

# BIOAg Project Report

Report Type: Final Report, Extension Mini-Grant

Title: Participatory On-Farm Agroecological Education: Assessing the Effectiveness of a 14-year Farmer-University Partnership

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**Abstract:** Recent decades have seen a growing recognition that diverse, small, organic, and sustainable farms have been underserved by standard public agricultural research and extension paradigms (FAO 2011, IAASTD 2009, IPES 2016). Following the publication of the seminal USDA report “A Time to Act” (1998), a state legislative initiative established a Small Farms Program (SFP) at WSU to focus specifically on research and extension for small-scale, sustainable, organic, and racially diverse producers. At listening sessions organized by SFP Director (PI Ostrom) in 2004, small farmers expressed interest in learning organic farming techniques directly from the most innovative and experienced organic farmers in the state. In response, Ostrom worked with the Tilth Producers of Washington to launch a series of farmer-to-farmer learning events hosted by the state’s leading organic and sustainable farms each year known as “Farm Walks.” From 2004 through 2018, the WSU-Tilth partnership organized 141 Farm Walks, an average of 9.5 Farm Walks per year, with a total of 4,714 attendees, an average of 33.4 participants per Walk. Farm Walks have featured BIOAg farmer research partners and engaged university BIOAg researchers as resources whenever feasible. This project allowed us to gather evaluation data for this program through compiling on-site evaluations and surveying past participants. Analysis of on-site evaluations found that 98% of participants reported increasing their knowledge in at least one subject area and 86% of farmer participants planned to change a farming practice after attending a Farm Walk. A retrospective online survey of participants from 2010-2018 confirmed that 87% of farmer respondents had made at least one change on their farm as a direct result of something they learned at a Farm Walk. The average number of acres farmed by farmer participants throughout this period was 132, with a maximum of 22,000 and a median of 10.

**Project Description:** In response to farmer requests for peer-to-peer learning venues and an opportunity to learn from the state’s first generation of organic farmers, the WSU Small Farms Program initiated a series of farmer-to-farmer events known as “Farm Walks” on the state’s leading organic farms in partnership with Tilth Producers of Washington in 2004. A Farm Walk is a forum designed to investigate specific advanced farming topics on an exemplary organic or sustainable farm through observation, presentations, dialogue and tours led by experienced host farmers. University specialists and Tilth staff recruit and prepare the host farmers, identify themes for the walk, develop informational handouts, assist with facilitation of farmer-to-farmer knowledge sharing, and offer expertise in response to questions that arise during the on-farm events. Now in its 17<sup>th</sup> year, the collaborative “Farm Walk” program has proven highly popular with diverse producers from across the state of Washington and featured over 150 interactive events with leading farmer innovators, including 15 bilingual Spanish-English Farm Walks. This proposal received funds to evaluate the long-term outcomes and impacts of this program through 2018 and to gather feedback on the format of the program and synthesize suggestions for future directions. The evaluation was accomplished through compiling and analyzing

existing evaluations collected on-site at the end of the events and by implementing an online survey of past participants.

The overarching objectives of the project were to:

1. Measure the effectiveness of farmer-to-farmer learning approaches for sharing agroecological farmer knowledge and research.
2. Determine the needs and interests of farmer audiences regarding topics and formats of future educational programs and BIOAg research projects.
3. Identify ways to improve the design and format of the WSU-Tilth Farm Walk program and farmer-led learning events in general.

## Outputs

Overview of Work Completed:

1. We created a OneDrive folder and a Microsoft Teams website to communicate and collect and share data with each other.
2. We assembled 1,651 “day-of-event” handwritten participant evaluations from 83 individual WSU/Tilth Farm Walks taking place between 2010 and 2018. Results have been collected, entered, and compiled into a single electronic database.
3. A master contact list of all Farm Walk participants from the beginning of the program from 2004 through 2018 was created and merged. Past participant email addresses were extracted from this contact list and updated and cleaned to the extent possible.
4. A past participant evaluation survey was designed and reviewed by the WSU project team, the Tilth Education coordinator, the Tilth Executive Director, and the farmer advisor in 2018. The survey was piloted with three producers in early 2019.
5. The final approved evaluation survey was converted into a Qualtrics format. Survey invitations with an individualized Qualtrics link were sent out to the full list of 1037 past Farm Walk participants with email addresses in April 2019. The survey was promoted over the Tilth Alliance list and five follow-up reminders were sent.
6. Quantitative data from on-farm evaluations and survey evaluations were analyzed using Excel spreadsheets.
7. Qualitative data was coded to thematic nodes that included topics, suggestions for types of farms and practices to feature, areas of research interest, and ideas for improving the Farm Walk format.
8. An update on the project and initial results were provided at the annual Tilth Alliance Conference on November 8, 2019 as part of a conference Farm Walk event.
9. An Extension Fact Sheet about best practices for holding Farm Walks was prepared and submitted.
10. A journal publication is in preparation.

### **Methods, Results, and Discussion (discussion for final reports only):**

1. Our Qualtrics survey was sent out to a list of 1,037 past participants on April 16, 2019 with 4 follow-up emails in April, May, July and September. A total of 245 email messages bounced back indicating inactive addresses and were removed from the list. We received a total of 154 responses and 54 refusals on the Qualtrics survey. We do not know how many email messages were actually received and/or opened. If all the email addresses were actually valid (which is unlikely given the historical time span over which the registration information was collected) this is a low response rate of around 15%.

This is disappointing but not unusual for modern online surveys. We also suspect that our online survey results would have been stronger if we had gotten the survey out sooner in relation to when the walk was attended to ensure validity of the email addresses. Doing the survey during the winter would have also improved response rates. Finally, it is likely that a survey utilizing mixed modes (i.e. offering both online and mail), while more expensive, would have had better results given the farmer audience.

2. In contrast, the typical return rate for our in-person, handwritten “day-of-event” evaluations was calculated to range from 61% to 75%. Differences in response rate were due to whether the facilitator strongly promoted survey completion and explained the importance of the evaluation. We printed our evaluation forms on bright colors and included them with the Farm Walk booklet received by participants at registration. For best results, we then called attention to them in the introductory remarks and explained why they were important for the overall program and for the selection of future topics and farmer hosts. Finally, in closing the events we mentioned the evaluations again and had a person positioned to collect them as participants left the event. As a consequence, the 1,651 paper copy “day-of-event” evaluations comprised the most comprehensive and significant component of our analysis, while the Qualtrics surveys of past-participants were used to confirm and elaborate longer term impacts.
3. Due to the way the on-site evaluations were structured and entered prior to 2010, these years were not comparable with the later evaluations. In the end we decided to analyze the results from the time frame from 2010-2018 because these evaluations were similarly structured. Even then we had to throw out some of the questions because they weren’t asked continuously. In the end we analyzed 1,605 comparable evaluations from 2010-2018. Important lessons for future Farm Walk evaluators will be to maintain continuity in the questions asked on the evaluations.
4. Analysis of all evaluation results (both from “day-of-event” evaluations and from the Qualtrics evaluation of past participants) revealed fairly similar themes and patterns.
5. Our Tilth farmer advisor reviewed our survey design and our initial Extension publication.
6. Please see Impacts section below for evaluation results.

#### **Publications, Handouts, Other Text & Web Products:**

1. Final results were used to develop and submit a WSU Fast Track Extension Fact Sheet, “Learning on the Land: Holding a Farm Walk”.
2. A journal publication on the value of on-farm learning methods for transferring agroecological knowledge is in preparation. The journal article, *Farmer to farmer learning on the land: the most effective approaches for agroecological knowledge transfer*, Ostrom, M., Collins, D., Smith, K.S., Schwartz, A., will be submitted first to the “Journal of Society & Natural Resources.”

#### **Outreach & Education Activities:**

1. Initial results were shared by Nicole Witham, Food Systems Team Coordinator, at the annual Tilth Alliance conference on Friday, Nov. 8 during the conference Farm Walk event.
2. We had hoped to hold another on-farm workshop at the 2020 Tilth Conference, but this ended up being a virtual event instead.
3. Our findings have been utilized to develop a new website and Farm Walk podcasts for the Food Systems Team: <https://www.farmwalks.org/podcast>

## Impacts

### Short-Term:

From "day-of-event" Farm Walk evaluations from 2012-2018, 98% of participants (1568/1597) reported that they increased their knowledge in at least one subject area, 67% (1073/1597) *greatly* increased their knowledge in at least one subject area, and 86% (658/767) of farmers planned to change a farming practice. Examples of specific activities included leasing new land instead of buying, increasing cover crop use, implementing rotational grazing, adding a new crop or market, and improving habitat for native pollinators. The average number of acres farmed by attendees throughout the 9-year period was 132, with a maximum of 22,000 and a median of 10 indicating highly variable farm sizes. For participants who reported having any poultry or livestock, the numbers were tracked from 2013-2018. During that period, attendees kept an average of 167 layers, 715 broilers, 39 livestock, and a median number of 29 layers, 3 broilers, and 11 livestock indicating that livestock numbers were fairly small and therefore management changes might have a smaller impact.

Overall, the evaluations about the Farm Walk were positive with only 14% (224/1605) offering practical suggestions for ways to improve the Farm Walks. (We disregarded comments about things we could not control such as the weather.) Suggestions for improving the Farm Walks included strengthening the focus on hands-on demonstrations, keeping the Farm Walk on schedule, having a sharper topic focus, continuing to invite both university researchers and other farmer experts, and having more opportunities to sit down and rest during the Farm Walks. Participants appreciated having the option to attend walks in a variety of locations and on different types of farms. They preferred smaller operations with more than one type of crop or livestock product. It was critical to attendees that the farmer hosts were experienced and successful. Participants consistently requested interactive introductions, well-facilitated dialogues, and high-quality portable sound systems. There were also several requests for more bilingual Farm Walks and handouts. Overall, in answer to the question of "how would you improve the Farm Walks?" most respondents left the answer blank and the next most common response was "don't change anything." This feedback has been shared with Farm Walk organizers at WSU and Tilth will be utilized to improve Farm Walk design. Unfortunately, no live Farm Walks were held in 2020 due to Covid-19, but where possible, evaluation feedback was utilized to inform the new "podcast" format being used to maintain social distancing.

Medium-Term: Findings from this research and the Extension publication will be utilized to improve the quality of future Farm Walks and plan the types of farms to visit in the next five years.

### Long-Term:

1. The retrospective Qualtrics evaluation of past Farm Walk participants (n=154, response rate = 15%) indicated that 87% of farmer respondents (48/55) had made at least one change on their farm as a direct result of something they learned at a Farm Walk.
2. Farm Walks continue to be a popular and effective learning activity after 15 years. The emphasis on high-quality dialogue has led us to place a cap on the numbers of registrations in many cases.

**Additional funding applied for/secured:** Unsuccessful USDA BFRDP Grant Proposal.

**Graduate students funded:** One hourly graduate student was funded to assist with qualitative data analysis.

**Recommendations for future research:**

1. In order to track evaluation data over multiple years, it is critical to enter each evaluation as a separate case with a unique identifier that can be sorted across different responses rather than simply tallying the results for each question.
2. It is important not to change the structure and questions of the evaluations over time in order to be able to make comparisons from farm-to-farm and from year-to-year. However, since the Farm Walks are topic based, there needs to be a way to evaluate the efficacy of the specific topics covered at an individual Farm Walk by adding on additional questions without altering the validity of the cross-farm comparisons. In this case, it could be worth trying some “pre” and “post” survey questions to find out about topic-specific knowledge changes.
3. It could also be useful to interview or survey the farmer hosts to find out about their experiences and how their experiences could be improved.