



Wild Farm Alliance Final Report for Co-managing biodiversity conservation and food safety on organic farms

December 2013

1. Project Summary

Conflicts between food safety requirements and conservation practices have made it critical for organic farmers and agricultural resource professionals to understand how conservation and food safety can be co-managed. After the *E. coli* 0157:H7 spinach contamination in 2006 when misguided habitat destruction occurred, there was confusion on how organic farmers were going to continue complying with the National Organic Program rule to conserve biodiversity. Thanks to support from Organic Farming Research Foundation and others, Wild Farm Alliance (WFA) was able to respond by co-publishing with Community Alliance with Family Farmers (CAFF) three resources on the co-management of food safety and conservation:

- [*Farming With Food Safety and Conservation in Mind*](#)
- [*A Farmer's Guide to Food Safety and Conservation: Facts, Tips and Frequently Asked Questions*](#)
- [*Training Scenarios for USDA and Third Party Auditors on the Co-management of Food Safety and Conservation as well as Small and Mid-Size Farm Concerns*](#)

More than three thousand organic and sustainable farmers received information from these publications, or the guides themselves, through distribution by two organic certifiers, eight sustainable agriculture nonprofits and five organic and sustainable businesses. Wild Farm Alliance staff shared information in these publications at three farmer workshops, a farmer and conservationist forum, the California Department of Food and Agriculture Board meeting, a Center for Produce Safety meeting, and at the USDA Outlook Forum.

2. Introduction

Since the *E. coli* O157 spinach contamination in 2006, many buyers in the leafy green industry were misguidedly requiring farm landscapes to be barren, allowing nothing but the crop to be present. This mentality spread to other commodities and farms. While this may appear to be a good marketing strategy, the decree for no wildlife or beneficial habitat it is not based on science, and according to FDA, wildlife in and of themselves are not a significant risk. Researchers have shown that wetlands and grasses filter pathogens such as *E. coli*. Publishing and distributing these educational materials have advanced organic farm practices compatible with food safety guidelines and legal organic requirements for biodiversity conservation.

3. Objectives and Outcomes / Fostering Organic Farming Practices

The objectives of this project were to provide organic farmers with the information they need to make informed decisions on practices and actions that address food safety and biodiversity conservation conflicts; to share the guide with organic community, and other agricultural resource professionals.

Objective 1 – Provide organic farmers with the information they need to make informed decisions on practices and actions that address food safety and biodiversity conservation conflicts.

- **Proposed Outcome** – Create and publish a guide on the co-management of food safety and conservation for organic farmers.
- **Actual Outcomes** – We published two farmer guides and a training module for food safety auditors:
 - *Farming With Food Safety and Conservation in Mind*
 - *A Farmer's Guide to Food Safety and Conservation: Facts, Tips and Frequently Asked Questions*, and
 - *Training Scenarios for USDA and Third Party Auditors on the Co-management of Food Safety and Conservation as well as Small and Mid-Size Farm Concerns*

Objective 2 – Share the guide with organic farmers and others in the organic community.

- **Proposed/Actual Outcome** – Distributed the guide to organic farmers, wholesalers, organic certifiers, nonprofit organizations, businesses, and through WFA's website; created Powerpoint presentations and gave talks at conferences and workshops.

Objective 3 – Provide the guide to other resource professionals.

- **Proposed Outcome** – Meet with the USDA and invite them to send announcements out to their staff and associates. Distribute to agricultural resource institutions.
- **Actual Outcome** – WFA received matching funds from USDA Natural Resources Conservation Service to create a technical note with similar information for them. We also worked with the USDA GAPs program to create the training scenarios.

4. Educational Approach

Based on our past experience participating in farmer meetings, conversations with farmers, analyzing farmer surveys, and input from farm partners and others, we identified several key knowledge gaps that needed to be addressed in the publications. An extensive literature review was conducted based on these gaps that included the persistence of pathogens in wildlife, soils, and compost; how pathogens move in the landscape and what abiotic and biotic factors reduce them; and the use of vegetative and soil management conservation practices to mitigate food safety risk.

In the first guide, *Farming With Food Safety and Conservation in Mind*, it was critical to describe why there was such an intense, albeit misguided focus on wildlife, and to proactively share practices and actions that organic farmers could take for co-managing food safety, wildlife and their habitat. It was also critical to dispel the notion that barren landscapes made food safer. The sections titles, sidebars and figures of this publication bear this out:

Section Titles

- How Did We Get Here?
- Unknown Culprit - Misguided Reaction
- Relative Food Safety Risk of Wildlife
- Vegetation's Filtering Capacity
- Why Soil Microbial Diversity is Important to Public Health
- Good Food Safety Protocol

Sidebars and Figures

- General Advice for Animal Management
- Specific Wildlife Considerations
- Compost Considerations
- Soil Management Considerations
- Vegetation Management Considerations
- Farm Conservation Practices That Support Public Health

For the second guide, *A Farmer's Guide to Food Safety and Conservation: Facts, Tips and Frequently Asked Questions*, we had identified the need for more in depth understanding of the fate and transport of pathogens on the farm, more details on co-management and issues that small farms specifically face. Because of the worry and confusion farmers have about food safety audits and inspections, we also addressed how farmers can have successful outcomes in these meetings. The sections titles and illustration of this document are as follows:

Section Titles

- Background
- How Pathogens Get on the Farm
- Factors that Affect Survival of Human Pathogens
- Frequently Asked Questions
 - Co-management Questions
 - Small- and Mid- Size Farm Questions
- Tips on How to Have a Successful Food Safety Audit or Inspection While Advocating for Farm Conservation Practices

Illustration and Its Key

- Healthy Diverse Ecosystems Help to Keep Pathogens in Check

For the third document, *Training Scenarios for USDA and Third Party Auditors on the Co-management of Food Safety and Conservation as well as Small and Mid-Size Farm Concerns*, we had identified a need to educate food safety auditors about co-management. Farmers were reporting that they were losing audit points due to vegetative conservation practices being considered "harborage" for wildlife. Auditors needed knowledge of the conservation benefits and how these practices can be co-managed with food safety. Each of the sections titles below address both co-management and small farm issues as follows:

Section Titles

- Field History and Assessment Requirement
- Worker Health/Hygiene Requirement

- Water System Risk Assessment Requirement
- Animal Control Risk Assessment Requirement
- Animal Control Monitoring Requirement
- Animal Control Requirement
- Soil Amendments Requirement

The training materials were written to be used alongside Produce GAPs Harmonized Food Safety Standards, and auditors who work for, or are accredited by USDA, can receive continuing education units.

In order to ensure that these three publications were technically correct, they were reviewed and substantial input was given by staff from UC Davis, Natural Resources Conservation Service, University of Florida, California Department of Fish and Wildlife, USDA GAPs program, CDFA, multiple sustainable agriculture groups, and several organic farmers.

5. Project Results

Qualitative Results

The publications have been well received. Organic and sustainable farm groups mentioned below in the outreach section have gladly helped to distribute the farmer guides to their constituents. Our work at addressing the food safety and conservation has shown farmers and policy makers that we can, and must co-manage both in order to protect public health.

Quantitative Results

At least three thousand organic and sustainable farmers received information from these publications, or the guides themselves. WFA distributed approximately 200 copies of the first guide—*Farming With Food Safety and Conservation in Mind*—to farmers who attended workshops given by WFA staff. Organically Grown Company shared 500 copies of this guide with their farmers. CAFF distributed about 1,000 copies of this guide through a mailing and is planning on distributing another 1,000 of the second guide—*A Farmer's Guide to Food Safety and Conservation: Facts, Tips and Frequently Asked Questions*. CCOF shared 50 copies of the second guide with their farmers. Pennsylvania Assoc of Sustainable Ag shared and will share a couple hundred copies of each guide with their growers. La Monanita Coop in New Mexico ran two articles in the newsletter on the guides. Many other farm groups listed in the outreach section shared links to the publication with their constituents via their e-newsletters. WFA also shared the content of the guides with the CDFA Board and 50 attendees of their meeting; 100 food safety researchers, educators and FDA staff at the Center for Produce Safety meeting; and with 50 attendees at the USDA Outlook Forum. We are continuing to distribute the second guide, and make the training scenarios available to more food safety auditors.

6. Conclusion and Discussion

The project was successful in its objective to provide organic farmers with the information they need to make informed decisions on practices and actions that address food safety and biodiversity conservation conflicts.

It was also successful at reaching out to food safety auditors. When it became apparent that there was a huge opportunity and need for educating food safety auditors, we successfully adopted core information used in the farmer guides for the auditor audience. This will result in auditors being better equipped to do their job, including properly analyzing any risk associated with conservation practices.

Besides educating farmers and auditors about food safety and conservation, we also used these publications to educate Congress and FDA about the critical need for co-management of food safety and conservation. This resulted in Congress requiring FDA to consider conservation mandates when crafting the rules, and in FDA acknowledging them in the pre-ambule to the proposed produce rule. FDA said there that they don't expect farmers to remove wildlife habitat, and they encouraged farmers to use sustainable conservation practices that can enhance food safety.

7. Outreach

WFA created both downloadable PDFs and separate web pages for the two guides so the information can be easily browsed on our website. The training scenarios only exist on a WFA webpage.

The following partners have helped with distributing the first guide, and/or are assisting with distributing the second to their constituents: CA Certified Organic Farmers, Family-Farmed, Community Alliance with Family Farmers, Florida Organic Growers, Food and Water Watch, Nat'l Center for Appropriate Technology, National Organic Coalition, Northeast Organic Farming Association of NY, Occidental Arts and Ecology Center, Organic Farming Research Foundation, Pennsylvania Assoc of Sustainable Ag, La Monanita Coop, Organically Grown Company, United Natural Foods, Inc., and Veritable Vegetable.

Wild Farm Alliance staff shared the content of these publications when speaking at two Ecological Farming Conferences in Asilomar, CA; a Food Safety and Water Quality Co-Management Forum in Watsonville, CA; the California Department of Food and Agriculture Board meeting in Sacramento, CA; a Yolo Resource Conservation District farmer meeting, in Winters, CA; a Center for Produce Safety meeting in Orlando, FL, and at the USDA Outlook Forum in Washington, D.C. We also spoke recently about these publications in farmer meetings set up to discuss FDA's proposed produce rule in Davis, Watsonville, San Luis Obispo and Santa Barbara.

WFA will be discussing the second guide at an upcoming Eco Farm workshop. We will be giving a webinar on that guide in the winter for CCOF, and another in spring of 2014 for the USDA NRCS. A webinar on the training scenarios is tentatively scheduled for the USDA GAP program to their accredited food safety auditors in 2014.

8. Financial Accounting

Grant Amount from Organic Farming Research Foundation*

15,000

Expenditures

Wages/Salaries/Benefits/Taxes	11,280
Postage	6
Professional Fees	350
Rent	1,401
Supplies	25
Telecommunications	863
Travel/Meals/Conferences	676
Other Program Expenses	400
Total Expenditures	15,000

*This is the planned expenditure after final payment of \$1,500 to WFA, contingent on review and acceptance of the final report.

9. Leveraging Resources

With matching support from Organic Farming Research Foundation and other sources, Wild Farm Alliance was awarded a USDA Natural Resources Conservation Service (NRCS) grant of \$140,000 over three years to create a Technical Note and give trainings to help their staff take this message of co-management out to the thousands of farmers they advise. WFA also received support from California's Specialty Crop Block Grant through CAFF.

10. References

Selected References for *A Farmer's Guide to Food Safety and Conservation: Facts, Tips and Frequently Asked Questions*

Background

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How Pathogens Get on the Farm

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Factors that Affect Survival of Human Pathogens

- Barak, J. D. and B. K. Schroeder (2012). Interrelationships of Food Safety and Plant Pathology: The Life Cycle of Human Pathogens on Plants. Annual Review of Phytopathology, Vol 50. N. K. VanAlfen, J. E. Leach and S. Lindow. 50: 241-266.

Healthy Diverse Ecosystems Help to Keep Pathogens in Check

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Frequently Asked Questions

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How Did We Get Here?

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11. Addenda

Many of the photos in these three publications can be used by OFRF in their outreach. Please check with WFA for files and use.