Founded in April, 1982, China Crop Protection Industry Association (CCPIA) was one of the earliest trade associations in China's chemical field. It is a non-profit national institution covering different regions, organizations/departments and industries, and possesses independent legal person status.

In the course of the more than two decades period since its establishment, CCPIA has undergone rapid development, witnessing its members increased from the originally 45 to 564 at present, covering producers/enterprises, R & D and design institutions, universities and colleges, provincial/municipal pesticide associations related with technicals and formulations, intermediates, auxiliaries, packing materials, packing equipments and applying machines, etc. CCPIA members companies’ production value accounts for 90% of the national total pesticide production.

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Imidacloprid product report
At present, there are altogether more than 60 registered imidacloprid manufactures in China with an annual capacity of 25,000 tonnes (based on 100% a.i.), China’s imidacloprid output is about 12,000 tonnes/year, accounting for two thirds of the world’s total output. The domestic demand for imidacloprid is 3,000-4,000 tonnes/year and the remaining 8,000 tonnes are exported. There are some large imidacloprid producers in China, including Jiangsu Ke Sheng Group Co., Ltd., Nanjing Red Sun Co., Ltd., Qingdao Hailier Pharmaceutical Co., Ltd., Shandong Sino-Agri United Biotechnology Co., Ltd. and Jiangsu Changqing Agrochemical Co., Ltd.

Glyphosate product report
By June 2012, there have been 124 registered enterprises of glyphosate manufactures in China, including 61 licensed enterprises in agrochemicals production and only 56 enterprises that met all of the required procedures in this regard. However, just over 20 enterprises are running business due to strict environmental protection supervision. And the capacity of glyphosate technical in China remains 600,000 tonnes.

2,4-D product report
Currently, there are only 9 enterprises with a valid registration certificate of 2,4-D technical, including 5 manufacturing license holders, with a total deliverability of over 80,000 tonnes or so against a total domestic demand of approximately 8,000 tonnes.

Other product reports:
Paraquat
Acetochlor
Carbendazim
Mancozeb
Abamectin
Chlorpyrifos
Chlorothalonil
Acephate
Pymetrozine
Glufosinate
Azoxystralin
Triazines
Thiamethoxam
Nicosulfuron
Transfluthrin
Mesotrione, etc.

Besides, CCPIA issued the China Crop Protection Industry Yearbook 2013.
International Conference on Crop Protection Science & Technology Call for Papers

2013 International Conference on Crop Protection Science & Technology, in parallel with Agrochemex 2014, organized by China Crop Protection Industry Association, will be held in Shanghai in October, 2014. The events will cover marketing, new legislation and new data requirements, as well as innovation and technology improving. Since it began seven years ago, the events has attracted thousands people, especially for technical and regulatory staffs and marketing specialists.

Original papers, surveys and presentations on all aspects of crop protection are invited. Possible topics for submission to the various sessions include, but are not limited to:

- Marketing status of local agrochemical industry or agriculture, strategies of international marketing, cooperation with Chinese companies
- Policies, registration overseas, view of local pesticides regulation
- R&D: synthesis of technicals, intermediates and pro-pesticides
- Environmental science: new pollution treatment technology, green process, energy reduction and comprehensive use of resources
- Process and application: formulation process, adjuvant and formula, application and efficiency
- Marketing strategy: market exploration, import/export
- Bio-pesticides
- Others: Agrochemical Residue & Metabolism Chemistry

All papers should make clear titles, abstract, author(s), the affiliation (institution, agency or company) and location (city and state or country). Deadline is July 30th, 2014. Excellent papers will be elected and be presented in the forum, the authors will be awarded.

All the papers should be sent to yousheng@ccpia.org.cn before July 30th 2014.

http://www.agrochemex.org
Anti-Dumping Case against Pyridine Settled, RedSun’s Integrated Advantages Stand Out

Recently, the Ministry of Commerce of China released Announcement No.73, 2013. According to the Announcement, dumping exists in pyridine imports originated from India and Japan during the period of investigation. Such dumping has caused material injury to China’s industry of pyridine and there exists a causal link between the dumping and the material injury. Anti-dumping duty will be levied on pyridine imports (ranging from 24.6% to 57.4%). Importers that mentioned in the Announcement should pay required anti-dumping rates to China Customs when importing the said products in light of dumping rates listed in the Announcement. This rule will be implemented for five years.

As the chief beneficiary in this pyridine anti-dumping case, Nanjing RedSun’s integrated advantages stand out. Equipped with production units for pyridine, RedSun assures that the raw material for its paraquat will be regularly supplied, which will not only sharpen its competitive edge in the international paraquat market, but also guarantee that the quality of its paraquat will be stabilized and the market share will be maintained. This has fully embodied the company’s integrated advantages. To develop downstream products on the basis of pyridine, RedSun’s future looks promising.

Pesticide Output Fell for Three Months in a row and Output of October Dropped by 6.1%

According to the statistics of the National Bureau of Statistics of China, in October 2013, the total output of pesticide TC by 339 pesticide enterprises above designated size reached 262,000 tonnes in term of active ingredients, a drop of 6.1% on a year-on-year basis; of all the TC products, insecticides met the largest decline, a drop of 7.5% on a year-on-year basis with the output in October being 60,000 tonnes; the output of herbicides in October reached 141,000 tonnes, a drop of 3.8% on a year-on-year basis; only the output of fungicides increased, a slight increase of 0.7% on a year-on-year basis, reaching 13,000 tonnes in October.

The domestic pesticide output of the first ten months of 2013 reached 2,620,000 tonnes, a slight decrease of 0.3% on a year-on-year basis. The output of fungicides and herbicides increased respectively by 9.3% and 7.6%, reaching 136,000 tonnes and 1,333,000 tonnes respectively. The output of herbicides accounted for 54.5% of the total, and fungicides for 5.2%. However, the insecticide output dropped by 7.0% on a year-on-year basis, reaching 594,000 tonnes, accounting for 22.6% of the total.

In terms of provinces, the top three provinces of the largest pesticide output are listed as below: Shandong province, Jiangsu province, and Henan province. The pesticide output of Henan province in October was larger than that of Zhejiang province, and ranked the third in the provincial pesticide output ranking list. During the first ten months of 2013, the pesticide output of Shandong province reached 715,900 tonnes, an increase of 7.6% on a year-on-year basis; that of Jiangsu province reached 613,800 tonnes, a drop of 0.9% on a year-on-year basis, and that of Zhejiang province reached 239,300 tonnes, a drop of 1.8% on a year-on-year basis.

The Profit of the Pesticide Industry in the First Three Quarters of 2013 Increased by 34.5%

According to statistics of the National Bureau of Statistics of China (828 enterprises), the asset of the pesticide industry of the first three quarters of 2013 totaled RMB180 billion, an increase of 14.3% on a year-on-year basis; primary business income reached RMB201.6 billion, an increase of 17.9% on a year-on-year basis; total profit reached RMB 14.1 billion, a substantial increase of 34.5% on a year-on-year basis.

<table>
<thead>
<tr>
<th>Industry Category</th>
<th>Number of Enterprises</th>
<th>Total Asset (RMB, million)</th>
<th>Primary Business Income (RMB, billion)</th>
<th>Total Profit (RMB, million)</th>
</tr>
</thead>
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<tr>
<td>Pesticide</td>
<td>828</td>
<td>1800.5</td>
<td>2016.7</td>
<td>140.8</td>
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<td>Chemical TC</td>
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<td>Biochemical Pesticide and Microbial Pesticide</td>
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<td>143.5</td>
<td>199.1</td>
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<tr>
<td>Biochemical Pesticide</td>
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<tr>
<td>Microbial Pesticide</td>
<td>129</td>
<td>143.5</td>
<td>199.1</td>
<td>13.6</td>
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</tbody>
</table>
Pesticide Imports and Exports in October 2013

According to statistics from the General Administration of Customs of the PRC, in October 2013, the total amount of the pesticide imports and exports reached 313 million dollars, an increase of 37.8% on a year-on-year basis. The total amount of the pesticide imports and exports during the first ten months of 2013 reached 3,733 million dollars, an increase of 31.4% on a year-on-year basis.

In October, China imported 4,000 tonnes of pesticides, a sharp rise of 46.7% on a year-on-year basis, and the amount of imports grew by 91.1%, reaching 41 million dollars. Among the imports, the import of fungicides still accounted for the largest share, totaling 1,600 tonnes, an increase of 10.7% on a year-on-year basis; the import of herbicides reached 700 tonnes, a substantial increase of 313.7% on a year-on-year basis with the import amount totaling 3,000 dollars; the import of insecticides reached 400 tonnes and the import amount totaled 5 million dollars, an increase of 81.7% and 56.8% respectively.

In October, China exported 72,800 tonnes of pesticides, an increase of 17.9% on a year-on-year basis, and the exports amounted to 272 million dollars, an increase of 32.2% on a year-on-year basis. Of the exports, the export volume of herbicides ranked the first, reaching 48,200 tonnes, an increase of 18.9% on a year-on-year basis, and the export amount maintained the substantial growth, with the export volume of insecticides reaching 16,200 tonnes, an increase of 20.2% on a year-on-year basis; the export of fungicides reached 5,800 tonnes, an increase of 12.1% on a year-on-year basis.

Total Demand for Pesticides in 2014 will Meet Slight Decline

According to statistical analysis from the Plant Protection Stations of the 31 provinces (including autonomous regions and municipalities) across the country, it is expected that China’s total demand for pesticides in 2014 (quantity of commodity) will meet slight decline, a drop of 1.38% compared with that of last year. The total demand will reach 1,009,900 tonnes, or 329,700 tonnes in term of active ingredients. The demand for insecticides will drop, while demand for fungicides will maintain the growth, demand for herbicides and plant growth regulators will meet remarkable increase, and demand for seed coating formulations and plant protection chemicals as well as sprayer facilities will meet substantial increase.

It is known that the demand for insecticides, acaricides and rodenticides next year will decrease, and the demand for fungicides remains flat, while the demand for herbicides and plant growth regulators will increase. It’s said that demand for pesticides next year was expected to decrease, reaching 120,300 tonnes, a decline of 1.21% than that of last year. Use of conventional organophosphorus pesticides will be significantly reduced, while use of pesticides of high efficiency, low toxicity and persistent effect will rise. It is projected that the demand for conventional organophosphorus pesticides will reach 82,700 tonnes, a decline of 3.95% than that of last year. Demand for seed coating agents for corn, peanuts, rice and other crops will increase substantially. Demand for rodenticides will meet slight decline, reaching 85.92 tonnes, a drop of 24.21% compared with that of last year. Demand for acaricides will also decline, dropping to 10,500 tonnes, a decline of 3.38% than that of last year.

The decline of demand for conventional organophosphate insecticides
MOA will help increase the application rate of bio-pesticides and other products of minor side effects.

As revealed by MOA, the National Sustainable Agriculture Development Plan highlights that the ideas and objectives of agricultural development should be extended from “securing the supply and increasing the output” to “three win-win targets” including production increase, life quality and ecology protection. Outstanding problems met in effectively using agricultural resources and in protecting the ecological environment should be solved out in an earnest way, and constant efforts should be made to explore a sustainable agricultural development path of Chinese characteristics. According to industry analysts, the policy intention for starting sustainable agricultural development planning is clearly and primarily targeted at food safety problems caused by excessive use of fertilizers and pesticides. Furthermore, MOA announced in early November that from 2014 MOA would begin to vigorously promote the demonstration of operating highly toxic pesticides in some designated places and the demonstration of subsidizing application of pesticides of low toxicity and low residue in order to guide the farmers to reduce the use of highly toxic pesticides. The ultimate goal is to establish a standardized designated operation system for highly toxic pesticides and formulate subsidy policies for applying pesticides of low toxicity and residue with three to five years’ efforts.

It is worth noting that, as a new variety in the pesticide industry of the 21st century, bio-pesticides have been gaining increasing attention. The biggest advantage of bio-pesticides is that the pollution of chemical pesticides on the ecological environment will be eliminated and pesticide residue in agricultural and sideline products can be reduced. In accordance with the “Twelfth Five-year Plan” for the pesticide industry, by 2015 the output of efficient, safe, economical and environmental friendly pesticide varieties should account for more than half of the total. Since to develop bio-pesticides has become a national competitive strategy, the commercial value of bio-pesticides will be further highlighted.

In addition, the International Symposium on Biodiversity and Green Development, held on November 22, focused on promoting biodiversity conservation and green development, aiming to enhance the application rate of bio-pesticides. Currently, the application rate of conventional pesticides is quite high, and the pollution of conventional pesticides on the environment is rather heavy, while the application of bio-pesticides does not cause side effects on crops, conducive to the development of biological diversity.

Overall, with sustainable agricultural development being the general trend, bio-chemicals of minor side effects, which also favors environmental protection and ecological diversity development, will embrace opportunities for accelerated development. There will be more room for market penetration increase. Mainstream products such as avermectin, gibberellin and other high-tech bio-pesticides are expected to take the lead in benefiting from the general trend.

Ministry of Agriculture Starts the Sustainable Development Plan: Bio-pesticides Embrace Opportunities for Development

Recently, the Ministry of Agriculture officially launched the National Sustainable Agriculture Development Plan, focusing on the construction of ecological balance, handling the relationship between environment protection and agricultural production as well as the vigorous development of specialized organizations for disease prevention and control, it is expected that the total demand for plant protection machinery in 2014 will increase significantly. The future for large self-propelled sprayers, unmanned aerial vehicles controlled by remote and spraying machinery for rice fields looks promising.

As to the demand for herbicides, the demand for glyphosate, acetochlor, atrazine, paraquat, butachlor, 2,4-D butyl ester and bentazone will increase significantly. The demand for new varieties cyhalofop-butyl, penoxsulam and metamifop will also rise remarkably. The demand for plant growth regulators is projected to reach 4456.86 tonnes, an increase of 20.27% on a year-on-year basis. Overall, there will be an increasing number of varieties, of which ethephon, paclobutrazol and DPC, etc. will meet a relatively large demand.

In recent years, along with the labor force shift, land transfer, the increasing number of farming units of a large scale as well as the vigorous development of specialized organizations for disease prevention and control, it is expected that the total demand for plant protection machinery in 2014 will increase significantly. The future for large self-propelled sprayers, unmanned aerial vehicles controlled by remote and spraying machinery for rice fields looks promising.

Ministry of Agriculture Starts the Sustainable Development Plan: Bio-pesticides Embrace Opportunities for Development

Recently, the Ministry of Agriculture officially launched the National Sustainable Agriculture Development Plan, focusing on the construction of ecological balance, handling the relationship between environment protection and agricultural production as well as the bearing capacity of regional resources and environment. Since currently there is excessive use of agricultural fertilizers and pesticides in China, the National Sustainable Agriculture Development Plan by MOA will help increase the application rate of bio-pesticides and other products of minor side effects.
Confusions on the way: Open Your Mind and Break through 2013 China Agrochemical Industry Summit — Sponsored By Fuhua Tongda

The issued China Top 100 List of Pesticide Industry in 2013 showed the achievements made by the elites from China pesticide industry in the past year. Consider the endless power of the force of examples, China Crop Protection Industry Association (CCPIA) invited nine representatives in the List to participate in the Fuhua Forum, 2013 China Agrochemical Industry Summit.

**Strategy—Brands and Integration**

The integration here has broad meanings, including the change of ideology, the merger and acquisition of enterprises, the cut-through of industry chains, the overall thinking of solutions and the integration of market.

**To Enhance Competitiveness by Mergers and Acquisitions**

As the leading enterprise of pesticide formulation in China, Noposion Agrochemicals Co., Ltd. has frequently taken the mergers and acquisitions after appearing on the market and its major acquisition to the stock equity of Changlong Agricultural has apparently broadened its industry chain. Since July 8 this year, the nearly two months’ suspension of Noposion has left wide reverie to the industry. In responding to this, Mr. Wang Shihao, the Deputy General Manager and Secretary of the Board, said that in recent years Noposion had taken some steps in cooperation, set up the Department of Cooperation and Development and would take cooperation as its largest development strategy in the future three to five years. As a result,

Noposion had exchanged with hundreds of national formulation enterprises, but few could meet the cooperation norms of public companies. In recent years, the decline of the gross margin of Noposion has urged it to search for upstream and downstream cooperation of pesticide so as to reduce costs and improve market competitiveness. Unfortunately, the recombination has not been reached after two months’ suspension, but the cooperation with Makhteshim Agan Industries on AK Network Services is still under negotiation. According to the introduction of Mr. Wang, Makhteshim Agan Industries does a very good job in the terminal services, especially achieving a lot of successful experience in the market of India and Brazil, so Noposion intends to cooperate with it.

Mr. Liang Huazhong, becoming the vice president of Jiangsu Lanfeng Bio-chemical Co., Ltd., specially takes charge of the integration, research and development, foreign trade and some other business of the company. He believes that the run of each enterprise should surround the brand and integration, and it’s a very important time for mergers and acquisitions, so everybody should cherish this opportunity. When talking about integration, he said that the upstream and downstream stretching of industry chain, whether the structure of the product meeting the needs of development and whether the regional environmental capacity meeting the sustainability requirements of the development should all be considered. The integration is not only the acquisition and reorganization of resource between large and small enterprises, but also the proper integration among the competitors, which he particularly stressed as the important means to solve the problem of overcapacity.

Both Mr. Wang and Mr. Liang believe that mergers and acquisitions is the way to achieve win-win cooperation.

**Connecting the Industry Chain and Gathering all Resource Together**

With the rising of paraquat price and the increasing of the profitability of related enterprises, Shandong Luba Chemical Co., Ltd., one of the domestic companies producing paraquat on a large scale, apparently enjoys this situation. Zhao Yan, the general manager of this company, recalled the arduous journey of paraquat production that in the eight years from 2004 to 2012, the company paid too much for the production of paraquat and suffered more difficulties in paraquat production than that in glyphosate production, for paraquat only made profit in three months of 2008 and lost money in all other time. The reason was that leading companies had blocked the production technology of pyridine for a long time and controlled the upstream products of paraquat, so Luba had no choice but to overcome the difficulty in synthesizing the pyridine intermediates and get through the industry chain. Now, it broadens the downstream products of pyridine. Mr. Zhao said that after getting through the industry chain, Luba could gather the earning money from pyridine, paraquat and other downstream products of pyridine.

In responding to the future market trend of paraquat, Mr. Zhao said that influenced by the market, the recent price of paraquat was indeed high, deviating from its cost, which had brought risks to the companies of paraquat technical material and formulations.

**Driven by Technological Innovation and Market Expansion**

Shandong United Agrochemical Co., Ltd. acquired the Technology Innovation Award at this exchange meeting. Driven by the technology and market, the pesticide sales amount of this company reached RMB 670 million in 2012, a significant increase of 75.6 percent over the previous year. Xu Hui, the general manager of the United Agrochemical, said that resource advantage, technology advantage and market advantage were very necessary in making a company to become successful, but comparing with other companies, the United
Agrochemical had no resource advantage and not obvious technology advantage, so more efforts had to be made on the market. Recently, after visiting 40 to 50 countries, he was sorry to realize the trampled situation of China that it produced 60 percent of the global pesticide but only had 10 percent of market share in the world pesticide market. Why should many technical material companies of our country not make more efforts on the market, but only be willing to contribute to companies of other countries? He believed that Indian companies did a better job than us, for they first bought TC from China, then processed formulations in India, and finally changed hands to sell the products as the world brand. The United Phosphorus Limited, a good example, has entered into Global Top 10, but its sales amount in 2005 was only 370 million dollars.

The United Agrochemical had shrunk the domestic market into the areas of 500 km radius, focused in nine aspects, such as crops, varieties, market and means, reduced the production equipments from the original 16 to 9 in 2008, focused on producing neonicotinoid insecticides and also set foot in fungicide. As to the brand, he thought that first the company must do its best to become a regional brand, then slowly grab the world market and finally become the world brand. The building of a brand is accumulated from the little things and should start from the most basic management.

Becoming the World Leading Custom Processing Service Provider of Fine Chemicals

Mr. He Chun said that in the past 30 years, Lianhe Technology took a special development road: custom processing, which was quite different with many other companies. This company was based on becoming a brand company and put forward the concept of the full life cycle service of the products. Lianhe Technology will target its service objects on the world top ten innovative transnational corporations, analyze the characteristics of the products in different stage of the full life cycle, and provide specific services that meet the different requirement of strategic partners.

Lianhe Technology believed that the products would be replaced at any time, but the service based on the strong technical support wouldn’t. With almost 30 years’ development, it has built seven production bases and one technology research and development centre in five provinces and one city. Its subsidiary corporations, with their different technology expertise and advantage, construct the strong technology and resources that Lianhe Technology needs to serve for its cooperative partners, forming the complete system providing industry chain services.

The refreshing business mode of Lianhe Technology, established after long-term thinking and exploring, is that the company takes the need of strategic partners and its own technology and resource as the lead, the custom processing as the practice form and provides the full life cycle service of the products. In the past five years, the sales amount of Lianhe Technology increased continuously, with the CAGR reaching more than 30 percent; in 2012, the pesticide sales amount of Jiangsu Lianhua Technology Co., Ltd. reached RMB6.18 billion, up by 37.1 percent year-on-year.

Take the 12 Profit Points as the Support and Continue to Develop the Glyphosate Industry

As the most major pesticide product in China even in the world, glyphosate has undoubtedly become the hot topic in the forum. Fuhua Tongda Agro-chemical Technology Co., Ltd. (Hereinafter called “FUHUA”) in Leshan City, in Sichuan province, is the major domestic producer of glyphosate.

FUHUA was originally a paper-making company, but set foot in the glyphosate production areas because of the outage of chlor-alkali, and Fuhua Tongda Agro-chemical Technology Co., Ltd. in Leshan City, Sichuan Province, founded in December, 2007, with its production capacity of glyphosate reaching 120,000 tonnes now, had become the largest domestic glyphosate producer.

The chairman Zhang Hua analyzed the global trend of glyphosate, indicating that global demand of glyphosate was more than 800,000 tonnes and the glyphosate capacity of China were about 500,000 tonnes. With the further development of GM crops, especially the planting permission of glyphosate-resistant wheat in the United States, the market of glyphosate will continue to enlarge in the future. In 2020, the global glyphosate demand will be estimated at one million to 1.2 million tonnes and the rigid demand of glyphosate indicates that there will be 200,000 to 400,000 tonnes of increase space in the future. FUHUA has rich hydropower resources and abundant coal mine, phosphorite and other mineral resources, its upstream supporting projects of glyphosate have been built, or are under construction or in expansion, and the scale of supporting materials, such as Chlor-alkali, caustic soda, hydrogen peroxide, paraphormaldehyde and glycine, and intermediates rank in the front throughout the country.

FUHUA attaches great importance on environmental security and has invested over RMB 300 million on environmental protection since last year. Chairman Zhang believes that mother liquor of glyphosate will turn from waste to treasure in the future and FUHUA will achieve the cut-through of upstream and downstream industry chain of glyphosate. “We take the glyphosate as a banner and surrounding it we have at least 12 profit points to support FUHUA to make profit, so I don’t care about whether the glyphosate earn money or not,” said Zhang. He stressed that FUHUA only manufactures and provides good service, the high-quality and low-cost glyphosate products for customers.

The Products Are Complete and Export-oriented

The passionate statement made by Chairman Zhang was apparently not deterrent to Liu Anping, the general manager of Hubei Sanonda Group Corporation (SANONDA for short). Mr. Liu said that the production of PMIDA produced by SANONDA was the largest in the whole country and the cost was the lowest; as the brand product of the company, PMIDA didn’t participate in the market bargain; the capacity of glyphosate was 20,000 tonnes, not large but exactly matched with other products.

Hubei Sanonda Co., Ltd., with its A share appearing on the market in 1993 and B share appearing on the market in 1997, was the first listed company in pesticide industry; in 2005 it merged into China National Chemical Corporation (ChemChina for short), becoming the wholly-owned subsidiary of China National Agrochemical Corporation; in 1989 it first acquired the Import & Export Right in the same industry throughout the country, and now the marketing...
According to the Twelfth Five-Year Plan, the production of technical material of top 20 pesticide producers will account for more than 50 percent of the total until 2015; build two to three large enterprise groups, internationally competitive, the sales amount of which will reach more than RMB 10 billion. In recent two years, the herbicide becomes very popular in pesticide industry but the insecticide shows not so much improvement. Paraquat, glyphosate and other bulk hot products sell well, which attracts a great attention in the capital market. Xia Shu, the general manager of Nanjing Red Sun Co., Ltd. (RedSun for short), believes that the promotion of planning and environmental policy brings a boom cycle to the industry. The Mergers and acquisitions among the companies are in progress, so a new round of change will come in pesticide industry.

The RedSun is one of the earliest pesticide companies that make use of the capital market to achieve their development. In 1993, through injecting products pyrethroid, it realized Back Door Listing; in 2008, it launched an overall listing and injected pyridine base industry chain; in 2011, three industry chains of pyrethroid, hydrocyanic acid and pyridine base were formed after recombination. Through the upstream and downstream integration, it built a whole industry chain, including technical material, intermediates, formulations and sales.

With ten years’ development, RedSun took the lead in independently researching and developing the pyridine base production technology that had been monopolized by leading companies for more than 50 years, contributing to the rapid development of paraquat and other pyridine pesticides. However, with the intervention of Japanese and Indian companies in China pyridine market, the price of pyridine declined all the time and in 2012 fell to RMB 24,000 to RMB 25,000 per tonne. From September 21, 2012, under the lead of the RedSun, the Ministry of Commerce carried on anti-dumping investigations on imported pyridine originating from India and Japan; on May 27, 2013, Ministry of Commerce issued a preliminary ruling announcement on pyridine anti-dumping and began to levy security deposit of different rates on many Japanese and Indian pyridine companies (In November this year, Ministry of Commerce again issued a final ruling announcement on pyridine anti-dumping, confirmed the existence of dumping and took measures of security deposit to Japanese and Indian related companies), which contributed to the rising of the price of pyridine and its downstream products.

When talking about the influence of Announcement No. 1745 on the market, Mr. Xia expressed that according to the data of customs, 75 percent to 80 percent of the domestic paraquat was for export and only 20 percent to 25 percent was sold in the domestic market, so the Announcement had little influence on the future paraquat market. On September 25, 2013, the RedSun officially registered paraquat soluble glue (20%), which was the first official registration in addition to paraquat water removal agents in China, thus laid a foundation for the market butt of paraquat.

According to the statistics made by the National Bureau of Statistics, from January to August this year, the accumulated pesticide production of the national pesticide industry reached 2.124 million tonnes (converted into 100% purity), increased 1.6 percent year-on-year; the main business income reached RMB 180.608 billion, a year-on-year increase of 18.5 percent; the total profit reached RMB 12.594 billion, up by 40.5 percent year-on-year. The profit growth was significantly ahead of sales growth, thriving in the national chemical industry, which aroused widespread attraction in capital market.

Zhang Liyang, the principal analyst of Hong Yuan Securities Co., Ltd., Zheng Fangbiao, the chief researcher of chemical industry of Industrial Securities Co., Ltd., Guo Jingpu, the chief analyst of Cinda Securities Co., Ltd., and Qi Xiaoqiang, the chief analyst of petrochemical industry of China Galaxy Securities Co., Ltd. made statements and participated in discussions, and their presence had also become the highlight of the forum. “Engaging in the industry is doing addition and entering in the capital market is doing multiplication,” said the general manager Xia Shu. So, when occurs a butt joint between capital market and pesticide industry, which kind of hybrid operation will it do? Let’s wait and see.
After three consecutive years’ recession, from 2009 to 2011, China’s pesticide industry showed upward trend in 2012 and maintained a steady and rapid growth. Larger domestic pesticide companies all achieved good sales performance. According to the statistics made by the China Crop Protection Industry Association (CCPIA) on pesticide sales performance of each enterprise in 2012, Top 100 pesticide sales enterprises of China was released.

From the performance of the Top 100 pesticide sales companies in 2013, we could figure that the threshold for the shortlist of top 100 companies continued to improve significantly, from RMB 200 million in 2012 to RMB 257 million in 2013, an increase of RMB 57 million, reflecting the strengthening of the scales and strength of the national pesticide companies. At the same time, the total sales revenue of Top 100 pesticide companies in 2012 reached RMB 79.11 billion, increased 27.9 percent, RMB 17.25 billion more than that in 2011; which was RMB 61.86 billion. All fully demonstrated that the large-scale companies were playing more and more important roles in the economic and industrial structuring and the market of pesticide products, as the rigid demand, was slowly grappling and constantly strengthening.

From the provinces in which the Top 100 pesticide sales companies in 2012 were located, we could know that, the trend that the area of pesticide industry was spreading to the Midwest was strengthening. These Top 100 companies were located in 17 provinces, municipalities and autonomous regions, with Jiangsu province, Shandong province and Zhejiang province, the traditional major pesticide provinces, still ranking the top three. The total number of the pesticide companies shortlisted in the Top 100 List in these three provinces was 64, slightly less than last year’s 72. The sum of the sales amount of these three provinces reached RMB 54.52 billion, increased 19.7 percent, compared with that in 2012, which was RMB 45.55 billion, accounting for 68.9 percent of the total sales of the Top 100 companies, slightly lower than 2011’s 73.6 percent. The number of the pesticide companies shortlisted in the Top 100 list in nine provinces in the Midwest reached 24, 6 more than that in 2011, which was 18; and compared with RMB 11.25 billion in 2011, the total sales of these companies reached RMB 15.71 billion, increased 39.6 percent, with the growing rate much higher than the average value, accounting for 19.9 percent of the total sales of the Top 100 companies, 1.7 percentage point higher than that in 2011. All these data showed that the tendency has been becoming more and more obvious.

The number of the Top 100 companies, with their sales amount reaching RMB 1 billion, unprecedentedly reached 24 this year, and there were only 10 in 2010 and 16 in 2011; and the sales amount of these companies was RMB 40.61 billion, accounting for 51.3 percent of the total sales of the Top 100 companies, far more than the 36.3 percent of the last year. These data showed that the companies were moving towards intensive development and the advantages of large-scale companies were becoming more and more apparent, which were good to the decrease of business risk and the increase of the companies’ international competitiveness.

The sales amount of this year’s Top 30 formulators were all more than RMB 110 million in 2012, and the total sales amount reached RMB 10.87 billion, increased RMB 2.51 billion, an increase of 30.0 percent compared with that in 2011, which was RMB 8.36 billion last year. As to the location, these Top 30 formulators were located in 13 provinces, municipalities and autonomous regions. Jiangsu province with seven companies in the list ranked first, the sum sales amount of which reached RMB 3.06 billion in 2012, accounting for 28.1 percent of the total sales amount of the Top 30 companies. Shanghai with four companies in the list ranked second, the sum sales amount of which reached RMB 740 million. Guangdong province, Guangxi province and Shaanxi province each has three companies in the list ranked third together.

The sales amount of Shenzhen Noposion Agrochemicals Co., Ltd. reached RMB 1.53 billion in 2011 and increased about RMB 60 million in 2012, a 3.9 percent of increase. The sales gap of the Top 30 formulators greatly reduced compared with that last year. The sales gap between the ranking first company and the ranking second company was RMB 720 million last year but only RMB 520 million this year.

The number of the companies in the Top 30 list, with their sales amount reaching more than RMB 300 million, was 12 this year while only 7 in 2012; and the total sales amount of these 12 companies was RMB 7.33 billion this year, accounting for 67.4 percent of the total sales amount of the Top 30 preparation companies, far more than the 57.8 percent of last year. The above data showed that the advantages of large-scale companies were becoming more and more obvious and the effects of structural adjustment were increasingly showing up.
The Special Topic Forum, Going into the U.S. Market: Resolving Mysteries of Data Compensation and Dealing with Hidden Hurdles in Registration, on the 13th AgroChemEx was carried out in Shanghai Everbright International Hotel in the morning of October 17. This forum aimed to help our agrochemical enterprises to enter the US high-end market and solve the obstacles encountered in registration through the explanation of industry experts, meanwhile, deeply understand the registration techniques of the US agrochemical products and the ways and channels of the US market development, and formulate better registration and sales strategies to target market.

Dr. Arthur L. (Artie) Lawyer, the president of US Technology and Science Group Co., Ltd. (TSG), analyzed the intensity of competition, and challenge, opportunity, costs and obstacles of entering the US market from the great market potential of the US pesticide market, crop characteristics and government supervision. Aiming at the common problems Chinese customers were facing and combining his own 20 years’ working experience, Peter L. Gray, the Chairman of McKenna Long & Aldridge (MLA), the parent company of TSG, shared with people the strategies of product registration and operation steps of registration procedures in the form of diagram, in respond to the techniques to extend the absolute use right of data, registration and approval procedures of "Me-Too" product and the problems and difficulties it might meet in the US when new pesticide products enter into the US market.

Arthur L. (Artie) Lawyer, the president of TSG, highlighted the way to overcome the obstacles in registration process and to seize the opportunity quickly, talked about having a clear understanding of the crop distribution and pesticide using features of each state and preparing for state registration while having federal registration, analyzed the registration features and difficulty level of some states with examples and suggested that the company could first register biology, microorganism, non-food and other non-strict applications, then gradually register other applications so as to enter the US market as soon as possible.

Dr. Chen Hong stressed that the culture difference between China and the United States would influence the relationship between China’s export enterprises and the U.S. government administration section, agents or collaborators, and also illustrated the great importance of choosing agents.

The 8th International Forum on Procurement and Service of Pesticides Successfully Held in Shanghai

The 8th International Forum on Procurement and Service of Pesticides, hosted by China Crop Protection Industry Association, was held in Everbright International Hotel Shanghai on October 17, 2013. Sun Shubao, president of CCPIA, said in his speech that, agrochemical trading is the weather vane of production. With the global demand increasing, both the production and trade volume have grown bigger than ever. In addition, the deepening globalization suggests more communications on international trading to see whether its development is sustainable, what are the driving force of periodic variation and how to control market jointly and avoid risks when the industry is periodically booming.

Export-Import Management and Situation Analysis of China’s Agrochemicals

Zhang Wenjun, head of International Communication and Service Division, Institute for the Control of Agrochemicals, Ministry of Agriculture, introduces the export-import management of China’s agrochemicals by analyzing related regulations and major measures. In short, the export and import of China’s agrochemicals should adhere to three laws, three ordinances, two international conventions and one management rule.

Mr. Zhang analyzes the market structure, product structure and enterprise structure of China’s agrochemical industry in 2012 from 9 aspects, including total export-import volume and value, export volume, import volume and the species of exported agrochemicals. Both the export-import volume and value of agrochemicals has a double-digit growth since 2012, showing that our agrochemical industry is export-oriented and highly dependent on the international market. Under this macro situation, enterprises should actively expand their international market with appropriate strategies based on their product orientation.

Procurement of Bayer Crop Science

Dr. Li Bin, purchasing director of Bayer, said that
Bayer's purchasing volume has doubled since 2010, and in the coming 5 years, new products will be introduced and more products outsourced, which is a good news for its partners and suppliers. According to Dr. Li's conservative estimation, Bayer will increase its annual investment in outsourse service by 200 million dollars, which means 1 billion in 5 years. Dr. Li looks forward to cooperating with China's outstanding suppliers, and enhancing the cooperation with established suppliers.

The expectations for China's suppliers mainly includes two aspects, said Dr. Li, price competitiveness and security of supply. Stable long-term purchasing, established brand and distribution channels could reduce the investment risk and marketing costs. In addition to products, Bayer also purchases technical support so as to improve its technique and increase production yield, helping reduce unit consumption of energy. Besides, it enhances the level of automation, reduces labor costs and improves price competitiveness. The automation strengthens its technique and security, and cuts the costs of energy. The system for security and environmental protection safeguards the security of supply.

Risks that Counterfeitters and Illegal Agrochemical Importers May Face in Europe
-- Please Get to Know Your Clients

China has been devoting great attention to crack down counterfeited agrochemicals—an increasingly serious issue across the world. Shen Chunxiang, a Legal Counsel working for CropLife (China), says the main duties of CropLife is to analyze the agrochemical-counterfeiting situation around the world, launching the anti-counterfeiting movement, promoting legislation in various countries and cooperating with industry associations of various countries to discipline the industry better. The vast majority of agrochemical importers are legitimate, thus CropLife are launching a movement called "Know Your Client", cooperating with importers and exporters of China agrochemical industry to avoid them any involvement with counterfeiters abroad. And CropLife hopes that China enterprises could establish and protect China international image by offering top quality products and shouldering responsibilities.

How to Earn the Trust of Overseas Purchasers for China Agrochemical Enterprises

Agrochemical counterfeiting events damages China agrochemical industry and international reputation badly and hinders exports and imports. How to win back and keep overseas clients? C S Liew from Pacific Agriscience Pte Ltd offers several suggestions: Enterprises should 1) cooperate with CCPIA and rebuild a positive image by holding public-relation campaign abroad, shouldering social responsibilities and punishing manufacturers and traders involved; 2) improve the quality of service under the principle of “Customer is God”; 3) promote R&D of novel products, keep the production sustainable and control the pollution.

Trading Risk Prevention in Africa Market

Agrochemical trading is strategically increasing in Africa, a vast continent with many countries and rich natural resources. Africa is an emerging market for most countries that are dominated by agriculture, which accounts a large share in their GNP. How to prevent risk from the market? Chen Gang, deputy director of SinoRating, shares the study on Africa trading risk with present business elites and traders.

After introducing the overall risk, Mr. Chen analyzes the investment environment of Nigeria, Kenya and Ghana respectively. In the long term, Nigeria has a great potential in economic development and investment. Firstly, Nigeria has a large population, which means a large market and spending power; secondly, Nigeria is politically and economically stable with the federal government's efforts in improving the investment and business environment; thirdly, it has a good ability to pay with little foreign debt; what's more, its influence in Africa is strong with a great radiating power in neighboring markets. However, the expansion of bilateral trades between China and Nigeria brings occasional frauds and kidnappings to China enterprises and citizens in Nigeria. China's enterprises to invest in Nigeria should take cautions and preventions with financial crime and social security.

Chinese enterprises to invest in Nigeria should notice: 1) Generally, Nigerians love cheap and low end products, but defaults occur for Nigerian traders' lack of affordability. Chinese enterprises could require Nigerian traders to pay via international banks with credibility. 2) Chinese enterprises must ensure the quality and be honest in trading since negative impressions has been made in Nigeria by inferior products. 3) Chinese enterprises must comply with environment protection laws and regulations of Nigeria, and fulfill it well, seriously considering the expenses on environment protection in budget.

After the analysis of risk in these countries, Mr. Chen suggests Chinese enterprises entering the international market that, 1) export-import risk should be insured; 2) credit enquiry and investment consulting should be conducted via credit rating associations.
Experience on Business Development in Argentine Market and Issues to be Noticed

Wei Hanhan, deputy general manager of Sinochem Agro Co., Ltd, introduced that Sinochem Agro Co., Ltd, a corporation developed from Sinochem Shanghai Import and Export Corporation, specializes in the exports and imports of agrochemicals, and started international distribution business from 3 years ago. Sinochem Agro (Argentina) is set as a platform to explore Argentina market and further cover regional market, as well as a research and development platform to develop new talents for Sinochem Agro going abroad. Positioned as a producer running in distribution mode, Sinochem Agro Co., Ltd, a corporation developed from Sinochem Agro Co., Ltd, introduced that Sinochem Agro (Argentina) is expected to be an organizer of the made-in-China products, and to explore a way for their internationalization. Though the prospect is good, Wei warns enterprises entering Argentina of the risks: 1) Affected by its core policy, the planting pattern changes. 2) Lacking foreign currency reserve, Argentina’s economy isn’t very prosperous though has recovered much from the economic crisis in 2002. 3) With high labor cost, the annual wage increase rate is 25% on average. 4) Interim policies might be introduced, mainly related to presidential election. For example, last year, a restriction was imposed on import licensing of agrochemicals.

Issues to be Noticed for China Enterprises Entering Agrochemical Market of Ukraine

Zhu Xianding, president of Iprochem Company Ltd in Shenzhen, China, analyzes the advantages for Chinese enterprises entering agrochemical market of Ukraine: low agrochemical popularizing rate provides a great space for growth; large scale of farms lays a valid foundation for product-promotion; the registration procedure is not complicated. However, risks should also be noticed: the market is dominated by multinational corporations; farmers sells on credits; price war and unfair competition exists. Mr. Zhu offers three suggestions on clients and products: 1) use tactics of guerrilla warfare in general trades (when the clients are importers); 2) use tactics of positional warfare in the trade of brand products (when the clients are distributors or farms); 3) use tactics of annihilation warfare in the trade of superior products--get self-registered, and authorize agents or direct selling farms.

Mr. Zhu shares the story of the development of Iprochem, one of the first companies entering Ukraine market. Targeting the formulation market, Iprochem registered as a joint venture named IPROCHEM-SOYUZ (90% of the stocks were held by Ipronchem), and started to promote Chinese agrochemical brands. Iprochem expects to cooperate with Chinese suppliers to develop Ukrainian market, by helping them get registered, jointly registered with them, or acting as their product agent in Ukraine.

Agrochemical Market Profile of Ukraine

China in Ukraine market.

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Agrochemical Market Profile of Ukraine

China in Ukraine market.
China ICAMA Representative Analyzed Import/Export Management of Pesticide in
the 8th China International Forum on Procurement and Service of Pesticide

As a major agrochemical market and the largest agrochemical supplier in the world, China’s pesticide exports rose by 26.8% to some 7.86 billion USD in 2012. Imports amounted to some 560 million USD, reflecting an 8.2% year on year growth rate. Dumping and counterfeit issues have challenged the Chinese industry from both an international trade perspective and a regulatory perspective. On Day two of the AgroChemEx 2013 conference in Shanghai (China International Forum on Procurement and Service of Pesticides), Mr. Zhang Wenjun, Division Director of International Exchange and Service from ICAMA, outlined the current status of the Chinese pesticide industry from a regulatory standpoint and offered interesting statistics on the Import and Export of pesticide in China.

Legislative Basis

Currently, Chinese regulatory enforcement for import/export control of pesticide relies on Three Laws, Three Regulations, Two International Treaties and One Measure.

Laws:
• Customs Law of the People’s Republic of China (last updated on July 8, 2000);
• Foreign Trade Law of the People’s Republic of China (first promulgated on May 12, 1994, last updated on April 6, 2004);
• Law of the People’s Republic of China on Import and Export Commodity Inspection (first promulgated on April 28, 2002, revised in 2013)

Regulations:
• Regulation of the People’s Republic of China on the Administration of the Import and Export of Goods (implemented on January 1, 2002)
• Regulations for the Implementation of the Law of the People’s Republic of China on Import and Export Commodity Inspection;
• Regulation on Pesticide Administration (importation and/or exportation of pesticide within the territory of China should obtain the pesticide registration in China)

Clearance Notification and Pesticide Inventory

The enforcement of import/export management of pesticide is primarily managed by the ICAMA and Customs. All importers and exporters should obtain a custom notification from ICAMA, which contains the name, volume, HS code, CAS No., toxicity, manufacturing, exporter/importer, exporting/importing country, use of the pesticide. Customs are responsible for field inspections, checking the information on the Custom Notification on a “one Notification for one custom declaration” basis. Thus, the identity and authenticity of the pesticide is ensured as ICAMA can verify the registration status before each release of the pesticide.

Generally, pesticides under import/export management are included in the Pesticide Inventory under Import/Export Management, which is updated at the end of each year. The latest version was issued under the Announcement 1880 of the MoA and GAC. This inventory contained 1157 active ingredients, which includes all the active ingredients registered in China and 98% of the active ingredients registered in other countries. The update added 5 novel pesticides and 1 category of biopesticide into the inventory and adjusted the HS code for paraquat and glyphosate due to tax rebate considerations.

When exporting agrochemicals to overseas market, the relevant authority from the importing countries usually requires a certificate issued by ICAMA (ICAMA Certificate), which declares the registration status, range of applications of the pesticide. Sometimes, pesticides with an ICAMA Certificate can enjoy unexpected advantages over other products, this certificate can serve as a cargo-clearance during customs procedures in the importing countries. Pakistan gives preferential treatment to product with ICAMA Certificate during pesticide registration. Thailand, Lebanon and Indonesia required additional inclusion of information into the certificate, such as registration, production and application of the products.

The certificate issued has had various anti-counterfeit measures included into its design and technology. Mr. Zhang admitted that these documents are usually forged by illicit factories as ICAMA has frequently...
had the authenticity of these documents called into question by authorities from other countries.

**Import/Export Overview**

The import/export of pesticide in China enjoyed double-digital growth in 2012. The export volume amounted to some 1.599 million tonnes, a 13.53% increase from 2011 (1.408 million tonnes). Nearly 65% of all exports are technical materials and 80% of all imports are formulated products.

<table>
<thead>
<tr>
<th>Year</th>
<th>Import/Export</th>
<th>Product Type</th>
<th>Volume (1000 tonnes)</th>
<th>Change (%)</th>
<th>Percentage of total trade (%)</th>
<th>Value (million USD)</th>
<th>Change (%)</th>
<th>Percentage of total trade (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>export</td>
<td>technical material</td>
<td>654.00</td>
<td>/</td>
<td>46.42</td>
<td>3,919.11</td>
<td>/</td>
<td>63.22</td>
</tr>
<tr>
<td>2011</td>
<td>export</td>
<td>formulated product</td>
<td>754.81</td>
<td>/</td>
<td>53.58</td>
<td>2,279.71</td>
<td>/</td>
<td>36.78</td>
</tr>
<tr>
<td>2011</td>
<td>import</td>
<td>technical material</td>
<td>6.89</td>
<td>/</td>
<td>15.69</td>
<td>111.30</td>
<td>/</td>
<td>21.36</td>
</tr>
<tr>
<td>2011</td>
<td>import</td>
<td>formulated product</td>
<td>37.03</td>
<td>/</td>
<td>84.31</td>
<td>409.77</td>
<td>/</td>
<td>78.64</td>
</tr>
</tbody>
</table>

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>export</td>
<td>technical material</td>
<td>742.62</td>
<td>13.55</td>
<td>46.43</td>
<td>5,120.82</td>
<td>30.66</td>
<td>65.12</td>
</tr>
<tr>
<td>2012</td>
<td>export</td>
<td>formulated product</td>
<td>856.82</td>
<td>13.52</td>
<td>53.57</td>
<td>2,742.44</td>
<td>20.30</td>
<td>34.88</td>
</tr>
<tr>
<td>2012</td>
<td>import</td>
<td>technical material</td>
<td>6.36</td>
<td>-7.67</td>
<td>11.89</td>
<td>105.79</td>
<td>-4.95</td>
<td>18.76</td>
</tr>
<tr>
<td>2012</td>
<td>import</td>
<td>formulated product</td>
<td>47.12</td>
<td>27.27</td>
<td>8.11</td>
<td>458.18</td>
<td>11.81</td>
<td>81.24</td>
</tr>
</tbody>
</table>

Herbicides were by far the most exported pesticide. 57% of the export value is attributable to this category followed by insecticides, fungicides, PGRs and rodenticides.

The top 5 importers of Chinese pesticides are the United State at 1,126.61 million USD, Brazil at 699.1 million USD, Argentina at 528.04 USD, Australia at 387.32 USD and Thailand at 320.61 USD.

<table>
<thead>
<tr>
<th>Region</th>
<th>Volume (1000 tonnes)</th>
<th>Change (% YoY)</th>
<th>Percentage of the Exported Technical Material (%)</th>
<th>Value (million USD)</th>
<th>Change (% YoY)</th>
<th>Percentage of the Exported Technical Material (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>245.159</td>
<td>-9.52</td>
<td>33.01</td>
<td>1,548.18</td>
<td>7.57</td>
<td>30.23</td>
</tr>
<tr>
<td>South America</td>
<td>227.424</td>
<td>29.00</td>
<td>30.62</td>
<td>1,409.38</td>
<td>50.06</td>
<td>27.52</td>
</tr>
<tr>
<td>North America</td>
<td>137.656</td>
<td>46.77</td>
<td>18.54</td>
<td>1,046.85</td>
<td>54.60</td>
<td>20.44</td>
</tr>
<tr>
<td>Europa</td>
<td>76.487</td>
<td>23.77</td>
<td>10.30</td>
<td>722.18</td>
<td>30.16</td>
<td>14.10</td>
</tr>
<tr>
<td>Australia</td>
<td>36.945</td>
<td>13.01</td>
<td>4.96</td>
<td>260.76</td>
<td>32.47</td>
<td>5.09</td>
</tr>
<tr>
<td>Africa</td>
<td>19.053</td>
<td>2.68</td>
<td>2.57</td>
<td>133.46</td>
<td>19.36</td>
<td>2.61</td>
</tr>
</tbody>
</table>

The exports of the technical materials to South America and North America showed robust growth in 2012, seeing a 54.6% and 50.1% increase respectively. Around 1.41 billion USD and 227,000 million tonnes of technical materials were exported to South America at 1.41 billion USD, and North America at 1.05 billion USD and 138,000 tonnes.

<table>
<thead>
<tr>
<th>Region</th>
<th>Volume (1000 tonnes)</th>
<th>Change (% YoY)</th>
<th>Percentage of the Exported Formulated Products (%)</th>
<th>Value (million USD)</th>
<th>Change (% YoY)</th>
<th>Percentage of the Exported Formulated Products (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>314.449</td>
<td>22.30</td>
<td>36.71</td>
<td>924.69</td>
<td>21.27</td>
<td>33.72</td>
</tr>
<tr>
<td>South America</td>
<td>158.358</td>
<td>22.86</td>
<td>18.48</td>
<td>637.4</td>
<td>33.35</td>
<td>23.24</td>
</tr>
<tr>
<td>Africa</td>
<td>222.355</td>
<td>1.00</td>
<td>12.96</td>
<td>308.5</td>
<td>12.96</td>
<td>11.25</td>
</tr>
<tr>
<td>Europa</td>
<td>80.585</td>
<td>12.67</td>
<td>2.57</td>
<td>58.87</td>
<td>8.56</td>
<td>21.18</td>
</tr>
<tr>
<td>Australia</td>
<td>56.878</td>
<td>4.06</td>
<td>6.64</td>
<td>186.46</td>
<td>15.72</td>
<td>6.80</td>
</tr>
<tr>
<td>North America</td>
<td>19.053</td>
<td>41.34</td>
<td>3.06</td>
<td>104.53</td>
<td>49.67</td>
<td>3.81</td>
</tr>
</tbody>
</table>

Asia, South America and Africa are the top 3 importers of Chinese formulated products. Exports to these three regions amounted to 78.1% of the total exports of formulated products. The increase in exportation to these regions is mainly due to the developing countries in these regions are incapable of processing or producing these formulated products. Chinese Formulated products imported by some African countries accounted for 80% of their total agrochemical imports from China.

Glyphosate is undeniably the most exported active ingredient. Some 389,685 tonnes or 1,427.27 million USD worth of the herbicide was exported in 2012, followed by imidacloprid, at 359.64 USD or 23,943 tonnes. 10 other active ingredients reached over 100 million USD in exports including paraquat, glyphosate isopropylamine, atrazine, chlorpyrifos, 2,4-D, acephate, methomyl, carbendazim, carbofuran and lambda-cyhalothrin.
The 8th Crop Protection International Forum Successfully Held In Shanghai

The Innovation and Application of Green Pesticide ----Qian Xuhong (The President and Academician from East China University of Science and Technology)

The president Qian Xuhong from East China University of Science and Technology was first introduced in the symposium to make an opening report. Focusing on the two terminal points of industrial chain of pesticide, he made great presentation entitled with “The Innovation and Application of Green Pesticide” and mainly talked about the innovation of green pesticide in our country.

Mechanism of action is the important research project in the work of pesticide research and development, which guides researchers to develop new products one after another suited to the social development and the demand of market. In herbicide, the inhibiting herbicides of hydroxy phenyl pyruvate oxidase (HPPD) have a rapid increase momentum in inhibiting herbicides of hydroxy phenyl pyruvate oxidase (HPPD) have a rapid increase momentum in herbicides and the demand of market. One after another suited to the social development and the demand of market. How can we effectively control the damage of diseases and pests. How can we effectively control the damage of diseases and pests. By studying the mechanism of action, they find that B-2a can make plants generate lots of hydrogen peroxide which gather in the root of plant, so B-2a has the characteristic of conduction from top of plants to the bottom of the root. What’s more surprising is that B-2a can induce plants to have the ability to resist pieris rapeae, which is unprecedented discovery.

On 17th October, 2013, the 8th Crop Protection International Forum was held in Shanghai. 9 reports went through the whole day, making the feast of pesticide information ranging from innovation, technology, formulations, production, application, trade and strategy in an all-round manner. Professor Cao Chengyu and Yang Guangliang, two deputy secretary generals from China Crop Protection Industry Association, hosted the symposiums in the morning and afternoon respectively.

The Development Direction of EC Formulation in China—Peter Southgate(the Technical Director in Pacific Regions and Southern Africa of DOW AgroSciences)

Focusing on the problems of EC in China, Peter Southgate, the technical director in Pacific regions and southern Africa of Dow AgroSciences, made a report entitled “the Development Direction of EC Formulation”. With over 40 years of experience of formulating EC and managing EC, Mr. Southgate reviewed a series of management policies about EC of our country, analyzed the current situation and problems in the production of EC and put forward the development direction of EC in our country.

According to the introduction of Mr. Southgate, some major countries or organizations like FAO/WHO do not ban or restrict the use of EC. They attach great importance to the toxicity of solvents in formulations and ban or strictly restrict the use of toxic and harmful additives. They think that in the future, EC will develop from traditional one to the solvent-free and high concentration ones and natural and environmental-friendly. But some of solvents stimulate to eyes. They think that “engineered” solvents such as diazosulfide, cycloxaprid and cyantraniliprole have been widely accepted and used in the replacement of EC solvents. They also suggest that people should use the method of six sigma, the analysis of value stream map and lean production in the production of pesticide formulations in order to improve production technologies, increase productivity and shorten production cycle and achieve the scale, continuity and automation of production, thus improving the competitiveness of products and maximize the benefit.

Rice, wheat and corn are the three major crops in the world, and rice is the most important grain crop in our country and is also easy to be attacked by diseases and pests. How can we effectively control the damage of diseases and pests. How can we effectively control the damage of diseases and pests. According to the introduction of Mr. Southgate, some major countries or organizations like FAO/WHO do not ban or restrict the use of EC. They attach great importance to the toxicity of solvents in formulations and ban or strictly restrict the use of toxic and harmful additives. They think that in the future, EC will develop from traditional one to the solvent-free and high concentration ones and natural and “engineered” solvent EC will be widely used.

Because solvent-free EC is only constituted by active ingredient and surfactant, it is crucial to choose surfactant and active compound of pesticide for the success of the process of solvent-free EC. Natural oil like linseed oil, pine oil and dinen and biodiesel made from jatropha seeds are the best choice for the natural solvent EC. However, the problems of solubility and other restrictions on property are still needed to be resolved in the process of preparing natural solvent EC. “Engineered” solvent is usually from renewable resources with low toxicity and no carcinogenic risk and is clean and environmental-friendly. But some of solvents stimulate to eyes. They think that “engineered” solvents such as diazosulfide, cycloxaprid and cyantraniliprole have been widely accepted and used in the replacement of EC solvents. They also suggest that people should use the method of six sigma, the analysis of value stream map and lean production in the production of pesticide formulations in order to improve production technologies, increase productivity and shorten production cycle and achieve the scale, continuity and automation of production, thus improving the competitiveness of products and maximize the benefit.

When serious damage of diseases and pests of rice occur, it can threaten the high and stable yield of rice. From 2002 to 2012, the annual areas of occurring diseases and pests of rice are 1,450 million mu, accounting for 30.5% in the total area. The annual loss made by this damage is 5.2 million tonnes, accounting for 53.5% of the total loss of grain. When serious damage of diseases and pests of rice occur, it can threaten the high and stable yield of rice. From 2002 to 2012, the annual areas of occurring diseases and pests of rice are 1,450 million mu, accounting for 30.5% in the total area. The annual loss made by this damage is 5.2 million tonnes, accounting for 53.5% of the total loss of grain.

In 2012, the biggest pest in rice was the rice planthopper with the occurrence area 42% followed by snout moth’s larva 22%, rice leaf folder 23% and...
other pests 13%; Sheath blight with 62% occurrence area ranked the first followed by rice blast 16%, rice false smut 9% and other diseases 13%. The main reasons for the diseases and pests of rice is the climate change, the distribution of rice varieties, non-tillage and mechanical harvesting, the structure of plantation, nutrient and water management and resistance to drugs. Because of the resistance, our country has suggested to ban the use of imidacloprid to prevent and treat brown planthopper. Triazophos has been banned to prevent and treat chilo suppressalis in Zhejiang, Anhui and other regions.

Challenges for New Introduced Pesticide Products---Li Zhaoliang (Vice General Manager of Sinochem Agro Co., Ltd. and the Senior Expert of Sinochem Group)

Li Zhaoliang, the vice general manager of Sinochem Agro Co., Ltd. and the senior expert of Sinochem Group, elaborates imported technologies and the threshold of registration of innovative products of pesticide and emphasizes the importance of the management in the work of introduction of pesticide products in his report of “Challenges for New Introduced Pesticide Products”.

The introduction of new products is a cycling period from strategy to project to solution (of products) and to strategy. The core idea of its cycling must meet the demands of customers and bring values for them. The new products of what Mr. Li says is not only the new active ingredient, but also the new mixture, new target, new method of use, new countries to use, new package and new product mark, etc.

The life cycle of pesticide product experiences the following 4 stages: the research of new active compounds, evaluation, development of the product and management of life cycle of product. The introduction starts at the beginning of life cycle of pesticide product cycle, but also the new mixture. The threshold of technologies and registration it faces is higher and is a complex, expensive, long-term and high-risk investment.

To invent the new active ingredients is harder and harder and the cost is higher and higher. It usually takes over 10 years for a new pesticide from its research to launching into the market with some $260 million spending. The work of developing new pesticide in our country starts late and lacks of investment. Although we have gained remarkable achievement over the past ten years, there is still huge gap between domestic and foreign large-size companies. From 2000 to 2012, the domestic annual product of formulation is 2.5 on average. Besides Monsanto Company, the number of new pesticides that the top five innovation-oriented transnational corporations introduced annually was 5.7 during that period.

Occurrence and Control of China Major Crop Diseases—Chen Wanquan (Vice Director and Researcher of Institute of Plant Protection, Chinese Academy of Agricultural Sciences)

With his rich work experiences, Chen Wanquan, vice director and researcher of Institute of Plant Protection, Chinese Academy of Agricultural Sciences, clearly explains and analyses the occurrence dynamics of diseases and pests and the development trend of plant protection from 6 aspects in his report of “Occurrence and Control of China Major Crop Diseases”.

Over the decades, we have made remarkable achievements in the work of plant protection and successfully controlled the damage of mythimna separate, wheat midge, rice stem borer, bunt smut and potato black rot. And we have effectively contained the outbreak and spread of major biohazard caused by grasshopper, rice planthopper, rice leaf folder, cotton bollworm, European corn borer, wheat stripe rust, rice blast, small speck diseases of maize, cotton verticillium wilt, etc. In recent years, the annual average grain supposed to be damaged by pests has reached over 60 billion kg.

The annual occurrence area of crop pest in our country is 6-7 billion mu, causing direct economic loss more than RMB100 billion and the damage in some areas is even worse than that caused by flood and drought. Plant protection is a challenging work with great responsibility. However, under the guideline of “Prevention First Accompanied by Comprehensive Treatment”, the workers of plant protection made joint efforts to set up a new concept of plant protection of “Modern Plant Protection, Public Plant Protection, Green Plan Protection”, made full use of the advantages of unified prevention and treatment and actively imported new products, technologies and prevention measures, thus gained the increase of grain in production and the agricultural harvest in 10 consecutive years.

Sustainable Agrochemical Production in BASF—Dr. Florian Thomas (the Head of Department of Investment Projects in Asia-Pacific Region, the Department of Crop Protection of BASF)

In 2012, five major business parts of BASF have jointly contributed 72.1 billion euro in its total sales. “Agricultural Solution” is what we usually say the pesticide business. In 2012, the sale volume of pesticides of BASF has reached 4,679 million euro, accounting for 6.5% in its total sales. From the perspective of sales of pesticide, BASF ranks the third in the world. Although pesticide is just a small business in BASF, it costs more than 400 million euro (25% in its global budget of research and development) to develop and innovate the solutions for farmers around the world. With huge investment in pesticide, we consider the BASF as the example of global research and development. And two figures have set up a benchmark for the pesticide industry: with the R&D expenditure accounting for 9%-10% in its sales, it gains about 25% EBITDA profit margin.

What’s more, Dr. Florian Thomas, the head of Department of Investment Projects in Asia-Pacific Region, the Department of Crop Protection of BASF, shows the code of behavior of BASF to us from the perspective of “agrochemical production” in his report of “Sustainable Agrochemical Production in BASF”, thus making us understand the essence of thriving of BASF for over 100 years, that is the responsibility and care can be seen in everywhere in the production of chemical products.

In June, 2013, BASF began to build its production base of pesticide formulations in Rudong. It’s estimated that the base will operate in 2014. This base has the capacity of producing and packing 10,000 tonnes of pesticide formulations in one year. Under the local and global laws and regulations, BASF is making efforts to create Rudong base the most advanced one in the world.

Focus on Glufosinate: Challenge, Opportunity and Key Technology—Xu Shangcheng(Chief Engineer and Professor of Jiangsu Cheng Yang Crop Science Co. Ltd.)

The discovery of glufosinate is attributed to the research of natural products and the discovery of its herbicidal activity is legendary. After it is sold in the market, it goes through difficult period. But under the support of Bayer’s remarkable strategic insight and extraordinary firm faith, this product has finally met its good fortune.

Focusing on the hot product of glufosinate, Professor Xu Shangcheng, the chief engineer of Jiangsu Cheng Yang Crop Science Co. Ltd, made a splendid report entitled “Focusing on Glufosinate: Opportunity, Challenge and Key Technology”. Professor Xu reviews the development of glufosinate, analyzed the current opportunity and challenge of glufosinat and proposed the most valuable development course from the numerous synthetic methods of glufosinate.

Technology Creates Value—R&D Pipeline of Agrochemicals and its Security Speed up Development: Success comes from Innovation---Bai Guanyi (The Director of Syngenta Nantong Technological Center)

13 years ago, Syngenta was formed by Zeneca and Novartis. With short history, Syngenta has become the world No.1 pesticide company. In 2012,
its sales volume of pesticide has reached $10.318 billion. If the sales volumes of $757 million lawn and garden products and $3237 million seed are counted, the total sales volumes of Syngenta reached $14,312 million in 2012. Syngenta invests more than $1 billion in its R&D every year. In more than 26,000 staffs around the world, there are over 5,000 researchers.

Innovation and technological development have promoted the strong increase of Syngenta.

Mr. Bai, the director of Syngenta Nantong Technological Center, expanded the technological importance to the whole product cycle of the company. As the company introduce the position and role of the department of T&E (technology and engineering) where he works to the whole industrial chain.

Syngenta divides the crops in the world into 9 categories: corn, soybean, cereal, rice, sugarcane, field crops, vegetable, special crops and lawn and gardening. Under the strong support of technologies, Syngenta will serve farmers better in the future through integration and innovation.

Mr. Bai enumerates Syngenta’s two crop solutions on rice and sugarcane: TEGRA and PLENE. Syngenta provides considerate service to crops from sowing to harvesting. By implementing the TEGRA solution, Syngenta not only increased the rice output by 30% and the rate of return on investment is 150%. And through the PLENE solution, growers can save 15% of their cost.


Wang Wencai, the Chairman of the Board of Shandong Rainbow International Trading Co., Ltd, showed his unique thinking on business operation in the past 10 years and shared their mistakes and experience in the process of company’s development in his speech of “Developmental Strategy of Internationalization Enterprises—Easy Market Access Platform”.

1. Rapid Growth before the Formation of Strategy
On October 10th, 2000, Mr. Wang together with other 6 people contributed RMB 300,000 and borrowed RMB 700,000 to establish Rainbow. Since its establishment, the company has been developing rapidly. In 2012, the sales of Shandong Weifang Rainbow Chemical Engineering Co., Ltd affiliated company Shangdong Rainbow increased by RMB 1.2 billion. With the business of chemical engineering added, there was RMB 2.4 billion in total. In 2008, its sales volume reached peak.

2. Providing Considerate Service for “the Market Access Platform”

The platform building of Rainbow has experienced 3 development stages: 1) What products should we produce and what products should we register. At the initial stage on its way to market, Rainbow registered in accordance with Rainbow’s products, such as glyphosate, 2,4-D and atrazine, etc. Mr. Wang says: “since we locate in “Market Access Platform”, we should forget factory. We should customize according to the demands of cooperative partners. This is the change that we have experienced. 2) Registering those products that are popular in the market. According to market demand and hot products, Rainbow customized and registered popular products in the market, while the market response was still not good. Many customers had registered and there were no clear differences. 3) Registering products in advance according to crops. In this stage, focusing on the research of Syngenta, Rainbow researched the newest and the most popular products and their trend in the future and chose varieties and registered them before other companies and accesses to market rapidly. Due to this change of concept, the market value and profit rate of Rainbow have increased. The attraction of Rainbow in market has rapidly increased and Rainbow has thus got a profitable return: in 2009, the amount of export to Argentina market was $7 million; in 2012, it increased to $110 million; in 2009, the amount of export to Australia was about $12 million, and now the business income is about $65 million every year. The return on input and output makes Rainbow increase the investment in each country. Now, Rainbow has registered in over 30 countries around the world. The input on registration in 2013 has increased to $12 million from the budget of $9 million in the beginning of the year.

3. Sustainable Innovation is the Core Value of the “Platform”

In the concept of “Easy Market Access Platform”, sustainable innovation is the core competiveness of the platform.

Rainbow has done many works in the field of innovation. Mr. Wang shared their achievements from the following 3 aspects: 1) Upgrading and transformation of formulations to the large tonnage active ingredient. Argentina government required its farmers to recycle plastic container, which drove the transformation of glyphosate solution to granula rapidly in this market. In lights of this situation, Rainbow not only imported glyphosate granula to Argentina, but also developed 2,4-D salt water soluble granule. Rainbow not only applied patent for 2,4-D salt water soluble granule, but also registered it in Argentina. In 2009, Rainbow imported 10 cargo containers of glyphosate granula to Argentina, and in 2012 600 cargo containers. In 2013, for the first time, Rainbow imported 1800 tonnes of 2,4-D salt water soluble granule to Argentina. Mr. Wang thinks that as long as the cost is under control, paraquat granula from GAOZHENG GROUP has bright market in the future. At the same time, paraquat granula will be also the key project in Rainbow. 2) Copying the market. Rainbow carries out its work in over 30 different countries at the same time, so there are lots of differences in markets. Focusing on target crops, Rainbow copies its solutions from A market to B market. By doing this, it can lower the risk and be easy to carry out. Mr. Wang illustrated that Asia is the biggest continent in planting rice in the world with advanced planting experience. Brazil, Uruguay, Paraguay and Columbia, but their planting technologies are relatively backward. When Mr. Wang went to Columbia for the first time, he found that there were only acetochlor and propanil in its rice market and there was a huge gap between China and Columbia in the level of prevention and treatment. Rainbow tested and registered its best domestic herbicides in Columbia. Copying the successful experience of A market into B market, Rainbow has been benefited a lot from this. 3) Customizing products and registering them in advance. When the products of Rainbow are sold in the destination countries, Rainbow tries to know the new changes of markets directly and find solutions according to customers’ demand. Rainbow customizes the products that customers find and let them develop market independently. The prices of products change a lot with the supply and demand of the market. Mr. Wang considers that it must be quicker than other companies in access and registration, so efficiency is also the innovation.

Rainbow encourages innovation and actively applies for patents to protect innovation, thus protecting this platform and enhancing the core value of this platform.

4. Finding the Proper, Excellent and Right Cooperative Partners.

How to maximize the value of the platform? How to choose proper, excellent and right cooperative partners in different markets, regions and crops? These are the problems that Rainbow is thinking and needs to solve.
Improve the Service and Help the Enterprises Grow
---Interview at the AgroChemEx 2013

Editor's note: The year of 2013 has witnessed the 13th anniversary of AgroChemEx held by China Crop Protection Industry Association. Over the past 13 years, with enterprises’ support and the Association’s strenuous effort, the AgroChemEx has already become a professional agrochemical exhibition of the largest scale in China. The conference pattern which integrates both conference and exhibition provides an informative platform for the industry businesses to exchange information and showcase their strengths. Here, we are honored to have the chance to interview some of the meeting and exhibition participant enterprises. Their positive assessment has not only empowered us but also drove us forward to provide better service for the industry businesses. China Crop Protection Industry Association will commit itself to continuously optimizing its service in helping the enterprises gain healthy growth, smooth transformation and upgrading.

Huang Ziyun: TC manufacturers are suppliers for formulation enterprises. I hope that domestic TC manufacturers could make constant efforts to gain national policy support, increase their input into technological innovation, and bring more new and quality products into the market. As a formulation enterprise, I hope that the TC market could maintain a relatively stable price and avoid the “roller-coaster” ups and downs.

Journalist: What is the most-wanted information that you want to know from participating the exhibition?

Huang Ziyun: We attach great importance to the AgroChemEx held by China Crop Protection Industry Association each year and have always been an active participant during the past few years. We want to know through the exhibition the development trend of TC products and what new products will show up at the exhibition; the price movement of TC products as well as manufacturers’ reserve measures during slack seasons. What’s more, we also want to know and buy upgraded processing equipment and packaging material.

Journalist: As a formulation enterprise to participate the exhibition, what’s your expectation for the TC market?

Huang Ziyun: TC market is in roller-coaster trend in the past two decades. Our TC products over the past two decades. Our TC products have been exported to over 60 countries and we have established cooperative relationships with many multinational corporations. We hope that more corporations will join hands with us.

Journalist: As an exhibitor, what’s your impression on this year’s exhibition?

Huang Ziyun: This year’s exhibition is compactly significant. The opening ceremony was brief but lively; there were newcomers among the participant businesses; the exhibition was rich in programs; there were fewer bystanders and much more industry elites. There were so many highlights which caught our attention at the exhibition. Many of the representative enterprises from Anhui province lamented that none of the formulation enterprises from Anhui province had made it to the Top 30 and only three of them had made it to the Top 100 Sales, but we believe that through strenuous efforts we could certainly change the situation; we believe that through this annual conference and exhibition, we will know our shortcomings, learn more valuable concepts and technologies, and display our own image to our counterparts so that they will gain a better understanding of the pesticide enterprises from Anhui province.

Journalist: Would you please give us a brief introduction of your company?

Meghmani Organic: Meghmani Organic Ltd. is an Indian agrochemical company. We've been committed to the development of agrochemical products over the past two decades. Our products have been exported to over 60 countries and we have established cooperative relationships with many multinational corporations. We hope that more corporations will join hands with us.

Bioagri Laboratory: Bioagri Laboratory is committed to providing all-round service in helping Chinese enterprises enter the Brazilian market. We are honored to be given the opportunity to participate in the exhibition. We hope to join hands with more Chinese enterprises to develop the Brazilian market.

Journalist: As a Brazilian company, Bioagri Laboratory has an active participant at our exhibitions for years. Would you please let us know what you have gained from participating in the exhibitions? What advice would you give us?

Bioagri Laboratory: Bioagri Laboratory is a laboratory-type firm which offers agrochemical product analysis and test for agrochemical companies with high-quality chemical analysis and test service. Bioagri Laboratory boasts of the best five-batch analysis in the world, ecotoxicological study, study on physical and chemical features, etc. Bioagri Laboratory also helps foreign enterprises register in Brazil. Its quality service is not only designed for agrochemical clients but also suitable for farmers and agrochemical investors.
Journalist: What are your measures in guaranteeing product safety and protecting the environment?

Kenso Corporation: As a lot of our products are exported to Australia, we need to guarantee that our products will meet Australia’s high standards. We’ve already been quite good at this, and our assistant and additive products are very environmentally friendly, too.

Journalist: How do you think this exhibition will help the enterprises promoting their images and brands?

Kenso Corporation: We can meet lots of exhibitors and visitors from all over the world and exchange business ideas with them through AgroChemEx held by China Crop Protection Industry Association. As we have factories in China, so the exhibition not only offers us opportunities to meet foreign clients but also chance to exchange ideas with domestic factories.

Journalist: What’s your future plan for developing business in and out of China?

Kenso Corporation: We are not only focusing on the domestic market. The establishment of factories in China serves to develop business in Australia, Thailand and Indonesia. Since our output in Malaysia is quite limited, this will help us in bringing more business to the company.

Sevencontinent: Sevencontinent has committed itself to the production of highly efficient triazoles fungicide products of low toxicity. Sevencontinent has been developing products of its own characteristics in the pesticide industry. Although not an enterprise of a large scale, Sevencontinent has always been clear about its target: the development and production of highly efficient triazoles fungicide products of low toxicity. Sevencontinent has been working with an American partner/client? If they make the following two decisions. First, they should decide whether to directly register the product or to work with an American distributor/retailer. This will help us in bringing more business to the company.

Sevencontinent: Through this platform, Sevencontinent will demonstrate its achievements and growth to the world each year and let more of our counterparts witness the development of Sevencontinent as well as that of the domestic pesticide industry. This platform keeps us well informed with the fresh developments of the pesticide industry. The exhibition connects the clients with the enterprises and brings us the market movement and direction which concerns us. The scale of the exhibition is expanding each year and it will head to Pudong district, Shanghai next year. I think this will offer the enterprises in the pesticide industry a good opportunity to present their images and exchange ideas with their counterparts.

Peter Gray: I’m glad to join in this conversation regarding the difficulties met by the Chinese pesticide manufacturers when they try to enter the American and European markets. You have mentioned that if they have the pesticide products registered, they still find it hard to enter the American and European markets. The Chinese pesticide market can’t find its share in America. As a matter of fact, McKenna Long & Aldridge has helped some of the Chinese pesticide enterprises overcome such difficulties. The Chinese enterprises should make the following two decisions. First, they should decide whether to directly register the product or to work with an American partner/client? If they make the decision to register the product, they can gain higher profit in selling the products, but a higher profit comes at a cost. The Chinese enterprises need to compensate the original registrant who is backed up by data. This is an awkward problem for many of the enterprises, for the data compensation amount is not a fixed number, which might need to be sorted out through arbitration. However, the compensation fee is quite high, but if there is an awesome American consultant to help, the Chinese enterprises will get themselves a reasonable number to pay. Secondly, if the Chinese enterprises have received registration approval in America, then what’s the key for them to succeed in the American market? I think the next move for them is to employ some American people who know well about the American market and, especially, have connection with the American distributors and retailers. This kind of connection is essential, for the distributors need to believe that the Chinese enterprises can deliver quality products on time. If the distributors cannot trust the Chinese enterprises in this, they would rather pay a higher price to buy the products from other suppliers.

Journalist: China is the largest exporter of generic pesticides in the world; however, the Chinese pesticide enterprises usually find themselves in an awkward position. Take glyphosate as an example. The foreign businesses have it registered in EPA, but the Chinese enterprises can only produce it for their foreign counterparts instead of being allowed to sell their own products in the American market. What do you think are the reasons which led to this kind of awkward situation? What should the Chinese pesticide industry do in order to step out into the world?

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Hebang Crop to Acquire 51% of Shares of Hebang Agricultural Technology, Starting Glyphosate Business

Sichuan Hebang Corp announced its decision on Nov 29th to acquire 51% non-public shares of Leshan Hebang Agricultural Technology from Sichuan Salt Industry Corporation, worth RMB 814 million. After the acquisition, Hebang Agricultural Technology would be a wholly-owned subsidy of Hebang Crop, who owned 49% of its shares before.

Hebang Crop says some production lines of Hebang Agricultural Technology, including an annual production capacity of 150,000 tonnes of PMIDA, are on pilot operation, but haven’t been put into production yet. After the acquisition and the operation, Hebang Crop would have an extra 15,000 tonnes of PMIDA and related products produced annually. Hebang Crop might lead the domestic PMIDA business, its product structure will cover not only sodium carbonate, ammonia chloride, but also PMIDA.

PMIDA is mainly applied in glyphosate production. There has been a great demand in PMIDA and glyphosate products since 2013, with its selling price rising. The prospect in the market of glyphosate is prosperous. The acquisition might make Hebang Crop the leading corporation in glyphosate industry.

Huapont-Nutrichem to Acquire Two Fine Chemical Enterprises for 1.3 Billion, Strengthen Agrochemical Industry

Huapont-Nutrichem recently announced its decision to acquire 100% of stake from Shandong Fuer and Shandong Kaisheng New Materials, paying by issued shares and cash for 16.12 RMB per share. The total worth of the shares is RMB 1.329 billion, with Shandong Fuer RMB 849.68 million and Kaisheng New Materials RMB 479.50 million.

Huapont-Nutrichem will raise supporting fund as new capital for Shandong Fuer in chloride and fluoride production, for Kaisheng New Materials in aramid polymerized monomer (m/p-phthaloyl chloride) production, the volume of which is 12,000 tonnes per year.

Huapont-Nutrichem says the reorganization will achieve a scale up cost-effective operation by integrating the upstream and downstream agrochemical resources, and enhance its capacity to provide industry leaders like BASF with more varieties of products. And Huapont-Nutrichem is to invest more in the R&D of leading new polymer materials like PEK.

Shandong Fuer specializes in the R&D, production and marketing of fine chemical intermediates, with aromatic compounds as the main products for synthesizing of intermediates to be applied in production of quinclorac, bifenthrin, diflubenzuron, F500, flusilazole and flutiafol. It has established a long-term cooperation with BASF.

Kaisheng New Materials mainly deals with fine chemical intermediates and new polymer materials, with registrations in the market of thionyl chloride, tertephthaloyl chloride/ isophthaloyl dichloride, chloric ether, PEAK, etc. as main products. As an important organic material, thionyl chloride is mainly applied in the production of agrochemicals, pharmaceuticals and food additives such as deltamethrin, fenpropatin, ciprofloxacin, etc. chloric ether is one of the raw materials of low toxic and high efficient herbicide—the early-phase broad spectrum rice field application pretiachlor in bud stage, and is supplied to Hangzhou Qingfeng Agricultural Chemicals Co., Ltd, a subsidiary of Huapont-Nutrichem. Kaisheng New Materials is leading in the thionyl chloride and acyl chloride industry, and is actively promoting the industrialization and scale expansion of new polymer materials like PEK.

Rainbow Expands Market in Central America and Caribbean, Speeding up International Business

Two years after starting its operations, Rainbow Agrosciences (Central America), part of the Chinese agrochemical company Rainbow Group, continues to establish the Market Access Platform for its customers in the region. The annual turnover of Rainbow in the Central America and The Caribbean Region will reach over 25 million dollars in 2013, and the company expects a revenue growth of a minimum of 20% for the next fiscal year.

Rainbow has a global professional team, which works hard to deliver a complete and competitive product and service portfolio to its customers. Rainbow’s business operates in two ways: on one hand it gives access to a broad portfolio of quality and competitive commodity products; on the other hand, it provides access to specialty post-patent products that delivered more added value to its customers. Rainbow has obtained more than 300 registrations in the region during the last two years, and more than 200 applications have been submitted. Moreover 600 applications are in the registration plan.

“We are currently the biggest Chinese supplier in this region, but our long-term goal is to become the preferred and right business partner for all our customers. For this reason, we’ll continue with a flexible platform that adapts itself to all market changes. In addition, this platform will transform changes and challenges into opportunities and solutions for all stakeholders,” says Michael Groos, Director General for Central America and the Caribbean.

“We recognize the quality of Rainbow’s products and especially their timely response in attending our needs”, says José Rodolfo Pérez, CEO of Agrocentro, S.A, a well-known Guatemalan enterprise with operations in more than in Central and Southern America region.

Market driven innovation is very important to Rainbow, as it constitutes a core value of its day-to-day activities. This means to live and work alongside its customers, as well as to gain a deeper insight and understanding of the market. Market driven innovation consists of developing new solutions that serve and satisfy the market challenges.

Mr. Groos says, “We’ll continue to invest and improve our Market Access Platform. We’ll achieve this by introducing more high value specialties and proprietary innovative products that will in return protect the market position and profitability of our customers in the long term.”

Rainbow is working more closely with its strategic partners than ever. The launch of new products and a much more professional and efficient service is attracting customers willing to work with Rainbow. The company is optimistic about their prospects of development.
RedSun Released Q3 Report, Business Integration Decision Passed

Key financial data are in the following table:

<table>
<thead>
<tr>
<th></th>
<th>The end of the reporting period</th>
<th>The end of previous year</th>
<th>Change between the end of the reporting period over the previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets (RMB)</td>
<td>9,723,083,925.97</td>
<td>9,115,590,134.30</td>
<td>-4.29%</td>
</tr>
<tr>
<td>Net assets attributable to shareholders of listed company (RMB)</td>
<td>3,267,386,341.58</td>
<td>3,021,770,425.17</td>
<td>-2.03%</td>
</tr>
</tbody>
</table>

On the same day of releasing Q3 report, the Board of RedSun adopted the Proposal on the merger of wholly-owned subsidiary of the Company. Based on the need of the company’s production operations and development, in order to advance the further integration of the business, improve operational efficiency, and reduce operating costs, Chongqing Huage Biochemical Co., Ltd. (hereinafter referred to as “Huage”) will merger Chongqing RedSun Biochemical Co., Ltd. (hereinafter referred to as “Chongqing RedSun”). After the merger, Huage will continue to existent, Chongqing RedSun will be legally dissolved and canceled. All the assets and debt of Chongqing RedSun will be inherited by Huage.

Huaxing Chemical Q3 Report: Revenue Quadrupled

Key financial data are in the following table:

<table>
<thead>
<tr>
<th></th>
<th>The End of reporting period</th>
<th>The End of reporting period of Previous year</th>
<th>Change between the end of the reporting period over the previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets (RMB)</td>
<td>3,240,046,469.18</td>
<td>1,505,708,552.05</td>
<td>115.18%</td>
</tr>
<tr>
<td>Net assets attributable to shareholders of listed company (RMB)</td>
<td>2,590,990,852.61</td>
<td>683,381,678.60</td>
<td>279.14%</td>
</tr>
</tbody>
</table>

Huaxing Chemical Q3 Report: Revenue Quadrupled

Net profit attributable to shareholders of listed companies performs positively and does not belong to a turnaround situation; net profit attributable to shareholders changes in the range of -68% to -48% in 2013; net profit attributable to shareholders of listed companies was 111.90 m in 2012.

Introduction of reasons for changes in performance: last year, the company transferred 51% of equity of its subsidiary Anhui Huaxing Construction Investment, which brought in RMBv104.7787 million of income, while there was no such income registered during this year. Compared with 2012, in 2013, net profit excluding non-recurring gains and losses attributable to shareholders of listed companies has a larger growth. The main reason is that the price of company’s leading product, glyphosate, has been increasing during this year, resulting in improved gross profit margin. Meanwhile, subsidiary Linearfull have enlarged their agricultural trade, which also contributes to the increased net profit.
Li
cr Chemical Q3 revenue rose by 1/4

In 2012, the technical innovation of the company’s subsidiary, Jiangsu Kuaida Agrochemical was approved. The technology projects are planned relocation in an orderly way, and some have already entered the workshop equipment installation phase.

Income of Lianhetech Rose by More than 1/3 in Q3 2013

Recently, Lianhetech published its three quarterly report in 2013. In the first nine months, the company achieved total revenue of RMB 2.419 billion, an increase of 11.1%; operating profit of RMB 3146 million, an increase of 16.3%; achieved net profit attributable to shareholders of the parent company RMB 296 million, an increase of 18.4%. Which the July-September operating income of RMB 965 million, an increase of 38.9%; net profit attributable to shareholders of RMB 102 million, an increase of 17.8%.

The company also expects net profit attributable to shareholders of listed companies in 2013 reach 4.02-4.75 billion, an increase of 10% - 30%.

Taizhou headquarters (the parent company) and subsidiaries of Jiangsu Lianhua is currently the company’s industrial business’s main production base (the company achieved operating income in the first half of industrial business RMB 1.167 billion, of which the parent company and Jiangsu Lianhe were realized RMB 5.23 and RMB 5.86 billion). According to three quarterly data, from July to September the company achieved revenues of about RMB 766 million of industrial operations. Meanwhile, over the same period, the parent company, Taizhou Lianhe achieved a revenue of RMB 342 million.

SANONDA has a Predicted Increase in Operation from 270-320% in the First Three Quarters

On the evening of October 7, SANONDA announced that from July 1 to September 30, net profit attributable to shareholders of listed companies is about RMB 5516.2 - 7984.2 million, an increase of 117% - 215%. From January 1st to September 30, net profit attributable to shareholders of listed companies are approximately RMB 18,263.2 to RMB 20731.2 million, an increase of 270% - 320%, basic earnings per share is about RMB 0.3075-0.3490.

The Company said that increase in the third quarter resulted from the company’s production and sales of major products increase significantly compared with the same period last year. Besides, sales prices also increased, which also contributed to the increase.

Key financial data are in the following table:

<table>
<thead>
<tr>
<th></th>
<th>End of the reporting period</th>
<th>The end of the previous year</th>
<th>Change between the end of the reporting period over the previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assets (RMB)</td>
<td>1,666,075,531.65</td>
<td>1,492,026,522.16</td>
<td>11.67%</td>
</tr>
<tr>
<td>Net assets attributable to shareholders of listed company (RMB)</td>
<td>1,082,936,694.71</td>
<td>1,007,915,994.20</td>
<td>7.44%</td>
</tr>
<tr>
<td>The reporting period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change between the reporting period over the previous year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change between the beginning of the reporting period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change between the beginning of the reporting period over the previous year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating income (RMB)</td>
<td>120,956,350.97</td>
<td>19.76%</td>
<td>1,084,935,335.79</td>
</tr>
<tr>
<td>Net profit attributable to shareholders of listed company (RMB)</td>
<td>28,553,535.52</td>
<td>13.23%</td>
<td>97,936,280.40</td>
</tr>
<tr>
<td>Net profit attributable to shareholders of listed company (RMB)</td>
<td>31,920,421.44</td>
<td>16.59%</td>
<td>103,941,013.26</td>
</tr>
<tr>
<td>Net cash flow from operating activities (RMB)</td>
<td>77,155,396.12</td>
<td>24.98%</td>
<td></td>
</tr>
<tr>
<td>Basic earnings per share (RMB / share)</td>
<td>0.14</td>
<td>16.67%</td>
<td>0.48</td>
</tr>
<tr>
<td>Diluted earnings per share (RMB / share)</td>
<td>0.14</td>
<td>16.67%</td>
<td>0.48</td>
</tr>
<tr>
<td>Weighted average return on net assets (%)</td>
<td>2.79%</td>
<td>0.21%</td>
<td>9.25%</td>
</tr>
</tbody>
</table>

In 2012, the technical innovation of the company’s subsidiary, Jiangsu Kuaida Agrochemical was approved. The technology projects are planned relocation in an orderly way, and some have already entered the workshop equipment installation phase.

About agrochemical show: www.agrochemex.net
** PRODUCTS **

Zhejiang Huajing Biotechnology Receives the First Registration Approval for Berberine Product in China

Recently, Zhejiang Huajing Biotechnology Co., Ltd. has received the first formal registration approval for 0.5% berberine in China. The registration will expire on Oct. 11, 2018. This is the first berberine product which has been formally approved in China. Huajing Biotechnology's berberine has been registered for controlling gray mold disease and leaf mold disease on tomato, powdery mildew and downy mildew on cucumber as well as phytophthora capsici.

0.5% berberine is a botanical fungicide of broad spectrum developed and produced by Zhejiang Huajing Biotechnology Co., Ltd. It is of minor toxicity, pollution-free, and harmless to natural enemies, human beings and animals, and can be applied for various purposes without influencing the produce, for it is mainly extracted from natural plants such as Chinese honeylocust fruit, bitter root, aconite root, aloes, radix sophorae flavescentis, rheum officinale, and resin, etc.

One of the action mechanism of berberine is to close the harmful fungus and pests in so they will be cut off from oxygen and nutrients. Later on they will be suffocated or starve to death; or berberine will seep into the body of the harmful bacteria and pests and spread out quickly, so the bioactive agents or protein in the pesticide will break down into toxic substances which will destroy the intestine cells of the harmful fungus and pests so they will be stopped taking in food within several minutes and be wiped out within one to three days due to blood poisoning and hunger. Berberine is remarkably effective when applied on plants such as vegetables to control gray mold disease, phytophthora disease, powdery mildew and downy mildew, and fruits and Chinese medicinal plants.

Anhui Fengle Agrochemical Receives the First Registration Approval for Propyzamide WDG in China

Recently, Anhui Fengle Agrochemical Co., Ltd. has received the temporary registration approval from ICAMA for its 80% propyzamide WDG used to control annual weeds in ginger field. The registration which will expire on Oct. 10, 2014 is the first registration for propyzamide WDG in China.

No propyzamide TC or formulation has ever received formal registration approval in China so far. Enterprises of temporary registration for propyzamide products are listed as below: temporary registration for 96% propyzamide TC by Jiangsu Luye Agrochemicals Co., Ltd.; temporary registration for 97% propyzamide TC by Jiangsu Nantong Jiahe Chemicals Co., Ltd.; temporary registration for 50% propyzamide WP used for controlling weeds in lettuce field by both Jiangsu Luye Agrochemicals Co., Ltd. and Fivestar (Nantong) Chemical Co., Ltd.

Propyzamide is a systemic selective amide herbicide. It functions by disturbing the mitotic mechanism of the weeds cells after the root takes in and transmits the herbicide. It is mainly applied on monocotyledonous weeds and safe for broad-leaf crops.
Rudong Zhongyi Chemical Receives the Registration Approval for Cyazofamid TC as the First Domestic Enterprise in China

Recently, Rudong Zhongyi Chemical Co., Ltd. has received the formal registration approval for 94% cyazofamid TC from ICAMA. Rudong Zhongyi Chemical Co., Ltd. thus became the first enterprise in China which has received registration approval for 94% cyazofamid TC. Currently, Rudong Zhongyi Chemical Co., Ltd. has installed equipment of 200 tonne/year capacity which can be put into production in the first half of next year. Most of the products will be exported. Prior to this, Ishihara had received registration approval for 93.5% cyazofamid TC in China.

Cyazofamid is a preventative fungicide which is applied on leaves and in soil. It is of residual effect and rain resistance and is remarkably effective in controlling downy mildew, phytophthora diseases, club root, damping-off, etc. It can be applied to effectively control late blight and downy mildew in the field. It functions by interrupting the electron transfer of mitochondria cytochrome complex bc1 in vivo of oomycete bacteria which will subsequently disturb the supply of energy. It has no cross-resistance with other fungicides.

Cyazofamid is a preventative imidazole fungicide introduced and researched by Ishihara and jointly developed by Ishihara and BASF. Cyazofamid is sold by BASF in regions other than Asia and it faces fierce competition with other products in the market. In 2001, cyazofamid was launched into the British and French markets to be applied against potato late blight, and into the Japanese market for grapes, potatoes, cucumbers, melons and tomatoes. It was launched into the Mexican market in 2005, into the American and Brazilian markets as Ranman in 2006, and into the Canadian market by FMC in 2007. In 2011, Ishihara mixed cyazofamid with polyoxin together, developed the compound product of Greenwork and had it registered in Japan. In 2012, Belchim renamed it as Ranman Top and launched it into the Italian market, while ISK named it as Torrent and had it registered in Canada. At present, the European Commission has proposed to extend the existing valid registration date of cyazofamid until July 31, 2016.

The First Domestic Enterprise in China Receives the Registration Approval for Iodosulfuron-methyl-sodium TC

Recently, Jiangsu Agrochem Laboratory has received the formal registration approval for 91% iodosulfuron-methyl-sodium TC as the first domestic enterprise in China. Prior to this, Bayer CropScience had received the registration approval for 91% iodosulfuron-methyl-sodium TC in China. Selective herbicide iodosulfuron-methyl-sodium is a branched-chain-aminoc-acid synthesis inhibitor which by inhibiting the biosynthesis of critical amino acid valine and isoleucine disrupts the cell division and hinders plant growth. This post-emergence herbicide is applied to control grasses and broadleaf weeds such as cleavers and ryegrass in cereal crops such as winter wheat, spring wheat, durum wheat, triticale and spring barley.

Iodosulfuron-methyl-sodium was originally developed by AgrEvo from Germany and now is a product of Bayer. Two compounded formulations of iodosulfuron-methyl-sodium were registered in China, both by Bayer CropScience: 6.25% acid ethyl • metsulfuron WDG (5% acid ethyl + 1.25% iodosulfuron-methyl-sodium), 3.6% mesosulfuron methyl • metsulfuron WDG (3% metsulfuron methyl + 0.6% iodosulfuron-methyl-sodium) and 1.2% mesosulfuron-methyl • iodosulfuron-methyl-sodium OD (1% metsulfuron methyl + 0.2% iodosulfuron-methyl-sodium) respectively.

Shijiazhuang Xingbai Bioengineering Receives the Registration Approval for Dinotefuran TC as the First Domestic Enterprise in China

Recently, Shijiazhuang Xingbai Bioengineering Co., Ltd. received temporary registration approval for 98% dinotefuran TC from ICAMA. This is the first registration for dinotefuran TC registered by a domestic enterprise in China. Prior to this, Mitsu Chemicals Agro, Inc. had received the registration approval for 99.1% dinotefuran TC.

Dinotefuran is a systemic neonicotinoid insecticide developed by Mitsui. After being taken in by the crops it will be translocated acropetally. The absorption of dinotefuran by the insects will cause antagonistic action on the nicotine-like acetylcholinergic receptors in vivo which will subsequently affect the synapses of the central nervous system. Dinotefuran can be applied to prevent and control sap-sucking insects such as whiteflies and plant bugs, coleopterans insects such as Colorado beetles and flea beetles, dipteran insects such as leaf miners and lepidopteran insects such as fruit moths.

Dinotefuran was first registered in Japan in 2001, and 2% dinotefuran granule as well as 20% dinotefuran soluble granule was launched into the market in the following year. Dinotefuran was registered in South Korea in 2003 and was registered in America in 2005 to be applied on cotton, grape vine, vegetables, potatoes and for non-crop purposes. Dinotefuran can be used to protect animal health and prevent and control household pests. Summit VetPharm, a subsidiary of Sumitomo Corporation, launched Vectra containing dinotefuran to control fleas on pets such as dogs and cats. In 2006, Valent registered Venom in America to be applied on grape vine, on brassicas, gourds and other vegetables in 2007, and on ornamental plants in 2008. Gowon launched Scorpion 35SL into the market in 2010 and registered it in America to be applied on gourds, fruit vegetables, potatoes, grapes, leaf vegetables, etc. America began the examination and registration work for dinotefuran in 2012.
PRODUCTS

China ICAMA Newly Granted 1931 Pesticide Registrations in H1 2013

The number of ICAMA newly granted pesticide registrations numbered 1931 in the first half of 2013. That reflected a 36.6% increase over the same period last year, when 1414 registrations were granted. 1532 approvals (146 technical materials and 1386 formulated products) were for full registration, consisting of 1393 approvals for crop use and 139 approvals for household pesticides. 366 approvals (18 technical materials and 348 formulated products) were for temporary registration, consisting of 338 approvals for crop use and 28 approvals for household use. In addition, 33 approvals were granted for pesticide repackaging.

Insecticide was by far the most registered product category. 855 of the approvals were granted, reflecting a 36.6% increase over the same period last year. Followed by herbicide (502 new registrations), fungicide (491 new registrations) and PGRs (31 new registrations).

Of all the pesticide products registered in the first half of 2013, The aqueous suspension concentrate (SC) becomes the top registered formulation type, followed by emulsifiable concentrate(EC), wettable powder(WP), water dispersible granule(WDG).

Areal distribution of the Registrants

<table>
<thead>
<tr>
<th>Province (Region)</th>
<th>Number of Products</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shandong</td>
<td>404</td>
<td>20.9</td>
</tr>
<tr>
<td>Jiangsu</td>
<td>286</td>
<td>14.8</td>
</tr>
<tr>
<td>Shanxi</td>
<td>161</td>
<td>8.3</td>
</tr>
<tr>
<td>Hebei</td>
<td>113</td>
<td>5.9</td>
</tr>
<tr>
<td>Guangdong</td>
<td>103</td>
<td>5.3</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>98</td>
<td>5.1</td>
</tr>
<tr>
<td>Anhui</td>
<td>79</td>
<td>4.1</td>
</tr>
<tr>
<td>Sichuan</td>
<td>72</td>
<td>3.7</td>
</tr>
<tr>
<td>Jiangxi</td>
<td>70</td>
<td>3.6</td>
</tr>
<tr>
<td>Liaoning</td>
<td>70</td>
<td>3.6</td>
</tr>
<tr>
<td>Henan</td>
<td>67</td>
<td>3.5</td>
</tr>
<tr>
<td>Other provinces</td>
<td>372</td>
<td>19.2</td>
</tr>
<tr>
<td>Overseas companies</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>

The vast majority of the pesticides were registered by indigenous registrants. Agrochemical companies from Shandong, Jiangsu, Guangdong and Zhejiang are driving much of this trend.
www.agrochemex.net

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