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Seed China News



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Welcome to Seed China News 1111

Happy new year! It comes to the end of the year in a twinkling. Reviewing the whole year, the safety for GM products still remains a hot topic, with a widespread dispute in public. In order to dispel the public misunderstanding for GM products, Ministry of Agriculture (MOA) promoted an informative booklet on GM products in Dec. 2011.

According to the booklet, 29 countries approved the planting of GM crops and 59 countries approved the flow of GM crops on the market in 2010. It is said that so far there have been no food safety issues for GM products happening in the world.

The booklet also points out several common mistakes in public. For example, many people have the wrong idea that all the agricultural foods are from natural resources without genetic improvement. It is clarified that not only GM crops, but also hybrid crops have the gene transfer during the breeding process. Moreover, non-GM crops are relative not absolute safe for human beings.

At present, the common GM agricultural products in domestic markets include cotton, soybean oil, soybean products, rapeseed oil, papaya, etc. As for the GM technology in China, China will concentrate the efforts on accelerating research, promoting application and standardizing management for it.

If there are any specific topics you would like us to cover or investigate any of the subjects covered in more detail, please contact us by +86-20-3761 6606, or econtact@cnchemicals.com.



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Headlines of Seed China News

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China pays more attention to enhancing agricultural science and technology, especially in crop breeding and agricultural machinery.

China is striving to explore the overseas hybrid rice market by building production and demonstration zones in foreign countries.

Recently some listed companies are involved into seed quality issues, attracting great concern in the industry.

MOA reveals some practical difficulties encountered by seed production companies in Gansu Province.

Rijk Zwaan set up a new breeding station in China to enhance the influence in southern vegetable areas.

Longping High-tech CEO's resignation brings shocks to the company's stocks and shakes the whole seed industry.

Grand Agriseeds injects capitals into two subsidiaries to strengthen hybrid rice seed business.

Gansu Dunhuang acquires the exclusive production and sales rights of "Jixiang 1", an excellent corn hybrid illegally operated by numerous seed players.

HPSG, a state-owned seed company in Hubei, is striving to enhance the R&D capacity.

The secondary coating for corn seeds is believed to have a substantial application prospect in China.

Location of key companies covered in this issue





Policy

China pays more attention to agricultural science and technology

At the end of 2011, Chinese Ministry of Agriculture officially released the 12th Five-Year (2011-2015) Development Plan for Agricultural Science and Technology (the Development Plan), which requires that the overall contribution rate of agricultural science and technology to agricultural economic growth shall be over 55% in the period of the 12th Five-Year Plan (2011-2015), with 3% higher than that in the former five years.

According to the Development Plan, the innovation for agricultural science and technology should be the main task during the 12th Five-Year Plan period. For this, the central government demands the budgets at all levels to increase the financial investment in agricultural science and technology. Achieving the technological breakthrough would be mainly centered in crop breeding and agricultural machinery.

In crop breeding, the Development Plan points out that conventional breeding should be more tightly combined with biotechnology, for the target of selecting and cultivating more crop varieties with intellectual property. For this, a series of functional genes with independent intellectual property must be identified and fully utilized, with some high efficient gene transfer platforms to be established.

For the trait improvement, new crop variety breeding and selection will mainly centered in high yielding, good quality, multiple resistance and wide adaptability. More over, the new variety of major crops suitable for mechanized planting and harvest should also be developed

with great emphasis.

During the 12th Five-Year Plan period, the R&D for new crop varieties must follow the market-oriented and industrial breeding model. Therefore, domestic seed companies with large scale, strong strength and good growth are encouraged to integrate existing breeding resources. The research results from public welfare units should be fully utilized.

As for the agricultural mechanization, the Development Plan points out that the overall level of major crop planting and harvest must be over 60% during the 12th Five-Year Plan period.

According to the National Bureau of Statistics, China's total grain output hits 571.21 million tonnes in 2011, up 4.5% over 2010, resulting in eight successive years of growth in grain production. The harvests are inseparable from the increasing popularization of improved varieties and agricultural machinery. Actually, China's authorities have issued a series of policies and measures in crop breeding and agricultural machinery.

In order to continually guarantee grain production and further enhance agricultural economic development, the government would pay more attention to agricultural science and technology. It is reported that China's agricultural science and technology would enter a golden period in the coming ten years, with total financial investment from the government over USD470 billion in the period.

China exploring overseas markets on hybrid rice

China leads the world in breeding technology of hybrid rice with a large number of seed companies producing hybrid rice seeds. As domestic hybrid rice seed market tends to be saturated, some prominent companies are striving to enter foreign market, with great support from the government. It is believed that developing countries in Asia, Africa and Latin America shall become the emerging markets for China's hybrid rice companies.

Under the "Guidance for Promoting the International Development of Strategic Emerging Industries" (Guidance for Emerging Industries) issued in Sept. 2011, domestic seed companies are expected by the government to explore the emerging markets in Asia, Africa and Latin America. China's companies are encouraged to build production and demonstration zones in foreign countries and strengthen

the overseas promotion for new crop varieties.

On 25 Dec., 2011, China National Rice Research Institute (CNIRRI) cooperated with a local hybrid rice company to establish the ASEAN Rice Seed R&D Center in Guangxi Zhuang Autonomous Region (Guangxi), Southwest China. The new R&D center is committed to cultivating new hybrid rice varieties for local areas and Southeast Asian countries.

For the Southeast Asian countries such as Vietnam, Philippines, Indonesia, Thailand, with similar climatic conditions as the rice planting areas in the south part of China, could directly introduce hybrid rice varieties from Guangxi for trial planting.

In recent years, China has gradually enhanced the promotion of hybrid rice in foreign countries. A series of hybrid rice aid projects have been launched in other developing countries such as Pakistan, Indonesia, Philippines, Bangladesh, Uzbekistan, Guinea, etc.

With breeding stations or demonstration sites, China's hybrid rice is gradually recognized in foreign countries. For example, over 10 hybrid rice production demonstration sites have been built in Guinea, producing over 500 tonnes of rice seeds in 3,530 ha. rice planting areas now. It is understood that Madagascar already introduced over 30 hybrid rice varieties from China for trial planting.

Although the exports of hybrid rice seeds have constantly increased in recent years, the export destinations are only limited to a few countries such as Bangladesh, Myanmar, Philippines and Guinea, with a low level in both export volume and value.

Some industrial insiders believe that it would be a good strategy for domestic companies to establish hybrid rice demonstration zones in overseas countries, aiming to expand the local seed markets in the long run. For most African countries without strong sense of improved varieties, it may not easy for domestic companies to directly distribute hybrid seeds there. After demonstration and guidance, local farmers would be more receptive to improved varieties and fine seeds.

Encouraged by the government, some leading hybrid rice companies are actively exploiting overseas markets. For example, Longping High-tech is leading a Sino-Indonesian hybrid rice program, aiming to develop the best hybrid rice variety for Indonesia. Besides, the company also has a hybrid rice R&D center in Philippines which is committed to developing excellent hybrid rice.

Winall Hi-tech, another leading hybrid rice company, is striving to expand the hybrid rice market in Southeast Asia, with seed export business mainly covering Pakistan, Indonesia, Vietnam, etc. Actually, Winall Hi-tech is one of the key players exporting hybrid rice seeds to Southeast Asian countries.

With the increasing influence of hybrid rice worldwide, a number of overseas countries, especially those in Asia, Africa and Latin America are hoping to introduce hybrid rice technology from China. There should be a huge market space for hybrid rice seeds, as the coverage rate of hybrid rice is still very low in most foreign countries.

It is believed that the developing countries in Asia, Africa and Latin America which have maintained close relationship with China for years would provide a great platform for Chinese seed companies to achieve the internationalization in future. Of course, the talent resources and breeding techniques must be fully enhanced before domestic seed companies really lead the overseas hybrid rice markets.

PICTURE 1: Hybrid rice promoted in Guinea, May 2009



Source: Chinese Embassy in Guinea

Dynamic

Seed quality issues traced in listed companies

As is known to all, product quality is the lifeblood for the development of a company. While among domestic seed players, quality problems of seed products have been exposed from time to time. However, the seeds with poor quality not only hinder the healthy development of seed companies, but also cause damage to agriculture production in varying degrees.

On 29 Nov., 2011, the China's Ministry of Agriculture (MOA) released the seed sampling results of 2011 spring market, which cover 30 crops, such as corn, rice, cotton, soybeans, rapeseed, spinach, watermelon, etc. According to the sampling results, nearly 15% of the 1,195 seed samples checked are unqualified based on the detection values of seed cleanliness, germination rate, water content and seed purity.

Five listed companies are on the MOA's sampling-failure list, respectively Winall Hi-tech Seed Co., Ltd. (Winall Hi-tech), Grand Agriseeds Technology, Inc. (Grand Agriseeds), Gansu Dunhuang Seed Co., Ltd. (Gansu Dunhuang), Shandong Denghai Seeds Co., Ltd. (Shandong Denghai) and Origin Agritech Limited (Origin). So far, there have been totally nine listed seed companies in China, including Origin which is listed on Nasdaq stock exchange in the US.

Actually, all listed companies in seed business encountered the fall in stock price on the second day when MOA issued the sampling-failure list. At the close on 30 Nov., 2011, the stock price for Winall Hi-tech, Gansu Dunhuang, Grand Agriseeds and Shandong Denghai respectively dropped by 10.01%, 5.07%, 4.83% and 4.42% over the previous trading day. Besides, listed seed companies excluded in the sampling-failure list also suffered stock setback in varying degrees on 30 Nov., 2011, such as Hefei Fengle Seed Co., Ltd. (Hefei Fengle, down 3.20%) and Yuan Longping High-tech Agriculture Co., Ltd. (Longping High-tech, down 4.35%).

As for the traced seed quality issues, the listed companies concerned make different responses, all aiming to

minimize the negative impacts on themselves. So far, except Origin, other companies involved have made an explanation for the seed quality issues.

Winall High-tech, a prominent hybrid rice company, has been greatly affected by the seed quality event. The hybrid rice seeds of variety "Xinliangyou 343" was traced to be unqualified due to the checked seed purity of 87.6%, significantly lower than the tagged value of 96%, also the lowest value for hybrid rice seeds prescribed by the state.

"Xinliangyou 343", a national approved variety released in 2010, is promoted by Winall High-tech mainly in Anhui and Hubei provinces, with a small annual seed output of around 20 tonnes. Winall High-tech admitted that effective isolation measures were not well taken in small-scale seed production, leading to the outflows of lower-purity hybrid rice seeds.

On the other hand, Winall Hi-tech claims that its technical staff have strengthened the field cleaning work and taken effective isolation measures, aiming to breed high-purity hybrid seeds. According to Winall Hi-tech, after the strict quality control, the purity of the newly-produced "Xinliangyou 343" seeds amounts to 97%, already higher than the tagged value of 96%.

Grand Agriseeds also claims that its hybrid rice seeds with lower germination rate were already handled completely as early as June this year, after the company was informed the seed sampling results from MOA this April. As for the unqualified batch seeds with lower germination rate, Ou Qiusheng, Board Secretary of Grand Agriseeds believes that they are probably attributed to the imperfect management in seed transport. Mr. Ou also insists that the quantity of the unqualified seeds is very small, with only few hundreds of kilograms.

According to MOA's seed sampling-failure list, Shandong Denghai is involved in the unqualified seeds of "Shibin 28", a corn hybrid. However, Shandong Denghai released a

TABLE 1: Seed sampling results of 2011 spring market released on 29 Nov. 2011

Crop types	Passing rate	Total sample	Detection items
Hybrid corn	86.0%	593	Seed cleanliness, germination rate, water content, seed purity
Hybrid rice	91.7%	303	Seed cleanliness, germination rate, water content, seed purity
Conventional rice	96.0%	50	Seed cleanliness, germination rate, water content
Cotton	95.5%	22	Seed cleanliness, germination rate, water content
Soybean	100.0%	6	Seed cleanliness, germination rate, water content
Other crops	69.7%	221	Seed cleanliness, germination rate, water content

Source: Ministry of Agriculture



public notice on 30 Nov., 2011 to deny its role in producing the inferior corn seeds. Although the manufacturer marked on "Shibin 28" seed packaging is "Shenyang Shibin Breeding Institute, Shandong Denghai Seeds Co., Ltd.", Shandong Denghai insists that the inferior corn seeds were actually produced by Shenyang Shibin Breeding Institute, which is definitely not the subordinate unit of Shandong Denghai. The company also added that it once consulted with the institute on establishing a joint venture, but the two sides failed to reach an agreement on it.

Moreover, Shandong Denghai's majority-owned subsidiary Shandong Denghai-Pioneer Seeds Co., Ltd. (Denghai-Pioneer) was traced by MOA to produce unqualified "Xianyu 335" seeds with higher water content or lower germination rate. However, CCM International was informed by Deputy General Manager of Shandong Denghai, the same batch of "Xianyu 335" seeds were approved to be totally qualified, according to the indoor testing of Denghai-Pioneer itself. Furthermore, farmers have not found any germination problems on planting "Xianyu 335".

Revealed by industrial insiders, the traced seed quality issues would not cause great influence to the marketing of "Xianyu 335", mainly owing to its unique advantage in high yielding and dehydration property.

Gansu Dunhuang made an explanation on 6 Dec., 2011, saying that the exclusive water content in "Jidan 261" corn seeds is owing to the moisture in storage, and the unqualified purity of "Dunhuang 518" is attributed to staff's negligence. The company also claimed that all the corn seeds with quality issues have been recalled in time,

with no significant damage to corn growers.

As for corn seeds "Xianyu 420" and "32D22" produced by Dunhuang-Pioneer Seed Co., Ltd. (Dunhuang-Pioneer), Gansu Dunhuang's majority-owned joint venture, their germination rate detected by MOA is lower than the marked value on the package. In a similar way as Shandong Denghai, Gansu Dunhuang also insists that the two corn hybrids promoted by Dunhuang-Pioneer in Northeast China have no germination or seedling problems while being planted in fields. However, the company believes that the local dealers' poor storage conditions would possibly be blamed for the substandard germination rate traced by MOA.

According to Tong Pingya, CCM International's consultant in seed industry, MOA's seed sampling results of 2011 spring market should not have significantly negative impact on the listed companies involved in seed quality issues, since the new season for seed production and sales has already started. It is believed that enough buffer time has been left for those leading players involved to solve the problems in seed breeding or production, which may not be troubles for their future development.

However, the listed seed companies in MOA's sampling-failure list have been widely exposed in China, which has created a bad reputation to them in the industry. Furthermore, some companies have been linked with seed quality issues more than once. In the long run, seed players' development should be greatly hindered unless they take active measures to enhance quality control and deliver crop seeds with acceptable quality.

Some difficulties encountered by corn seed manufacturers

In early Dec., 2011, China's Ministry of Agriculture (MOA) released the inspection results of seed production companies in the seed production bases of Gansu Province, mainly covering Zhangye City and Jiuquan City. A series of practical difficulties for the companies were revealed in MOA's inspection results, such as insufficient drying capacity, tight transport, intense competition, rising seed production costs, etc.

The inspection starting from 17 Nov., 2011, was implemented by MOA's Seed Administration Bureau just founded this Sept. It is the first time that Seed Administration Bureau carried out inspection activities after the establishment.

According to Seed Administration Bureau, in 2011, seed production companies generally buy wet corn ear from seed production farmers and then dry the corn ear under natural conditions or by drying equipment, rather than directly purchasing dry corn ear from farmers in the past

years. New drying equipment with high price have being introduced by corn seed manufacturers, but the overall drying capacity can only meet 1/3 of total production demand.

Corn seed manufacturers also reflect that it is really not easy to get a chance to deliver corn seeds by railway due to the tight transport between East China and West China. They have to pay higher fees to increase transport capacity, which would greatly increase their cost burden.

In addition, more corn seed manufactures' entering leads to the intense competition in local seed production industry. For each manufacturer, the annual average area of corn seed production fields has shown a downward trend. The total area of fixed seed production fields maintains around 60,000 ha. in Zhangye City from 2009 to 2011, while the number of the corn seed manufacturers increases from 36 to 72.

Moreover, the production cost for corn seeds has continued to rise in recent years. Apart from agricultural material input, the costs in corn seed processing, transportation and labor force also rise significantly from 2009 to 2011. Revealed by many corn seed manufacturers, the production cost for corn seeds should continue to increase in the next year.

As for those corn seed purchasing and storage companies which generally prepay the purchasing corn seeds through loans, they have to face tremendous financial pressure as the general increase of bank lending rates. Owing to the great risk in corn seed breeding, it is really difficult for the purchasing and storage companies obtain social funds. Generally speaking, the financing cost is very high for corn seed purchasing and storage companies.

As for the practical difficulties in corn seed production, manufacturers hope that the government could provide great support in solving the difficulties. They put forward some expectations listed as follows.

First of all, the government should make rigorous examination to the qualifications and capabilities of seed production companies, in accordance with the newly released Management Regulations for Crop Seed Production and Operation. Large-scale companies should be supported with priority in maintaining fixed corn seed breeding areas.

Secondly, the state financial should provide special subsidies to big corn seed manufacturers. Some manufacturers recommend that the special subsidies for corn seed production ought to reach USD710/ha.~USD1,183/ha. (RMB300/mu~RMB500/mu), in way of direct cash subsidy or providing seed machinery.

Thirdly, the infrastructure construction for corn seed production should be enhanced. The state financial is advised to increase support for the construction of seed production bases, mainly in land formation and drip irrigation facilities.

At last, the government should develop detailed policies or measures to solve the difficulties in talent introduction and resources sharing, aiming to strengthen the commercial breeding capacity of seed production companies.

Zhangye City is the largest corn seed production base in China, providing over 40% of the national seed consumption for field corn. It is understood that the total corn seed output in Zhangye City exceeds 450,000 tonnes in 2011, with another bumper harvest. Nearly all the prominent corn seed manufacturers including Shandong Denghai, Liaoning Dongya, Hefei Fengle, Origin, etc., have built corn seed production fields and seed processing plants in Zhangye City. The industrial operation system in the mode with the combination of "company + base + farmer" has greatly promoted the local economic development.

PICTURE 2: Farmers do emasculation work in corn seed production fields, Zhangye City



Source: Zhangye Municipal Government

R&D

Rijk Zwaan opens second breeding station in China

On 21 Nov., 2011, Rijk Zwaan, a Netherlands-based multinational corporation specializing in vegetable seed breeding and supplying, officially set up the second breeding station in Guilin City, Guangxi Zhuang Autonomous Region (Guangxi), Southwest China. The Guilin breeding station, covering an area of over 10 ha., has been started to be constructed since 2008 with the estimated total investment of USD3.15 million (RMB20 million). Committed to breeding vegetable varieties for the south part of China, the Guilin breeding station shall play an important role in Rijk Zwaan's expansion strategy.

Local authorities expect that Rijk Zwaan's new breeding station could cultivate more excellent and adaptable vegetable varieties for growers and make contribution to the development of the vegetable industry. It is understood that local authorities have given Rijk Zwaan full support from setting up to the opening of the breeding station.

It is understood that the new breeding station is mainly committed to breeding new varieties of watermelon and tomato. Rijk Zwaan expects to develop more watermelon varieties adapting to the tropical regions in China and even the countries near by. More high-end tomato varieties with strong disease resistance and excellent quality will be also developed specially for the south part of China.

Rijk Zwaan's vegetable seeds had entered Guangxi market since 2003 and the breeding work in Guangxi was started in 2008. After a lot of fundamental work, the company has accumulated abundant resources for new variety breeding.

Guangxi is an important vegetable base in south part of China, mainly supplying vegetables sowed in autumn and winter. According to related statistics, the planting areas of vegetable in Guangxi hit 1.13 million ha. in 2010, with the yield of 24.37 million tonnes and output value of USD3.74 billion. Several major vegetable bases have been formed in Guangxi, such as cherry tomato in Tianyang, watermelon

and sweet corn in Nanning City, pepper in Qingzhou City, tomato in Guilin City, etc.

With the continuing expansion of vegetable planting, Guangxi has become an important market for vegetable seed companies both at home and abroad. At present, vegetable seed companies from Guangdong Province are still the main force in Guangxi vegetable seed market. The R&D capability for vegetable seed in Guangdong is much stronger than that in Guangxi and the climatic conditions in Guangxi are similar to that in Guangdong for their neighboring locations.

Overseas companies such as Rijk Zwaan and Nunhems mainly eye the high-end vegetable seed market in Guangxi. Excellent tomato seeds with higher prices have gradually occupied a larger market in Guangxi and other southern areas of China. It is noteworthy that Nunhems also owns a vegetable breeding station in Guangxi, which is mainly engaged in tomato breeding.

This time the official opening of Rijk Zwaan's new breeding station in Guangxi would bring great opportunities to the companies in enhancing the influence in local vegetable seed markets. By introducing vegetable varieties suitable for local conditions, Rijk Zwaan is expected to occupy more market share in Guangxi, or even the south part of China.

Rijk Zwaan headquartered in the Netherlands, was founded in 1924, specializing in vegetable seed breeding, production and marketing. In 2001, Rijk Zwaan set up a Chinese subsidiary in Qingdao City, Shandong Province, called Rijk Zwaan Qingdao Seed Co., Ltd. Later, the subsidiary was renamed as Rijk Zwaan China Seed Co., Ltd. The first Chinese breeding station of Rijk Zwaan was also located in Qingdao, which has played a key role in cultivating new vegetable varieties for the north part of China, especially in Shandong Province which owns the largest vegetable base of China.

PICTURE 3: Opening ceremony of Rijk Zwaan Guilin breeding station, 21 Nov. 2011



Source: Guilin Municipal Government



Company

Longping High-tech's stock price plummeting as resignation of its CEO

On 3 Dec., 2011, Yuan Longping High-Tech Agriculture Co., Ltd. (Longping High-tech) released a public announcement saying that its CEO David Liu (Chinese name: Liu Shi) resigned for personal reasons, which not only brings shocks to the company's stocks, but also shakes the whole seed industry.

Board of the company received the resignation from David Liu on 1 Dec., 2011 and adopted the resignation the very next day when the stock price of Longping High-tech dropped by 7.21%. When the company's stock resumed trading on 6 Dec., 2011, some major tradable shares sold the stock holdings in a huge number, with the closing price down 9.51%.

Longping High-tech, a domestic leader in hybrid rice seed business, employed David Liu as CEO on 23 April, 2010, mainly to enhance its competitiveness in domestic corn seed industry. David Liu was well known for having successfully promoted Pioneer's hybrid corn "Xianyu 335" in China before he entered Longping High-tech. The industry was also looking forward to the great change in Longping High-tech brought by David Liu.

A series of initiatives including acquisition and collaboration have been implemented in Longping High-tech after David Liu became CEO. Longping High-tech gradually promoted the collaboration with the seed giant Limagrain, by introducing the corn hybrid "Lihe 16" and signing agreements to set up a joint venture. On the other hand, Longping High-tech transferred all the 60% holdings of Beijing Tunyu Seed Co., Ltd., a sales company of hybrid corn seeds, as it failed to enhance the corn seed business by holding the latter.

After David Liu entered Longping High-tech, the stock price rose to a record high. And David Liu's leaving this time also causes great impact on the stocks.

The company says the future developing orientation shall not change after David Liu's resignation. Yan Weibin, Longping High-tech's Vice Chairman and the predecessor of David Liu, serves as the new CEO. Mr. Yan has held the senior position in Longping High-tech for years, possessing a comprehensive experience to lead the whole group. It is believed that the company should still maintain a good development momentum in the future, with major strategic decisions unchanged.

Longping High-tech affirmed David Liu's contribution during his CEO tenure, saying that he has played an important role in promoting the development of corn seed business and improving the management level of the company. Under David Liu's leadership, Longping High-tech enhanced the production of high-profit corn seeds, with a modern corn seed processing plant being built in Zhangye City, Gansu Province.

Objectively speaking, Longping High-tech under David Liu's leadership achieved dramatic development, with dual growth for revenue and net profit in 2010. At the end of Oct. 2011, the company predicted its substantial profit growth for the year 2011.

As an innovator, David Liu wishes a new platform for innovation and breakthrough. As for the future plan, the industry estimates that he would no longer be a professional manager and probably start his own company on seed business.

David Liu served as Regional Sales Manager of Monsanto in China from 1993 to 2001, playing a crucial role in promoting Monsanto's Bt cotton varieties in China. Later David Liu joined Pioneer in 2001 as president for its operation in China and vigorously promoted "Xianyu 335". In early 2010, he officially left Pioneer and joined Longping High-tech in April 2010, serving as CEO till Dec. 2011.

FIGURE 1: Stock price of Longping High-tech, July 2010-Nov. 2011



Note: RMB USD Exchange Rate changes between 6.32 and 6.81 from July 2010 to Nov. 2011.

Source: Google Finance

Grand Agriseeds increases investment into two subsidiaries

Grand Agriseeds Technology, Inc. (Grand Agriseeds), a Hainan-based company listed in early 2011, released public announcements to increase the investment into two subsidiaries: Sichuan Grand Agriseeds Co., Ltd. (Sichuan Grand) and Fujian Grand Agriseeds Co., Ltd. (Fujian Grand), with part of the raised funds from IPO.

According to Grand Agriseeds' announcements, USD3.90 million of the raised funds from IPO will be paid to increase the registered capital of Sichuan Grand. Coupled with the USD47,313 from Hainan Grand Investment Co., Ltd. (Grand Investment, another subsidiary of Grand Agriseeds), the registered capital of Sichuan Grand will be increased from USD788,550 (RMB5 million) to USD4.73 million (RMB30 million).

As for Fujian Grand, the registered capital will also be increased from USD788,550 (RMB5 million) to USD4.73 million (RMB30 million), with the joint investment from Grand Agriseeds (USD3.41 million) and Grand Investment (USD536,214).

Both Sichuan Grand and Fujian Grand are mainly engaged in hybrid rice seed business, playing key roles in expanding provincial markets for Grand Agriseeds. This time Grand Agriseeds's increasing investment into the two subsidiaries is also in line with the newly released Management Regulations for Crop Seed Production and Operation, which defines that the registered capital of seed companies in hybrid rice or hybrid corn should be no less than USD4.73 million (RMB30 million).

With the capital injection from the parent company, Sichuan Grand and Fujian Grand should have stronger financial ability to upgrade seed production technology and expand business scale.

Sichuan Grand, located in Sichuan Province, Southwest China, was founded by Grand Agriseeds in March 2005, with main businesses covering hybrid rice seed, wheat seed and hybrid corn seed. In 2010, the company achieved USD1.71 million of total revenue and USD202,570 of net profit. According to Grand Agriseeds, the net profit of Sichuan Grand should maintain a steady growth in the next three years.

Sichuan Province is a key hybrid rice production base in China, with annual rice planting area of around 2 million ha. Hybrid rice accounts for over 90% of total rice planting area in the province where high-quality hybrid rice seed is greatly demanded. In addition, the province also possesses outstanding advantages in hybrid rice R&D and hybrid seed breeding. Therefore, Grand Agriseeds is expected to increase its influence on southwest hybrid rice seed market by injecting capital to Sichuan Grand.

Fujian Grand, located in Fujian Province, Southeast China, was founded in July 2005, with hybrid rice seed as its dominant product. The revenue and net profit of Fujian Grand respectively amounted to USD1.84 million and USD260,625 in 2010. Hybrid rice is the major food crop of Fujian Province, with annual planting area of around 900,000 ha., accounting for about 50% of total grain crop planting area in the province. For the province, the annual demand for hybrid rice seed is over 10,000 tonnes, mainly from local seed companies. Based on Fujian Grand, Grand Agriseeds plans to achieve wide distribution in Fujian Province, and also the areas of middle and lower reaches of Changjiang River.

Grand Agriseeds, a newly listed hybrid rice company, totally raised USD151.40 million of funds from IPO. After

FIGURE 2: Forecast on investment returns, Grand Agriseeds, 2012-2014



Note: Hunan Grand: Hunan Grand Agriseeds Co., Ltd., Sichuan Grand: Sichuan Grand Agriseeds Co., Ltd., Fujian Grand: Fujian Grand Agriseeds Co., Ltd.

Source: Grand Agriseeds Technology, Inc.



getting listed, the company saw slight growth in both the revenue and net profit in the first three quarters of 2011, with core business of three-line hybrid rice seed. Revealed by industrial insiders, the gross margin of Grand Agriseeds' hybrid rice seed is lower than that of the counterparts such as Longping High-tech, Hefei Fengle and Winall High-tech, mainly owing to its weak R&D ability in developing high-end hybrid rice varieties.

In order to further enhance the influence in the industry, Grand Agriseeds has been constantly injected capital to its subsidiaries in different areas with the raised funds from IPO. Before investing Sichuan Grand and Fujian Grand, Grand Agriseeds also increased the registered capital of other two subsidiaries: Hunan Grand Agriseeds Co., Ltd. (Hunan Grand) and Hunan Detian Seed Co., Ltd. (Hunan

Detian), respectively in Aug. and Oct. 2011.

In order to develop Hunan Grand into a national seed company, Grand Agriseeds totally injected USD10.87 million into the subsidiary and the registered capital of Hunan Grand increased to USD15.52 million (RMB100 million). Besides, Grand Agriseeds successfully controlled Hunan Detian by increasing investment. Both the two subsidiaries are located in Hunan Province, the largest rice planting area in China. Relying on Hunan Grand and Hunan Detian, Grand Agriseeds intends to expand hybrid rice seed market in Hunan Province, and also the surrounding areas covering provinces like Jiangxi and Hubei, which are also the important rice production bases in China.

"Jixiang 1" purchased by Gansu Dunhuang

!! "Jixiang 1", an excellent corn hybrid, was reported to have the second largest promotion areas, only after "Zhengdan 958" among domestic hybrid corn varieties. However, no more than 10% of "Jixiang 1" seeds on the market are approved, with the remaining operated by over 60 seed companies without permission. Therefore, the corn hybrid urgently requires property protection and unified operation.

On 22 Dec. 2011, Gansu Dunhuang Seed Co., Ltd. (Gansu Dunhuang), a listed hybrid corn company in China, released a public notice saying that it already bought the production and sales rights of "Jixiang 1" from Wuwei Institute of Agricultural Sciences (WIAS), the breeder and owner of "Jixiang 1". Under the agreement signed by the two parties on 16 Dec., Gansu Dunhuang totally paid USD4.23 million to WIAS for exclusively production and sales rights of "Jixiang 1" seeds.

Before the transaction, only two companies associated with WIAS have been authorized to produce and market "Jixiang 1" seeds, namely Wuwei Wuke Seed Technology Co., Ltd. and Wuwei Ganxin Seed Co., Ltd. It can be speculated the two companies would get corresponding compensation from the contract change. The proprietary right of "Jixiang 1", originally half-and-half belonging to WIAS and a natural person Huang Wenlong, was totally vested in WIAS after a transfer agreement signed on 10 Dec. 2011.

It seems to Gansu Dunhuang, "Jixiang 1" owns multiple outstanding advantages covering high yielding, strong stress tolerance, high disease resistance, nice grain quality, etc. More importantly, the corn hybrid shows wide adaptability, suitable for planting in Huang-Huai-Hai area (covering provinces of Henan, Hebei, Shandong, etc.) and part of Gansu Province. Obviously, Gansu Dunhuang has great expectations on the corn hybrid, looking forward to returning steady profit in future.

Revealed by the industry, it may not easy for "Jixiang 1" to acquire the national approval and get released in the whole country as "Jixiang 1" has been suspected to be an "imitation" of "Zhengdan 958". So far, "Jixiang 1" has been registered and released only in Henan Province and Gansu Province.

Not long ago Gansu Dunhuang was reported to produce and market fake-licensed "Jixiang 1" seeds, which has shocked the industry. With huge investment, the company has turned into the exclusive operators for "Jixiang 1", which also surprises the whole industry. Moreover, "Jixiang 1" will always be operated by Gansu Dunhuang until it eventually exits the seed market, which is estimated to last over 10 years.

In view of the existing numerous infringers, "Jixiang 1" still requires a strong market protection and property protection. Gansu Dunhuang says that it will litigate all the infringements on "Jixiang 1", according to relevant laws and regulations.

To guarantee the future supply of "Jixiang 1" seeds, Gansu Dunhuang plans to build a 30,000 t/a corn seed processing plant in Wuwei City. USD7.89 million (RMB50 million) has been invested by Gansu Dunhuang to register a subsidiary named Wuwei Dunhuang Seed Co., Ltd., which acts as the main body for the plant construction.

Based on the future plant in Wuwei City, Gansu Dunhuang expects to produce sufficient amount of "Jixiang 1" with high quality. Wuwei City is also one of the major seed production bases in Gansu Province, apart from Zhangye City, Jiuquan City, etc. The corn seed production fields in Wuwei City maintains around 33,333 ha. each year. Moreover, relying on the new subsidiary, Gansu Dunhuang also looks forward to the follow-up cooperation with Wuwei Institute of Agricultural Sciences (WIAS).

Actually, all the money invested in "Jixiang 1" and new subsidiary comes from the raised funds which were supposed to be invested in a tomato deed processing project of Gansu Dunhuang. In order to enhance the core competitiveness in corn seed business, Gansu Dunhuang

made adjustments to the use of the raised funds. Relying on "Jixiang 1", the company eases the thirsty to excellent corn varieties and would greatly increase profitability in future.

HPSG enhancing R&D capacity

In Nov. 2011, Hubei Provincial Seed Group Co., Ltd. (HPSG), a state-owned seed company based in Hubei Province, opened a research station in Yichang City, west of Hubei Province, the third R&D base after the other two in the province. The company is striving to strengthen its R&D capacity and enrich variety resources.

Just like most of other seed players in China, HPSG has not yet set up a commercial crop breeding system, with an overall backward situation in breeding methods and techniques. The innovation ability for crop variety improvement is still relatively weak owing to the lack of talents and germplasm resources.

It is believed that HPSG's crop breeding is out of connection with the seed production. Besides, the company lacks sufficient seed production bases and fine seed processing plants. Overall, there is still a long way to go before HPSG grows into a national seed group in the mode with the combination of breeding, propagation and promotion.

In view of the deficiencies in the development process, HPSG wishes to obtain key support from the government in three major projects: commercial breeding system, special base for seed production and seed precision processing center.

Most of HPSG's crop varieties are introduced from research institutes or jointly cultivated with other units, with few varieties developed by itself. As the largest seed player in the province, HPSG specializes in crop breeding, seed production and marketing for both field

and horticultural crops. Hybrid rice, cotton, corn and rapeseed are the dominant crops of the company. Besides, the company also produces and distributes oil sunflower seeds, sesame seeds and green manure seeds.

HPSG is among the top 50 seed companies in China, with its large production scale and big sales. Compared with other leading seed players in China, the company depends more highly on introducing varieties from research institutes. Its long-term dependence on government also leads to the weakening of competitiveness in the market. It would be a rather long process for HPSG to set up a commercial crop breeding system and grow into a prominent seed group in the mode with the combination of breeding, propagation and promotion.

Hubei Provincial Seed Group Co., Ltd., (HPSG) located in Wuhan City, Hubei Province, was founded in 1978. In 2000, the company set up a R&D center called Hubei Province Introduction and Breeding Center for Improved Crop Varieties, which is committed to breeding and introducing new crop varieties. With a good sales network, HPSG's seed products are widely distributed in the province and also the surrounding areas across the middle and lower reaches of Changjiang River.

In terms of seed export, HPSG leads other counterparts in China, with hybrid rice seeds, cotton seeds, corn seeds and oil crop seeds exported to Bangladesh, Pakistan, Myanmar, Malaysia, India, Indonesia, and Vietnam, etc. With great support from the government, HPSG has been gradually increasing its export volume and value, always ranking the first place among domestic seed companies in recent years.

PICTURE 4: Zhongyouza 11, a rapeseed variety operated by HPSG



Note: Zhongyouza 11, bred by Chinese Academy of Agricultural Sciences, became a national approved variety in 2005. HPSG: Hubei Provincial Seed Group Co., Ltd. Source: Hubei Provincial Seed Group Co., Ltd.

Seed treatment

Corn seed secondary coating has large market space in China

Corn seeds with coating have been widely recognized by domestic growers, but most of the coating agents for corn seeds are still unable to effectively solve severe pest infestation during corn growth. Under such circumstances, the secondary coating for corn seeds is believed to have a substantial application prospect in China.

Revealed by the industry, a number of agrochemical companies are striving to develop the secondary coating agent, in order to seize the market opportunities as soon as possible.

At present, there has been a wide variety of corn seed coating agents, while the main components are nothing more than carbofuran, thiram, tebuconazole, carbendazim, etc., mainly for the control of soil pests and maize head smut. However, other common pests such as *athetis lepigone*, aphid, thrips, etc., are still can not be effectively controlled by the conventional seed coating.

On the other hand, not a few corn seeds with coating in the market only have a good appearance, rather than an excellent performance in preventing or controlling pests and diseases.

The serious damage caused by corn pests can not be ignored, which requires better quality or multi-layer coating for corn seeds.

For example, thrips caused serious harm to corn seedlings in the spring corn planting areas in China in 2011, mainly owing to the appropriate temperature for thrips in last winter and this spring. It is suggested that the secondary coating for corn seeds should be done before sowing, as the corn seeds with coating agents generally can't prevent the

seedling pests like thrips, planthopper, etc.

In recent years, seriously harm to corn seedlings caused by *athetis lepigone* has been found, especially in the summer corn areas of Huang-Huai-Hai plain in China. In wheat-corn interplanting fields, the larva of *athetis lepigone* hiding in fragmented wheat straw or surface soil usually bites the stem base or the root of corn, making the corn seedling wither or lodge.

However, most coating agents on ex-factory corn seeds still can't effectively prevent and control *athetis lepigone* and the secondary coating for corn seeds before sowing would be a nice solution for the insect pest. Some insiders believe that the agent composed of chlorantraniliprole and fipronil for corn seed secondary coating can nicely control *athetis lepigone*, aphid and thrips, etc.

Of cause, there are also significant risks for the promotion of secondary coating agents. It must be ensured that no chemical reaction happens among the components in twice coating without conflict in the efficacy. Otherwise, corn seeds with secondary coating would be damaged, or with poor efficacy. It is really important for corn growers to figure out the main components of the first coating agents before they do secondary coating to corn seeds. Therefore, sufficient experiments and demonstration must be done before a secondary coating product enters the market.

The secondary coating for corn seeds also increases the costs of corn growers and it may be not easy for them to accept the secondary coating in the short term. Moreover, the convenient and efficient technical operation of secondary coating is also very important to corn growers.

PICTURE 5: Corn plant harmed by *athetis lepigone*



Source: <http://www.nyshow.com.cn/>

Brief news

Seed export increases dramatically in Beijing

There are totally 12 enterprises having the crop import and export qualification in Beijing. In 2011, nine enterprises conduct seed import and export business, with the import value reaching USD53.33 million and the import volume of 5,003.77 tonnes (6.46 million plants). Overall, the seed import in 2011 decreases over the previous year while the seed export increases dramatically. According to the statistics, the crop seed export value and volume amount to USD1.54 million and 433.2 tonnes in 2011, with 7.60 times and 34 times over that in 2010, respectively.

Shandong Denghai injects capital to its subsidiary

On Dec. 2011, Shandong Denghai Seeds Co., Ltd. (Shandong Denghai), a listed corn seed company, passed a motion to increase the registered capital of Changjizhou Denghai Seeds Co., Ltd., a wholly-owned subsidiary located in Xinjiang, Northwest China. After capital injection, the registered capital of the subsidiary will increase to USD4.73 million (RMB30 million) from the original USD1.26 million. In the first three quarters of 2011, the total revenue and net profit of the subsidiary respectively amount to USD1.99 million and USD1,140.

China imports USD26.9 billion of soybeans in Jan.-Nov. 2011

It was reported lately that China totally imported USD26.9 billion of soybeans from Jan. to Nov. in 2011, up 21.3% year on year. While the soybean import volume amounts to 47.21 million tonnes, down 4.4% year on year. During the same period, China exported 180,000 tonnes of soybeans, up 19.6% year on year, with USD139.45 million of export value, up 28.9% year on year.

State Council commends huge cereal growing farmers

On 26 Dec., 2011, State Council held a commendation meeting in Beijing, attended by Prime Minister Wen Jiabao. At the meeting, 300 huge cereal growing farmers across the country were encouraged and awarded, for their outstanding contribution to national grain production in 2011. It is the first grain production commendation meeting held by State Council in China.

Guangdong 10th Seed Expo held in Guangzhou

During 12 to 14 Dec., 2011, Guangdong 10th Seed Expo was held in Guangzhou. Major vegetable seed companies at home and abroad participated in the exhibition, with over 200 recommended vegetable varieties on display. Guangdong, as a key vegetable planting area in South China, has become a more and more important target market for vegetable seed companies from North China and foreign countries.

Henan issues suggestions for developing seed industry

In late Nov. 2011, Henan provincial government issues the suggestions on accelerating the development of modern crop seed industry, which demands that the coverage rate for improved variety in the province should be over 96% by 2015. In the future ten years, the provincial government is going to support 3-5 leading seed enterprises with priority in the province. Henan Province, located in central China, is a key grain production area, especially for wheat and corn.

First seed storage and logistics park settled in Changsha

In Dec. 2011, the construction project for the first seed storage and logistics park in China was launched in Changsha City, Hunan Province, with total investment of USD119.87 million. The park covers an area of about 15 ha., near National Hybrid Rice Research Center and some seed enterprises. After the completion of the construction, the seed storage and logistics park will meet the demand of local seed companies in seed storage, quarantine and processing.

Yunnan exports USD150 million of flowers in 2011

As a leading flower production area in China, Yunnan Province achieves USD3.66 billion of output value in flowers, with 42,000 ha. of planting areas and USD150 million of export value.

Yunnan, located in Southwest China, is an important flower production base in the world, with flowers exported to about 50 countries and regions. The local government plans to build the Asia's largest flower production center and market center by 2015

Planting areas increase for autumn and winter sowing corps

According to the survey by Ministry of Agriculture in Dec. 2011, the planting areas of autumn and winter sowing corps amount to around 29.47 million ha. this year, with 273,333 ha. more than that in 2010. Winter wheat covers 22.67 million ha. and winter rapeseed covers 6.80 million ha.

Peanut planting increases in 2011

According to the latest forecast from National Grain and Oils Information Center, the total planting area and the total output of peanut amount to 4.70 million ha. and 16.20 million tonnes in 2011, up 3.82% and 3.55% year on year respectively. Hebei, Shandong, Henan and Jiangsu are the main peanut planting areas in China.



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