Pesticide Management in China

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Singapore
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Topics

1. China Pesticide Industry
2. Regulatory System of Pesticide in China
3. Improvement of Pesticide Management
1. China Pesticide Industry
2. Regulatory System of Pesticide in China
3. Improvement of Pesticide Management
China Pesticide Industry

Pesticide Registration in China

Till end of 2013

Number of Registrations 3273
Temporary Registrations 555
Formal Registrations 2718

Source: ICAMA
## China Pesticide Industry in 2013

*Thousand Tons & Million USD*

<table>
<thead>
<tr>
<th></th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume</td>
<td>+/-%</td>
</tr>
<tr>
<td>Pesticide</td>
<td>76</td>
<td>10.6</td>
</tr>
<tr>
<td>Insecticide</td>
<td>10</td>
<td>17.9</td>
</tr>
<tr>
<td>Fungicide</td>
<td>27</td>
<td>12.1</td>
</tr>
<tr>
<td>Herbicide</td>
<td>24</td>
<td>-4.1</td>
</tr>
</tbody>
</table>

Source: CCPIA
### Top 20 Pesticide Companies in the world

<table>
<thead>
<tr>
<th>2013 (2012) ranking</th>
<th>Company</th>
<th>2013 currency (million)</th>
<th>Reported currency (million)</th>
<th>% change $</th>
<th>% change reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (1) Syngenta</td>
<td>$10,923</td>
<td>$10,923 ($10,918)</td>
<td>5.9</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>2 (2) Bayer CropScience</td>
<td>$7,945</td>
<td>$7,945 ($7,921)</td>
<td>9.2</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>3 (3) BASF</td>
<td>$5,543</td>
<td>$5,227 ($4,679)</td>
<td>15.4</td>
<td>11.7</td>
<td></td>
</tr>
<tr>
<td>4 (4) Dow AgroSciences</td>
<td>$5,543</td>
<td>$5,545 ($5,042)</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>5 (5) Monsanto</td>
<td>$4,521</td>
<td>$4,521 ($3,715)</td>
<td>21.7</td>
<td>21.7</td>
<td></td>
</tr>
<tr>
<td>6 (6) DuPont</td>
<td>$3,557</td>
<td>$3,557 ($3,173)</td>
<td>12.1</td>
<td>12.1</td>
<td></td>
</tr>
<tr>
<td>7 (7) Adama (formerly MAI)</td>
<td>$2,876</td>
<td>$2,876 ($2,649)</td>
<td>8.6</td>
<td>8.6</td>
<td></td>
</tr>
<tr>
<td>8 (8) Nufarm</td>
<td>$2,146</td>
<td>$2,146 ($1,764)</td>
<td>21.7</td>
<td>21.7</td>
<td></td>
</tr>
<tr>
<td>9 (9) Sumitomo Chemical</td>
<td>$1,552</td>
<td>¥199,997 ($156,221)</td>
<td>5.1</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>10 (10) UPL</td>
<td>$1,101</td>
<td>DKK 6,182 ($5,949)</td>
<td>7.1</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>11 (11) Wynn Chemical</td>
<td>$774</td>
<td>Yuan 3,554 (Yuan 2,832)</td>
<td>27.8</td>
<td>25.5</td>
<td></td>
</tr>
<tr>
<td>12 (12) Huapont Nutrichem</td>
<td>$770</td>
<td>Yuan 3,530 (Yuan 3,023)</td>
<td>18.9</td>
<td>16.8</td>
<td></td>
</tr>
<tr>
<td>13 (13) Kumiai Chemical</td>
<td>$506</td>
<td>₹99,760 (₹84,750)</td>
<td>8.2</td>
<td>17.7</td>
<td></td>
</tr>
<tr>
<td>14 (14) Ishihara Sangyo Kaisha</td>
<td>$503</td>
<td>¥49,000 (¥43,200)</td>
<td>-6.9</td>
<td>13.4</td>
<td></td>
</tr>
<tr>
<td>15 (15) Jiangsu Yangnong</td>
<td>$501</td>
<td>¥377 ($337)</td>
<td>15.5</td>
<td>11.0</td>
<td></td>
</tr>
<tr>
<td>16 (16) Nanjing Redsun</td>
<td>$482</td>
<td>Yuan 2,985 (Yuan 2,724)</td>
<td>11.6</td>
<td>9.0</td>
<td></td>
</tr>
<tr>
<td>17 (17) Jiangsu Yangnong</td>
<td>$480</td>
<td>Yuan 2,974 (Yuan 2,187)</td>
<td>38.5</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>18 (18) FMC</td>
<td>$2,146</td>
<td>$2,146 ($1,764)</td>
<td>21.7</td>
<td>21.7</td>
<td></td>
</tr>
<tr>
<td>19 (19) FMC</td>
<td>$2,146</td>
<td>$2,146 ($1,764)</td>
<td>21.7</td>
<td>21.7</td>
<td></td>
</tr>
<tr>
<td>20 (20) FMC</td>
<td>$2,146</td>
<td>$2,146 ($1,764)</td>
<td>21.7</td>
<td>21.7</td>
<td></td>
</tr>
</tbody>
</table>
Regulatory System of Pesticide in China

Regulations of Pesticide Management

Issued: Decree No.216 of State Council, May 8, 1997

Measures for the Implementation of the Regulations of Pesticide Management

Issued: Decree No.20 of MoA, Jul 23, 1999

Data Requirements on Pesticide Registration

Issued: Decree No.10 of MoA, Dec 8, 2007
Regulatory System of Pesticide in China

Regulations of Pesticide Management

1. **Definition and Range** of Pesticide in China

**Pesticide** is one substance or mixture of substances and its formulations intended for preventing or controlling any disease, pest, weed which is harmful to agriculture and forestry, or any other harmful plant, with the purpose of regulating the plant, insect growth in the chemical synthesis form, or sourced from the plant or natural resources.

- Insecticide
- Fungicide
- Herbicide
- Rodenticide
- Molluscicide
- IGR
- PGR
- Acaricide
- Termiticide
- Fumigant for warehousing
- Preservative for Agricultural and Forest Products
- Household Insecticide

……
Regulatory System of Pesticide in China

Regulations of Pesticide Management

Pesticide Management System

Pesticide Registration System

Pesticide Production License System

MoA

AQSIQ

MIIT

Ministry of Agriculture of the People’s Republic of China

General Administration of Quality Supervision, Inspection and Quarantine of the People’s Republic of China

Ministry of Industry and Information Technology of the People’s Republic of China
Regulatory System of Pesticide in China

Regulations of Pesticide Management

3 Pesticide Registration System

1 Field Trial Phase

2 Temporary Registration Phase

3 Formal Registration Phase
Article 10: The Authority will **protect** the undisclosed data generated by the applicant for the first registration of the pesticide containing new A.I. Within 6 years from the date of registration, **MoA should not grant any registration** to other applicants using the data mentioned in this Article without the consent of the registrant; except in the case that the data are generated by the applicants themselves.
### Regulatory System of Pesticide in China

#### Measures for the Implementation of the Regulations of Pesticide Management

<table>
<thead>
<tr>
<th>Authority for Pesticide Registration</th>
<th>Authentication System for Test Unit</th>
<th>Valid Period of Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICAMA</strong> (Institute for the Control of Agrochemicals, MoA, PRC) is the Authority for Pesticide Registration in China.</td>
<td>All test units executing <strong>Bio-efficacy test</strong>, <strong>Residue test</strong>, <strong>Toxicity test</strong> and <strong>Environmental Effect test</strong> for the purpose of Pesticide registration should be authenticated by MoA.</td>
<td><strong>Temporary Registration:</strong> 1 Year. Should be renewed every year. Accumulative valid period can’t exceed <strong>3 Years</strong>. <strong>Formal Registration:</strong> 5 Years.</td>
</tr>
</tbody>
</table>
Regulatory System of Pesticide in China

Data Requirements on Pesticide Registration

- **Registration Type**
  - Technical Grade
  - Formulated Pesticide
  - Pesticide With New A.I.
  - Technical Concentration
  - New Special Pesticide
  - Repacking
  - New Formulated Pesticide
  - New Formulation
  - New Content
  - Small Optimization
  - New Mixture Formulation
  - New Penetrant

- **Actions**
  - Expend Scope of Use
  - Amendment
  - Amend Application Method
  - Amend Use Dosage
  - Renewal
  - Me-too
  - Technical Grade
  - Formulated Pesticide

- **Types of Pesticides**
  - Household Use
  - Bio-pesticide
  - Rodenticide
  - Microbial Pesticide
  - Botanical Pesticide
Regulatory System of Pesticide in China

Data Requirements on Pesticide Registration

Example: Pesticide with New A.I.

- Application Form
- Summary
- Product Chemistry Data
- Toxicology Data
- Environmental Effect Data
- Label
- MSDS
- Bio-efficacy Data
- Residue Data
- Other Information
Improvement of Pesticide Management

- Announcement of Authorities
- Minutes of Meeting of Registration Evaluation Committee of Experts
- Protect Agricultural production and Environment
- Ensure Quality and Safety of Agricultural Products
- Ensure safety of human and livestock
Improvement of Pesticide Management

Management of Long Residue Herbicides

- Announcement No. 671 of MOA, 2006.6.13
- Minutes of 10th Meeting of 8th Committee, 2011.12.16
- Minutes of 13th Meeting of 8th Committee, 2013.7.31

BANNED

- Metsulfuron-methyl,
- Chlorsulfuron,
- Ethametsulfuron-methyl
Management of Fipronil

- Announcement No. 1157 of MoA, MIIT & MEP, 2009.2.25
- Minutes of 70th Meeting of 3rd Committee for Temporary Registration

Limited Use

Fipronil
Management of High Toxic Pesticides

Announcement No. 1586 of MoA, MEP, MIIT, SAIC and AQSIQ, 2011.6.15

Fenamiphos, Fonofos, Phosfolan-methyl, Calcium phosphide, Magnesium phosphide, Zinc phosphide, Cadusafos, Coumaphos, Sulfotep, Terbufos, Methidathion, Phorate, Isofenphos-methyl, Carbofuran, Methomyl, Ethoprophos, Aldicarb, Aluminium phosphide, Omethoate, Isocarbophos, Methyl bromide, Endosulfan
Management of Paraquat Aqueous Solution

Announcement No. 1745 of MoA, MIIT and AQSIQ, 2012.4.24

Paraquat
Aqueous Solution
1. China Pesticide Industry
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3. Improvement of Pesticide Management
Draft New “Regulations of Pesticide Management”

- Start revision work for New “Regulations of Pesticide Management” from 2010.
- Continuously improve and revise New Regulations in past years.
Draft New “Regulations of Pesticide Management”

Highlight 1: Pesticide Registration Management

1. Field Trial Phase
2. Temporary Registration Phase (highlighted)
3. Formal Registration Phase
Draft New “Regulations of Pesticide Management”

Highlight 2: Management of Trade of Pesticide

Licensing system to trade of pesticide
Draft New “Regulations of Pesticide Management”

Highlight 3: Management of Use of Pesticide

Define the management of the waste of pesticide
Draft New “Regulations of Pesticide Management”

Highlight 4: Supervision Management of Pesticide

Establish Recall System
Highlight 5: Reevaluation System of Pesticide
Highlight 6: Legal Liability

Increase the penalty for violating the Regulations
Summary

- China is a very important country for pesticide in the world.
- China started formal management of pesticide from 1997.
- ICAMA is the key authority for pesticide registration.
- China is keeping perfecting the Regulations of Pesticide Management to encourage environmental friendly and low risk pesticide products.
- The regulatory system is becoming more perfect; the management is becoming stricter; the penalty is becoming more severe.
Thank You!