local farmers burn corn stalks after having harvested the cobs. We are in Jilin Province, the heart of Chinese corn production and also home of Global Bio-Chem Technology (GBT). With four processing facilities and an annual processing volume of nearly 3 million tonnes, GBT is the largest processor of corn in China.

A representative from GBT picks me up from the airport and drives me to town. As a westerner and unfamiliar with Chinese driving habits, it is defi-



Ford Zheng is responsible for lysine exports at GBT.

nately advisable to make use of a local driver. Left and right are sometimes not clear and pedestrians and cyclists are treated as outlaws. Honking the horn is a national sport. Contrasts are huge in Changchun, the rural capital of Jilin Province. Its metropolitan area has a population of 6.83 million and the city inhabits 2.78 million people. Ox-traction can be seen next to Hummer cars, reflecting the economic growth China is experiencing.

After a good night's rest my driver takes me further north to Dehui, where a large plant for corn processing is located. This plant was established in 2005. Together with the old plant in Changchun the production capacity for lysine HCL is 120,000 tonnes (actual production 110,000 tonnes) and 240,000 tonnes for lysine sulphate (actual 220,000 tonnes) per year. Maximum capacities can be reached through technical innovations or improvements.

Threonine production momentarily is 10,000 tonnes, but will expand to 25,000 tonnes in 2008. GBT also manufactures, amongst others, 130-150,000 tonnes of corngluten and more than 400,000 tonnes of corn feed annually.

The 1½ hour drive is not very exciting – left and right of the expressway is corn as far as the eye can see. The plant in Dehui has a special exit from the motorway since it is the only “village” in the area. From the exit, a dual carriageway leads to a roundabout in front of the main office. In the circle, a golden statue tells you in Chinese that you are at the Dacheng premises. Dacheng? Yes, ask any Chinese in the corn processing business about GBT and he will shrug his shoulders. However, Dacheng is a well-known brand in China and is used throughout the

business and make friends



country. GBT is the name used outside of China and on the Hong Kong stock exchange (since 2001).

As previously mentioned the factory looks like a village. Two huge dormitories dominate the left side of the complex. Between these two buildings a new event centre is being built. Almost all workers come from Changchun and stay over during the week, because a daily trip to work would take too much time, since there is no public transport and many cannot afford a car. Furthermore, the complex consists of buildings for processing corn, laboratories, an office, restaurant, warehouse and power plant.

Bagged product

Taking pictures is a delicate subject, from the outside

it is no problem, but inside and especially in the fermentation areas, it is out of the question. There is strong competition in amino acid production and rivals are not allowed to peep into their kitchen even through magazine photos. In addition, strict sanitary rules (FAMI-QS) impede further entry other than the bagging area and warehouses. Lysine is stored in 25 kg bags and a small percentage in big bags. The reason for this mainly has to do with logistics. Most of the transport equipment is not suited for big bags – not to mention bulk volumes. Big bags are difficult to handle. Trucks are loaded by hand and bag by bag; train carts have too narrow openings for a forklift to enter the lorry. So everything is moved manually; labour is abundant and still cheaper than automation.

On account of the many handling actions, the lysine is stored in sturdy nylon bags. If shipped by truck and train it is possible that bags are moved eight times before reaching their final destination. Normally it is a few times less, because they are either moved from Dehui by truck to the port of Dalian or by train to Dalian from the Changchun factory. There is a rail connection directly to this factory.

Bags are not shipped on pallets as this would decrease the storage capacity in the train lorries or trucks and it also adds to the costs. Furthermore, the train lorries cannot be loaded with a forklift.

Once back in Changchun we visit the other processing facility, located in the city. After a quick walk round the plant, amongst others to see the manufacturing of corn gluten, one is happy to be outside again – the noise inside is deafening.



Train lorries are manually loaded at the Changchun factory, which has a rail connection.

Market

World lysine and threonine production (2006, metric tonnes per year)

Producer	Country	L-Lysine HCL (98%) ¹	L-Lysine Sulphate (65%) ¹	Threonine ¹
ADM	USA	174,000		10,200
Agro&Ferm	Denmark		12,000	
Ajinomoto	Brazil, France, Thailand, USA	170,400		61,200
Anhui BBKA	China	18,000		
BASF	South Korea	61,200		
Cheil Jedang	Indonesia	122,400	30,000	9,000
Chuanhua Powder	China	22,800		
Daquan Lysine	China	7,800		
Degussa	USA, Slovakia		75,000	18,000
Gansu Ronghua	China	2,400		
Global Bio-Chem	China	110,000	220,000	10,000
Golden Corn	China	15,600		
Maidan	China	7,800		
Ningxia Yiping Eppens	China	12,000		
SA Bioproducts	South Africa	9,600		
Starlake	China			18,000
Vedan	Vietnam	18,000		
Xiwang sugar	China	12,000		
Total ²		764,000	337,000	126,400

¹ Source: Feedinfo.com, and Feed Tech, extrapolation of monthly production figures

² Total market for lysine in 2006 is estimated at 960,000 tonnes, and for threonine at 105,000 tonnes.

Distribution strategy

Finally, I end up in the office building to meet Ford Zheng, assistant general manager and international trade department manager. Smartly dressed, he represents a new style of young Chinese entrepreneurs that is in contrast with the image of the rigid black suit Chinese officials often seen on television. During our conversation it becomes easier to imagine that

this manager was responsible for exports of US\$150 million last year and is targeting US\$170 million this year.

GBT maintains a low key presence, which is incorporated in its sales strategy. "We directly do business with the big feed industries such as Nutreco, Provimi and Cargill and transport our amino acids to different destinations according to their schedules", Zheng explains. "In other places we cooperate with local companies. They know their local market and act as our distributors. We prefer a one-on-one approach. That works successfully. Early September we organised a seminar here and invited distributors and large customers from 25 countries. That's our strategy: 'Make business and make friends'."

Largest corn processor

Dacheng or GBT was founded in 1994 for manufacturing corn products. Its vision is to become the largest vertically integrated corn-based products manufacturer in the Asia Pacific region as well as a major player in the industry worldwide. With vertically integrated production facilities and advanced technology of commercialised scale of production, GBT has established leading positions in upstream corn refinery (corn starch, corn fibre, gluten meal and corn oil)



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China's lysine market

China's lysine market saw increased production activity in 2006, with output reaching a record high of 283,600 tonnes, up 16.6% compared with 2005. Despite weaker performance of the livestock and feed industry, domestic consumption was still at a reasonably high level of 218,200 tonnes.

China's lysine production industry is increasingly integrated with the global lysine and feed market. The country's current capacity and output now accounts for approximately 40% and 27.5% of world's production capacity and output of lysine. Exports have also doubled to 117,000 tonnes in 2006. Imports continue to fall, and were down from 53,000 tonnes in 2005 to 24,000

tonnes in 2006.

Moving forward, China's lysine output for 2007 is forecast at 335,650 tonnes. Demand for the amino acid is expected to increase to 238,000 tonnes, in tandem with the recovery in livestock production activities. Prices are expected to be volatile as industry consolidation continues. Imports for 2007 are projected to fall to 22,000 tonnes while exports are forecast to rise to 140,000 tonnes. The rise in China's exports will have a significant impact on the demand and supply dynamic in the global lysine market.

(source: Research&Markets)

as well as successfully diversified its downstream product portfolio. The latter includes amino acids, corn sweeteners, modified starch and polyol chemicals (to make fabrics amongst others).

The company is the largest corn refiner in Asia. It is also one of the largest lysine series products manufacturers and protein lysine products manufacturers in the world. In addition, GBT is the leading firm to use corn in the production of polyol chemicals in the world. Annual turnover in 2006 was HK\$4,742 million (US\$ 610.4m) and net profits reached HK\$501 million (US\$ 64.5m).

Lysine main export item

In the animal feed business lysine is the largest export item. Turnover and gross profit of the lysine business in 2006 was HK\$2,075 million (US\$ 267m) and HK\$637 million (US\$ 82m) respectively. There are four production locations: Changchun and Dehui for up and down stream corn; Jinzhou, same as Changchun except amino acids and Shanghai which manufactures sweetener. There are no direct plans to start processing outside China. "We have not finished our expansion plans in China yet, but in the future perhaps", Zheng says.

Although the Chinese government has restricted corn processing GBT still benefits from government support. "This allows us to pay a little extra to the farmers to raise their income, something that is in line with governmental plans. There is also government support needed to obtain permits and expansion subsidies. Previous expansions were partly paid by the stock market and partly by subsidies", Zheng elaborates. Currently there is no expansion planned, so the governmental restriction on corn processing (into ethanol) is of little influence.

Less tax rebate

Because corn prices are being increased continuously,



Lysine is packed in big bags, but only on a limited scale and not for exports.

will GBT remain competitive on the world market? Zheng: "Yes, because all manufacturers are suffering from the high corn prices, so the production cost of all producers is being increased. We try to control corn purchasing prices, to improve productivity, to control handling costs and other costs."

Recently the government reduced the tax rebate from 17% (=VAT%) to 5%. This makes Chinese exports more expensive. Zheng says that despite this negative effect their products are still competitive. "Even if the 5% rebate was cancelled, we still would be competitive. We strictly control production costs and here in the north we have 5 months of winter. This, for example, reduces our costs for cooling the water."

This answer immediately touches another sensitive issue and that is pollution. Chinese companies in a negative way are at the top of the list when it comes to pollution control, but Zheng assures that this is not a problem at their facilities. "Five years ago we invested 100 million RMB (US\$13.4m) in water recy-

Dutch verdict

Japanese lysine manufacturer Ajinomoto (Aji) has brought a patent infringement by GBT before The Hague Patent Court in The Netherlands. The Court on August 22 ruled that indeed GBT had infringed the patent. As a result, GBT and its German distributor Helm with immediate effect were ordered to discontinue to make, use, sell, offer to sell, import, trade and stock the Lysine which infringed the patents. Additionally, GBT and Helm had to recall this lysine which infringed the patent that was already on the Dutch market and they will have to provide information on related sales in the Netherlands. The court's decision is open to appeal, but an appeal will not postpone the enforceability of the decision.

Is GBT going to appeal? According to Ford Zheng, GBT will: "The first judgment is not final, so it is too early to say that GBT has infringed Aji's patent. Of course, GBT respects the first judgment and will follow the request listed in the judgment during the process of appealing for the final judgment. (GBT appealed in September in Holland)

"Our lawyer told us that Aji may have a chance to take action in other EU countries since the judgment is only valid in The Netherlands. But Aji has to claim separately in each EU country where it has the patent. Aji is not able to claim in a central EU court as there is no such patent court in the EU yet. Wherever Aji claims, GBT will be ready for the challenge.

"In the meantime GBT is shipping a new product to the Netherlands and other EU countries, which is produced by a different strain and in line with EU feed law. It is just tentatively used. If we can win the final case, then we might go back to the strain which we were using. Our new strain is performing well, but not yet to our liking".

"As a new player in the world market, different consumers were not completely satisfied by the way we handled the case due to lack of global sales experience", Zheng admits. "But with the help and understanding of our customers, we have become more experienced and professional. We will not give up the market in the EU. It is still our key market and nothing will be changed."

cling and other equipment to control pollution at each plant. We are monitored and approved by the National Environmental Protection Bureau on a regular basis", Zheng explains. The company has strict management to control pollution.

Market share increase

GBT in the general market place is not well known as a manufacturer and supplier of amino acids. How do their products compare to those of Ajinomoto, ADM and Cheil Jedang, the other important players in the marketplace? "The quality of lysine and threonine is highly appreciated by customers worldwide in terms of particle size, flowability, smell and colour and so on. Sometimes packaging problems occur, but that does not affect our quality", Zheng says.

About 50-55% of Lysine HCL and 25-30% of Lysine Sulphate is exported. On average, Lysine HCL and Sulphate comprise about 60% of the market in China, and have a world market share of about 22-25%. GBT's plans are to grow step by step by increasing to 65% supply in China. Their sales strategy is "to provide good service and a competitive price to existing customers continuously, to step by step supply more big bag materials to satisfy requests of western customers and to increase exports to 65%".

Zheng expects a stable EU market and intends to increase sales to North America. To be able to con-

tinue to grow it is important to invest in research and development. GBT has its own R&D team with over 100 local and overseas agricultural scientists and biochemical engineers. They are responsible for the development and cultivation of micro-organisms for the biochemical process.

They adjust operating conditions to optimal levels to allow the micro-organism to work under the best conditions in a large fermentation tank. Also, they exercise online control to prevent contamination by means of a computerised workflow system. About 3% of the annual turnover is used to invest in research and development. GBT intends to have at least one new downstream product going into commercial production every two years.

Due to a lawsuit in the Netherlands (*see box – Dutch verdict*) market access problems occurred. In addition, products need to be registered by 2010. How is GBT coping with this? Zheng: "We will finalize our registration for Lysine HCL, Lysine Sulphate and Threonine before 2010 just as the EU feed regulations require. Our technical department is working on the dossiers."

So in future we might hear some more of GBT? "The court case was not good for us and maybe some more cases occur. But we will fight the accusations. In the meantime we want to show our presence in the market. We will not disappear", Zheng concludes. ●