



Working Committee 1

General Topics

Date: 04/05/2012

Revision: Final

Introduction

This working committee was tasked with discussing the following areas related to review of general topics within Good Agricultural Practices and fresh produce safety.

1.1. Introduction

1.1.1 Fresh Produce Production: Description of Food Production on a Farm

1.1.2. Definitions: GAPs, NOP, Co-management, Food Defense, etc.

1.2. Impact of:

1.2.1. Foodborne Illness

1.2.2. Economic-Business perspective

1.2.3. Legal consequences: litigation, regulatory actions

1.3. Defining and Identifying Hazards (Biological, Chemical, Physical)

1.3.1. Resources as guidance

1.4. Regulatory Requirements & Exemptions

1.5. Evaluating suppliers from a food safety perspective

1.6. Crisis Management

1.6.1. Developing a crisis management team

1.6.2. List of emergency contacts

1.6.3. Priority list of must do tasks

1.6.4. Media Training

Working Committee Chairs

Ben Chapman

Assistant Professor & Food Safety Extension Specialist, North Carolina State University

James Theuri

Extension Educator, Small Farms/Local Foods, University of Illinois Extension

Meetings Held

Date	Attendance
June 16, 2011	16
July 14, 2011	13
August 12, 2011	12
September 2, 2011	9
October 18, 2011	11
December 12, 2011	9
March 13, 2012	13

Total Meetings: 7

Total committee members¹: 57

¹ See [Appendix I](#) for full list of members

Data Collection

Information from committee members was collected during seven teleconferences held over six months (June 2011 to March 2012). Each meeting held was approximately one hour long with open discussion between all participants. Detailed notes were taken and submitted to the committee after the meeting so that all participants, including those unable to attend, could review the content. Completed notes were then posted online at the PSA website.

From the overall outline of discussions, the committee co-chairs and members moved forward to identify priority areas for the committee's discussion and final recommendations to the PSA Executive committee. Topics which were prioritized as lower importance will be kept on file in the committee's original meeting note document.

Due to the similarity of topics covered between the ten working committees that constitute the PSA, some priority areas, such as hazard identification (physical, chemical, and biological), are covered in multiple groups. The depths to which they are covered vary between groups but all outcomes are retained and will be represented in the overall PSA documents.

Recommendations

1.1. Introduction

1.1.1 Fresh Produce Production: Description of Food Production on a Farm

This curriculum is intended for all farms that produce fruits and vegetables. There is value if you grow fresh produce for all of these steps. Some may apply to you, some may not. This curriculum will define best practices regardless of size, market, production methods (such as organic, biodynamic, and conventional), commodity, and geographic location. The curriculum is based on the best available science to reduce biological, chemical, and physical risks.

1.1.2. Definitions: GAPs, NOP, Co-management, Food Defense, etc.

- Definitions to be derived from future FSMA Produce Safety regulations.
- Defined by Committee:
 - **Co-management:** A site-specific approach to protect public health and conserve ecology, that minimize pathogen hazards associated with food production. Co-management conserves soil, water, air and wildlife by integrating cultural, biological, and mechanical practices that promote ecological balance.
 - **Raw agricultural commodity:** means any food in its raw or natural state, including all fruits that are washed, colored, or otherwise treated in their unpeeled natural form prior to marketing.
 - **National Organic Program:**
CFR Regulatory Text, 7 CFR Part 205, Subpart A — Definitions. § 205.2 Terms defined “Organic production. A production system that is managed in accordance with the Act and regulations in this part to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.”
Source: USDA National Organic Program.
<http://www.ams.usda.gov/nop/NOP/standards/DefineReg.html>

1.2. Impact of Foodborne Illness

1.2.1. Foodborne Illness

- Science-based curriculum needs an applicable example so the philosophy can be conveyed.
- Stories (case studies) of actual outbreaks, illnesses, and public health impacts should be used to communicating the threat of foodborne illness and how to handle different situations.
- Pathogens commonly linked to specific foods and sources should be listed so farmers are aware of the potential risks.
- Importance of animals (cattle, deer, birds) in or around the field should be communicated. (See scope for WC #3 and #4)
- The role of neighbors, the environment, and the production area should be a crucial aspect of the risk-assessment and pre-production activities. (See WC #3)

1.2.2. Economic-Business perspective

- Used to describe potential ramifications of foodborne illness outbreaks as well as the advantages of having a food safety plan developed for growers, business owners, and others involved in the production of fresh fruits and vegetables.
 - Losing market
 - Gaining entry
- Resources:
 - Cornell Online course – there is a letter from a buyer and an audio interview which can serve as an example of market access.
<http://www.gaps.cornell.edu/eventscalendar.html>

1.2.3. Legal consequences

Resources: North Carolina task force training on:

- Litigation
- Victims and business loss
 - Liability insurance
- Regulatory actions
- Case study examples to be used: 2006 spinach outbreak, 2011 cantaloupe outbreak

1.3 Defining and Identifying Hazards

Risk assessment is a critical piece in the learning process to aid growers in reviewing and evaluating their own farm management and production practices to identify potential risks of contamination to their fruits and vegetables.

Descriptors of biological, chemical, and physical risks on the farm are included in the working committee #3 summary which is focused the general farm review.

1.3.1. Resources as guidance: FDA 1998 Guide, United Harmonization, AFDO Model Code, LGMA, United Tomato Metrics, USDA GAP&GHP Audit Verification Program, future FDA Produce Safety Regulations.

- See list of additional resources, [Appendix II](#)

1.4. Regulatory Requirements & Exemptions State

- The curriculum should focus on regulatory areas of concern as listed below. These are areas where regulations may overlap or where local and state regulations may set the standard. These areas may be open to local subcontract interpretation. State and local environmental and public health regulations will vary. The list below is not all inclusive, but specific areas are highlighted that are known to vary between regions.

1. Water Quality and Environment and Waste Disposal
 - Environmental Protection Agency (EPA) Guidelines
 - Wash water, sanitation chemical, and pesticide disposal regulations
 - Drinking Water Regulations
 - USDA Natural Resources Conservation Services (NRCS)

2. Labor
 - Occupational Safety and Health Administration (OSHA)
 - Worker Protection Standards (EPA, OSHA)
 - Environmental Protection Agency (EPA): Pesticide Safety Program
3. Food Facilities
 - Food and Drug Administration (FDA) – Current Good manufacturing Practices
 - FDA Food Code
4. Chemicals
 - Environmental Protection Agency (EPA): Pesticide Safety Program
5. Additional Requirements and Policies
 - Buyer-driven requirements
 - Third Party Auditors
 - State/Commodity Specific Regulations (LGMA, TGAPs)

1.5. Evaluating suppliers from a food safety perspective

- Evaluation may be supported with documentation (and auditors/verifiers may require these). This may include letters of guarantee, certificate of analysis, or some other means that verify the ingredients/materials have been made to reduce potential food safety risks. Supplier requirements should be prioritized according to food safety risk posed. We identified the following suppliers as most likely to introduce food safety risks into the system:
 1. Water/Ice
 - Water bill is available for municipal water, testing results from laboratory for microbial quality of water applied during production and post-harvest operations.
 - Ice is made from potable water and stored appropriately.
 2. Soil Amendments
 - Retain documentation (process validation records) from supplier of compost specifying method of composting, temperature monitoring, turning records, microbiological testing, and procedures for preventing cross contamination.
 3. Chemicals (including pesticides, fertilizers, sanitizers)
 - Suppliers of chemical products should be kept on file along with Material Safety Data Sheet (MSDS).
 - Chemicals need to be approved for use by regulatory body for proper application (FDA, EPA, etc.).
 4. Packaging
 - Packaging is used for intended purpose.
 - Packaging material is food grade, including sticker adhesive, ink, and other applications which may come into direct contact with the produce.
 - Containers should not be reused for any purpose other than the intended. (e.g. chemical bottles should not be used to mix other sprays)
 5. Microbial Testing Laboratories
 - Although testing labs do not introduce risk at the farm level, testing laboratories should be accredited and validated in the tests that they are conducting.

1.6. Crisis Management

1.6.1. Developing a crisis management team

- The farm has a crisis management team designated and a plan to assign employees to different tasks should a crisis occur. Each critical person has a backup.
- Standard employee training includes discussion of the crisis management plan and employee responsibilities in the event of a crisis.

1.6.2. List of emergency contacts

- The crisis management plan includes a list of all priority contacts that support or provide services to the farm in the event of a crisis, including lawyers, grower organizations, state health officials and vendors.

1.6.3. Priority list of must do tasks

- The crisis management plan outlines which operations must continue and those which can be temporarily halted during a crisis.

1.6.4. Media Training

- The farm has several individuals who have media training and who are familiar with farming operations to be able to answer questions from the media. These individuals are familiar with all farm food safety protocols that are in place to prevent problems.

Recommendations

1. The consequences and impacts of foodborne illness to public health as well as business need to be a focus of the curriculum to stress the importance of this training to participants.
2. This curriculum is not all encompassing, especially when it comes to regulatory issues. Details may vary by location. The committee has done its best to define federal regulations and other regulations which may impact growers and food safety practices that are known.
3. Through the curriculum roll-out process, trainers should be informed and directed to exercise due diligence in delivering appropriate material by making mention of what is legal and appropriate for their jurisdiction(s).
4. The idea of a systems-based approach to food safety is important to the committee. Food safety risk reduction is not completed in a vacuum, as there are multiple competing interests within the production system. The impact of these interests that may extend beyond food safety, such as co-management or Good Manufacturing Practices (GMPs), should also be mentioned within the curriculum.
5. The curriculum must be developed to teach producers how to assess risks, identify hazards, and make decisions that are specific to their farms and processes.
6. The committee acknowledges that this document and final curriculum, including definitions, may need to be adjusted appropriately to comply with the FDA's final Produce Safety Rule.
7. The ultimate training program needs to be a living one; it must be flexible and adaptable to new science and changes in industry best practices based on emerging science.

APPENDIX I

Working Committee Members (57)

1. Beckman, Edward ; CEO ; California Tomato Farmers
2. Bihn, Elizabeth ; PSA Program Director ; Cornell University
3. Biltonen, Mike A. ; Consultant ; Red Jacket Orchards
4. Bonanno, Richard A. ; Extension Specialist ; University of Massachusetts
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6. Broughton, Fred ; Marketing Specialist ; South Carolina Department of Agriculture
7. Brown, Reggie ; Association Manager ; Florida Tomato Exchange
8. Carlson, Cathy ; Food Safety Program Manager ; Community Alliance with Family Farmers
9. Chapman, Benjamin ; Assistant Professor ; North Carolina State University
10. Chedwick, Megan ; Food Safety ; Church Brothers, LLC
11. Chege, Peter G. ; Extension Specialist ; University of Illinois Extension
12. DeSantis, Valeria J. ; Farm Products Grading Inspector ; NYS Dept. of Agriculture
13. Dougherty, Jennifer ; Audit programs coordinator ; USDA-AMS
14. Ducharme, Diane T. ; Educator ; North Carolina State University
15. Giclas, Hank ; Senior Vice President ; Western Growers
16. Gombas, David ; SVP Food Safety and Technology ; United Fresh Produce Association
17. Haskins, Cynthia ; Consultant ; Illinois Farm Bureau
18. Horrall, Autumn ; Food Safety Manager ; Melon Acres, Inc.
19. Horsfall, Scott ; CEO ; California Leafy Greens Marketing Agreement
20. Johanson, Joy ; FDA/CFSAN ; Consumer Safety Officer
21. Johnson, Donna ; DLJ Food Consulting ; Owner
22. Kiger, Luana E. ; Special Assistant to STC ; USDA NRCS
23. Kimes, Ken ; Farmer ; Greensward/New Natives, LLC
24. Kulhanek, Ashley L. ; Food Safety Education Associate ; The Ohio State University
25. Langdon, Sue J. ; Extension Director ; North Carolina Sweet Potato Commission
26. Lanini, Sharan A. ; Raw Product Food Safety Manager ; Chiquita Brands International/Fresh Express
27. McCartney, Michael ; Principal/Consultant ; QLM Consulting
28. McGinnis, Yvonne R. ; CEO ; Remembering Mary, LLC
29. McReynolds, Roland ; Executive Director ; Carolina Farm Stewardship Association
30. Miller, Bill ; Farm Prod. Grdg. Insp. 3 ; NYS Dept. of Agriculture and Markets
31. Mills, Laura G ; Consultant ; Metz Fresh, LLC
32. Nelsen, Joel ; President ; California Citrus Mutual
33. Nickerson, Ginger ; GAPs Outreach Coordinator ; UVM Extension
34. Nieto-Montenegro, Sergio ; President ; Hispanic Workforce Management, LLC
35. Nolte, Kurt D. ; Extension Agent ; University of Arizona
36. Ogle, Tamara M. ; Extension Educator ; Purdue Extension
37. Oleson, Beth ; Director of Education ; Georgia Fruit & Vegetable Growers Association
38. Phelps, Laura ; President ; American Mushroom Institute
39. Queenan, Mark ; VP of Quality ; Backyard Farms, LLC
40. Reeves, Brian N. ; Farmer ; Reeves Farms
41. Roberts, Martha Rhodes ; Special Assistant to Dean for Research ; University of Florida

42. Rushing, Jim ; Training and Program Manager ; University of Maryland
43. Sanchez, Marcos ; Food Safety Specialist ; IICA
44. Santoro, Al ; Farmer ; Poamoho Organic Produce
45. Schermann, Michele ; Research Fellow ; University of Minnesota
46. Schrock, Lloyd C. ; Chairman of the Board and Mgr. ; Lincoln Co. Produce Auction
47. Sharp, Adam J. ; Public Policy ; Ohio Farm Bureau Federation
48. Smathers, Sarah ; Graduate Research Assistant ; North Carolina State University
49. Smith, Michelle A. ; Senior Policy Analyst ; US FDA
50. Sullivan, Bradley W. ; Managing Attorney ; Lombardo & Gilles, LLP
51. Swiger, Joshua ; Attorney ; Weinberg, Wheeler, Hudgings, Gunn & Dial, LLC
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APPENDIX II

Additional Resources

- 1.) 1998 Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables
<http://www.fda.gov/downloads/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/ProduceandPlanProducts/UCM169112.pdf>
- 2.) Association of Food and Drug Officials (AFDO) Model Code for Produce Safety for State and Local Regulatory Agencies
<http://www.producesafetyproject.org/admin/assets/files/AFDO-Model-Code.pdf>
- 3.) California Leafy Green Handler Marketing Agreement (LGMA)
<http://www.caleafygreens.ca.gov/>
- 4.) Food Safety Programs and Auditing Protocol for the Fresh Tomato Supply Chain
http://www.unitedfresh.org/newsviews/food_safety_resource_center/fresh_tomato_supply_chain
- 5.) FDA Food Safety Modernization Act
<http://www.fda.gov/food/foodsafety/fsma/default.htm>
- 6.) United Fresh GAPs Harmonization Initiative
http://www.unitedfresh.org/newsviews/gap_harmonization
- 7.) USDA GAP & GHP Produce Audit Verification Program
<http://www.ams.usda.gov/AMSV1.0/GAPGHPAuditVerificationProgram>