China Experience in Handling Food Safety Compliance for SMEs

Submitted by: Zhanjiang Guolian Aquatic Products Co., Ltd
1. Company Profile

With 12 years' development since its establishment in 2001, Guolian Aquatic has become the biggest shrimp processor and exporter in China. Benefiting from its vertical integration over hatchery, feed, farming and processing, Guolian has established a sophisticated traceability system and a scientific management system on food safety.

<table>
<thead>
<tr>
<th>Year</th>
<th>Certification</th>
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<tbody>
<tr>
<td>2001</td>
<td>HACCP/ISO9000</td>
</tr>
<tr>
<td>2004</td>
<td>EU BRC</td>
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<tr>
<td>2007</td>
<td>BAP on processing plant</td>
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<tr>
<td>2009</td>
<td>BAP on hatchery, farm &amp; processing plant</td>
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<tr>
<td>2011</td>
<td>BAP on hatchery, feed, farm &amp; processing plant</td>
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II. Guolian Food Safety System

1. Improvement of Shrimp Seedling:

- Ecological seedling: no antibiotic during production;
- Use microecologies to improve water quality;
- Guolian hatcheries: 18 in total
- Yearly Production: SPF Shrimp fry - 5 billion; PLs – 30 billion;
- 1st BAP Certified Hatchery in China

II. Guolian Food Safety System

2. Healthy Feed:

- Nov 2006: Guolian Feed Mill established;
- May 2007: production line established;
- May 2008: production started
- Healthy feed: ISO9001, HACCP, BAP (1st BAP Certified feed mill in China)
- Output: 40,000 tons of shrimp feed; 60,000 tons of tilapia feed;
Ⅱ. Guolian Food Safety System

3. Standard Farming

- Usage of microecologies in disease control during production;
- Production management: farm registration system in CIQ, water quality testing system, production recording system, microecologies prescription system, product labeling system, shrimp testing system before harvesting;

Ⅱ. Guolian Food Safety System

4. Processing Control:

- Shrimp workshop and tilapia workshop – in compliance with HACCP regulations and EU standards;
- Real-time supervision on workshop equipment, worker hygiene conditions, raw material receiving, processing, packaging, cold storage, and product inspection;
- Industry Model in scientific production management;
Ⅱ. Guolian Food Safety System

5. Laboratory:

- Well-equipped laboratories in farming base, feed mill, and processing plant;
- Tests conducted on each lot of raw material and finished product;

Ⅱ. Guolian Food Safety System

6. Traceability System (Tracing Forward & Backward):
Ⅱ. Guolian Food Safety System

Ⅲ. Current Status of China SMEs’ Food Safety Management

- With low entry cost, most of SMEs in food industry suffer from poor processing conditions, inferior equipment and specification; what is more, SMEs are lacking in awareness of the importance of food safety, professional skills and knowledge, which results in disability in food safety management.

**Major reasons in restricting SMEs from effective food safety management:**
- Poor infrastructure;
- Insufficient professionals;
- Lack of awareness of the importance of food safety;
- High cost in improving quality and safety management.
IV. Enlightenment on Guolian’s Development

1. Food safety is the lifeblood of a food processing enterprise.

Guolian’s Testing System throughout the Vertical Integration

IV. Enlightenment on Guolian’s Development

Pre-test residues and pathogens before harvesting
- Qualified supplier
- Supplier testing report on every lot
- Micro test

Raw material
Other ingredients besides RM
Packing material

semi-manufactured product
Food contact surface
tests on micros

Finished product

Residues & Micros & Sensory tests

Guolian’s Food Safety Control During Processing
IV. Enlightenment on Guolian’s Development

2. When internal skills and technology are not sufficient, SEMs can search for help from regulatory body, consulting organization, academy, and/or research institution.

<table>
<thead>
<tr>
<th>Regulatory Body</th>
<th>CIQ &amp; AQSIQ</th>
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<tbody>
<tr>
<td>Technical Exchange</td>
<td>CIQ &amp; AQSIQ</td>
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<tr>
<td></td>
<td>CIQ &amp; AQSIQ</td>
</tr>
<tr>
<td>Consulting Organization</td>
<td>SGS, INTERTEK, CCIC</td>
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<tr>
<td>Training Content</td>
<td>HACCP, GMP, SSOP, BAP, BRC, ISO9000, ISO22000</td>
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Enhancing food safety awareness of the management team and all the workers

- Hire SGS for trainings to production & QC team on HACCP system
- Hire external professionals (MR. Zhang Yan) to instruct food safety management on site
IV. Enlightenment on Guolian’s Development

Set up farming technique promotion center & Give trainings to private farmers around

Trainings of vannamei farming techniques
Trainings of tilapia farming techniques

Technical Cooperation Body

China Fisheries Research Institute
Freshwater Fisheries Center

Aquatic College of Guangdong Ocean University

Shanghai Ocean University

Yangtze Institution of Chinese Academy of Fishery Sciences
IV. Enlightenment on Guolian’s Development

- Search for professional help and suggestions on location selection and plant layout design when setting up a new food processing plant.

IV. Enlightenment on Guolian’s Development

- Search for professional instructions on lab design and equipment operation;
- Guolian has obtained great support from CIQ on trainings on its laboratory personnel and on lab personnel ability assessment;
IV. Enlightenment on Guolian’s Development

- Established a scientific food safety management system based on regulatory requirements on processing conditions, production equipment, process control, product standards, hygienic conditions, storage conditions, testing standards, quality management, labeling and etc.

- Be open to receive external supervision and inspection so to verify and improve food safety managing ability;

- Guolian has completed its vertical integration from hatchery, farm, feed and processing. As to verify its management efficiency throughout the industry, Guolian group apply for ACC 4 star certification audits; and by now Guolian is the only BAP 4 star enterprise in China.
### IV. Enlightenment on Guolian’s Development

- **From 2003 to 2010,** Guolian Group has received in total 12 foreign official plant inspections, all of which are approvals of Guolian’s management system, and among which FVO’s inspection was rated 100 marks, the best to get.

- Through all these inspections, Guolian’s management, production and QC teams have improved the food safety awareness; Guolian’s management system has been brought in line with international standards.

![FVO inspection on May 8th, 2009](image1)

![Russian Federation Veterinary Bureau inspection on Sep 5th, 2013](image2)