Pesticide Sales of Listed Companies Up 27.5% (P2)

Pesticide Demand in China Up 2.3 Million Tons in 2015 (P4)

3rd Environmental-friendly Pesticide Formulations and Processing Technology and Equipment Seminar (P8)
AgroChemEx 2012

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

www.agrochemex.org
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Email:leahlee@ccpia.org.cn  kittychen@ccpia.org.cn
Organizer: China Crop Protection Industry Association
China Crop Protection Industry Association

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 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

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 Glyphosate
 Parquat
 2,4-D
 Acetochlor
 Imidacloprid
 Carbendazim
 Mancozeb
 Abamectin
 Chlorpyrifos
 Chlorothalonil
 Acephate
 Pyrethroid
 Glufosinate
 Azoxyystrobin
 Triazines
 Thiamethoxam
 Nicosulfuron
 Transfluthrin
 Mesotrione etc
2012 International Forum on the Procurement & Services of Crop Protection Products and Conference on Crop Protection Science & Technology, in parallel with Agrochemex 2012, organized by China Crop Protection Industry Association, will be held at Shanghai Everbright International Hotel on October 20th, 2012.

The events will cover marketing, new legislation and new data requirements, as well as innovation and technology improving. Since it began six 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:

- Markets: 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, 2012. Excellent papers will be elected and be presented in the forum, the authors will be awarded.

All the papers should be sent to ccpia.acc@gmail.com or yousheng@ccpia.org.cn before July 30th.
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Director of Editorial Dept.: Sun Shubao
Editor in Chief: Connie Ao
Executive Editors: Duan Yousheng, Zhu Weijuan, Luo Yan

Sponsor: China Crop Protection Industry Association (CCPIA)
Pesticide Sales of List Companies Up 27.5%

2011 domestic pesticide market showed recovery growth, but the profitability in overall industry declined. Agrochemical sales of 23 listed enterprises up by 27.53% to Yuan 20.913 billion. Total profit of listed companies reached Yuan 3.47 billion, with an increase of 22.06%, accounting for 27.53% of the annual total industry profit, which is flat over last year.

<table>
<thead>
<tr>
<th>Rank</th>
<th>company</th>
<th>Pesticide business 2011 (2010)</th>
<th>% change</th>
<th>Sales</th>
<th>Export value</th>
<th>% change</th>
<th>profit</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Wynca</td>
<td>21.43 (18.74)</td>
<td>14.35</td>
<td>48.53</td>
<td>18.30</td>
<td>40.26</td>
<td>4.80</td>
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<td>2</td>
<td>Sanonda</td>
<td>20.39 (13.85)</td>
<td>47.22</td>
<td>19.01</td>
<td>11.96</td>
<td>67.99</td>
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<td>3</td>
<td>Yangrong</td>
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<td>11.24</td>
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<td>4</td>
<td>Noposion</td>
<td>15.34 (13.44)</td>
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<td>15.55</td>
<td>0.03</td>
<td>-</td>
<td>6.60</td>
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<tr>
<td>5</td>
<td>Jiangshan</td>
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<td>46.56</td>
<td>26.01</td>
<td>11.86</td>
<td>38.92</td>
<td>2.60</td>
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<td>6</td>
<td>Lianhua</td>
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<td>25.68</td>
<td>20.61</td>
<td>52.86</td>
<td>2.96</td>
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<tr>
<td>7</td>
<td>Redsun</td>
<td>12.82 (8.64)</td>
<td>48.38</td>
<td>57.89</td>
<td>1.54</td>
<td>-</td>
<td>3.69</td>
</tr>
<tr>
<td>8</td>
<td>Huifeng</td>
<td>10.38 (7.90)</td>
<td>31.39</td>
<td>10.48</td>
<td>3.28</td>
<td>44.97</td>
<td>2.56</td>
</tr>
<tr>
<td>9</td>
<td>Changing</td>
<td>9.92 (7.56)</td>
<td>31.22</td>
<td>10.01</td>
<td>5.86</td>
<td>51.86</td>
<td>2.17</td>
</tr>
<tr>
<td>10</td>
<td>Lier</td>
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<td>4.97</td>
<td>33.13</td>
<td>2.04</td>
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<tr>
<td>11</td>
<td>Halli</td>
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<td>1.57</td>
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<tr>
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<td>Lanfeng</td>
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<td>26.11</td>
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<tr>
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<td>4.04</td>
<td>3.98</td>
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<td>Biok</td>
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<td>-9.25</td>
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<td>19.73</td>
<td>2.52</td>
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<tr>
<td>17</td>
<td>Fengle</td>
<td>5.37 (3.81)</td>
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<td>16.20</td>
<td>2.27</td>
<td>5.58</td>
<td>3.32</td>
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<td>0.39</td>
<td>-20.70</td>
<td>0.00</td>
</tr>
<tr>
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<td>Huayang</td>
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<td>6.31</td>
<td>1.85</td>
<td>95.64</td>
<td>0.43</td>
</tr>
<tr>
<td>20</td>
<td>Beihei GuoFa</td>
<td>3.65 (1.95)</td>
<td>87.18</td>
<td>5.28</td>
<td>1.07</td>
<td>-0.73</td>
<td></td>
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<tr>
<td>21</td>
<td>Qianjiang BioTechnology</td>
<td>3.10 (2.59)</td>
<td>19.69</td>
<td>5.59</td>
<td>1.18</td>
<td>6.59</td>
<td>0.85</td>
</tr>
<tr>
<td>22</td>
<td>Taihe</td>
<td>0.41 (0.85)</td>
<td>-51.76</td>
<td>26.41</td>
<td>0.02</td>
<td>-70.05</td>
<td>8.71</td>
</tr>
<tr>
<td>23</td>
<td>Longping Agri</td>
<td>0.31 (0.41)</td>
<td>-24.39</td>
<td>15.52</td>
<td>1.98</td>
<td>896.98</td>
<td>5.50</td>
</tr>
</tbody>
</table>

Sales and profit

There are 8 companies, of which, sales exceeded Yuan 1 billion in 2011, and the number was just 5 in 2010. Their sales accounted for 60.33% of total sales among listed companies. Top three was Wynca, Sanonda and Yangrong, of which sales was Yuan 2.143 billion, Yuan 2.039 billion and Yuan 1.815 billion, respectively. Wynca held the top 1 with only a slight advantage dragged down by glyphosate. Sanonda moved up to the second place after reform and the relocation of Jingzhou agricultural plant. Lier, of which sales climbed up to Yuan 934 million with an increase of 109.9% after a merger, it surged to rank 10 in 2011 from rank 16 in 2010.

Profit of 10 companies exceeds Yuan 100 million for each, sum of their total profits accounted for 84.5% of the total profit among listed companies. Top three were the same as that in 2010, they are Noposion, Lianhua and Yangrong, of which profit was Yuan 652 million, Yuan 527 million and 304 million, respectively. After relocation, Jiangshan achieved normal operation and was rapid recovered in profits, but the performance is affected by the impact of glyphosate products, profit margin of pesticide business was just 3.48%, with expectations ahead. Coincidentally, profit of Wynca and Shenghua Biok also were squeezed by glyphosate and abamectin market, respectively. Profit of Shandong Dacheng fell over 50% due to old products. Profit of Shandong Shengli rose by 124.2%, while they actively explored the market, implemented differentiated price strategy and strengthened the brand last year.

Projects construction

Redsun invested its own funds in clorfluazuron and pymetrozine projects. By the end of the reporting period, the projects are almost completed.

Sanonda almost completed the projects of pyridine and derivatives plant, glyphosate and 2, 4-D plant. Jingzhou agrochemical factory’s relocation project has been completed.

Shandong Dacheng’s phosethyl-Al production process improvement: the cost downed by 10%.

Jiangsu Changqing's fomesafen ai project has reached the requirements of the design capacity.

Lanfeng set up acephate ai and formulation plant. Its projects aiming at improving its technical aspects of cypermethrin, beta-cypermethrin, permethrin and lambdacyhalothrin, project of diuron are in the process of implementation.

Jiangshan set up amide herbicide plant, completed glyphosate IDAN renovation project.

Haili completed environmental protection & technical improvement project of carbamates, with the productive capacity for propoxur, carbosulfan, fenbucarb, isopropcarb, carbonyl chloride.

Shenghua Biok invested Yuan 85 million in a formulation plant.

Lier completed the projects of chlorpyrifos and propiconazole ai, and epoxiconazole and glufosinate ai.

Restructuring and investment

Redsun completed the reorganization of Nanjing First Pesticide Group Co., Ltd. by purchasing 100% stake of its subsidiaries, i.e., Nanjing Biochemical, Anhui Biochemical and Redsun International. Through the reorganization and integration, Redsun has the industrial chain for pyrethroid, pyridine and hydrocyanic acid.

Anhui Huaxing agreed to buy process technologies of 24 varieties of pesticide formulation and carbendazim ai, as well as its registration certificate, etc.

Noposion’s subsidiaries, Chengdu Royal CropScience and Fujian Sino-dashing Biochemical bought 100% stake of Chengdu West CropScience and Sichun Nuofuer CropScience, respectively.

Lanfeng invested totally Yuan 80 million in establishment of Ningxia Lanfeng. And the company will set up a joint venture with the US Red Eagle Chemical Co., Ltd., which Lanfeng bought 51% stake with $1.326 million. The venture’s business scope is the
Huifeng added funds to acquire more share of Xi’an Nongyida Technology Co., Ltd., Huifeng making its holdings of 40% stake in the target company and 50.8% voting right. Xi’an Nongyida Technology Co., Ltd. is an agri-based technology company.

Development trends
Earlier this year, the development planning of pesticide industry (2011-2015) was issued by the Ministry of Industry and Information Technology (MIIT). The planning has become a very important guideline for sustained, healthy and term development in the industry, which put forward the development target of Chinese pesticide industry in 12th five-year plan. There shall be 5 agrochemical enterprises, of which sales exceed 5 billion.

The technical production of the top 20 pesticide manufacturers shall account for more than 50% of total. To build 3 ~ 5 professional pesticide industry parks in the concentrated area of agrochemical production enterprise. To cultivate 2 ~ 3 internationally competitive conglomerates, of which sales exceed RMB 10 billion. The ratio of new varieties of production with efficient, safe, economical and environmental friendly characteristics attained more than 50%, while the production of varieties of highly toxic, highly residual pesticide down to 3% of the total. By 2015, varieties of pesticide with intellectual property rights total will be more than 50, R & D investment of whole pesticide industry accounted for more than 2% of sales. By 2015, the goal of further improvement and perfection of special pollutant treatment technology and “three wastes” emissions by 15% shall be obtained. The yield of pesticide production shall increase 5% and by-products utilization efficiency shall be increased by 30%.

In the face of accelerating the transformation of the mode of economic development and global industrial transfer, pesticide enterprises, especially the outstanding listed companies need to offer comprehended agricultural services, to strengthen scientific and technological innovation and environmental protection, to improve product quality and brand, and to optimize business management and other measures.

China Import Ups 13.5% in Q1

Agrochemicals output in Q1 of 2012 increased by 20.3%, 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 Q1 of 2012 is shown as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Output (1,000t)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>%change</td>
<td>Q1</td>
</tr>
<tr>
<td>Total</td>
<td>838</td>
<td>20.3</td>
</tr>
<tr>
<td>Insecticides</td>
<td>183</td>
<td>-10.4</td>
</tr>
<tr>
<td>Fungicides</td>
<td>31</td>
<td>-16.4</td>
</tr>
<tr>
<td>Herbicides</td>
<td>371</td>
<td>41.1</td>
</tr>
</tbody>
</table>

In Q1 of 2012, accumulated production of technical pesticide products was 838,000 tons, increased by 20.3% over the same period of 2011, among which insecticides 183,000 tons, fungicides 31,000 tons, herbicides 371,000 tons, up -10.4%,-16.4% and 41.1% over the same period of 2011, respectively.

2. Import and Export
According to the data released by the General Administration of Customs, pesticide import/export in Q1 of 2012 is shown in table 2.

<table>
<thead>
<tr>
<th>Type</th>
<th>Import Amount (1,000t)</th>
<th>Import Value ($M)</th>
<th>Export Amount (1,000t)</th>
<th>Export Value ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>%change</td>
<td>Q1</td>
<td>%change</td>
<td>Q1</td>
</tr>
<tr>
<td>Total</td>
<td>20.7</td>
<td>26.0</td>
<td>170</td>
<td>13.5</td>
</tr>
<tr>
<td>Insecticides</td>
<td>2.5</td>
<td>28.7</td>
<td>42</td>
<td>9.3</td>
</tr>
<tr>
<td>Fungicide</td>
<td>6.8</td>
<td>39.5</td>
<td>69</td>
<td>38.6</td>
</tr>
<tr>
<td>Herbicide</td>
<td>9.1</td>
<td>27.0</td>
<td>49</td>
<td>-0.8</td>
</tr>
</tbody>
</table>

It is shown from the table above that the imported and exported pesticide increased greatly. The imported pesticide amount was 20,700 tons, increased by 26.0%; the imported pesticide value reached $170 million, increased by 13.5%, the imported average price was $8,212.6/t, decreased by 10.2%. Among them, imported insecticide, herbicide and fungicide increased by 28.7%, 39.5% and 27.0%, respectively. The exported pesticide amount reached 230,800 tonnes, increased by 12.2%, the exported pesticide value reached $733 million, increased by 12.2%, and the exported average price was $2790.4/t, increased by 2.7%. The amount of exported pesticides accounts for 27.5% of the total output. Among them, exported herbicides volume was 162,700 tons, increased by 19.7%, accounting for 70.5% of the total export, 43.9% of herbicide production. The exported herbicide value was $454 million; the average exported price was $2,790/t, increased by 2.5%. The exported fungicide was 18,400 tons, decreased by 4.2%, accounting for
8.0% of the total exported volume, 59.4% of fungicide production; the exported fungicide value reached $ 94 million, down 5.7%, the average exported price was $5,108.7/t, decreased by 2.9%. The price of import pesticides of Q1 as follows:

<table>
<thead>
<tr>
<th>Pesticides</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>Q1</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insecticides</td>
<td>9848.7 (7505.2)</td>
<td>9717.4 (9336.4)</td>
<td>7861.4 (10686.0)</td>
<td>8212.6 (9147.4)</td>
<td>-10.2</td>
</tr>
<tr>
<td>Fungicides</td>
<td>23602.4 (13359.6)</td>
<td>17340.6 (14218.8)</td>
<td>13614.6 (24257.6)</td>
<td>16800.0 (19711.9)</td>
<td>-14.8</td>
</tr>
<tr>
<td>Herbicides</td>
<td>9936.5 (11211.6)</td>
<td>10537.8 (11287.6)</td>
<td>9810.9 (9012.9)</td>
<td>10147 (10180.4)</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Sales of Insecticides Up 32% in March

According to CCPIA, domestic sales of insecticides went up 32% in March compared to that in February. Sales in Jiangsu accounted for 37.9% of total sales. Among the insecticides, sales of chlorpyrifos was the largest, and market share of pyrethroid was increased.

Shandong’s domestic sales was up 26.73%, the export was increased by 22.62%. Sales of Profenofos ai reached 489 tons. Sales of chlorpyrifos ai is expected with better market, almost all the products were put on the market. Sales of phoxim reached nearly 300 tons in March.

Sales in Anhui reached 1559.3 tons, accounting for 11.37% of total sales. Sales of monosultap ai reached 599.95 tons, and triazophos sales reached 394.7 tons.

Sales in Hubei went up 22.44% to 889.98 tons, accounting for 6.49% of total sales. Sales of phoxim ai rose 38.3%, with the price slightly up. The price of trichlorfon ai also went up.

After sales reached a peak in Hunan in January, the market was dropped down a bit and slowly recovered in March with sales up 39.4% over February, accounting for 5.61% of the total sales. Isoprocarb ai market was more optimistic.

Areas Affected by Wheat Pests Enlarged

According to the statistics from national crop diseases and pests monitoring, the overall situation of wheat pest is more severe and the areas affected by wheat aphids and Sitodiplosis mosellana Gehin expanded quickly in the last week of April. The outburst of wheat diseases and pests in the national main wheat production areas started from the end of April to the end of May.

Demand and exports of herbicides will grow dramatically driven by the decline in farming labor and growing export market by 2015. As farmers have to fight fungal diseases with recurrent, fungicides will achieve the highest growth rate. Pesticide ai sales will achieve 4.8% annual rate to reached 765,000 tons in 2015. By volume, the ai shall account for 26% of the formulation in export volumes in 2015. Herbicide export growth will be mainly affected by the growth of pesticide ai export, and production capacity of domestic formulation product will further promote the growth of demand.

Northwest market will become the fastest growing market in China. In the six main regions, pesticide market scale, growth rate and the use of pesticides has their own advantages and characteristics. Middle East and south-central region will continue to maintain as the largest pesticide consumption areas, together accounted for 70% of the total pesticide demand in 2015. Pesticide demand in these two regions will be driven by expansion of economic crop cultivation, the Northwest area is benefit from the western development strategy, and pesticide sales growth rate is expected to exceed other areas.

The improvement of varieties and quality of pesticides, especially pesticides produced by more sophisticated technology, will promote the expansion of pesticide application and the growth of its demand. Due to the rise in agricultural prices and government subsidies, farmers’ income will retain a stable growth. Government subsidies reduce pesticide costs, therefore lead to a new pesticide application. In addition, from an investment, the increase in the use of pesticides has become a viable way to improve return on investment. The cost is offset by the higher prices of agricultural products, which is why there is an improvement in earnings.

Pesticide Demand in China Up to 2.3 Million Tons in 2015

The competitive price of domestic products, and continuously improvement of the quality, pesticide formulations export is expected to grow at the rate of 5.2% per year, and net exports volume are expected to grow to 717,000 tons. Insecticide products will remain the domain position in the market, and the fungicides’ growth rate will exceed the insecticide. Herbicides will still be the largest variety to 2015, although the relatively low growth rates to 3.7%. Existing pesticide products will continue to dominate the entire market, but the trend is to use low-toxicity insecticides, which is the reason of low growth rate of insecticides.
The Differentiation of Chemicals Segment’s Performance Increased

According to the listed companies’ report of Q1, it showed that the earnings of 100 chemical enterprises reached Yuan 70 billion, and net profit of Yuan 2.47 billion, down by 8% and 34%, respectively over last year, and only 37 of 100 chemical companies showed positive growth in performance. Meanwhile performance differentiation of sub-industries is increased.

From the data released, the overall operating conditions of listed companies cannot be described as “optimistic”, especially chemicals segment, which showed the uneven performance of the sub-sectors. Agrochemical plate showed positive signs in Q1. Benefited by the Spring plowing production, there is a significant rise in agricultural sector, Redsun posted 9% rise to approximately Yuan 60 million of profit, placing the top for the fastest growth rate. Net profit of Veyong, Sanonda, Jinzhengda and Stanley rose more than 50% respectively. But an insider said that the sustainability of profits of the plate remains uncertain.

Chemical intermediate listed company, such as Lianhua Technology, Yaben, Tianma Refine-Chemical, etc. all posted red. The profitability of the listed resources companies still maintains growth. Xingfa Group said the positive performance attributed to the higher prices of phosphate and other leading products. The report shows that the company’s Q1 2012 operating income increased by 54% to Yuan 2.1 billion and a net profit increased by 70% to Yuan 65.59 million.

However, it is worth to note that many chemical companies’ earnings showed inflection point in Q1. The net profit of Zhonggang Jitan fell over 85.8%; the same to Juhua and Duofuduo, the net profit of them both fell over 30%, Juhua said the industry is now going into recession period.

The Usage Volume of Agrochemicals Declined in Jiangsu

According to the Jiangsu Province Bureau of Statistics: Jiangsu’s fertilizer use was 3.37 million tons, down 1.1% compared to 2010, the province’s use of fertilizers has been down in 2 consecutive years; the use of pesticides decreased by 4% to 86,500 tons, the province’s use of pesticides has declined for six consecutive years.

Statistics Bureau of Jiangsu Province: In Jiangsu Province, fertilizer and pesticide usage continued to decline, which not only helps to reduce environmental pollution, improve the ecological environment but also helps to improve crop quality and food safety. Meanwhile, integrated pest management and advice to farmers on organic fertilizer and bio-fertilizer use are also encouraged by relevant departments of Jiangsu Province.

Hunan Haili Chemical Industry Co., Ltd.

Hunan Haili Chemical Industry Co., Ltd (Hunan Haili) is one of the hi-tech listing enterprises in China, which is mainly formed by Hunan Research Institute of Chemical Industry. Hunan Haili mainly devotes itself to development, production and trade of pesticides and fine chemicals, transportation of dangerous chemicals, installation of chemical facilities. Hunan Haili is fully reinforced at R & D and production of pesticides, which becomes State Pesticide Development & Engineering Technology Research Center and State Carbamate Pesticide Industry Pilot Base.

Hunan Haili has built up the largest production facilities in Asia with annual capacity over 10,000 tons for Carbamate pesticides such as Carbofuran, etc. Hunan Haili has also built up the largest production facilities in Asia with annual capacity over 10,000 tons for alkylphosphorus pesticides like Dimethoate and pirimiphos methyl. Depending on the phosgene production facilities with annual capacity of 10,000MT and 5,000MT, Hunan Haili has developed isocyanates, chloroformates, carbonates, urea phosgene derivatives and also undertakes chemical processing.

Carbamate pesticides, Dimethoate pesticides and alkylphenol intermediates with Haili Brand are the famous products in Hunan Province. Haili Brand is the famous brand in Hunan Province. Since listed in 1996, Hunan Haili has achieved sound and rapid progress, which has held and annexed five domestic enterprises. Hunan Haili has been ISO9001:2000 and ISO14001:2004 certified and passed certification of GB/T28001-2001 in China.
MAI and Sanonda Seek Cooperation

MAI, Israel's largest agrochemicals company paid a visit to Chinese company, Sanonda. If possible, Sanonda will be the pesticide production base of ChemChina.

MAI will evaluate its possibility to cooperate, with the greatest sincerity to seek cooperation and strive to win the project.

MAI had an inspection tour to Sanonda last year. It is understood that the company is one of the world's leading pesticide manufacturers and distributors with products covering herbicides, insecticides, fungicides and plant growth regulators, etc., including 120+ ai varieties and 800+ formulations. There are nearly 5,000 registered products and more than 6,000 trademarks in 120 countries around the world, annual sales revenue reached $2.7 billion.

Approved Registration of Two Imidazolinone Herbicides by APVMA

The registration of two imidazolinone herbicides, imazapic and imazethapyr from Yancheng Southern Chemical Co., Ltd. has been approved by the Australian Pesticide and Veterinary Medicines Authority recently.

Imidazolinone herbicide is a type of high-efficient herbicide which was discovered by Cyanamid Company in the 1970s. It is mainly used on soybean, peanut, vegetables and other dry crops, and it can control many annual and perennial grass, broadleaf weeds and sedge weeds.

Imidazolinone herbicide is an acetolactate synthase (ALS) or acetohydroxyacid synthase (AHAS) inhibitor, which through undermining the synthesis of proteins and interfering with DNA synthesis and cell division and growth, eventually kills the plants.

Imidazolinone herbicides mainly include four varieties: imazapyr, imazethapyr, imazapic and imazamox.

Zhejiang DeHeng Approved GLP Laboratory Certificate by OECD

The Zhejiang DeHeng Biochemical Detection Technology Co., Ltd. was founded in 2006, is testing a high-tech enterprise focus on pesticide testings. The company set up a GLP laboratory since its establishment. Its establishment is in compliance with the related standards and regulations for the construction of the GLP laboratory. After nearly two years’ construction period, the laboratory has completed the construction of the GLP system, independently owned the all package of GLP system files.

In 2009 and 2010, Deheng’s laboratory was received inspection and approved with a GLP laboratory qualification certificate issued by the Ministry of Agriculture. The laboratory can be used for physical and chemical properties test for domestic pesticide registration. There are six units become the first batch to have GLP Certificate issued by the Ministry of Agriculture, the other five companies are: Shenyang Institute of Chemical Safety Evaluation Center, National Pesticide Quality Supervision and Inspection Center (Beijing), Beijing Nutrichem technology Co., Ltd. GLP laboratory, FMC (Shanghai) Chemical Technology Consulting Co., Ltd. and Xingnong Chemical (Shanghai) Co., Ltd. Testing Center.

In 2011, Deheng laboratories applied for OECD member countries, Belgium's GLP certification, Belgian prosecutor conducted a formal on-site inspection of the laboratory and they gave a positive evaluation on the laboratory as well as suggestions for improvement. After the upgrading, Deheng was approved the GLP certificate issued by the Belgian laboratory in April 2012, which helps the compnay to realize its march from China to the world.

At present, the Deheng GLP laboratory has applied eligible service for China, Australia, South Africa, Kenya, Korea, Philippines, Thailand, Paraguay, Peru, Colombia and other countries and regions. After gaining GLP certificate by Belgium in April this year, the issued GLP reports from Deheng GLP laboratory can be used in the markets of Europe, Brazil and other countries and regions.
EHS Standards of Pesticide Industry is About to Release

Chemical production has a certain degree of risk, most of the chemical production process involves the inflammable and explosive dangerous goods, many of the production processes along with the high-temperature, high pressure chemical reaction, so just the slightest negligence will lead to an accident and cause injury to the operator and have impact on the environment. Therefore, companies pay more attention to the environment, health and safety while keeping the efficient operation.

EHS (Responsible Care) has become an important means of conducting business management, controlling and preventing accidents. At present, most domestic enterprises have no systematic EHS management operations and the focus is to exclude an objective harm but to neglect subjective factors. The renowned international companies have completed their EHS management system long ago and thus gain the society’s reputation.

At present, the Chinese pesticide production capacity and output ranks first in the world. In order to implement the concept of Responsible Care in pesticide companies, further to enhance the overall competitiveness in the international arena as well as to ensure the sustained and healthy development of the industry, China Crop Protection Industry Association, with China National Chemical Information Center, supported by the Plant Protection (China) Association, release EHS management Practice in China’s Pesticide Industry after co-composing three drafts and conducting extensive consultation of many enterprises, including transnational corporations.
The 3rd Environmental-friendly Pesticide Formulations and Processing Technology and Equipment Seminar was held by CCPIA recently. More than 800 representatives from pesticide formulators, research institutes, and equipment companies attended the meeting. On the issues of relocation of manufacturers, demand of new facilities, transformation and development of the industry, trends of formulation technological innovation, cleaner production of formulation processing, nearly 20 senior experts exchanged and discussed with the representatives. After the meeting, representatives were organized to visit Syngenta (Suzhou) and JRB Packaging Co., Ltd.

**3rd Environmental-friendly Pesticide Formulations and Processing Technology and Equipment Seminar**

Yuan Longhua, Deputy Director of Department of Raw Material, MIIT: the pace of technology advancement needs to be quickened in pesticide formulation industry to promote its sustainable development during China’s 12th Five-Year Plan.

He introduced that the government will implement more strict production standards and will quicken the pace of technological transformation to improve the application level of high technology and automation in the industry. Meanwhile, we continue to implement the adjustment of product structure, to take EC proportion reduction plan to the next level, and to strictly control the use of toxic and hazardous solvents and additives in order to promote the pesticide formulation industry towards a more efficient, and more environmental-friendly direction.

Luo Haizhang, Chairman of CCPIA: formulation industry needs transformation and upgrading urgently.

China has been implementing development and promotion of industrialization of new environmental-friendly pesticide formulation over the past decade. Pesticide formulators also continue to adjust their product structure, make the formulations constantly optimized. However, water-based formulation such as SC, WG, etc. still only accounts for 20% of all formulation registration. The development of China’s pesticide formulations must be based on the national actual situation, the focus must be given to technological innovation and product restructuring. It is also important to improve quality standards in accordance with resources and the environment, thus to achieve sustainable development.

Wu Zhifeng: to strengthen the safety management of pesticide additives to promote the international mutual recognition of registration.

She said that currently the EC accounts for nearly 40%, WP for about 26% in formulation market and the proportion of water-based, granular formulations is steadily increased, accounted for 52%
of total formulation registration in 2011, reaching the highest historical development rate.

Xi-Li Liu: The seed treatment develops the fast in Chinese pesticide industry.

Professor Liu Xili, Director of Seed Treatment of Applied Chemistry Research and Development Center, China Agricultural University, said: "seed coating agent has become the fastest growing species in Chinese pesticide industry, which also plays an important role in agriculture."

Li Mei: Each product needs to have its own unique solution.

Dr. Li Mei introduced the development process of Dow's new formulation products. She pointed out that there is no single solution for all the environmental-friendly products, each product needs its own unique solution. We all need to find a balance between the reality and expectations. Companies must look into the future with a positive perspective, and make the next 5-to-15 year plan, because the formulation products developed today will be launched on markets after five years, with their sales and usage in the future decades.

Wang Huimei: try to minimize its impact on the environment, and optimize the allocation of natural resources.

Director of Syngenta (Suzhou), Wang Huimei, introduced the company’s policy—"minimize impact on the environment, and optimize the allocation of natural resources". This is Syngenta’s cleaner production policy, also one of the focuses of Syngenta’s (KunShan) daily operation. Since its establishment, a total investment of Yuan1.383 million spent in the clean production helps the company to achieve 3 rehabilitation programs of high to medium cost and 19 of low to zero cost, the production efficiency will double and the 50% reduction will be achieved in cleaning costs. Clean production technology innovations help the company to achieve annual revenue increase of Yuan1.7287 million and better environment.

Wang Qinbo: Cleaner production processes require appropriate equipments

Wang Qinbo, Engineer of Miyou Powder Equipment Engineering Co., Ltd., said that results in the market research indicated the demand for cleaner production equipment in many pesticide companies was very high. Environmental friendly intelligent air jet mill system integrates mixed and ultrafine grinding production technology, which solve the problem of dust pollution in pesticides production, achieving the continuous and automated production.

Wang Yang: Pesticides solid formulation engineering technology has to be upgraded now.

With the development of pesticide formulations, the difference between laboratory for formulation and processing plants in the terms of technology is increasing, this makes formulation engineering technology become particularly important.

Professor Leng Yang pointed out that the WP and WG manufacturing engineering technology plays a decisive role in the pesticide solid formulation industry, and the new way of manufacturing and process using continuous extrusion production technology can effectively curb the spillover of batch production in the WG process, thus significantly improve the working environment, and substantially reduce the labor intensity and production costs. It is the new common technology of cleaner production of pesticide solid formulation.
pesticides, reduce the usage and environmental pollution, the use of pesticides with spray adjuvants is an effective method. With the continuous technology innovation of pesticide application, spray additives in the production practice will be vigorously developed and applied."

Zhao Jun: Rosin-based vegetable oil ND-OD1 is a dispersed oil SC carrier with good performance.

Zhao Jun, Senior Engineer of Noposion, introduced that rosin-based vegetable oil ND-OD1 is a special carrier of vegetable oils SC developed by Fujian Nuode Biotechnology Co., Ltd.. It consists of terpenes and vegetable oil single alkyl-ester, which are listed in List3 and List4 in EPA classification system as “the inert components with lowest risk”, with the advantages of environmental-friendly, safe, renewable characters.

Shawn Zhu: When a single solvent cannot achieve the desired results, a mixed solvent maybe a solution.

Akzo Nobel has developed a novel, low toxicity mixed solvent. It is composed of butyl acetate and cineole, which can dissolve some pesticides, and they are easy to prepare EC in a good quality.
toxic and environmental-friendly mixed solvent. It is called Armid FMPC, a mixed solvent of morpholine derivatives and propylene carbonate. Shawn Zhu, Manager of Akzo Nobel, introduced its development process and application. This improved mixed solvent is proved to have good dilution stability with the imidacloprid SL, and it can also be applied to 2,4-D acid, dicamba, triazole and Trifloxystrobin etc.

and labor-saving” trends for global pesticide formulations with a “environmental-friendly and continuous mode” for the processing.

Zhang Yibin analyzed some key pesticides varieties and a number of global newly developed varieties of formulations comparatively. He concluded that there is a “safe, convenient, and labor-saving” trend for global pesticide formulations with a “environmental-friendly and continuous mode” for the processing. Thus, water-based and particle formulation is the focus.

new formulation studies.

“Sustained release is becoming more and more important in new pesticide formulation studies,” said Chou Jingyu, Senior engineer of National Key Lab of Pesticide Discovery and Development, Shenyang Chemical Research Institute Co., Ltd., “Micro-capsules belongs to the catalogue of release agents, and it is a new high-tech type of pesticide formulation of considerable prospects for the development. The market of micro-capsules in pesticide formulations is still now small, but in view of its benefits and features, it has already become one of the hotspots of the pesticide formulation studies in recent years, and will become an important direction of the pesticide formulation processing.

Qi Wu: Environmental-friendly formulations of active ingredients mixture shall gradually become the focus of development.

Qi Wu, Director of RedSun Group Co., Ltd. describes the selection of resistance to strong electrolyte surfactant developed 500g / L of glyphosate-diuron SC, MCPA•clopyralid•Diflufenican SC.

Peter Baur: The current synergist and mixed additives (in bulk storage) will gain more importance in the future.

Dr. Peter Baur, Global Technical Director of Crop Protection, Clariant Chemical, pointed out that the synergist is an important part of increasing the pesticide efficacy, the current synergist and mixed additives (in bulk storage) will gain more importance in the future.” He explained the bottlenecks and obstacles encountered in the efficiency process, and proposed solutions and some new efficiency detection methods to reduce time and expense. He also introduced the development and use of the “green barrel” mixed additives.

Dai Quan: Pesticide companies should master the skills of scientifically selecting the appropriate formulations.

Until now, pesticide formulation has formed several fixed branches, among which solid formulation is a larger branch, and typical examples are WP and granules. Due to the restriction of EC, it is very important to develop solid formulation and take countermeasures. However, the production technology of solid formulation still needs more improvement.

Zhang Yibin: “Safe, convenient, and labor-saving” trends for global pesticide formulations with a “environmental-friendly and continuous mode” for the processing.

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Chou Jingyu: Sustained release has become an important topic of new formulation studies.

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Zhao Xuming: Higher requirements of formulation products’ physical safety evaluation.

Zhao Xuming, Senior Engineer of Central Research Institute of Chemical Science and Technology, introduced requirements related to the physical safety of pesticide formulation products, including a new version of hazardous chemicals regulations, physical security of domestic pesticide formulations products evaluation progress, GHS and other international regulations on pesticide formulation products.

After the meeting, the representatives visited to the Syngenta (Suzhou) and JRB Packaging company.

Syngenta(Suzhou)

JRB
International Trade Commission of CCPIA Was Established

The aim of the Committee is to carry out trade exchanges between China pesticide industry and the world, involved in counter claims with the anti-dumping case against China pesticide exports and trade barriers, to participate in the claims of pesticide restrictions and regulations, to enhance mutual understanding with the global pesticide industry, and to promote continuously the healthy development of China pesticide industry import and export trade in accordance with the People's Republic of China laws and regulations.

International Trade Commission is a professional committee which belongs to China Crop Protection Industry Association, is formed with a total of 27 units of foreign trade sector of manufacturers, professional agricultural foreign trade companies and local industry associations. The committee is responsible for the making of the main tasks of the Committee and deliberations of the new members, and for making proposals of working plans and issues of the Committee.

The second working meeting was held in Hangzhou on April 13th, resulting in the first session of the Standing Committee. The meeting discussed the problems in the import and export industry and clarified the role in the pesticide import and export trade activities. One chairman and four vice-chairmen were elected. Standing Committee unanimously approved the Committee's "Work Rules". The focuses of the Committee are:

- to reflect the demands and aspirations of the import and export pesticide enterprises to the government;
- to strive favorable policies for the industry’s import and export;
- to convey governmental policies and norms of trade management;
- to serve as a bridge between government and enterprises;
- to guide healthy and orderly development of the import and export in pesticide industry;
- to invite and welcome foreign pesticide trade delegation;
- to organize members to visit abroad and investigation.

Company

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<td>Nutrichem International Trade</td>
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<td>Iprochem Chemical Limited</td>
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<td>Nanjing Essence Fine-chemical</td>
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<td>Jiangsu Flag Chemical Industry</td>
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<td>Shanghai Fertilizer Pesticide Trade Association</td>
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<td>Sinochem Ningbo Group</td>
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<td>Ningbo Generic Chemical</td>
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About agrochemical show: www.agrochemex.net
The Fifth Council of the Eighth Session of China Crop Protection Industry Association was held in Nanchang, Jiangxi. Yuan Longhua, Deputy Director of Department of Raw Material, MIIT; Ye Jiming, Deputy Director of ICAMA of the Ministry of Agriculture; Yang Renping, Deputy Director of Industry and Information Committee of Jiangxi Province, Zou Ximing, vice president of Zhengbang Group and over 200 representatives from 167 governing units, the provincial and municipal pesticide associations and media participated in the meeting. The meeting was chaired by the secretary general of CCPIA, Sun Shubao. The chairman of CCPIA, Luo Haizhang made a report on the work of CCPIA. The report informed the operation of the 2011 pesticide industry and Industry general situation in first 4 months of 2012, and summarized the 2011 major work and introduced the 2012 work plan of CCPIA.

2011 summary of the major work

I Social responsibility concern and energy savings as the starting point to comprehensively promote the industrial upgrading of the pesticide industry.

To set up Paraquat Production Enterprises Management and Social Responsibility Care Working Group and to carry out a series of fruitful work;

To establish the glyphosate environmental verification Fund; to actively promote the product collaborative group work to carry out the industry self-regulation, to maintain and enhance the competitiveness of superior products in the international market; to organize industry-wide Responsible Care training and exchanges; to organize Environmental-Friendly Pesticides EC Development Seminar; to organize the compilation of Guide to Advanced Applicable Technologies of Energy Conservation; to carry out pesticide industry water survey; to compose the subject of access to pesticide industry.

To be great concern about and active participation in the amendments of Pesticide Regulation.

III To make efforts for the healthy development of the pesticide industry. More combats against illegal manufacturers with governments, to create a fair competitive environment for legitimate businesses; to carry out international exchanges and overseas Agrochemical Show; to set up Pesticides Innovation Award; to establish Enterprises Report on Monthly & Yearly system, to carry out the annual appraisals of Top 100 companies within the industry.; to carry out chemical analysis trainings; to organize the intangible assets training courses and pesticide standardization system training courses; continued to organize AgroChemEx, issue Journal of China Agrochemicals, China Agrochemicals and China Pesticide Industry Yearbook, to maintain the CCPIA's web..
In 2012, pesticide industry is focus on mode transferring and adjustment of the structure. CCPIA is to be undertaken include in 2012:

To promote the revision and implementation of Pesticide Regulation and Approach to Pesticide Production Management;

To promote the industry consolidation, and to promote the industry to take the intensive, large-scale actively;

To promote the work of bulk product collaboration group;

To organize the Congress of Members and AgroChemEx & exchange meetings; to strive to improve a grade of media of CCPIA;

To organize the third pesticide formulations seminar, to speed up the upgrading of the pesticide formulations, and guide the pesticide formulators in transition;

To implement on the compilation of pesticide industry EHS norms, and jointly promote the construction and implementation of the Chinese pesticide industry HSE standards;

To establish the International Trade Commission of CCPIA to promote the internationalization of domestic enterprises and products.
Since the tricyclazole and triadimefon launched, the triazole fungicides became the largest category in market due to their high activities until the strobilurin fungicide was discovered. At present, the triazole fungicide is still one of the largest categories in the market. The sales of tebuconazole, epoxiconazole, difenoconazole and propiconazole, etc. have been exceeded $100 millions respectively in 2007. Among them, tebuconazole, of which global sales reaches more than $500 million, is ranked 2nd only after azoxystrobin in the variety of all fungicides. Tebuconazole, which was discovered by Bayer in 1986, is an efficient, broad-spectrum, systemic triazole fungicide. It was registered in China as six formulations in 1995, 1999 and 2000, respectively. Domestic enterprises approved registration of AI and formulation in 1999. It mainly is used to control wheat rust, scab, andrice, diseases of fruit trees. Triazole has been one of the largest fungicides and, tebuconazole usage is retaining its position as the top of the triazole over the years, due to its high efficiency, significant achievements, high quality & reasonable price and with a huge advantage compared to its similar products. Tebuconazole is an alternative for the prevention and control of wheat rust, rice sheath blight and false smut. In the next few years, tebuconazole will be rapidly developed with prosperous market future.

In 2011, tebuconazole was the popular product among fungicide registration in China. A total of 29 products were registered in 2011, 19 more compared to 2010. The number of registered products ranked 3rd after difenoconazole and propiconazole. Among them, 5 companies had ai registration, which are Shandong Zibo NAB Agrochemical Co., Ltd., Jiangsu Pesticide Research Institute Co., Ltd., Jiangsu Good Harvest Weien Co., Ltd., Hainan Zhengye Zhongnong High Technology Co., Ltd., Jiangsu Taizhou Baili Chemical Co., Ltd.; single registration and mixture registration companies were 18 and 6, respectively.

Up to now, more than 40 companies gained the approval of the registration of tebuconazole ai. Beijing Huarong Biological Hormone Plant, Shandong Meibang Pesticide Co., Ltd. and Shanghai Heben-Eastsun Medicaments Co., Ltd. gained the approval of the registration of 70% WDG, 80% WDG and 80% WDG, respectively. Bayer gained the approval of the registration of mixture of 50% tebuconazole + 25% Trifloxystrobin.

In 2010, the usage volume of tebuconazole in China was 951 tons, and the total use is expected to continue its growth in 2012 with more than a thousand tons. In 2011, the tebuconazole export reached 10,718 tons, with an increase of 15.7%; export value increased 30.93% to $990.1 million. Export volume, value and import value of carbenazim reached 34,444 tons, $155.11 and over $10 million, respectively.

Tebuconazole can control wheat scab, fruit trees diseases and take significant effect on rice sheath blight, thus it favored by the market. Market of triazole fungicides ranked first for quite a while, but declined slightly over the past 2 years. First, the effect on control of wheat scab decreased. Secondly, it suffered from the impact of high-end products of multinational companies, Bayer CropScience, Syngenta, etc. Meanwhile, due to the EU ban of tebuconazole, the export was seriously affected.

In recent years, due to the protective and control effect of Jinggangmycin on rice sheath blight disease begins to wear off, the triazole fungicides, tebuconazole are largely used as an alternative with an increasing market demand. However, the tebuconazole market is far smaller than validamycin due to its cost.
Dow firstly discovered pyridine herbicide-picloram in 1960 and reported in 1963. The company launched the product under the brand name "Tordon 101" in 1963, "Tordon 22k" in 1964, "Tordon k" in 1972, "Tordon RTU" in 1979 and "Access" in 1982, respectively. Since then, pyridine derivatives have been used both as raw material & intermediate and active ingredient of herbicides, such as triclopyr, clopyralid, aminopyralid and fluoroxyppyr, etc.

In the development of herbicides, the activity of compound improves with the growing number of compounds containing pyridine in the molecular structure. With numerous patents, Dow occupies the leading position in the synthesis of pyridine herbicides.

Main varieties
In many types of herbicides, the variety of pyridine herbicides is limited (Table 1). Their characteristics are: (1) most of the species with low selectivity and mainly used for grassland, pasture, forest, mining and other non-farmland; (2) effects mainly on annual and perennial broadleaf weeds; (3) absorbed by the leaves in the foliage spray, the active ingredient accumulated in the leaves and the root meristem through the conduct of xylem and phloem, resulting in stem and petiole twisted, swollen, leaves shrunken into the cup shape, subsequently leading to the inhibition of plant growth, plant wilting and death; (4) similar mechanism of the synthetic hormoneherbicides.

Application
Pyridine herbicides are mainly used in forestry, grassland, ranch, mining and beyond the agriculture, therefore failed to be paid sufficient attention to and most of the species has not been adopted the industrial synthesis and promotion applications in China. Among many species, except for fluoroxyppyr, fluoroxyppyr- methyl, other species are still undeveloped. With the rise of forestry and grassland, pasture weeds cause serious damage to domestic pyridine raw materials, industrial production and supply of goods, people began to pay attention to the industrial synthesis of pyridine herbicides, and particular attention should be paid to species which have effects on a certain number of special crops.

Picoloram
The herbicide was discovered by Dow. It is used to control annual and perennial broadleaf weeds. However, the grass is tolerant to picloram, so it is usually used to pasture, grasslands, and non-farmland.

Fluoroxyppyr
Dow’s pyridinecarboxylic acid herbicide, fluoroxyppyr can control most of broadleaf weeds and be effective on weeds resistant to sulfonylurea herbicides. The product, and as the mixture with 2,4-D ester, registered in Canada as brand of Starane and Attain Herbicide Tank-mix in 1996, respectively, and then registered as brand of Starane and Vista in America in 1998.

The herbicide is for the control of polyooum conyolvus, gallium aparine, amaranthus retroflexus, solanum nigrum, convolvulus arvensis, stellaria media, galeopsis bifida, descurainia Sophia, portulaca oleracea, humulus scandens, polygonum sp., etc. It has been promoted and applied in winter wheat fields in China in a large scale. Currently its application in the corn field is under the consideration.

Aminopyralid
Dow’s another pyridinecarboxylic acid herbicide, firstly registered for grassland, pasture and non-farmland, can control annual and perennial broadleaves weeds, including Acroptilan repens, Carduus nutans, Cenraurea maculosa and Cirsiurn arvense, with the properties of broad-spectrum and high efficiency. Aminopyralid is applied for rice, wheat and rape, and will be developed to apply for broadleaf weeds in rubber plantations. For example, it is selectively to control main broadleaf weeds, e.g. Papaver rhexae, Polygonum aviculare, Silbyum marianum and Chrythemum setetum. It is phytotoxic for alfalfa, bean and sunflower, but safe for maize.

Clopyralid
This product launched in Europe in 1978 and sold as the brand of Confront in US in 1989. It has a certain application prospects in sugar beet and rape fields, so it is suitable for development and application in China. Clopyralid is used for sugar beet, rapeseed, corn, turnips, spring wheat, spring barley and cruciferous crops in Canada, can control of annual and perennial broadleaf weeds such as field thistle, polygonum convolulus, cocklebur, mandala and ragweed.

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<th>Active ingredient</th>
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<td>picloram</td>
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<tr>
<td>aminopyralid</td>
<td>Milestone, DE-750</td>
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<td>clopyralid</td>
<td>AccentGold, Battleshiphip, Confront, Curtail, Reclaim, Stinger, Dowco 290, 3,6-DCP</td>
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<tr>
<td>triclopyr</td>
<td>Acess, Battleship, Chaster, Crossbow, Dowco 233</td>
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<tr>
<td>fluoroxyppyr</td>
<td>Advance, Attain, Starane, Tomigan, Retrieve, Dowco-433</td>
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Varities of pyridine herbicide
In the development of pyridine compound synthesis of such herbicides, Dow has always been in a superior position with numerous patents. The company made an important contribution in the creation and development of such herbicides. At present, in the development of herbicides, pyridine compounds is still in its infancy, how to develop new herbicides of the pyridine compounds? It’s still a challenge.
Restriction on Paraquat in China

The new "mother liquid", formulations or any processing factories of paraquat will not be approved in China. The new applications for "mother liquid "and water-based formulations (includes complex water-based formulations of paraquat, the same as below) new field test, registration or production (includes production certificates and documents, the same as below) will not be processed. The approval of registration and production of new "mother liquid "and formulations products will be haunted.

Emergency telephone hotlines and warnings need to be added on the label. The manufacturers of "mother liquid "need to be contained in pesticide registration certificates and production permission documents. The paraquat manufacturers need to apply for new labels, pesticide registration certificates and production permission documents in time. The old registration certificates and production permission documents shall be abolished and the products without new labels can not be sold in the market since January 1st, 2013. The products with old label already in the market can be sold until Dec.31, 2013. All the manufacturers need to add sufficient quantity of emetic, stench and colorant to ensure the quality of paraquat products. After sales service such as user guidance and poisoning treatment, small-bore bottles, activated carbon for medical use along with the products are also encouraged.

About agrochemical show: www.agrochemex.net
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:

Exhibition

- 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, consultance, 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.

www.agrochemex.net