ADDRESSING FOOD SAFETY CHALLENGES IN CHINA
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CHINA FOOD SAFETY CHALLENGES AND OUR SHARED RESPONSIBILITY

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Discussion Overview

- China Food Safety Trends, Challenges and Data
- China Food Safety Progress
- Approaches to Advance Food Safety in China
CHINA FOOD SAFETY TRENDS, CHALLENGES AND DATA
Food Industry Trends in China

**Economy**
- Surpassed U.S. in 2010 become the world largest food producer --- Large Pond Grows Big Fish
- Rising Middle Class (accounts for > 50% of households by 2020) and Urbanization make China the world’s most dynamic food consumption market
- Food trade, and Chinese food companies, go global
- Increasing labor costs vs. lack of skilled labors

**Consumer**
- Increasing personal income and dining out
- Diets move from grains to proteins
- Increased awareness of food safety has made it the #1 consideration above price

**Technology**
- Science and technology enables a broader set of product and process improvements, but it also increases liability potential
- Booming traditional food calling for industry innovation
- Natural resource scarcity requires innovative technologies to increase productivity
Rapid Development of Food Industry in China
New Growth Related to Food Marketing

Urbanization is increasing

E-trading is increasing

Source: Euromonitor
British Insurance company RSA published the risks survey: 300 years. It listed the top five risk concerns of the public.
Food Safety Public Awareness

- Customers prefer to visit again the store with better food safety reputation.
- Consumers are willing to pay more for safer food.

Digital sources: IPSOS
Consumption Trends Move to Riskier Foods

2012

- Fresh Food-Meat/Seafood: 79%
- Grain and Oil: 75%
- Milk Products: 74%
- Fresh Food – Vegetables/Fruits: 71%
- Processed Meat /Deli Food: 64%
- Beverage: 58%
- Baby Food: 54%
- Fried Classes/Barbecue Food: 46%
- Biscuits: 44%
- Instant Noodles/Cookies/Snack Food: 43%
- Preserved Food: 41%
- Drinks: 39%
- Canned Food: 32%

Digital sources: IPSOS
Food Safety Challenges in China

- The Chinese food industry faces the same big food safety problems that occurred in developed countries during the past 100 years
- Visibility of food safety outbreaks requires urgent action

Industry pollution at the beginning of the food chain and water pollution

Man-Made Contamination
- Causes most of the highly publicized food safety incidents:
  - Brings trust crisis

Microorganism
- #1 agent that causes illness
- Causes more than 50% of food safety incidents
2014 China Food Safety Public Concerns
6 January 2015

- Food safety systems
- Antibiotics in fish
- Aluminum residue
- Microbial contamination
- GMO
- Husi
- Fake ingredients
- Modern Dairy Farm
- Toxic bean sprout
- Infant formula
- Food additives
- Taiwan Gutter oil

Data source: China Economic Net Food Safety Public Opinion Research Institute
Where Was Contaminated Food Consumed?

China 1999 – 2010

- Private home: 24%
- Company cafeteria: 15%
- School: 17%
- Rural family banquet: 10%
- Makeshift cafeteria: 4%
- Fast food service: 2%
- Restaurant or deli: 23%
- Street vendor: 2%
- Other*: 3%

*< 1% of outbreaks

Top 5 Underlying Contamination Causes

China 1999 – 2010

- Unhygienic practice – 56.6%
- Ingestion of expired or decayed food – 8.6%
- Misuse of toxic substances in food – 6.7%
- Other regulatory violations – 6.1%
- Inadequate cooking – 4.7%

In 2014, intentional food safety incidences decreased. Microbial contamination, heavy metals and ingredient contamination became the major food safety issues. These will be the main concerns for China food industries in the future.

Food production, processing and serving should comply with “Good hygiene practices,” reinforce the process control for microbial contamination and validate CCP.

Food safety surveillance should be focused on pathogens rather than indicators.
CHINA FOOD SAFETY PROGRESS
Evolution of Food Safety Supervision

2008-2010: Crisis management
2010-2012: Process control
2012-2014: Source control
2014: Source control + End detection
China Food Safety Management Structure (2013)

**MOA:** Responsible for the quality and safe production of primary agriculture products and supervision of swine slaughter.

**CFDA:** Authority over the production, distribution and consumption of domestic food and drug products.
- Division I: Production
- Division II: Distribution
- Division III: Others

**FSC:** State Food Safety Commission

**NHFPC:** National Health and Family Planning Commission of the People's Republic of China

**CFSA:** Created in 2011. Independence and freedom to provide scientific advice across the government through food safety risk surveillance, assessment, alert and risk information exchange, and standards.

**AQSIQ:** Import/export food safety supervision
Risk Surveillance – China National Center for Food Safety Risk Assessment (CFSA)

- Risk monitoring of food safety
  - 2142 sentinel sites, 100% coverage at province level and 74.6% at county level
  - Foodborne disease surveillance network – 1335 sentinel hospitals and 3136 CDCs

- Contaminant monitoring
  - Chemicals
  - Microorganisms

- Foodborne disease surveillance
  - National Foodborne Disease Outbreaks Reporting System
  - National Foodborne Disease Surveillance Reporting System
  - National Molecular Tracing Network for Foodborne Disease Surveillance

Source: Xiumei Liu, IAFP, 2014
National Molecular Tracing Network for Foodborne Disease Surveillance （TraNet）

- PFGE: Pulsed field gel electrophoresis
- “Fingerprints” in center database at CFSA and local CDC
- Real-time sharing DNA “fingerprint” maps through Internet
- Cluster identification
- Rapid, coordinated detection and response to outbreaks

Source: Xiumei Liu, IAFP, 2014
Food Standards Clean-Up in 2013
*5,000 standards

- Established an extended expert panel
- Development of standards clean-up online working platform
- Formation of 1061 food safety national standards catalogue

Source: Xiumei Liu, IAFP, 2014
Microbial Risk Management in China

- To strengthen FBD report and monitoring system
- To strengthen the surveillance for risk factors in main foods
- To strengthen RA on biohazards in foods
- To speed up the food safety standards to clean, integrate and revise processing
  - General standards (GB29921 FB Bacteria limits)
  - Methods (GB 4789 sampling plan)
  - GMP (GB 14881)
Control for Microbial Indicators

Current:
- General & product standards
  - FBP
  - ABC
  - coliform

Future:
- Integrated Control
  - FBP limits
  - GB29921
  - GMP

Source: Xiumei Liu, IAFP, 2014
APPROACHES TO ADVANCE FOOD SAFETY IN CHINA
Food Safety Solutions From Farm to Fork

To be effective, food safety programs must extend across the supply chain.
Collaborative Work to Launch Seven-Star Alliance
Advocates for Food Safety

Set the role models
“Seven-Star Food Health Award”

Promote food safety public education
Cooperate with alliance members on consumer science education
Facilitate industry best practice sharing
Cross-industry food safety workshops

Co-Founders

Chinese Institute of Food Science and Technology (CIFST)

Technical Support

Foodservice
Food Manufacturing
Food Retail
Education and Training Programs Support CDFA In Regulation Implementation

One-Day Training Program for Foodservice Operators

2011-2014
• 7 Cities
• 19 Open Classes
• 2,000+ Food Operations
• Over 4,000 Food Operators
• Benefits 100K Consumers

ECOLAB
In Summary

- Food production and consumption are changing significantly in China
- Food safety in China continues to be challenging although significant progress has been made
- Food safety is a shared responsibility
- Ecolab wants to help advance food safety in China
Our Shared Purpose

THE WORK WE DO MATTERS

Every day Ecolab makes the world cleaner, safer and healthier

Protecting people and vital resources

ECOLAB®
Thank You!
谢谢！

Ecolab is everywhere it matters.
Because what we do - and how we do it - matters everywhere.

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