Harmonization of Produce GAPs

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My Hats of Perspective

Industry
Work to craft workable GAPs

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Organizations
IFT, FDA, USDA partnerships etc.
Converging Issues

- Can’t separate food safety from crop pest and disease or production issues
- All are intertwined
- Water quality – not just chemical quality anymore but also microbial quality
- Must have key partners on all crop issues
- Co Management issues on environment and labor
Today’s World Focus is on Food

- Food Safety
- Food Availability & Prices
- Food Security
- Food Traceability
PRINCIPLES FOR FOOD SAFETY

- Prevention most important followed by Intervention and Response
- Proactive versus Reactive
  - Control of Destiny
- Message/Behavioral changes critical
- Credibility and Trust
- Uncontrollable Events
  - Politics/catastrophe/ resource crisis
- Based in Science/Measurable/ Common Sense/Cost efficient
Program of Today

- Look at the partners/participants
- INDUSTRY HISTORICAL PERSPECTIVE
- FEDERAL ACTIONS
- EFFORTS TO HARMONIZE IMPACTS/BRING TO CONSSENSUS
- INDUSTRY INITIATIVE
- INTERNATIONAL STD SETTING
- PANEL TO DISCUSS OPTIONS
GAPs and Harmonization

- **BOTTOM LINE:** Consensus building and cooperation essential across all sectors
- No one needs to meet 10 different programs of requirements
- **GOAL:** Productive/Profitable/Sustainable/Safe
- **PAST & PRESENT:** Trials/Tribulation/Pests/Disease/Unknowns
- **CONVERGENCE OF ISSUES**
- **GLOBALIZATION/INTERNATIONAL**
Industry Initiative

- The FDA Food Safety Modernization Act (FSMA) amends the FFDCA to identify standards for produce safety under Section 419. The FSMA identifies six issues which will be addressed by standards which consider “hazards that occur naturally, may be unintentionally introduced, or may be intentionally introduced, including by acts of terrorism.”

- The issues are:
  1. soil amendments,
  2. hygiene,
  3. packaging,
  4. temperature controls,
  5. animals in the growing area, and
  6. water.
Harmonization of GAPs

- Evaluate effectiveness of current metrics
- Cost of GAPs compared to reduced risks
- Critical need for validation of currently proposed metrics
  - Science Based
  - Easily monitored
  - Economically feasible
  - Regionally based/ geographically specific
  - Seasonality considerations
A Step Away

- May–June, 2011 European outbreak – Sprouts Sickened 4000, 50 killed, cucumber & produce markets destroyed – Rare E. coli 0104: H4
- 2008 Salmonella saintpaul outbreak – Mexican jalapenos – Tomatoes accused – losses >$200 million
- Produce recall every 5.8 day on average 87 recalls in 2011 as if August (Prince, 2011)
- Most in 2011 – cantaloupe, lettuce, sprouts, fresh-cut apple slices
Balancing Act on GAPs

- Generic/ Umbrella Requirements vs Specific Commodity Requirements
- Harmonized vs Unique
- Consistent vs Inconsistent
- Responsible Initiative vs Reluctance to Act
The Past Led to.....

- Outbreaks of the 90s
- Concern by regulators led to –

1998 Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables
  - Water
  - Manure
  - Worker Health & Hygiene & Sanitary Facilities
  - Field Sanitation & Packinghouse Sanitation
  - Traceback
  - Transportation
Good Agricultural Practices
For Growing and Packing Fresh Produce
INDUSTRY COMMODITY SPECIFIC GUIDANCE
COOPERATIVELY DEVELOPED MANY PARTIES

- Melon – Oct ‘05
- Lettuce – April ‘06
- Tomato – June ’06 & 2nd Ed ‘09
- Green Onions – Feb ’10
  - And many others
Foodborne Illness Statistics

- Recently revised by CDC
- 1 out of 6 people in US – 48 million suffer from foodborne illness each year
- 128,000 hospitalized with approximately 3,000 deaths
- Mead – 1999 (76 Million/325,000 H/5,000 deaths) 1 in 100 reported
- 60% of estimated foodborne illnesses due to norovirus
- 38 of 48 million due to unspecified causes
- 12% of outbreak assoc illnesses from produce
NOW WE CAN CONNECT THE DOTS MUCH EASIER!

PFGE (Pulse Field Gel Electrophoresis) – a technique that fingerprints the genetic material of the bacterial strain and allows health officials to “CONNECT THE DOTS”
Past Cont’d

- New guide to industry quickly became de facto regulation as customers demanded proof of compliance
- Evolution of 3rd party audits
- Continuing outbreaks
- 2004 FDA letters to California Leafy Greens industry and to Florida Tomato industry demanding closer adherence to food safety
Concurrent Developments

- Industry
- State Regulatory Agencies
- Federal Regulatory Agencies
- Associations
  - United – 2nd Ed Commodity Specific & Audit Harmonization Efforts
  - AFDO – Model Code for Produce Safety
  - PMA – Establish Center for Produce Safety
The Times They are a changing!

- Changing leaders –
- Changing players
- Changing trends –
- Changing politics –
- Changing crises!
FDA Food Protection Plan

- Published 2007
- Basic Tenets

**PREVENTION**

**INTERVENTION**

**RESPONSE**

15 federal agencies involved in food safety
Chronology: Tomato Related Events

2003-5 Attempts to change Federal Marketing Order through USDA – Quality regulated in CFR, Title 7, Part 966

2004-7 Formulated Tomato Good Agricultural Practices (T-GAPs) for growers and greenhouses and Tomato Best Management Practices (T-BMPs) for packinghouses and post-harvest

2006-7 Voluntarily adopted by industry

2006 North American Trade Work Group developed Commodity Specific Food Safety Guidelines for the Fresh Tomato Supply Chain

2006 Agreement with the state regulatory agency to adopt T-GAPs and T-BMPs as formal regulation to allow government surveillance of the industry
Additional Chronology

2007 Statute passed by FL Legislature for FDACS authority to establish mandatory government regulation of food safety of tomatoes

2007 FDA Hearing on Produce Safety

2007 Establishment of Center for Produce Safety at UC Davis funded by Produce Marketing Assoc & Taylor Fds

2009 Additional changes to Florida statute to mandate annual education and registration of locations
GOALS of All Produce GAPs

1) To enhance safety of produce to the consuming public
2) To prevent or minimize contamination of produce
3) To provide necessary education and training on food safety practices to workers at all levels
4) To meet the objectives of the FDA Produce Safety Action Plan to the degree possible

1) AGAIN TO PROVIDE: Productive/Profitable/Sustainable and Safety
12 BASIC Principles for Good Ag Practices

12 STEP PLAN

1. Document your practices
2. Write down a food safety plan – designate someone responsible for food safety
3. Monitor conditions of your land – check adjoining land for possible sources of contamination
4. Minimize or prevent any contamination from animals, run–off
12 Key Principles for Good Ag Practices

5. Document water source for irrigation
6. Monitor microbial levels in water – wells & municipal source at least annually
7. Train and educate all workers in good personal hygiene and sanitation practices and enforce compliance
8. Provide required field sanitation facilities including soap, paper towels, proper disposal – ensure handwashing
12 Key Principles for Good Ag Practices

9. Follow fertilizer and pesticide regulations including not diluting any agrichemical with water other than potable water.

10. Ensure proper hygiene of harvest crews and proper sanitation and cleanliness of containers and equipment.

11. Keep complete records of all that you do and keep written procedures.

12. Have crisis/emergency/recall plans in place.
KEY ACTIONS

- Consensus Building – across all lines in industry, regulatory
- Audit Harmonization – one company shouldn’t have to meet 12 different audits
- No one has right to their “stamp”
- Develop Interpretations – opinion should not change from auditor to auditor
- Gain cooperation and buy-in by everyone in the chain from farm to packer to market
- Consensus building is slow, tedious, sometimes contentious but rewarding in long run
Produce GAP Harmonization Initiative
Technical Working Group

Over 100 different people from producers, packers, retail, food service, & others involved in consensus review of existing food safety audits.

Monthly meetings around the country.

Provide consensus document to Steering Committee in September.
Site Specific Information for each Audit Body

Fresh Produce Audit Verification Program

With the increasing focus on good agricultural practices to verify that farms are producing fruits and vegetables in the safest manner possible, third party audits are being utilized by the retail and food service industry to verify their suppliers are in conformance to specific agricultural best practices. Since 1999, the Agricultural Marketing Service has been actively involved with the produce industry offering auditing services throughout the food chain to verify that best practices are being followed.

AMS, in partnership with state departments of agriculture, offers a voluntary, audit based program that verifies adherence to the recommendations made in the Food and Drug Administration’s Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables.

The Good Agricultural Practices and Good Handling Practices Audit Verification Program is broken down into three major sections: Good Agricultural Practices which examines farm practices; Good Handling Practices which concentrates on packing facilities, storage facilities and wholesale distribution centers; and Food Defense protocols utilized throughout the food chain. In addition to this program, AMS provides oversight for the Leafy Green Marketing Agreements in effect in California and Arizona, along with the California Tomato Growers Cooperative, each specific best practices criteria that their members can be audited against.

The USDA AMS Fresh Products Branch in collaboration with the

Resources
- USDA Audit Checklist (PDF)
- USDA Audit Score Sheet (PDF)
- USDA Audit Checklist & Score Sheet (Excel)

See Also
- Mushroom Production Audit Scoresheet (PDF)
- Commodity Specific Checklist for Mushroom Production (PDF)
Harmonized Audit Categories

- Compliance Plan
- Field Production
- Harvesting
- Cooling
- Packinghouse
- Transportation
- Produce Storage

*Consistent Auditor Interpretation Critical
FDA Regulatory Concerns on Major Contamination Sources on the Farm

- Four Sources of Particular Concern
  - Soil
  - Water
  - Domestic and Wild Animals
  - Farm Workers

Guzewich, FDA
The Gate through which Federal agencies gain entry to farms is Food Safety.
Food Supply is Global
Requirements are Global

Development of international standards
Global GAPs/ GFSI
Codex Alimentarius revisions
However includes considerations over and above food safety that you have not dealt with before
All should be harmonized to allow for free commerce and capitalism
Semantics Matter/ Science Matters

- In the past “Show me the money!” Jerry Maguire
- Now, “Show me the data”
- Grower organizations demanding science be behind the requirements
- If you don’t have the data,
- Get it
“The FDA should work towards a system where the frequency and intensity of inspection of each facility are based on risk”
Co-Management

- Adaptive co-management is an emerging approach for governance of social-ecological systems
- Meshing food safety and environmental considerations as well as labor issues are woven in
- Protecting food safety and biodiversity
- Sometimes conflicting/difficult decisions
- Ensures other agency requirements are met
  - Protection of migratory fowl—example
Future

- Food Safety Modernization Act – at least 12 – 18 new regulations
- Some may have effect on crop advisor roles
- Produce Safety Pilot Program required in next year
- Increased environmental sampling
- Increased research to hopefully measure risk
- New regulation on Produce Safety from FDA
- Positive actions to enhance food safety
Food Safety Modernization Act

- Most expansive changes since 1938 Act
- Sweeping new enforcement authorities
- Focus on prevention
- Worked on for last 3 years
- Supported by major produce industries
- New import requirements
- Increased inspection
- Passed, signed yet to be funded
Remaining Issues

- Contribution of Water and Environmental Contamination
- We can work through them together by assuring we have accurate data reflecting geographic and seasonal differences and real world scientific data
FEW REMAINING CONTROVERSIES
NEEDED DATA
WATER
WATER

- Have no real agricultural standards
- Rely on federal standards for recreational waters and microbial standards for drinking water in absence
- Water in packinghouses should meet stds for drinking water
- Know contaminated water can contaminate produce
- For more risky categories require dilution of ag chemicals or foliar sprays to meet drinking water standards
- Know microbes can grow in spray rigs
Salmonella newport found in many spray rigs/irrigation pumps
Can often reduce levels down to acceptable with just sand filters or with 1–3 ppm chlorine
New research reported by CPS shows monovalent iron shavings/scrap metal can reduce cheaply
Continue efforts for research and press for needed data
Don’t get upset about the unknown
Every time you see an anole, tree frog or lizard in a packing house or conveyer belt, Salmonella javiana – Salmonella anatum – reptilian/amphibian sources. 74,000 estimated cases Salmonella from reptiles and amphibians each year. >90% of reptiles are infected with Salmonella.
Work to have as much influence as possible on the changes affecting the citrus industry

Stay proactive – work for consensus – Get the data needed
Thanks for your cooperation