Final Report for the Organic Apple Conference Call Project

1. Project Summary

Provide a brief summary of your project—its purpose, what you were hoping to accomplish, and a short description of your main activities and results.

Project description: The purpose of our organic conference call project was to allow growers to get information from both a leader in organic apple production and from a midwestern IPM expert. We named our call series the Organic Apple Grower's Hour. During weekly conference calls, Michael Phillips gave growers timely answers to their orchard management questions. Phillips is widely regarded as a preeminent expert in organic apple production east of the Rockies. In addition, Wisconsin apple IPM consultant John Aue served as an adjunct consultant on half of the calls to provide insights on pest biology and behavior specific to the Upper Midwest. The calls focused on a systems approach to orchard management. Growers who were not able to dial in to the live calls were able to access information presented during the call through a number of venues, including a telephone recording, listserve, website and blog.

Main activities and results: We held weekly conference calls with Michael Phillips and John Aue from April 24 through August 28. After reviewing the results of our user survey and looking at call usage, we concluded that we attained our objectives of a) helping Upper Midwest organic apple growers improve their orchard management systems, and b) exposing conventional apple growers to organic orchard systems. By looking at their responses to our survey, we can see that participating growers improved their knowledge and actions regarding pest management and soil and plant health. By looking at our access logs (where we can recognize the e-mail addresses and phone numbers of some of the users of the calls), we can see that at least two conventional growers listened regularly to the Organic Apple Grower's Hour.

If we receive continued funding for this project, we anticipate that more growers will use the Organic Apple Grower's Hour in the upcoming years. We think that as call users testify to the usefulness of the calls, more growers will decide to listen in.

2. Introduction to Topic

Provide an introduction to the organic farming issues being addressed by this project and what led to the development of this project.

The issue: Due to their susceptibility to a host of insect and disease pests, apples are considered by many to be one of the "final frontiers" of organic agriculture. Most university research and Extension personnel contend that it is nearly impossible to profitably grow organic apples in the eastern half of the US. As a result, most Upper Midwest organic apple growers find little institutional support for their efforts. Furthermore, due to this "can't do" mindset, most conventional apple growers see little reason to explore organic systems, despite growing consumer demand.

While growing organic apples for market in the Upper Midwest is challenging, organic agriculturalists need to counteract the general supposition that it is not even worth trying. Organic apple growers need more help to succeed; conventional growers need more proof to be convinced that growing apples organically can be a winning game. By providing free weekly conference calls with an organic apple production expert during the growing season we aimed to help organic growers succeed and to convince conventional growers that profitable organic apple growing is technically possible and potentially profitable.

Project initiation: The University of Wisconsin-Madison's Center for Integrated Agricultural Systems (CIAS) was uniquely poised to conduct organic apple conference calls for Upper Midwest growers. The Center's Eco-Apple Project has been helping apple growers learn Integrated Pest Management since 2004. During the 2007 growing season, the Eco-Apple Project conducted free conference calls with IPM consultant John Aue. Participating growers received timely answers to their management questions and benefited from hearing the experiences of other growers on the line. The organic growers who participated on the calls requested a similar conference call with an expert in organic production. It was their request that prompted the development of this project.

3. Objectives Statement

State your original objectives as outlined in your project proposal. For each objective, present a measurable outcome that indicates successful achievement of it. Were there any changes in your objectives as the project unfolded? Please describe any differences from the original proposal and why these changes were made. This is valuable information for others who are involved in similar work and is essential for our evaluation of the project.

Objectives: Our first objective was to help Upper Midwest organic apple growers improve their orchard management systems. Growers who listened to the Organic Apple Grower's Hour were able to access seasonally appropriate information on the cutting-edge of organic apple systems management. For organic growers, the calls offered regular, timely support and inspiration throughout the growing season. An outcome that indicates successful achievement of our first objective is that most of the growers completing our user survey credited the calls with helping them to improve how they manage their orchards. For instance, growers reported that they had improved their sampling and monitoring routines, and that they had reduced the number of times they sprayed sulfur for scab.

Our second objective was to expose conventional apple growers to organic orchard systems. For the conventional apple growers in the Center for Integrated Agricultural Systems' Eco-Apple Project, the calls offered an easy way to learn more about organic orcharding. An outcome that indicates successful achievement of our second objective is that two conventional Eco-Apple growers were regular call listeners. Our objectives remained the same throughout the project.

An added benefit: One outcome we had not anticipated at the outset of the project was the ability of the Organic Apple Grower's Hour to strengthen links among growers. As one grower put it, the regulars on the live call "got to know each other a bit." From our user

survey, we learned that in addition to what they learned from Michael Phillips and John Aue, the growers placed great importance on being able to hear about what other growers were doing.

Change from original proposal: There was one small change from our original proposal. We did not post call summaries to the quarterly newsletter of the Organic Tree Fruit Growers Network as we had originally planned to do. Due to time constraints and lack of technical expertise, the call coordinator was not able to write detailed summaries of the calls. Rather, the summaries were usually brief listings of the topics covered on the call. They were effective in showing what topics growers would learn about if they listened to a call recording, but they were not a stand-alone educational tool. Because the summaries had little use when separated from the call recordings, we did not post them in the Network's newsletter. Instead, we used our space in the newsletter to explain the ways that growers could access the calls (see addenda).

4. Materials and Methods

Please describe how you assessed the current state of your audience's understanding of the subject matter; describe the end goal of the instruction or outreach; and explain how the project you developed matched audience need with the goal. Please describe why you chose this type of project to accomplish your objectives. How did you involve farmer/rancher collaborators in developing the content? Also, please present the specific steps you took to organize production of the document, meeting, or other product.

Audience: The Organic Apple Grower's Hour was geared for commercial apple growers in the Upper Midwest with intermediate to advanced orchard management skills. Beginning orchardists, backyard gardeners, growers from other regions, and others were more than welcome to listen in on the calls, but we focused on the questions of holistic commercial growers in the Upper Midwest.

Why weekly conference calls?: Conference calls are a convenient and affordable way to provide a steady stream of support throughout the growing season. Growers scattered across the Midwest can join in a regular discussion of cutting-edge orchard systems management strategies simply by picking up the telephone. With our conference call archive (now accessible via the telephone and via download), the great discussions on the calls will remain a source of free information for years to come.

Collaborating with growers: Four growers and an extension agent served as advisors to the project. Through e-mails and conference calls, the advisors helped to determine the focus of the Organic Apple Grower's Hour. The call coordinator regularly sought input and feedback from the advisors throughout the season.

Consultants: Michael Phillips was the primary consultant for the Organic Apple Grower's Hour. His book, *The Apple Grower: A Guide for the Organic Orchardist*, is widely regarded as a primary reference for Eastern organic apple production. He is a consultant for orchardists across the nation, and compiles holistic apple research on his website, GrowOrganicApples.com. Michael manages a two-acre organic orchard in

Groveton, New Hampshire, and experiences many of the same challenges and climatic timing as growers in the Upper Midwest.

John Aue of Threshold IPM Services consulted on half of the calls to provide insights on pest biology and behavior specific to the Upper Midwest. John has provided IPM consulting services to conventional and organic apple growers in Wisconsin, Minnesota, Iowa, and Illinois for 20 years. He manages his own organic potato farm in Richland Center, WI.

Teleconfencing service: We used the online service FreeConferenceCall.com for free, reservationless conference calling. This free teleconferencing service is simple to use, requiring only a name and an email address to receive an instant account. The only cost for participating in a conference call is one's own regularly incurred long distance charge. FreeConferenceCall accounts come with free conference call recording. The recordings are archived by the call coordinator and can be accessed by phone or internet download.

Project process: Before the call season began, we sent a message through the Organic Tree Fruit Growers Network listserve and newsletter; and the Eco-Apple Project's Apple Talk Blog asking interested growers to register by completing an orchard profile form. Registration was not a requirement. The orchard profiles helped us learn about the needs of our audience.

Calls occurred every Thursday at 8am from April 24 through August 28, except for July 3. We also held one post-season call on Thursday, November 13 to evaluate the performance of the season's management strategies.

We instructed participating growers to send their apple orchard management questions to Michael by 8pm on the Wednesday evening before a call. We also encouraged growers to submit any degree-day tracking information that they had recorded and to contribute any pertinent observations they had made in the field along with their questions. Michael reviewed the questions he received before a call and gave first priority to questions he believed were most relevant to the majority of call participants.

At 8am, growers participating on the live call entered a dial-in number and access code. To cut down on background noise, we requested that they use the service's mute function when not speaking.

With guidance from the advisory committee, we devised the following general model for the calls:

8:00-8:05	*Roll call:* Growers announce their names and locations as they enter the call.
8:05-8:15	*Michael's report:* Michael discusses emerging issues in the field, such as pest and disease challenges, and ecosystem and soil health issues.
8:15-8:50	*Answers:* Michael and other participating experts address the questions submitted the day before by growers.
8:50-9:00	*New questions:* Michael addresses any questions that arose during the call.

After a call, the coordinator drafted a short summary. The summary gave growers not participating on the live call an idea of what they might learn if they listened to the call recording.

5. Project Results:
Present your project results. Quantitative results (numerical and/or statistical data) and qualitative results (descriptions of how well or poorly something worked) are both important. Describe any educational materials created during this project and provide copies of such materials.

Call Usage: We cannot compile a *complete* list of call users because the access logs generated by FreeConferenceCall.com and the Apple Talk blog are not sufficiently detailed. Nevertheless, we have been able to identify 38 individuals who listened to at least one call; either live or via a recording. Again, we know that this list is incomplete. The users we could identify were from Vermont, Arkansas, Missouri, Ohio, Minnesota, Iowa, Indiana, and Wisconsin. At least two of the call users were conventional apple growers who participate in the Eco-Apple Project.

Each call was accessed an average of 25 times. On average, 7 growers listened to each call live, 7 growers accessed each call recording via their telephone, and each recording was downloaded an average of 11 times. The table on the following page details call usage.

Usage of the Organic Apple Grower's Hour as of Dec 1, 2008

conference call date	users on live call	users listening to recording via telephone	download numbers	total served
24-Apr	10	n/a**	n/a**	10
1-May	13	10	19	42
8-May	10	7	14	31
15-May	14	10	11	35
22-May	6	7	9	22
29-May	9	13	14	36
5-Jun	8	10	8	26
12-Jun	8	5	8	21
19-Jun	4	5	15	24
26-Jun	7	7	11	25
10-Jul	4	7	22	33
17-Jul	4	7	6	17
24-Jul	7	5	7	19
31-Jul	5	5	5	15
7-Aug	3	4	9	16
14-Aug	4	2	7	13
21-Aug	5	3	10	18
28-Aug	4	4	16	24
13-Nov	3	6	12	21
average	**7**	**7**	**11**	**25**

* not including Lisa DiPietro, Michael Phillips, or John Aue

** no recording available for this date

User Survey: To assess the effectiveness of the Organic Apple Grower's Hour, we posted a survey to the Organic Tree Fruit Growers Network listserve, and called regular listeners. We were able to compile 16 surveys. See the addenda for a compilation of survey responses.

From the survey, we gathered that growers found the calls very useful. To the question, "On a scale from 1 to 5, how would you rate the usefulness of the calls?" the average answer was 4.5.

We also learned that some growers valued the calls enough to pay for them. To the question, "Would you be willing to pay for the calls in the future, and if so, how much they would be willing to pay?" 13 of the 16 respondents indicated that they would be willing to pay for the calls, with 11 willing to pay 5-10 dollars per call and 2 willing to pay 10-20 dollars per call.

Additionally, we asked growers if the calls had inspired them to try any new practices during the 2008 season. 12 of the 16 respondents said yes. Some of the practices growers were inspired to try include:

- Reducing sulfur sprays for scab
- Spraying Surround, molasses, and horsetail tea
- Thinning with lime-sulfur
- Making and using compost
- Improved sampling and monitoring
- Improved timing on codling moth and apple maggot traps.
- Improved timing for picking up drops to suppress apple maggot fly.
- Improved timing on Surround sprays

We were pleased to learn that many growers had tried new practices as a result of listening to the call.

Educational Materials: The call recordings, archived on a telephone messaging system and on the Apple Talk blog, will serve as useful sources of information for years to come.

6. Conclusions and Discussion:

Discuss the results of the project and what you found out. In the end, how useful was this project to you and the participants? How useful do you feel the project and outcomes will be to other organic farmers? Did you encounter any problems during the project? What would you do differently if you did this project again? Based on what you've learned, what kind of activity or information product is needed next?

Success: After reviewing the results of our survey and looking at call usage, we concluded that we were successful in a) helping Upper Midwest organic apple growers improve their orchard management systems, and b) exposing conventional apple growers to organic orchard systems. By looking at their responses to our survey, we can see that participating growers improved their sampling, monitoring, and timing as a result of the calls. By looking at our access logs (where we can recognize the e-mail addresses and

phone numbers of some of the users of the calls), we know that at least two conventional growers regularly listened to the Organic Apple Grower's Hour.

Challenge 1: live call attendance: A major challenge for the project was a decrease in participation on the live calls as the season progressed. Live participation was at its peak during the first four weeks of the season with an average of 11.75 growers calling in each Thursday at 8am. By the last four weeks of the season (not including the call in November), live participation was down to an average of 4 growers per call. Conversely, the number of call downloads remained relatively steady, with an average of 13.25 downloads per call in the first four weeks of the season (leaving out the first week for which no recording was available), and an average of 10.5 downloads per call in the last four weeks of the season (not including the call in November).

We think scheduling problems are a main reason for the drop in live participation. This became clear through discussions with the project advisors and other organic apple growers, and by reviewing survey responses. Many growers stated that they simply had a scheduling conflict with the 8am call time; some "did not care to waste daylight," while others had off-farm jobs in the morning. Growers also indicated that the early season is the most management-intensive time in the orchard, giving them the biggest incentive to dial in at 8am for support. The early season is also the time where fewer non-orchard tasks are diverting their attention, allowing growers to more easily make the time to dial in at 8am. So as the season progressed and orchard management tasks became eclipsed by other more pressing matters, live participation fell. In addition, by comparing live participation with downloads of the call recording, we can also see that growers were more steady users of the calls when they could listen at any time that was convenient for them.

What we would do differently: From our survey, we know that users wanted more live grower-participants on the calls. To address this challenge, we would do two things differently. First, we would start the call season earlier, and end it earlier. Second, we would poll potential call users to settle on a better call time; possibly in the evening.

Challenge 2: limitations of conference call medium: Another challenge for the project involves an essential limitation of the conference call medium: a lack of visual cues. A substantial portion of growers who dialed in to the live calls did not speak up and contribute their experiences to the conversation, even when prompted by Michael Phillips. From our survey, we know that some would hesitate to respond because, with no visual cues to guide them, they didn't know if others were about to speak at the same time. Others may have kept quiet because they undervalued their potential contributions to the conversation. Again, with no visual cues, it was difficult for Michael Phillips to draw out the growers who were too shy to speak.

We also found it challenging to balance the need to keep it easy for growers to speak up during the call with the need to cut down on distracting background noise. The call coordinator requested that growers mute their lines when not actively engaged in the conversation to cut down on distracting noises like creaky doors, coughing, and side

conversations. Unfortunately, when a grower is muted, it requires a few extra seconds to un-mute before he or she can contribute to a discussion. Thus, while it is essential for most growers to mute their lines, muting makes them less likely to contribute.

What we would do differently: To address the challenges inherent in any conference call situation, Michael Phillips would be more deliberate in his solicitation of contributions from growers on the line. When he opens a topic for discussion, he could say, "I'll wait a couple of extra seconds before we move on for anybody who needs to un-mute to talk." He could also call on specific growers who remained quiet throughout the call to see if they had a contribution.

Challenge 3: accessibility of recordings: Another challenge was to deliver call recordings to growers who could not dial in live, and who could not download recordings due to slow internet connections. Throughout the season, growers in this group had only one route to access the calls. Via the telephone, they could listen to the most recent call recording. Calls from previous weeks were inaccessible to them. We learned through our survey that growers who missed the live calls and who did not have high speed internet wanted a low-tech way to access a permanent archive of the calls.

What we would do differently: To address this challenge we would use a service we recently discovered through FreeConferenceCall.com called SimpleVoiceCenter. Using SimpleVoiceCenter, we can make all call recordings available through a messaging system accessible via telephone. Indeed, in November we archived the season's calls using this service. The only cost for accessing this archive is one's normally incurred long distance charge.

Challenge 4: call summary detail: Managing some growers' expectations of the weekly call summaries also presented a challenge. Some growers would have preferred to get information by reading detailed call summaries. But due to time constraints and lack of technical expertise, the call coordinator was not able to write detailed summaries of the calls. Rather, the summaries were brief listings of the topics covered on the call. They were effective in showing what topics growers would learn about if they listened to a call recording, but they were not a stand-alone educational tool. See the addenda for a compilation of Organic Apple Grower's Hour summaries.

What we would do differently: To address this challenge we would make it clear to growers from the outset the purpose of the call summaries. To that end, we would call them "main topic lists" instead of "summaries." We would explain that the main topic lists are an adjunct to the calls themselves, rather than stand alone educational tools.

An improvement to make: From our user survey, we learned that many growers would have liked the Organic Apple Grower's Hour to feature occasional guest experts. To address this need, we would focus on recruiting advanced organic apple growers and/or researchers to be contributors on the calls. Specifically, we would offer a small honorarium ($30) to six organic apple experts in exchange for their attendance on a call.

Michael Phillips would interview the guest expert, and growers on the line would be able to ask them questions.

What needs to happen next: If we receive continued funding for this project, we anticipate that more growers will use the Organic Apple Grower's Hour in the upcoming years. This was true for our Eco-Apple IPM conference calls. In 2007, the first year of IPM calls, a total of 20 individuals used the calls. In 2008, a total of 37 individuals used the calls. We think that as call users testify to the usefulness of the calls, more growers will decide to listen in. We also think that as call users get to know each other, they will become more invested in the calls. We believe that the seasonal weekly conference call outreach model could work for other growers with crops that require intensive management.

7. Outreach

Please describe the distribution plan you used to target the end users or audience. Projects developed with OFRF funds must be available for free or for a minimal cost to cover production expenses. Describe the type of outreach that you did including any publications, tours, or other presentations of your project to the public.

We reached growers through the Midwest Organic Tree Fruit Network's listserve, website, organic apple field days, and newsletter; the Eco-Apple Project's Apple Talk blog and hard copy mailing; and Michael Phillips'GrowOrganicApples.com.

Our most important interface with organic growers was the Midwest Organic Tree Fruit Network. About 290 growers are on the Network listserve, and almost 400 receive its quarterly newsletter, *Just Picked.* The call coordinator posted call reminders, call main topic lists, and instructions for accessing the live call and call recordings to the Network listserve. Call main topic lists and access instructions were posted to the Network website. Access instructions and updates on the calls were included in the Network's newsletter. See the addenda for Network newsletter articles featuring the Organic Apple Grower's Hour.

We reached IPM-focused growers via the Apple Talk blog and hard-copy mailings. 84 people, the majority of whom are commercial apple growers, receive notifications when a new entry is posted to the Apple Talk blog. Growers without access to the internet receive monthly hard copy mailings of Apple Talk posts. Main topic lists and instructions for accessing the live call and call recordings were posted to the blog. In addition, both organic and IPM growers were able to download call recordings from the Apple Talk blog.

We reached growers not in the Network nor involved with the Eco-Apple project via Michael Phillips' website, GrowOrganicApples.com. A link to information about the calls is on this website.

Another way we reached our target audience was by presenting basic information about the calls at two organic orchard field days. Face-to-face interactions at the field days helped to catalyze interest in this unique resource.

In November 2008, we discovered another free service offered by FreeConferenceCall.com. With a service called SimpleVoiceCenter, we improved the way we reach growers without high-speed internet access. Originally, growers who could not download call recordings had access via telephone only to the most recent call recording. Now, growers are able to dial into a voice messaging system where every call recording is archived. The only cost for accessing the archive is their normally incurred long distance charge.

8. References

Provide a list of references you used to help develop your project and/or that you referred to in the body of your report.

Information for the calls mainly came from the experience and research of Michael Phillips and John Aue. Phillips and Aue look to publications from Michigan State University, the University of Illinois at Urbana-Champaign, Iowa State University, University of Wisconsin-Madison, Penn State, and the University of Vermont for new information. Their knowledge is also supported by the advanced growers with whom they associate, such as growers in the Berkshire group of the Northeast and leaders of the Midwest Organic Tree Fruit Network.

9. Addenda

We strongly encourage the submission of photos of your event or activity. We would also like to receive copies of additional materials such as handouts or publications for your meetings/activities, newspaper or newsletter articles featuring the project, or anything else that will help convey the scope of your activity.

See attached:

- Three Issues of *Just Picked*, the newsletter of the Midwest Organic Tree Fruit Network, featuring articles on the Organic Apple Grower's Hour.
- A compilation of conference call summaries.
- A compilation of evaluations for the Organic Apple Grower's Hour.
- Photos of lead consultant Michael Phillips.

Additionally, if project reviewers would like to download Organic Apple Grower's Hour recordings, they may do so by going to www.thinkipm.org/appletalk. Enter the user name: ofrf, and the password: winesap.

**A note on our grant budget*: As of December 16, 2008, our budget is not yet completely spent down. We are waiting to receive an invoice from IPM consultant John Aue and to transfer funds for the printing of the Winter 2009 newsletter of *Just Picked*.