

China Plant Protection Market

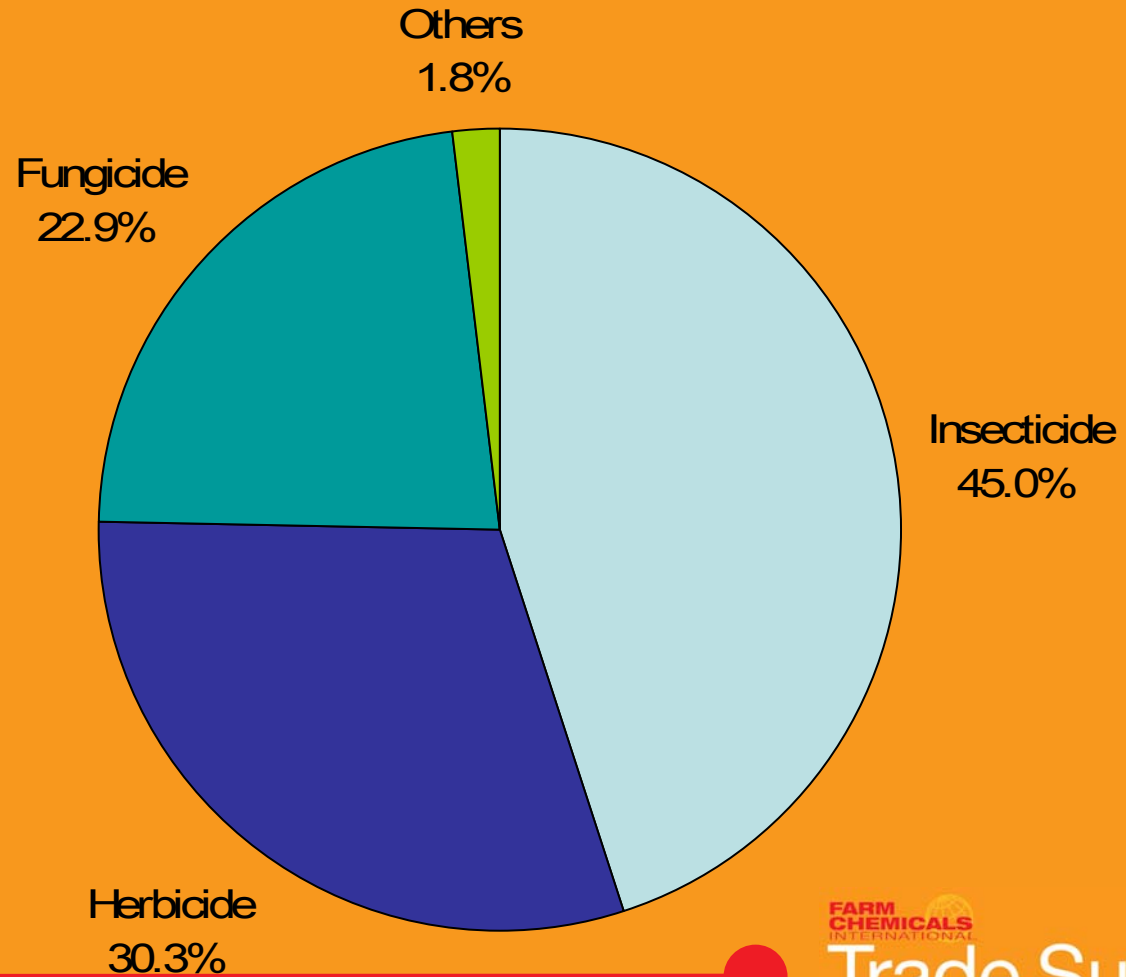
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Market value - 2006

- \$2.1 billions at wholesale level;
- \$2.4 billions at retail level;
- Up by 11.6% in USD;
- MNC up 12.8%;
- Expected to grow at 7 – 10% per year in the following years;
- Now 5th in the world; 4th by 2008 and 3rd by 2010.

China - 2006



Market trend

- Overall market increased by 11.6% in 2006;
 - Insecticide up 12%
 - Herbicide up by 11%
 - Fungicide up by 10%

Key factors for growth

- Favorable climate;
- Increase of the farmer income;
- Reduction of farming workers.

Treated area and cost per hectares

- The treated area in China reaches 550 Mio Ha in 2006 up by 6.6%;
- The average cost per hectare in China is an average of 4.5 \$/Ha; treatment made with international brands cost an average 12.3 \$/Ha and with domestic products, 3.7 \$/Ha.

Crop input

- Rice
- Vegetable
- Wheat
- Orchard

Market forecast

- The replacement of high toxic organophosphate and the favorable climatic condition will boost the demand of higher prices, efficient products in 2007;
- The market could be growing at an estimated 10 to 12% in 2007, and then to a reduced rate at 7 to 8 %.

Performance of MNC in China

- **Bayer**
- **Syngenta**
- **Dowagrosiences**
- **Monsanto**
- **FMC**
- **DuPont**
- **BASF**
- **Nippon soda**
- **Chemtura**
- **Sumitomo chemical**

Leading Chinese Producers for domestic market

- Red Sun
- Xin'an
- Sanonda
- Jiangshan
- Hua Yang
- Jiangsu Chemical
- Raiser
- Qiaochang
- Kesheng
- Haili
- Feng Shan

Distribution

- 3 levels: wholesaler (province level); dealer (region, city level); retailers (village or township level);
- Most producers have own an marketing and sales network to organize the promotional campaign, and execute the sales contract;
- Some producers have distributor agent at national level to handle the distribution;
- MNC with local facilities have shorten the distribution channel and supply directly to county dealers.



Registration in China

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ICAMA

- Institute for the Control of Agrochemicals Ministry of Agriculture
- Possessed executive, legislative, and judicial powers.



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Registration of new pesticides

- Field experiment
- Temporary registration
- Full registration

Field experiment

- Field efficacy test
- Residue experiment
- Environmental ecology study
- Data required
 - Product chemistry
 - Toxicology data
 - Efficacy data
 - Data and registration in other countries

Temporary registration

- Product chemistry data
- Toxicology data
- Efficacy data – (over 2- year field trails in China)
- Residue data
- Environmental and ecological data
- Label

Full registration

- Product chemistry data
- Toxicology data
- Efficacy data
- Residue data
- Environmental and ecological data
- Label

Me Too

- 7 years after the first registration, or the first registrant agrees to share data.
- Temporary registration
 - Product chemistry
 - Quality analysis
 - Authorization letter from the first registrant
 - Toxicity data
 - Label
- Full registration
 - Experiment reports on 2-year normal temperature storage stability and quality
 - Authorization letter from the first registrant
 - Label