Crop Protection and Pesticide Application Based on Food Safety in China

--Introduction of ENDURE to China and Design of Chinese Version

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Content

Situation of Crop Protection, Pesticide Application and Food Safety in China

Scientific Research and Technology in China

Design of “ENDURE in China”
<table>
<thead>
<tr>
<th>Crop</th>
<th>Area (ha)</th>
<th>Yield (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>rice</td>
<td>29 627 000</td>
<td>195 103 000</td>
</tr>
<tr>
<td>wheat</td>
<td>24 291 000</td>
<td>115 115 000</td>
</tr>
<tr>
<td>corn</td>
<td>31 183 000</td>
<td>163 974 000</td>
</tr>
<tr>
<td>rape</td>
<td>7 278 000</td>
<td>13 657 000</td>
</tr>
<tr>
<td>cotton</td>
<td>4 952 000</td>
<td>6 377 000</td>
</tr>
<tr>
<td><strong>Vegetables</strong></td>
<td><strong>18 414 000</strong></td>
<td><strong>444 000 000</strong></td>
</tr>
<tr>
<td>apple</td>
<td>2 667 000</td>
<td>31 681 000</td>
</tr>
<tr>
<td>citrus</td>
<td>2 067 000</td>
<td>25 211 000</td>
</tr>
<tr>
<td>tea</td>
<td>1 849 000</td>
<td>1 359 000</td>
</tr>
</tbody>
</table>
Important Pests on Crops in China

Important crop pests: > 1600 species

- Insects: 830
- Pathogens: 720
- Weeds: 60
- Rodents: 20

Invasive species from abroad: > 40
Pesticide Registration, Production and Sale in China

**Pesticide Registration**
- Pesticide ingredients: about 600
- Pesticide products: about 22,000

**Pesticide Production**
- Companies: over 2700
- Annual production: million tons
  - Pesticide technical materials: 1.3
  - Pesticide formulation: over 2.0

**Pesticide Production**
- Annual sales: 72.9 billion RMB (2006)
Pesticides Application in China (2006)

- Total amount of use: 460,000 tons
- For agriculture: 300,000 tons
- For forestry, hygiene, gardening, industry: 160,000 tons

Control area: 320 million ha•time

- 48% Insecticides
- 27% Herbicides
- 17% Fungicides
- 8% Other
Regular Inspection Results of Pesticide Residue in Vegetables in China (2003-2010)
Management of Food Safety in China

- Administrative management
- Laws and regulations
- Risk assessment and standards
- Inspection and control
- Quality accreditation

5 systems have been established:
Deficiency of Scientific and Technological Support on Food Safety in China

- Strategies of sustainable crop protection
- Techniques of replacement and reduction for pesticide use
- Methods of risk assessment and inspection for food safety
Attending ENDURE Activities

2008.6.16-17.
Meeting of the core team of ENDURE, UK

2008 annual meeting of ENDURE, La Grand Motte, France

2009.9.20-23.
2009 annual meeting of ENDURE, Wageningen, Netherlands
2009.4.15-17., Hangzhou, China:

“Sino-Denmark Seminar on Sustainable Crop Protection strategies”
Visiting and Cooperation

2009.10.13

Delegation from Aarhus University to ZAAS, Hangzhou, China
An international cooperation project has got approval from Ministry of Science and Technology, China.

"Research on practical techniques for reduction of pesticide use based on the EU food safety standards"

<table>
<thead>
<tr>
<th>Bilateral cooperation</th>
<th>ZAAS, China; AU, Denmark</th>
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<tbody>
<tr>
<td>Duration</td>
<td>2010-2012</td>
</tr>
<tr>
<td>Funding</td>
<td>Funding: 1 million RMB</td>
</tr>
</tbody>
</table>
Our Vision

High quality, safety and competitiveness

Objectives

Aiming to use the multiple sustainable crop protection and pesticide use reduction to reduce the pesticide residue, to enhance the agricultural products quality and ensure the food safety.
Strengthening exchanges with European ENDURE research units and initiating more international cooperative researches, following up ENDURE progress and participating in some activities, e.g. ENDURE 2010 conference, graduate studies programs and summer school, etc.

Applying for more supports from the Ministry of Science and Technology.

Establishing the network and platform to launch out the research of ENDURE in Chinese Version.

Participating in the research work of European ENDURE.

Possible fields for cooperation:

- Techniques on sustainable crop protection
- Techniques on pesticide replacement and use reduction
- Techniques on pesticide residue and food safety monitoring
- Testing techniques on pesticide residue and food safety monitoring
Based on the formal research projects, referred to the experiences in the first three years of ENDURE, a larger project is on the plan. It will cost 40-60 million RMB from S&T.

Bringing the research resources in the main farming regions across China together to form a research and extension network.

Introducing the fruits of ENDURE to China and carry out the research on crop protection—pesticide use reduction — whole process control for agricultural product safety, and then popularize the research outcomes in the main farming regions in China.
Thank you!