CHINA AGROCHEMICALS

11th Agrochemex Special (Page 2–Page 13)

China Output Ups 21.4% in 2011 (Page 14)

CCPIA Paid a Visit to Japan (Page 15)
AgroChemEx 2012

Location: Shanghai Everbright Convention and Exhibition Center, Shanghai, China

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Organizer: China Crop Protection Industry Association
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 495 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.

In term of the statistics, authoritatively, CCPIA issued the China Crop Protection Industry Yearbook and hundreds of products reports.

2011
Products report

- Glyphosate
- Paraquat
- 2,4-D
- Acetochlor
- Imidacloprid
- Carbendazim
- Mancozeb
- Abamectin
- Chlorpyrifos
- Clothianidin
- Thiamethoxam
- Triazines
- Nicosulfuron
- Transfluthrin
- Mesotrione etc.

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International Conference on Crop Protection Science & Technology Call for Papers

International Conference on Crop Protection Science & Technology in parallel with Agrochemex 2012, organized by China Crop Protection Industry Association, will be held on October 19, 2012. You are cordially invited to submit paper for the proceedings of the conference on following topics:

- **Crop protection:** Occurrence trend and control technology of insects, diseases and weeds
- **Regulations:** Management and registration of pesticides in different countries
- **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, 2012. Excellent papers will be elected and the authors will be awarded.

All the papers should be sent to yousheng@ccpia.org.cn OR ao_cc@hotmail.com before July 30th.
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Sponsor: China Crop Protection Industry Association (CCPIA)
**Development Consideration of China Petroleum and Chemical Industry’s 12th Five-Year Plan:**

Based on the completion and release of the industry “12th Five-Year Development Guide”, as well as related special programs, industry “12th Five-Year development of ideas and the main task, mainly reflected in the following five areas.

To promote industrial structure optimization and upgrading, maintaining the steady and rapid development of industry.

To speed up technological progress and innovation, to create a number of world famous brands.

To promote the development of conservation, safety and cleaning, initial formation of the green, low-carbon, safe and sustainable development model.

To foster large-scale enterprises and enterprise groups, to build the system of coordination of medium and small ancillary industries and enterprises.

To-ordination "bringing in" and “going out” to enhance the level of opening up.

**Promotion vigorously Responsible Care during the “12th Five-Year Plan”**

The implementation of Responsible Care is the social transformation of corporate safety and environmental protection requirements.

The implementation of Responsible Care is the need of enterprises to accelerate the transformation of economic development.

The implementation of Responsible Care is the need for further strengthening the external exchanges and cooperation for companies.

**Some advice of the pesticide industry.**

To further adjust the industrial structure, to improve the core competitiveness of the industry.

To make breakthroughs in core technologies, to enhance the capability of independent innovation.

To promote the Responsible Care vigorously, to improve industry safety and environmental standards.

To strengthen the industry operation monitoring, to improve the level of environmental protection.
Achievement
Pesticide production output increased significantly, product structure was further improved. The pesticide import and export was active, the export quality has been improved. R & D capacity improved, technological innovation has achieved considerable success. The company scale has been expanding, organizational structure improved. Industrial layout made more reasonable progress in structural adjustment. Promotion of energy conservation and environmental protection, extensive development of Responsible Care.

Challenges and opportunities
Post-International financial crisis
Agricultural bio-engineering technologies
Increased non-trade barriers
Increasingly stringent environmental protection requirements
Awareness of intellectual property protection

Development trends
To corporate mergers and restructure
To speed up eliminating backward production capacity
To adjust the product structure continuously
Layout of the park
Establishment of pesticide brand
Biopesticides are popular

Pesticide Industry "12th Five-Year Plan" will soon be released. The plan focuses on the following aspects:
To vigorously develop the circular economy, to promote energy saving and emission reduction.
To speed up the elimination of backward production capacity.
To accelerate the restructuring and corporate mergers.
To optimize the regional distribution, to promote balanced regional development.
To strengthen R&D, to raise the level of technical equipment.
To enhance the promotion of "Responsible Care".
To strengthen brand and quality building.
The implementation of industrial policy, revision of the Pesticide Regulation well.

From 2006 to 2010(11th Five-year plan), average annual growth of the industrial output value, revenue and profit reached 16.9%, 16.9% and 15.9%, respectively. Quality and efficiency of economic operation improved continuously.
During the ACE, almost 600 manufacturers and thousands of foreign buyers attend the grand activities.
China Agrochemical Industry Awards

Marketing awards

In recent years, Chinese agricultural enterprises have vividly grasped the essence of the expression—*The market decides the destiny of the enterprise*. Due to ups and downs of glyphosate market, domestic market have slumped for several years. A slacky market coupled with excess capacity led to vicious competition, in which companies struggled to survive. In this context, several companies come to the fore and develop into the market leader.

High on top of exporters of the domestic agricultural industry and as a candidate of Best company from an Emerging Market and Best Supplier of Agrow Awards in two consecutive years, Nutrichem Company Limited, which ranked 2009 in Deloitte Technology Fast 50 China has received China pesticide industry marketing awards this year, with an export value approaching $300 million.

In the context of the financial crisis, the sales of Iprochem Company Limited reached $110 million, with an average annual growth of 30%, and procurement value about 800 million yuan. Iprochem is becoming one of the leading agrochemical procurement companies. With intensified competition in international trade, Iprochem has registered branch in Russia, Ukraine, Malaysia, India, US and Taiwan, and introduced the products in Russian, Ukraine and other countries brand of HuXiong. Iprochem has made 36 registrations overseas.

Technology Innovation Awards

Technological innovation is an inexhaustible motive for enterprise development and the basic foundation of enterprises. At present, China is still heavily relying on universities and research institutes for technology innovation. But R & D, development of homegrown proprietary products, is the future direction within a period of time, and is the only way for the survival and growing of enterprises.

As China’s largest pyrethroids manufacturer, Jiangsu Yangnong Agricultural Co., Ltd. has been devoting to R & D activities, with more than 10 new pyrethroid products and intermediates discovered and 42 patent applications.

On 19th, October in 2011, China Agrochemical Industry Awards curtain raised. Twenty two agrochemical companies and one person obtained awards.
Responsibility Care is the binding duty of chemical companies. It is not only the right path towards achieving international standards, but also the action to establish a good image of the park and industry and promotion of social harmony and sustainable development.

In recent years, Limin Chemical Co., Ltd. developed rapidly and achieved good economic benefits, meanwhile the company continued investment in manpower, material and financial resources to construct the community. The company invested 9.15 million RMB in security facilities and staff insurance benefits and contributions to the community of more than 3 million RMB to reflect the responsible care in the past three years.

In recent years, Shandong United Pesticide Industry Co., Ltd. has been continuously devoting to new product development and technological innovation activities based on environmental protection, occupational health and safety, and has achieved good results. In 2008, the company established a quality management system, environmental management systems, occupational health and safety management, leading in the domestic agricultural industry.

Jiangsu Changqing Agrochemical Co., Ltd. Obtained the HSE Award by Syngenta again in Munich, Germany in June 2008. This was one of nine awards for the company in environmental protection and the responsible care in recent years. Excellent company of China pesticide industry responsible care is another support and encourage for the company's efforts of enhancing waste treatment, process improvement and project management.

During the period 2009-2011, LANFENG BIO-CHEM, while improving several productive technologies of metazachlor, propamocarb ai and their formulations, carbendazim and iprodione, discovered NK007 and developed generic products such as tribufos, chlorpyrifos-methyl, amicarbazone and many other new products, new technologies. The company submitted 6 patent applications and obtained 4 patent authorizations. In 2010, the company's revenue of high-tech product was 593.26 million RMB, accounting for 65% of total turnover. Zhejiang Wynca Chemical Group Co., Ltd. is China's largest manufacturer of glyphosate. In 2010, its revenue reached 4.2 billion RMB, while profit reached 180 million RMB. Sales of pesticides segment reached 1.873 billion RMB, ranking first of China agricultural industry for consecutive years. The Company focuses on technology innovation and has applied for 106 patents, 54 of which have been authorized by the end of April 2011, of which 47 patents related to glyphosate, topping itself in the ranking list of Chinese enterprises. Through chlorine-recycling technology, the company effectively reduces the emissions of chlorinated water. After cessation of marketing for glyphosate 10% AS, Wynca quickly reoriented itself to the market and developed phosphorus-recycling technology for the utilization of mother liquor to reduce the environmental pollution. These innovations, in particular the promotion of technological innovation glyphosate, generated great economic benefits. Meanwhile, it reflects the responsible care. Therefore, Wynca won well-deserved China Pesticide Industry Technology Innovation Award and Excellent Enterprise of China pesticide industry Responsible Care awards.
Q: How many Chinese companies does Syngenta cooperation with? How to achieve win-win?

A: We collaborate with 40-50 Chinese companies. Syngenta believes in working closely with our suppliers and partners. We provide expertise and resource in critical areas such as HSE, quality management, technical support (chemistry, chemical engineering, analytical sciences) and supply chain management.

Q: How to improve competitiveness for Chinese enterprises?

A: Chinese companies must adopt a programme of continuous improvement with the projects and products they already have – in addition to introducing new products and technologies. They must drive plant capacity, yield improvements, materials efficiencies and HSE standards. Syngenta has an active programme to support our Chinese partners in these critical areas.

Q: Will your company cooperate with more Chinese companies in the future? What products are involved?

A: Syngenta continues to strive for new partners and relationships with companies in China, as well as further develop and deepen our collaborations with our current suppliers and partners. We will continue to bring new intermediates and active ingredients to China for our partners to support our sourcing strategy.

A: Xemium® has curative as well as protectant activity. This together with a broad spectrum of action, permits a very broad range of applications in a large number of globally important crops.

Q: What’s yours consideration of formulation development?

A: Formulation is a crucial aspect in optimising the performance of an active ingredient and ensuring that the inherent activity is fully expressed under field conditions. In this respect both the solo and mixture formulations of Xemium® have been extensively optimised in order to secure the top performance of Xemium under field conditions. This has included optimisation of the retention of the compound on the leaf and its movement into and within the leaf which are critical for its residual activity.
Q: Over the last decade, formulation technology has developed rapidly, although the proportion is decreasing, but the EC is still one of the most convenient formulation, how do you think it's prospects?
A: For many years solvent based emulsifiable concentrates (EC) and powder formulations (DP and WP) have been very popular for agrochemical formulations around the world. In recent years there has been a trend to move away from the use of solvents towards water based formulations such as suspension concentrates (SC) and oil-in-water emulsions (EW). At the same time dusty powder formulations are being replaced by dust-free water dispersible granules (WG).

Q: You have many years of research experience and has been in China for a quite while from 1993, What are the differences between Chinese and the developed country? How to improve?
A: It is currently estimated that in developed countries the proportion of EC, DP and WP formulations represent to about 55% of all formulation types, while at the same time newer and safer water based and water dispersible granule formulations represent about 30% of all formulation types. China is also moving towards the safer and more environment friendly formulations. However, the latest figures from ICAMA, Beijing indicate that EC, DP and WP formulations represent about 65% of all formulations, and newer and safer water based and water dispersible granule formulations represent about 20% of all formulation types. Recent changes to ICAMA regulations regarding the policy to reduce of the number of EC formulation plants and to register more environment friendly formulations in the future suggest that the ratio of old to new formulation technologies will gradually meet the average in developed countries.
Q: Are the registration requirements of America or Canada or Mexico and NAFTA same?
A: No. They are not the same. This is because their national laws for regulating pesticides are different. Canada and USA have somewhat similar data requirements for the registration of pesticides.

Q: How about aspects of export and import of pesticides in India?
A: India is one of the leading exporters of pesticides. We export our products all over the world including USA, Europe, Australia and Asia. Indian companies give lots of importance to quality which has helped us to secure business from all over the world. India also imports pesticides from different countries including China.

Q: As a big generic agrochemicals manufacturer, which agrochemical varieties are advanced in the world?
A: In India, insecticides market is biggest. But the fungicides and herbicides market is growing rapidly. Worldwide, herbicides are the biggest market.

Q: How many agrochemicals enterprises in India?
A: India has a large number of agrochemical enterprises. There are about 30 big manufacturers and more than 250 formulators in India.

Q: Could you introduce of your company briefly?
A: Nagarjuna Agrichem Limited, belonging to Nagarjuna Group, is one of the most reputed agrochemical companies in India. It has turnover of about 140 million USD. The company has 3 manufacturing plants. We produce both Technicals and formulations. We are contract manufacturer for leading agrochemical companies of the world. Also, we have strong presence in the Indian domestic market where we sell our own brands. There are 8850 dealers in India who sell our products. We are present in all the segments such as insecticides, herbicides, fungicides and plant growth regulators. Nagarjuna Agrichem Limited has got ISO-9001, ISO-14001 and OHSAS 14001 certification. We are the only agrochemical company in India who has implemented "Zero Liquid Effluent Discharge" scheme for environmental protection. Our Quality Assurance Laboratory has all sophisticated instruments including GC-MS, LC-MS, HPLC, GLC, Spectrophotometers etc. At present we are setting up Corporate R&D Centre at a cost of 5 million USD. We are also planning to set up GLP lab for regulatory studies.

Q: Will your company cooperate with more Chinese companies in the future? What products are involved?
A: Our company has been collaborating with Chinese companies for many years. We purchase large quantity of different intermediates from China. In future we want to have more cooperation with Chinese companies, including import of pesticide Technicals.

Q: From your perspective, how to build their brands into the U.S. market for the Chinese enterprises?
A: I do not see any problem to market the brand name products by Chinese enterprises into the U.S. market provided that they do adequate publicity/advertising so that the distributors and growers recognize their brands.

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Q: How about your company's expectation of the new product?
A: Firstly, it's a good agrochemical product. As sales, it depends on market conditions, future market development, as well as the product itself.

Q: Compared with imidacloprid, what are the properties of the new product?
A: Although both acting by nicotinic acetylcholine receptor, sulfoxaflor is not neonicotinoid insecticide, with different functional group, mode of action and metabolic resistance. Sulfoxaflor exhibits no cross-resistance to IMI resistant pests.

Q: When will the new product be launched in China?
A: We expect to launch in 2013 in China assuming that the registrations are granted in time.

Q: The resistance issue is the bottleneck of imidacloprid development, do you think about the resistance of sulfoxaflor?
A: Yes, we did. So far, no evidence to show the resistance of sulfoxaflor. That’s why it is one of key developed products. Company attaches great importance to this issue. For example, implement are applied in the future including reduction of frequency of use, dosage, and alternative use of different mechanisms of insecticides to slow down or avoid developing resistance.

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On 11th National Agrochemical Exchange Meeting, Prof. Hu Xiaoxing brought us an excellent speech on *The Impact & Challenges Brought by Global GM Towards Agrochemical Industry*. This speech not only contained large amount of systematic data within full scope, but also drew conclusions by detailed comparison and analysis. Prof. Hu pointed out in the speech, that for those large corporations, GM crops and Seed Industry should be considered carefully and a way to combine agrochemicals with See Industry and Biotechnology should be fought for.

The speech emphasized on corporate development and strategies adopted by Sygenta, Bayer and BASF with their key products after giving an introduction on global agrochemical development (focused on 2010). In the end, the speech pointed out that “Creativity is the critical factor in top agrochemical companies, and Innovation is their key to success.” The reasons behind can be studied carefully. Bai Yaluо is a promising agrochemical information specialist and a role model for young people in this industry.
In the period of meetings, hundreds of entrepreneurs and experts attend to discuss and made the advices and suggestions.
Sichuan Leshan Fuhua Tongda Agro-Chemical Technology Co., Ltd. is specialized in Glyphosate manufacturing, with designed capacity of 120,000 Mt/a Glyphosate technical, the top in China and the second in the world and the current output is 70,000 Mt/a (Glycine Route). Fuhua have an Integrated Industry Chain of Phosphorus Glyphosate Silicone, which makes Fuhua competitive in the field; the factory locates in Leshan City Sichuan Province, a place with resources for Glyphosate manufacturing, and the sales office for the exporting business locates in Shanghai. There are over 2000 employees around the world.

- Rich Resource
- Focusing Glyphosate
- Integrated Industrial Chain
- Cyclic Economy
- Sustainable Production
- Innovative Technology
- Superior Quality
- Internationalized Service
- Reputed Brand

PROFESSIONAL & DEDICATED TO GLYPHOSATE

- GLYPHOSATE 97% TECH
- GLYPHOSATE 95% TECH
- GLYPHOSATE 75.7% WDG
- GLYPHOSATE 62% IPA SALT
- GLYPHOSATE 41% IPA SALT

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Kesai Agrochem, Keep Serving Agriculture  
One professional supplier of agrochemicals  
Own two factories, more than 100 valid certificates of ICAMA  
Can produce more than 70 formulations including mixture products  
Can offer registration support.

**Herbicides**  
- Atrazine  
- Ametryn  
- Simazine  
- Prometryn  
- Terbutryn  
- Acetochlor  
- Butachlor  
- Paraquat  
- Glyphosate  
- Nicosulfuron  
- Diuron  
- Bentazone  
- Clethodim  
- Haloxyfop-R-Methyl  
- Quizalofop-P-ethyl

**Insecticides**  
- Imidacloprid  
- Acetamiprid  
- Lambda-cyhalothrin  
- Chlorpyrifos  
- Cypermethrin  
- DDVP

**Fungicides**  
- Carbendazim  
- Mancozeb  
- Propiconazole  
- Difenoconazole

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China Output Ups 21.4% in 2011

Agrochemicals output in the year of 2011 increased by 21.4%, representing the consecutive quarters of double digit growth.

1. Pesticide Production

According to the data released by the National Bureau of Statistics, the production of pesticide products in the year of 2011 is shown as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Output (1,000t)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Growth (%) 2011</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2,648</td>
<td>21.4</td>
</tr>
<tr>
<td>Insecticides</td>
<td>711</td>
<td>16.7</td>
</tr>
<tr>
<td>Fungicides</td>
<td>152</td>
<td>1.3</td>
</tr>
<tr>
<td>Herbicides</td>
<td>1,173</td>
<td>12.5</td>
</tr>
</tbody>
</table>

In the year of 2011, accumulated production of technical pesticide products was 2,648,000 tons, increased by 21.4% over the same period of 2010, among which insecticides 711,000 tonnes, fungicides 152,000 tonnes, herbicides 1,173,000 tonnes, up 16.7%, 1.3% and 12.5% over the same period of 2010, respectively.

2. Import and Export

According to the data released by the General Administration of Customs, pesticide import/export and trade favorable balance in the year of 2011 is shown in table 2 and table 3:

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount (1,000 tonnes)</th>
<th>Value ($1 billion)</th>
<th>2011 Growth (%)</th>
<th>2011 Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>53</td>
<td>0.49</td>
<td>4.2</td>
<td>16.0</td>
</tr>
<tr>
<td>Insecticides</td>
<td>7</td>
<td>-20.4</td>
<td>0.49</td>
<td>-6.0</td>
</tr>
<tr>
<td>Fungicides</td>
<td>19</td>
<td>33.9</td>
<td>0.11</td>
<td>-6.0</td>
</tr>
<tr>
<td>Herbicides</td>
<td>17</td>
<td>-15.7</td>
<td>0.20</td>
<td>39.9</td>
</tr>
</tbody>
</table>

It is shown from the table above that the exported pesticide increased greatly. The imported pesticide amount was 53,000 tonnes, increased by 4.2%; the imported pesticide value reached $ 0.49 billion, increased by 16.0%, the imported average price was $ 9,245.3/t, increased by 12.3%. Among them, imported insecticide, herbicide and fungicide increased by -6.0%, 39.9% and 7.6%, respectively. The exported pesticide amount reached 796,000 tonnes, increased by 29.9%, the exported pesticide value reached $ 2.42 billion, increased by 36.4%, and the exported average price was $ 3,040.2/t, increased by 5.3%. The amount of exported pesticides accounts for 30.1% of the total output. Among them, exported herbicides volume was 501,000 tonnes, increased by 36.5%, accounting for 62.4% of the total export, 42.7% of herbicide production. The exported herbicide value was $ 1.30 billion; the average exported price was $ 2,594.8/t, increased by 6.7%. The exported fungicide was 77,000 tonnes, increased by 18.3%, accounting for 9.7% of the total exported volume, 50.7% of fungicide production; the exported fungicide value reached $ 370 million, up 33.5%, the average exported price was $ 4,805/t, increased by 13.8%. The favorable trade balance was $1.93 billion, increased by 42.8%.


About Agrochemical Show: www.agrochemex.net
CCPIA Paid a Visit to Japan

Invited by Japan Crop Protection Association, Mr. Luo Haizhang, chairman of China Crop Protection Industry Association (CCPIA), Mr. Sun Shubao, Secretary-General of CCPIA and 13 leaders of Chinese agrochemical companies paid a 10-day visit to Japanese agrochemical manufacturers in Nov. of 2011. The purpose of this visit is to look for cooperation opportunities, together provide better services for world's agricultural industry through communication and interaction. The most important stop of visit was Shimadzu Corporation. Tanigawa, Technology Department Manager of Shimadzu welcomed warmly the guests on behalf of the company. He first introduced the history of Shimadzu and recent scientific research. Then, Mr. Luo, introduced the status and outlook of Chinese pesticide production. he so much agreed with Shimadzu company’s operating philosophy, wished that both sides will further strengthen cooperation and achieve a win-win in different areas. Subsequently, the delegation visited the display centers, application centers and manufacturing plants of Shimadzu, respectively.

Environmental Protection Inspection of Glyphosate Industry

Recently, Water pollutant discharge standards of organic phosphorus pesticides industry, which is compiled by China Crop Protection Industry Association, has been submitted to Ministry of Environmental Protection (MEP) for consideration. According to Cao Chengyu, Deputy Secretary-General of China Crop Protection Industry Association, the environmental inspections of organic phosphorus and other waste emissions, can help to regulate the industry. Those irregularities enterprises would be banned production and export. At the same time, it can change the image of China’s pesticide industry, which sacrificing environment in favor of keeping costs advantages.

Cao Chengyu said that the environmental inspection of glyphosate industry readjust glyphosate industry, while improving the current serious excess production capacity. It will gradually develop in other products then. Establishment of effluent standards can promote industry consolidation, which also one of the methods for industry to take mergers and reorganizations.

Several Pesticides Ban

To the Competent departments of the provinces, autonomous regions and municipalities directly under the Central Government Industry and Information Technology:

In order to implement relatively requires of Ministry of Agriculture, Ministry of Industry and Information Technology, Ministry of Environmental Protection, the State Administration for Industry and State Administration of Quality Supervision, Inspection and Quarantine No.1586. To eliminate and forbid the highly toxic pesticide production approval certificate management notified as follows: According MIIT, suspension of application of 22 high toxic pesticides including fenamiphos, fonofos, phospholan-methyl, calcium phosphate, magnesium phosphate, zinc phosphate, cadusafos, coumaphos, sulfofet, terbufos, methidathion, phorate, isofenphos-methyl, carbofuran, Methomyl, ethoprophos, aldicarb, aluminum phosphate, ometaoate, isocarbophos, methylbromide, endosulfan was implemented from January 5, 2012. The production licenses of 9 high toxic pesticide including fenamiphos, calcium phosphate, cadusafos etc. were recalled by MIIT according to the No. 1586 announcement.
**INDUSTRIAL NEWS**

### 2011 Chinese Farmers’ Favorite Brand

According to a Farmers Daily study, the competition of Chinese farmers’ favorite brand of pesticide in the year of 2011 was announced recently. The top 30 brands included 4 international ones and 26 domestic ones.

<table>
<thead>
<tr>
<th>Brand</th>
<th>Company</th>
<th>Brand</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Noposion</td>
<td>14</td>
<td>Sword</td>
</tr>
<tr>
<td>2</td>
<td>Waier</td>
<td>17</td>
<td>FMC</td>
</tr>
<tr>
<td>3</td>
<td>Sanonda</td>
<td>18</td>
<td>Kesai</td>
</tr>
<tr>
<td>4</td>
<td>Dupont</td>
<td>19</td>
<td>BASF</td>
</tr>
<tr>
<td>5</td>
<td>Dow</td>
<td>20</td>
<td>Zhejiang Wyca Chemical Industry Group Co., Ltd.</td>
</tr>
<tr>
<td>6</td>
<td>Guoguang</td>
<td>21</td>
<td>Anhui Fengle Pesticide</td>
</tr>
<tr>
<td>7</td>
<td>Kuaida</td>
<td>22</td>
<td>Shaanxi Star Chemical Co., Ltd.</td>
</tr>
<tr>
<td>8</td>
<td>KeSheng</td>
<td>23</td>
<td>Jiangsu Zhengbang Biology</td>
</tr>
<tr>
<td>9</td>
<td>MeBang</td>
<td>24</td>
<td>Green Nonghui Biotechnology</td>
</tr>
<tr>
<td>10</td>
<td>Veyong</td>
<td>25</td>
<td>Chengdu New Sun Bio</td>
</tr>
<tr>
<td>11</td>
<td>Jinda</td>
<td>26</td>
<td>Jiangsu Hufeng Agrochem</td>
</tr>
<tr>
<td>12</td>
<td>Shandong Huayang Pesticide</td>
<td>27</td>
<td>Jiangsu Tianlong</td>
</tr>
<tr>
<td>13</td>
<td>Huaxing</td>
<td>28</td>
<td>Shandong A&amp;Fine</td>
</tr>
<tr>
<td>14</td>
<td>Red Sun</td>
<td>29</td>
<td>Ruideleng Biotechnology Co., Ltd.</td>
</tr>
<tr>
<td>15</td>
<td>Yong Boshi</td>
<td>30</td>
<td>Liaoning Weike Biotechnology</td>
</tr>
</tbody>
</table>

### The TOP 10 Enterprises of Shandong 2011

According to Shandong Province commissioned study, top 10 shandong agrochemical companies and top 10 agrochemical brand

#### Top 10 companies

- Shandong Binnong technology Co., Ltd
- Shandong Weifang Rainbow Chemical Co., Ltd
- Haier Pesticides and Chemicals Group Co., Ltd
- Shandong United Agrochemical Co., Ltd
- Shandong Shengbanglvye Chemical Co., Ltd
- Shandong A&Fine Agrochemicals Group
- Jinan Kesai agrochem holdings Co., Ltd
- Shandong Cynda Chemical Co., Ltd
- Zibo NAB Agrochemicals Limited
- Shandong Greenfield Pesticide Co., Ltd

#### Top 10 Pesticide Brand

1. Propargite TC Qingdao Hansheng Biotechnology Co., Ltd.
2. Emamectin benzoate series
3. 30% chlopyrifos SC
4. 30% Kresoxim-methyl SC
5. 70% mancozeb WP
6. 56% aluminium phosphate TA
7. Abamectin TC
8. 41% Glyphosate isopropylammonium AS
9. 55% cypermethrin EC
10. Pyrimethanil TC

### New approval project by MIIT

Recently, Shanghai HuaYi Group HuaYuan Chemical Industry Co., Ltd. etc. 3 companies approved production the related agrochemical variety by MIIT.

<table>
<thead>
<tr>
<th>Location</th>
<th>COMPANY</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shanghai HuaYi Group HuaYuan Chemical Industry Co., Ltd.</td>
<td>Efiephon TC</td>
</tr>
<tr>
<td>2</td>
<td>Jiangsu Yangzhou Pioneer Chemical Co., Ltd.</td>
<td>40% Carbendazim SC</td>
</tr>
<tr>
<td>3</td>
<td>Jiangsu Nanlong (Lianyungang) Chemical Co., Ltd.</td>
<td>Thiodicarb TC</td>
</tr>
</tbody>
</table>
Insecticide Sales ups 16.3%

According to the CCPIA, the production of insecticides rebounded tardily in the last November. Top five insecticides were chlorpyrifos, monosultap, acephate, imidacloprid and omethoate. 8 of domestic sales of the top 20 agrochemicals were insecticide products in November, which the data of 9 products of the top 20 in October. However, the total sales in November up by 16.27%, to 6575.59 tons, which are chlorpyrifos, acephate, imidacloprid, trichlorfon, marathion, omethoate, dichorvos, respectively.

Domestic sales of chlorpyrifos TC in November ups 10.3%, to 1700 tons, which the output of Nanjing Redsun Co., Ltd was largest, but the market share is not high. Acephate sales rose significantly to 1336.88 tons. The domestic sales were 1282.49 tons. 18 of monosultap manufacturers produced 1,902.76 tons monosultap TC in November 2011. The domestic sales were 757.94 tons. The output of Anhui Huaxing chemical Co., Ltd in each month was large, which capacity was 5500 tons.

The operating rate of imidacloprid was rising in November, which output up to 991.57 tons. The output of Jiangsu Fengshan, Changqing and Changlong was large, which domestic sales were 514.56 tons. The domestic sales of Trichlorphon were 636 tons equal to October descending 1.85%.

New Technology of Imidacloprid

Hosted by the Ministry of Science, acceptance meeting of project of Research and development of imidacloprid innovative wastewater treatment technology was held on January 5th in Beijing. The project was co-implemented by the Hailier Pesticide Group Co., Ltd. and Nankai University. They co-developed clean production technology of imidacloprid, joint efforts of both sides to complete the task of indicators, the development of and 3,000 tons / year production plant on the implementation of integrated and achieved good results: yield of cyclization process and condensation process increased to 70% and 92% from 65% and 70%, respectively. The purity increased to 98% from 95%. As the product yield increased, it greatly reduce the waste generation and emissions, 80% and 99.6% reduction in wastewater generation and emissions, respectively, and COD, 95% reduction; waste treatment costs, 55.8% savings. Through process improvement and optimization, greatly improving the technical level of imidacloprid, not less "waste" generation and emissions, and reduced production costs and improve competitiveness. Currently, several companies and Nankai University already signed the technology transfer agreement, carried out industrial tests. The promotion of the technology will further enhance China's imidacloprid production levels.
Yangnong and Sinochem mergers

SinoChem International and Yangnong Group signed a project cooperation agreement. Under the agreement, Sinochem International will invest 3 billion RMB in the construction of 350,000 tons phenol-acetone and 120,000 tons of bisphenol A projects in Yangzhou Chemical Industry Park. Project will be completed in 2013, Yongnong Group will form a new materials industrial chain of a resource - agricultural products - Green Technology Intermediates after being put into operation.

Jiangsu Huifeng: Wholly-owned Subsidiaries in Establishing in US

Jiangsu Huifeng recently announced that they plan to invest $5 million in establishing a wholly owned subsidiary, Huifeng United States International Trade Co., Ltd. in Los Angeles, US. Huifeng U.S. International Trade Co., Ltd. carries out pesticide TC and formulation sales. The final business scope subjects to registration authorities. Allegedly, the region’s major crops are corn, soybeans, wheat. In the realm of rich experience, support the company in the region developing product registration, sales and marketing through the establishment of Huifeng.

Lanfeng merged Taicang Otsuka

Recently, the MIIT has promulgated a list of merged pesticide product company (the forth), Jiangsu Lanfeng Biochemical Co., Ltd. (registered capital 74 million RMB) acquired an agrochemical TC manufacturer, Taicang-otsuka Chemical Co., Ltd. (registered capital $10,015,400). After merging, the name of the company is remained to be Jiangsu Lanfeng Biochemical Co., Ltd. According to Jiangsu Lanfeng report, equity transfer price is 2.6 million RMB. Taicang Otsuka Chemical Co., Ltd. manufactures 98% of carbofuran TC, 75% carbofuran TKP, 90% carbofuran TKP, phenol, 20% -45% carbofuran water suspension and other chemical products. The commonly management projects are producing and selling 20%-45% carbofuran water suspension and other chemical products. The merger, the company expanded pesticide production scale and increased the production capacity of pesticides carbofuran.
**New project of Sichuan Fuhua**

Pre-production trials of 120 thousand tons of hydrogen peroxide project invested by Sichuan Leshan Fuhua ran recently. The project manufactures H₂O₂ utilizing the hydrogen gas generated from caustic soda production process.

120,000t/a hydrogen peroxide project is one of Fuhua Group’s six planned projects, other projects include: 200,000t/a of methane chloride project, 50,000t/a of trichlorosilane project, 80,000t/a new refrigerant projects, three pesticides project and 400,000t/a of caustic soda projects. The annual sales income will reach 17.76 billion RMB after 6 projects put into operation.

Fuhua Agricultural Park, and strive to form agricultural and related products (raw materials, intermediates, formulations) industrial clusters, covering the sale of pesticides (herbicides, fungicides, insecticide) products production, playing a variety of configurations complete the world’s agricultural production based of TC.

**New Joint Biocide Engineering Research Center Qualified**

Recently, Fungal Biocides Engineering Research Center of Jiangxi Tianren Ecology Co., Ltd. qualified as National Fungal Biocide Engineering Research Center by National Development and Reform Commission. Fungal biocides of Jiangxi Tianren are effective in reducing agrochemical pollution, protecting water and ecology, widely used in forestry, agriculture, fruit, tea, gardening, household and other fields.

**Haili Approved Registration of Benfuracarb TC**

 Hunan Haili Chemical Industry Co., Ltd. approved registration of benfuracarb TC product on November 17th. Up to now, the other legal benfuracarb TC product manufacturer is the Japanese company Otsuka Agricultural Science and Technology Co., Ltd. (formerly Japan’s Otsuka Pharmaceutical Co., Ltd.). In addition, in recent years, the domestic market has no registered benfuracarb formulation product.

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**Several Pesticide Plant Protection Experts Elected as Chinese Academician**

On December 8, 2011, the results of Academician of the Chinese Academy of Engineering co-opted officially announced, several pesticide plant protection experts including: Qian Xuhong of East China University of Science and Technology (organic chemical); Chen Jianping of Zhejiang Academy of Agricultural Sciences (Plant Pathology); Wu Kongming of Chinese Academy of Agricultural Sciences Institute (Agricultural Entomology and Pest Management); Zhu Youyong of Yunnan Agricultural University (plant Pathology).
Company Introduction

Jiangsu Changqing Agrochemical Co., Ltd is a national fixed-point pesticide manufacturer and the National Hi-Tech Enterprise. Company was listed on Shenzhen Stock Exchange in Apr., 2010 ( Stock code: 002391 ).

Our company especially pays attention to scientific progress and technological innovation. At present we have two technical platforms (one National-level Post-doctoral Research Station and one Provincial-level Technology Center) and one ClassA Quality Inspection Department. Besides, as the key Hi-Tech Enterprise of National Torch Plan, possessing a well-educated scientific research team, we have successfully accomplished many national and provincial projects.

With the strict management, we are evaluated as "National Integrity and Law-abiding Enterprise" by Ministry of Agriculture and as "An Enterprise of Keeping Promise and Honoring Contracts" by SAIC. We have been awarded as "An Enterprise of AAR Credit" for 14 years in succession.

"Changqing" brands - "China Well-known Trademark". Our products enjoy the reputation of China Well-known products, National Key New products Provincial Hi-Tech products. Provincial Well-known products. The superior quality and after-sale service make our products sell well all over the domestic market and foreign market like Europe America and Southeast Asia.

Product List

- Clethodim 93%TECH
- Bentazon 95%TECH
- Benazolin-ethyl 96%TECH
- Niclosulfuron 97%TECH
- Mesotrione 95%TECH
- Clomazone 90%TECH
- Clomazone 95%TECH
- Lactofen 85%TECH
- Acliflofen 90%TECH
- Fomesafen 98%TECH
- Fluoroglyoxyfen-ethyl 95%TECH
- Mazethapy 96%TECH
- Bbromoxynil octanoate 95%TECH
- Difenthiuron 95%TECH
- Fipronil 95%TECH
- Acetamiprid 97%TECH
- Imidacloprid 95%TECH
- Imidacloprid 98%TECH
- Ricycloazole 90%TECH
- Propiconazole 98%TECH
- Fenoxanil 95%TECH
Nourish Plants
Care for people

Nutrichem, one of the best agrochemical company in China, supplies the world's customers or consumers with superior agrochemicals supported by innovative ideas, cost-effective processes and also GLP service certificated by OECD for global registration.

Nutrichem Company limited
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Fax: 86-10-8281 9899
E-mail: sales@nutriechem.com
www.nutriechem.com
CAC GROUP
Innovation is an assurance of brighter future

CAC is a steadily growing reputed agrochemical and specialty chemical company with leading competitive advantages in its core products, whose vision is to grow as a world leading post patent agrochemical and specialties chemicals manufacturer. Based on the strong R&D capabilities and more than 17 years manufacturing experience, CAC is well known as a reliable supplier with four plants, one formulating center, one state level technical center and one GLP laboratory.

<table>
<thead>
<tr>
<th>Herbicides</th>
<th>Fungicides</th>
<th>Fine Chemicals &amp; Intermediates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyphosate 95% TC</td>
<td>Chlorothalonil 97%, 98% TC</td>
<td>TCPO (Tetrachloroethylene) 99%</td>
</tr>
<tr>
<td>Paraquat dichloride 42% TC</td>
<td>Mancozeb 85%, 90%</td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Triallate 94% TC</td>
<td>Carbendazim 98% TC</td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>EPTC 90% TC</td>
<td>Captan 98% TC</td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Asulam 95% TC</td>
<td>Azoxystrobin ≥97% TC</td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Fluorochloridone 95% TC</td>
<td>Pyoxystrobin 95% TC</td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Thiobencarb 98% TC</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Chlorpropham 98% TC</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Cyhalofop-butyl 98% TC</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Molate ≥96% TC</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Bispyribac-Sodium 96% TC</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Florasulam 99% TC</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Prosulfocarb 98%</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
<tr>
<td>Oxyfluoren 97% TC</td>
<td></td>
<td>2,4-D (Dichloroethylene) 99%</td>
</tr>
</tbody>
</table>

| Insecticides                |                                |                                |
|-----------------------------|                                |                                |
| Lufenuron 96% TC            | Etoxazole 95% TC               |                                |
| Clothianidin 97% TC         | Novaluron 98% TC               |                                |

| Key Technology               |                                |                                |
|------------------------------|                                |                                |
| Annoxidation                 |                                |                                |
| Chlorination                 |                                |                                |
| Catalytic Hydrogenation      |                                |                                |

| Formulations                 |                                |                                |
|------------------------------|                                |                                |
| Herbicides                   |                                |                                |
| Glyphosate IPA 41% SL        |                                |                                |
| Glyphosate IPA 34% + MCPA 6.5% SL |                  |                                |
| Glyphosate Ammonium 74.7% WSG |                                |                                |
| Glyphosate Ammonium 50% SP   |                                |                                |
| Paraquat 200g/L SL           |                                |                                |
| Paraquat 250g/L SL           |                                |                                |
| Cledathin 240g/L EC          |                                |                                |
| Asulam Sodium Salt 36.2% SL  |                                |                                |
| Triallate 400g/L EC          |                                |                                |
| EPTC 720g/L EC               |                                |                                |
| Cyhalofop-butyl 10% EW       |                                |                                |
| Fomesafen & Bentazon 44.7% SL|                                |                                |

| Fungicides                   |                                |                                |
| Chlorothalonil 40% SC        |                                |                                |
| Chlorothalonil 75% WP        |                                |                                |
| Chlorothalonil 720g/L SC     |                                |                                |
| Carbendazim 50% WP           |                                |                                |

<p>| Insecticides                 |                                |                                |
| Beta-cypermethrin 4.5% EC    |                                |                                |
| Imidacloprid 10% WP          |                                |                                |
| Chlorpyrifos 480g/L EC       |                                |                                |</p>
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>PRODUCTS</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbicides</td>
<td>Glyphosate</td>
<td>95% TC</td>
</tr>
<tr>
<td></td>
<td>Glyphosate Potassium salt</td>
<td>98% TC, 480g/L SL</td>
</tr>
<tr>
<td></td>
<td>Glyphosate Ammonium cal</td>
<td>98% TC, 68% SG, 75.7% SG, 70% SG, 55% SG</td>
</tr>
<tr>
<td></td>
<td>Glyphosate IPA salt</td>
<td>95% TC, 62% SL, 51% SL, 41% SL, 480g/L SL</td>
</tr>
<tr>
<td></td>
<td>Quinclorac</td>
<td>95% TC, 50% WP, 25% SC</td>
</tr>
<tr>
<td></td>
<td>Diuron</td>
<td>98%, 95% TC</td>
</tr>
<tr>
<td></td>
<td>Parquat</td>
<td>30.5% TK</td>
</tr>
<tr>
<td></td>
<td>Oxadiazon</td>
<td>94% TC</td>
</tr>
<tr>
<td></td>
<td>Isoxoturon</td>
<td>95% TC</td>
</tr>
<tr>
<td>Fungicides</td>
<td>Carbendazim</td>
<td>98% TC</td>
</tr>
<tr>
<td></td>
<td>Thiophanate-methy</td>
<td>95% TC</td>
</tr>
<tr>
<td></td>
<td>Fosetyl-AL</td>
<td>95% TC, 80% WP</td>
</tr>
<tr>
<td>Insecticides</td>
<td>Imidacloprid</td>
<td>95% TC</td>
</tr>
<tr>
<td></td>
<td>Buprofezin</td>
<td>95% TC</td>
</tr>
<tr>
<td></td>
<td>Chlorpyrifos</td>
<td>95% TC, 40%, 48% EC, 10% GR</td>
</tr>
<tr>
<td>Chemical Products</td>
<td>O = O-Dimethyl Phosphate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phosphorus Oxychloride</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phosphorus Trichloride</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ammonium Dihydrogen Phosphate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diammonium Phosphate</td>
<td></td>
</tr>
<tr>
<td>Agricultural</td>
<td>XHG-248 Silicone Surfactant</td>
<td></td>
</tr>
<tr>
<td>organosilicon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>adjuvants</td>
<td></td>
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</tr>
</tbody>
</table>
Recently, domestic professional market research institution promulgated a latest report Azoxystrobin Market Research and Forecast Report, which mainly research azoxystrobin's production, consumption, technology, price and import and export condition and forecast the market trend and commercial opportunity of azoxystrobin from 2011-2015 in China.

As a novel fungicide with the properties of broad-spectrum, high efficiency, low toxicity, azoxystrobin plays an increasingly important role in control of disease in fruits and vegetables. In recent years, with the capacity expansion, China azoxystrobin TC production capacity has reached 1,500 tons/year in 2011. By August 2011, there are over 10 domestic azoxystrobin TC manufacturers mainly in Jiangsu, Shanghai and Guangdong.

Domestic sale of azoxystrobin in 2010 nearly reached 150 tons, up by 30% compared with 2009. Due to the higher price of azoxystrobin, its market value in 2010 was over $10 million. Azoxystrobin prices has shown a declining trend over the past few years. With the production technology becoming mature and increasing production capacity, the price of azoxystrobin TC will continue to decline in the next few years.

According to statistics, the domestic production of azoxystrobin is mainly for exporting. Azoxystrobin are mainly exported to Uruguay, South Africa and Italy in 2010. Based on the good efficacy and advantages of expanding overseas markets, in the next few years, China's exports of azoxystrobin will continue to increase.

Azoxystrobin growing market potential is mainly affected by several factors: lower production costs; application scope expansion; increasing export. The next five years, domestic production and demand of azoxystrobin will continue to grow steadily. To be sure, the azoxystrobin industry will drive the entire fungicide industry, to promote the fungicide product upgrading in China.
Glufosinate, which is another excellent unselective organophosphate herbicide variety after glyphosate, delivers broad-spectrum control of weeds. By the end of 2011, a total of 14 companies registered glufosinate TC product, which included 13 domestic companies and 1 foreign company. They are located in Zhejiang Province, Jiangsu Province, Shandong Province, Hebei Province, Sichuan Province, Hunan Province and Anhui Province, respectively.

<table>
<thead>
<tr>
<th>Year</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>ZheJiang Yongnong Chemical Co., Ltd.</td>
</tr>
<tr>
<td>2006</td>
<td>Shandong Pharmaceutical Co., Ltd.</td>
</tr>
<tr>
<td>2007</td>
<td>Zhejiang Biok Biology Co., Ltd.</td>
</tr>
<tr>
<td></td>
<td>Hebei Shijiazhuang Longhui FineChemical Co., Ltd.</td>
</tr>
<tr>
<td></td>
<td>Jiangsu Huangma Agrochemical Co., Ltd.</td>
</tr>
<tr>
<td>2008</td>
<td>Bayer CropScience</td>
</tr>
<tr>
<td></td>
<td>Lier Chemical Co., Ltd.</td>
</tr>
<tr>
<td></td>
<td>Wing Agricultural Biological Sciences Biological and Chemical Corporation</td>
</tr>
<tr>
<td></td>
<td>Hebei Veyong</td>
</tr>
<tr>
<td>2009</td>
<td>Jiangsu Flag Chemical Industry Co., Ltd.</td>
</tr>
<tr>
<td></td>
<td>Jiang Su Huifeng Agrochemical Co., Ltd.</td>
</tr>
<tr>
<td></td>
<td>Shandong Qiaochang Chemical Co., Ltd.</td>
</tr>
<tr>
<td></td>
<td>Yueyang Chemical Co., Ltd.</td>
</tr>
<tr>
<td>2011</td>
<td>Anhui HuaxingChemical Industry Co., Ltd.</td>
</tr>
</tbody>
</table>
Nitenpyram, which is nicotimine insecticide, developed as the new generation of product after imidacloprid and acetamiprid with excellent uptake, infiltration, broad spectrum and safety. In the year of 2011, a number of agrochemical companies applied to register nitenpyram product, which 13 companies approved the registration. The nitenpyram products registration information is as follows.

<table>
<thead>
<tr>
<th>company</th>
<th>product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Beijing Yoloo Agrochemical Co., Ltd.</td>
<td>80% pymetrozine &amp; Nitenpyram WDG</td>
</tr>
<tr>
<td>2. Shaanxi Biaozheng Crop Science Co., Ltd.</td>
<td>10% AS</td>
</tr>
<tr>
<td>3. Shandong United Agrochemical Industry Co., Ltd.</td>
<td>25% SP</td>
</tr>
<tr>
<td>4. Nanjing Huazhou Pharmaceutical Co., Ltd.</td>
<td>10% AS</td>
</tr>
<tr>
<td>5. Lianyungang Liben Agrochemical Co., Ltd.</td>
<td>20% AS</td>
</tr>
<tr>
<td>6. Jiangxi Sprin Agri-chemicals Co., Ltd.</td>
<td>10% AS</td>
</tr>
<tr>
<td>7. Shaanxi Welch crop protection Co., Ltd.</td>
<td>5% AS</td>
</tr>
<tr>
<td>8. Lianyungang Liben Agrochemical Co., Ltd.</td>
<td>50% SP</td>
</tr>
<tr>
<td>9. Shaanxi Thompson Biotechnology Co., Ltd.</td>
<td>20% WP</td>
</tr>
<tr>
<td>10. Shaanxi Sunger road Bio-Science Co., Ltd.</td>
<td>10% AS</td>
</tr>
<tr>
<td>11. Chengdu Royal Crop Science Co., Ltd.</td>
<td>10% AS</td>
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<tr>
<td>12. Qingdao Hailir Pesticides and Chemicals Co., Ltd.</td>
<td>10% AS</td>
</tr>
<tr>
<td>13. Chengdu West Aidi Crop Science Co., Ltd.</td>
<td>10% AS</td>
</tr>
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Fosthiazate TC approved Registration

Recently, Hebei Sanlen Agro Chemical Co., Ltd approved registration of fosthiazate TC product. The company is the only domestic fosthiazate registered company. Up to now, in addition to Japan Ishihara Sangyo Kaisha, Ltd. and Zhejiang ISK & Taurus Chemical Co., Ltd. registered 10% fosthiazate GR products, no other company approved registered fosthiazate products. With high toxic variety such as methylbromide, cadusafos phasing out, growing resistance to abamectin, the market of fosthiazate and other low toxicity and efficient nematicide for fruits and vegetables, horticulture, crop use will get better and better. Face the problem of excess bulk products, and the homogenization of today's increasingly competitive, independent innovation capability is the lifeline for survival and development, companies can only rely on technological innovation to capture the market opportunities.

Two Companies Approved Clothianidin Registration

Han Bide Biochemical co. Ltd and Jiangsu Flag Chemical Co., Ltd. registered clothianidin TC product on October 12th, 2011 and December 13th, 2011, respectively.

Tetraconazole TC approved Registration

December 5th, 2011, Zhejiang Hangzhou Yulong Chemical Co., Ltd. firstly approved the registration of Tetraconazole TC product. Up to now, Italian Isagro company is another tetraconazole TC product registered company.
Fluorine-containing Pesticides Varieties

Fluorine atom shows good characteristics in pesticides and other fields due to its special structure. According to statistics, there are 34 fluorochemicals of 86 varieties of developed chemical pesticides in the past 10 years. The fluorine-containing pesticides has become a high-end varieties and new major pesticides creation. Many fluorine-containing pesticides have good application prospects and higher value-added. The following is a brief introduction of some popular fluoride pesticide varieties.

The chlorfenapyr, trade marked as Pylon Miticide. Its domestic patent expired 2008, with annual sales exceeding $100 million. As a novel of broad-spectrum pyrrole insecticide/ acaricide, it can be used to prevent a variety of Lepidoptera, Diptera, Coleoptera, Hemiptera, pests and mites, and effective control of the carbamate, organophosphorus and pyrethroid resistant insects. Domestic manufactures are Rotam and Guangdong Deli biotechnology Co., Ltd. The industrialized technology of its intermediate 2- (chlorophenyl) -5 - (trifluoromethyl) pyrrole-3 – nitrile is very mature.

Transfluthrin, the domestic patent expired in 2008. Transfluthrin is an efficient, low toxicity, fast-acting pyrethroid insecticide with low persistency. Transfluthrin can be used in the indoor environment against flies, mosquitoes and cockroaches. It is a relatively volatile substance and acts as a contact and inhalation agent, used for a variety of mosquito coils, insect repellant piece. It is a foreign mainstream health insecticide, and the current domestic price reaches about 600,000 RMB / ton. Due to tough synthesis of the intermediate tetrafluoro-benzyl Alcohol, China rarely sees transfluthrin manufactures.

Cyhalofop butyl, which developed as a new type of phenyloxycarboxylates herbicides by Dow AgroSciences, is one of the most mainstream herbicides of rice fields, and become one of the popular registration varieties in recent years. Its administration protection expired 2007 in China. The product is intended to provide postemergent control of selected grassy weeds in rice. Clincher CA® does not have preemergence or soil residual activity. Cyhalofop butyl controls weeds by inhibiting acetyl Coenzyme-A carboxylase. The enzyme is responsible for the biosynthesis of fatty acids in selected grass species. This blockage of fatty acid production results in the loss of lipids and eventual death of the dividing cells in the growing point or tip of the grass. Because this site-of-action is exclusive to certain grasses, cyhalofop butyl will not control broadleaf weeds.

Thifluzamide, trade marked as goods Baosui. Its domestic administrative protection expired 2010. It can prevent a variety of plant diseases, particularly, the disease caused by basidiomycetes mycelium and rhizoctonia. It is excellent fungicide for control on rice, peanuts, cotton, sugar beets, potatoes, and lawn and other crop diseases. 4-Trifluoromethoxyaniline, as its intermediate of thifluzamide is also the intermediate of insecticide indoxacarb, of which patent expired 2011. Fluopicolide, which belongs to the benzamide class and the pyridine class, is a new fungicide approved in 2005 for use on late blight of potato in China, trade marked as Volare or R6Albis. The most striking is very safe to crops, especially suitable for integrated pest management system. The sales grows rapidly in recent years. Its intermediates for the synthesis of 2,3 - dichloro - 5 - (trifluoromethyl) pyridine, is a common intermediate of many fluorine-containing pesticides, such as haloxyfophalaxyfopmethyl, chlorfluazon, fluazuron and off-patent pesticide fluazinam.
**Phenol Supply Ups to 1.75 Million Tons in 2012**

It is reported that due to an abundant supply of the global market, domestic production capacity expansion and increased demand for the downstream, phenol supply of Chinese market will grow steadily in 2012.

According to Institutions in the industry, in 2012, the supply of phenol in China will reach about 1.75 million tons, up 7.4% over 2011, which will grow 3 percent of imports, domestic production will reach to about 100 million tons grow by 11%. According to market participant, by the mid-2012, domestic phenol production capacity increased to 1.22 million tons / year.

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**Application of Diketene in Pesticide**

Diketene is an important raw material of pesticide, mainly for the synthesis of various heterocyclic compounds, such as pyrrole derivatives, isoxazole derivatives, pyrazolone derivatives, pyrimidine derivatives, furan derivatives, coumarins and so on. It could react with a series of compounds to obtain pyrazolone, pyrimidine ketone, dioxane, oxazine and flavonoids. The use of pesticides in a wide range, can be used to synthesize and production for pesticides diazinon, Oxamyl, dicrotophos, monocrotophos, permethrin, cypermethrin, lambda-cyhalothrin etc. Currently, usage of diketene in pesticide approximately reach 35,000 t / a, and due to its application in pesticides expanding, the sales has increased. China has become the world's major production and consumption in the world.
AgroChemEx started as a national conference in 2000, and developed into a commercial platform integrating exhibition and conference in 2005 in Nanjing. It was originally largely focused on the Chinese domestic market. However, with the growing interest of international companies in both domestic opportunities and sourcing of technical and formulated products from Chinese producers, we decided to move it to the more strategic location Shanghai in 2009.

**Featuring:**
- 12,000 exhibition visitors from 78 countries
- 500 exhibitors all being pesticide & related companies
- 200 technical manufactures (total about 400 more manufactures in China)

**Exhibits Profile:**
**FOCUS ON GENERIC PESTICIDE!**

- **Pesticide:** Technical/ formulation
- **Additive:** Raw material, intermediate, adjuvant
- **Equipment:** Processing, lab/testing, labelling and packing, spraying
- **Service:** Laboratory, consultancy, training, research & development, technology, investment

**Why attend?**
- You can have opportunity to talk with the decision-makers of enterprises;
- You can be guaranteed a good price for autumn is the planning season for Chinese manufacture;
- You can find the idea supplier easily through our Procurement Matchmaking Program and Buyers Guide.

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