



Working Committee 8

Outreach to Farmers and Trainers

Date: 04/05/2012

Revision: Final

Introduction

Working committee #8 is tasked with the development and discussion of challenges related to outreach programs, materials, and delivery to farmers and trainers. There are four primary tasks delegated to this committee for which this report is written. The four areas are as follows:

- 8.1. Train the Trainer Programs
- 8.2. Train the Trainer Materials
- 8.3. Target Audience Training Materials
- 8.4. Training Delivery

Working Committee Chairs

Craig Kahlke

Area Extension Specialist, Fruit Quality Management, Lake Ontario Fruit Program – Cornell Cooperative Extension

Keith Schneider

Associate Professor, Food Science and Human Nutrition Dept. – University of Florida

Meetings Held

Date	Attendance
July 26, 2011	14
November 10, 2011	12
December 7, 2011	15
January 17, 2012	18
March 5, 2012	15
March 30, 2012	13

Total Meetings: 6

Total committee members¹: 68

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

Data Collection

Information from committee members was collected during six teleconferences held in the months of July 2011 to March of 2012. Each meeting held was approximately one hour long where detailed notes were taken and submitted to the committee for review. From the notes taken during the teleconferences, a summary of working committee discussions was created by the PSA facilitators and committee co-chairs. Recommendations to the PSA Executive Committee were then drafted based on the summary of discussions held. Additionally, a brief survey was conducted via SurveyMonkey to prioritize curriculum media. The survey results are located in Section V, Training Materials.

This working committee will continue to discuss topics related to outreach for farmers and trainers after the FDA's promulgation of the Produce Safety Rule.

Summary

I. Who Will Be Trained

A list of potential audiences to be trained includes the following:

- Extension professionals
- Community members (such as with Plain/Amish growers)
- Farmer's market managers
- Local officials
- Consulting groups
- Retail/buyers
- Distribution centers/brokers
- *Community/School Garden Groups*
- *Produce Auction Managers*
- *Community Supported Agriculture (CSA) Systems*
- *Fresh produce cooperatives*

*This list is a compilation of WC 8 and WC 7 identified audiences. Items listed in *italics* were uniquely identified by WC 7. All other potential audiences were identified by both working committees.

The diversity of potential audiences for training sessions highlights the need for an easily adaptable curriculum to meet the demands and requirements for each unique group.

II. Challenges and Considerations for Training Sessions

Specific challenges exist which need to be addressed in the curriculum and during trainings.

They include the following:

- 1.) Course Availability** – By utilizing a Train the Trainer model and allowing many training entities to conduct training, a multitude of courses should be available. Training entities such as government, industry trade associations, Cooperative Extension, Universities, and consultants could be utilized to maximize the training effort.
- 2.) Limitations on Registration** – The demand for trainings fluctuates greatly based on buyer demand for grower audits, commodity requirements, and eventually, Federal regulation (Food Safety Modernization Act). In addition, availability of Extension professionals, qualified trainers, and funding is limited. Small growers are less likely to get pressure from their buyers for food safety training; however farmer's markets and school food service programs are now driving food safety practices from their suppliers.
- 3.) Cost of Attendance** – This could be a huge barrier particularly for small growers. Program costs will vary greatly, and the PSA must assure cost effective options are available.

- 4.) **Specific Audiences** – There may be specific needs for some individuals that desire training such as Amish farmers and certain ethnic groups. These needs must be addressed by the PSA. Government regulators will need specialized training to conduct regulatory inspections, and growers/producers may require specialized training in certain areas. Audiences will also differ in a Train-the-Trainer situation, as described in WC #7’s document.
- 5.) **Attendance Based Dynamic** – The dynamic of a successful training is highly dependent on the class size and resources available to growers. If the class size is too small, trainings may not be offered in that specific location and the participant might miss out on crucial learning opportunities provided in part by their peer’s questions during the session. Trainings that are in high demand and are held with large groups may not receive the personal attention from trainers or educators to answer their specific questions, rendering the session less productive or useful to the grower.
- 6.) **Grower Motivation and Attitude** – Convincing some farmers that food safety and GAPs are critical remains an issue in some areas. Both cost and available time to implement GAPs has been a significant hurdle to overcome, especially for small farmers who have been producing for a long time.

III. Key Attributes for the Curriculum

1.) Creation of Standardized Content and Message

- A unified curriculum must be delivered to farmers, regulators, and trainers.
- Food safety should be incorporated into messages from other organizations, for instance the USDA’s ‘Know Your Farmer, Know Your Food’ campaign.
- A clear statement should be developed to promote the overarching objectives set by the PSA by utilizing the collaborative agreement with Cornell University, USDA, and FDA.
- Many members of the committee stressed “standardized” can be misleading; that the curriculum should not be “one size fits all” and certain things will only apply in certain regions.
- The content must be built on a solid foundation of known science and experienced-based practices that are applied appropriately to all types of produce and growing systems.

2.) Development of a Food Safety Plan

- The training should include steps towards writing a food safety plan. By enabling farmers to think about their own operation and conduct risk assessments, they will be better able to implement food safety practices on the farm.
- For farmers that are exempt from the FSMA regulations by the Tester Amendment, developing a food safety plan is still a critical step towards compliance with buyer requirements, maintaining market share, and creating a safer food system overall.

- If the training is only going to be one day, many on the committee stated that a sample food safety plan should be provided, although it may be difficult to provide a sample plan that will benefit diverse farms. Operational SOPs may be more useful to growers than trying to tackle the plan all at once.

3.) Material Covered

- The amount of material covered must be appropriate to the audience given the allotted time to conduct the training.
- Trainers must take into account the educational background of the attendees so that the appropriate amount and type of information is provided.

4.) Flexibility/Adaptability

- By developing curriculum materials in a modular approach, trainings may be tailored to specific audiences according to the time and resources available.

IV. Key Attributes for Trainings

1.) Optimum length

- 1-2 days farmers
Challenges: Time away from farm/family, travel/transportation to training location, cost of training.
 - Many on the committee stated that owners of small farms have full-time jobs off the farm, and may only be able to attend one day.
 - Thus the suggestion of a 1-day training with a sample food safety plan and an optional 2nd day to work on developing their own written plan.
- 3-4 days trainers
Challenges: Educational backgrounds of trainers, time away from work. The majority of committee members believe that 3 days would be the maximum amount of time that trainers would be willing to attend.
- Training length may be tailored to accommodate different groups by covering only certain 'modules' of the curriculum.
For instance, base modules will include topics that are essential to all attendees or are mandated by government regulations. Additional modules might be included for particular issues of interest, time permitting, such as farm biosecurity. See Section III, Part 4 above (flexibility and adaptability of curriculum).

2.) Availability and Location of Training

- Training should be provided at a convenient time, typically off production season for growers.
- Training should be held at a location that is within reasonable travel distance for attendees. Special considerations should be made for Amish/Plain growers.
- The training minimizes time away from home/farm.

- The potential for online learning should be considered for audiences who cannot travel to training sessions. Online learning tools may also be used for continuing education for those who have completed a full training in person but want to further their education or refresh their knowledge.
- Training schedules must have flexible options for weekend, mid-week, or split training dates according to audience preferences.

3.) Training Participants and Dynamic

- Regulators and growers are trained on the basic principles of GAPs together. Trainers benefit from hearing participants (farmer) questions and experiences. This ensures both farmers and trainers are being provided consistent messages.
- Trainers must attend additional sessions related to carrying out their specific duties.

V. Training Materials

A wide variety of training materials are already available from a number of resources including, but not limited to, industry groups (e.g., LGMA), government organizations (e.g., FDA, USDA), and numerous educational institutions and Universities. This committee will utilize the resources collected by the PSA staff from the June 29-30, 2011 GAPs Education and Training Materials Conference held in Orlando, Florida. Many of these educational training materials are already catalogued and available online from the [PSA website](#) for review. For the purpose of this document, we will not attempt to describe, list, or catalogue every available program, but instead use the resources collected by the PSA during the June meeting as reference.

Prioritizing Educational Material

If there are a limited amount of funds towards the purchase of training materials, some level of prioritizing will need to be set. A survey was sent to the committee (3-7-12) to prioritize the following list of media. The list below highlights the results of the prioritization process.

Educational Media Prioritization Results

1. USB/CD (Computer Resources)
2. Videos
3. Web Resources (links to information, websites)
4. Binders
5. PowerPoint Slide Sets
6. Flip Charts
7. Case Studies
8. Posters
9. Competency Exercises (Quizzes)

Educational materials preferred by trainees may depend on the culture, learning style, audit pressure, and comfort level with technology. For instance, Plain growers may prefer the binders and posters whereas other growers may prefer USB drives or training videos.

Educators being trained may prefer binders and annotated PowerPoint slide sets for reference. The focus groups currently being conducted by the PSA will aid in which resources are best for each group of trainees.

Educational Media

Several types of educational media were evaluated by the committee for use in the curriculum, both for trainers and farmers. All training materials should be provided in the language preferred by the audience. The materials discussed are listed below with a brief description of the advantages or disadvantages to their use.

- 1.) **Binders** – Essential to provide additional resources to trainers that should be used to supplement the curriculum content. The size and amount of material make them impractical for field use or as a quick reference guide for farmers.
- 2.) **Power Point Slide Sets** – Useful for training sessions to those that have the technology available. Slide sets with annotation should be provided to trainers and educators to ensure that the appropriate message is delivered for each particular portion of the training. Slide set notes may be useful for growers to add notes to during trainings.
- 3.) **USB/CD Materials** – A convenient way to send growers that have access to technology home with additional resources, food safety plan templates, and other multimedia supportive of the training.
- 4.) **Flip Charts** – A convenient and easy to use resource for small groups of growers or training participants who learn best pictorially. Flip charts are also useful in ‘tailgate’ trainings and can be taken to the field.
- 5.) **Posters** – Essential illustration and direction for workers, farm visitors, and other audience can be provided via posters. For example, hand washing and worker hygiene posters or signage are required to pass GAPs audits.
- 6.) **Competency Exercises** – A test of applied knowledge may be required of trainers or farmers to receive their GAPs certification, depending on the new FSMA regulations. This topic area is being discussed in greater detail in Working Committee 10 (Certification) and Working Committee 7 (Train the Trainer).
- 7.) **Case Studies** – Help illustrate real-life or fictitious scenarios that may help farmers understand the implications of foodborne illness outbreaks to their operation. Case studies may also be used to illustrate specific aspects of on-farm food safety, such as water management or worker training.
- 8.) **Mock Farm Audits** – When paired with general GAPs training, a mock farm audit can help prepare a grower to pass a real farm audit in the future. Mock audits can also serve as a preparatory experience for growers who may feel nervous or uncomfortable with the audit process.
- 9.) **Web-based Resources** – A variety of web-based resources are already being used in distance education courses, webinars, and videos online. The disadvantage to these resources is primarily ensuring that the target audience has access to and understands how to use these types of resources.

VI. Train the Trainer Programs

This committee has significant content overlap with Working Committees 7 (Train the Trainer) and 9 (Outreach to Regulators and Trainers). Therefore, within this document, topics that are in agreement or conflict with the aforementioned committees will be highlighted.

The committee reviewed several Train the Trainer programs developed by the following entities. Additional programs were brought forth for review, but were not discussed in great details on the conference call.

1. Joint Institute for Food Safety and Applied Nutrition (JIFSAN)
2. Cornell University National GAPs Program Train the Trainer Series
3. Purdue University Educator Training Program

JIFSAN's International Good Agricultural Practices (GAPs) Train-the-Trainer Program focuses on providing exporting countries with an adaptable framework of practices. Trainees then teach farmers and growers the concepts and best practices currently available to reduce microbial food safety risks. These practices, when widely disseminated and implemented, improve the safety of fresh produce exported to the U.S.A.

<http://jifsan.umd.edu/training/gaps.php>

Cornell's National GAPs Program – Train the Trainer 2012

A Train-the-Trainer workshop was held in mid-February 2012. Attendees included Extension educators, crop consultants, and Department of Agriculture and Markets inspectors. The training was held over two days; on the first day key GAPs were outlined, along with outbreak case studies, and current food safety research. On day 2, trainees were exposed to one grower's experience with writing a food safety plan and participating in the third-party audit process. Auditor perspectives and a comparison of audit metrics were provided by NY Dept. of Ag & Markets. Available educational materials were reviewed for use in trainings and to implement a food safety program on the farm.

A written evaluation was conducted at the end of the workshop which indicated that several trainees were anticipating hosting their own GAPs workshops, or collaborating with others across the state to launch workshops. At the very minimum, trainees indicated that they were better prepared to diffuse grower fear of FSMA regulations and third party audits. All trainees received a binder including the annotated slide sets and a flash drive containing all recordkeeping documents, an editable food safety plan template, audit information, PowerPoint slide sets, and supporting scientific research. In addition, participants received a bag of training materials that are provided during grower trainings that included food safety posters, photo novellas, training CDs, grower assessments, and other resources developed by the Cornell National GAPs Program.

<http://www.gaps.cornell.edu/indexhighspeed.html>

Indiana Train the Trainer Program

Educator training programs have been offered in Indiana in 2010-2011. The audience has been primarily county Extension educators in areas of Ag and Natural Resources and Consumer and Family Sciences who are members of a team established to develop and deliver food safety programs to fruit and vegetable farmers.

In the first year we spent a day and a half reviewing the North Carolina Market Ready GAPs curriculum. As a group we went through the annotated train the trainer guide, discussing the content to increase our understanding and to identify what we would want to change for grower audiences in Indiana and Illinois. Purdue Food Science faculty and Extension staff with some background in GAPs presented the materials and provided additional information.

In the second year, many of the same trainees attended, as well as some new individuals. We asked those who had not attended previously to review recorded presentations that we had developed for Indiana and Illinois. At the training, we spent half a day reviewing those presentations together to identify areas for improvement, and hearing updates on FSMA and the PSA. We spent another half-day hearing from outside speakers: Food Science faculty gave short updates on their research, a State Dept. of Health epidemiologist talked about how they trace investigations, and a Purdue Ag Communications specialist talked about Extension's communication roles in a foodborne illness outbreak. For the final half-day, we invited growers in to tell us about their experience with developing and implementing food safety plans, and to answer questions. As a result of the trainings, Extension educators have organized food safety programs in their regions of the state and are teaching producers about GAPs.

Other Programs

The committee recognizes that there are many other models that exist at universities and fresh produce industries throughout the country as well. Working Committee 7 (Train-the-Trainer) has identified several other programs including:

1. Arizona Leafy Greens Marketing Agreement
<http://www.arizonaleafygreens.org>
2. California Strawberry Commission
http://www.calstrawberry.com/members/calendar_detail.asp?cid=701
3. Mushroom Industry Food Safety Training Kit (FSTK)
4. Amish/Plain Grower Trainings for Farm Managers/Owners
5. Tomato GAPs, Florida
6. NC Market Ready GAPs Training Initiative
<http://www.ncsu.edu/enterprises/ncfreshproducesafety/>

Recommendations

Recommendation #1: The diversity of potential audiences for training sessions highlights the need for an easily adaptable curriculum to meet the demands and requirements for each unique group. Consistency across all platforms (e.g., Plain growers, live classroom lectures, or online) will be paramount.

Recommendation #2: Creation of a unified curriculum that emphasizes standardized content and consistent messages in order to promote the overarching objectives of the PSA. While a wide range of commodities, farming practices, and growing regions exist, emphasis must be placed on core principles with supplemental materials to accommodate the diverse needs of growers across the country.

Recommendation #3: A wide variety of training materials and media should be available to accommodate different facilities and audiences that will need utilize them. The committee will consult the final results of the PSA grower focus groups to prioritize educational materials and media to be developed for the curriculum.

Recommendation #4: The timing of trainings must be convenient for growers to attend. This may vary regionally; therefore trainers must take into account production practices and work schedules of their clientele. Significant effort should be made to conduct trainings during the 'off' season, or at minimum, the least busy months for growers who produce year-round. Options should be provided for course 'modules' to be taken over an extended period of time to accommodate grower's busy schedules.

Recommendation #5: The length of the training is appropriate for grower experience, minimizes time away from the farm, and is not cost prohibitive. The length of training should not exceed two days for growers. The first day should include the base curriculum that all growers must obtain with an optional second day to assist growers in writing their food safety plans.

Recommendation #6: Ensure access to educational materials is appropriate and easy to obtain for target audiences. This may include providing multiple outlets for resources such as on the web, requests by mail, or contacts through local collaborators (Extension, grower interest groups, etc.).

Recommendation #7: The curriculum must emphasize the importance of writing a food safety plan that is tailored for the grower's specific production practices and operation. Risk assessments conducted by the grower prior to writing a plan will establish an understanding of what risks exists on their farm, in turn helping them to implement practices that will mitigate the risk. A list of available tools to conduct a risk assessment should be provided as additional resources for growers.

APPENDIX I: Working Committee Members (68)

1. Aller, Marion ; Assoc. of Food & Drug Officials ; FL Dept. of Agriculture & Consumer Services
2. Bianchi, Mary L. ; Extension Farm Advisor ; UC Cooperative Extension
3. Bihn, Elizabeth ; PSA Project Director ; Cornell University
4. Bonanno, Richard A. ; Extension Specialist ; University of Massachusetts
5. Broughton, Fred ; Marketing Specialist ; S.C. Department of Agriculture
6. Brown, Reggie ; Association Manager ; Florida Tomato Exchange
7. Butler, Shawn ; Grower/Sales ; Grimes Produce Company
8. Carlson, Cathy ; Food Safety Program Manager ; Community Alliance with Family Farmers
9. Carrington, Deborah ; Director of Education ; Fidelis Partners
10. Chege, Peter G. ; Extension Specialist ; University of Illinois Extension
11. Critzer, Faith ; Assistant Professor ; University of Tennessee
12. Danyluk, Michelle ; Assistant Professor ; University of Florida
13. DeSantis, Valeria J. ; Farm Products Grading Inspector ; NYS Dept. of Agriculture
14. Drake, Dawn M. ; Manager ; Michigan Processing Apple Growers
15. Ducharme, Diane T. ; Educator ; North Carolina State University
16. Finney, Fred ; Famer/Owner ; Moreland Fruit Farm/Farmers Produce Auction
17. Foster, Steven ; Food Safety Director ; Wholesale Produce Supply Co.
18. Furrh, Lyn R ; Project Manager ; Bytech Technologies, LLC
19. Green, Karen ; Ag Marketing Specialist ; Missouri Department of Agriculture
20. Gregory, Laura ; Grower Communications ; California Strawberry Commission
21. Gurganus, Rod ; NC Market Ready Director ; North Carolina State University
22. Hadad, Robert G. ; Regional Vegetable Specialist ; Cornell University
23. Haskins, Cynthia ; Consultant ; Illinois Farm Bureau
24. Hepner, Johnna ; Director Food Safety ; PMA
25. Hirsch, Diane ; Extension Educator ; University of Connecticut Cooperative Extension
26. Hollyer, Jim ; Farm food safety coach ; University of Hawaii at Manoa
27. Johnson, Gordon ; Extension Vegetable Specialist ; University of Delaware
28. Kahlke, Craig, J. ; Area Extension Educator ; Cornell Cooperative Extension
29. Kiger, Luana E. ; Special Assistant to STC ; USDA NRCS
30. Killinger, Karen Meggen ; Assistant Professor ; Washington State University
31. Kimes, Ken ; Farmer ; Greensward/New Natives, LLC
32. Kinchla, Amanda ; Food Scientist, owner ; Kinchla Consulting
33. Kline, Wesley L. ; Agricultural Agent ; Rutgers Cooperative Extension
34. Koenig, Mark ; Extension Educator ; OSU Extension
35. Kramer, Andrew ; Manager of Grower Communications ; CA Strawberry Commission
36. Kulhanek, Ashley L. ; Food Safety Education Associate ; The Ohio State University
37. McGinnis, Yvonne R. ; CEO ; Remembering Mary, LLC
38. Merkle, Bethann G. ; Independent Consultant ; Self
39. Miller, Bill ; Farm Prod. Grdg. Insp. 3 ; NYS Dept. of Agriculture and Markets—Div. of FSI
40. Mills, Laura G ; Consultant ; Metz Fresh, LLC
41. Mountjoy, Daniel ; Asst. State Conservationist ; USDA NRCS

42. Nelsen, Joel ; President ; California Citrus Mutual
43. Nieto-Montenegro, Sergio ; President ; Hispanic Workforce Management, LLC
44. Nolte, Kurt D. ; Extension Agent ; University of Arizona
45. Ogle, Tamara M. ; Extension Educator ; Purdue Extension
46. Oleson, Beth ; Director of Education ; Georgia Fruit & Vegetable Growers Association
47. Osswald, Lane ; Farmer ; Growing Acres Farm
48. Peterson, Kim R. ; Outreach Program Specialist ; University of Nebraska Rural Initiative
49. Phelps, Laura ; President ; American Mushroom Institute
50. Phillips, Ellen ; Extension Educator ; University of Illinois Extension
51. Pivarnik, Lori ; Educator ; University of Rhode Island
52. Roberts, Martha Rhodes ; Special Assistant to Dean for Research ; University of Florida
53. Rushing, Jim ; Training and Program Manager ; University of Maryland
54. Salas Gutierrez, Sonia E. ; Science/Technology Manager ; Western Growers Association
55. Schneider, Keith ; Associate Professor ; University of Florida
56. Scott, Vicki ; Director of Quality ; Amigo Farms
57. Seideman, Steve C. ; Extension ; University of Arkansas
58. Sharp, Adam J. ; Public Policy ; Ohio Farm Bureau Federation
59. Stoltzfus, Jeff ; Ag Instructor ; ELANCO School District
60. Thomas, Steven ; Branch Chief 1 ; California Department of Food and Agriculture
61. Tocco, Phil ; Extension Educator ; Michigan State University Extension
62. Turner, Lynn ; Emeritus Professor ; North Carolina State University
63. Villaneva, Michael, L. ; Consultant ; California Leafy Greens Marketing Agreement
64. Wall, Gretchen ; PSA Program Coordinator ; Cornell University
65. Wiemers, Andrew ; Grower Communications ; California Strawberry Commission
66. Wszelaki, Annette ; Asst. Prof, Vegetable Extension Specialist ; University of Tennessee
67. Yoder, Bennie ; Rep. for Food Safety/Grower ; Sunset View
68. Yoder, Raymond J. ; Grower ; Yoder's Produce