

Beginning Farmer Workshops

Final report for NEDE17-001

Project Type: PDP State Program

Funds awarded in 2017: \$16,330.00

Funds awarded in 2018: \$16,667.00

Funds awarded in 2019: \$16,321.00

Projected End Date: 10/31/2020

Grant Recipient: University of Delaware

Region: Northeast

State: Delaware

State Coordinator:

[Dan Severson](#)

University of Delaware

Project Information

Summary:

In 2016, the state coordinator and members of the project team piloted a yearlong beginning farmer series to learn more about the interest in the state for beginning farmer education and the learning needs of this target audience. A total of 25 producers and aspiring producers participated in the series of workshops offered and the team identified interest and need for learning about business planning, crop selection and managing crops throughout the growing season. While service providers have experience working with established growers, they set goals to develop curriculum and provide individual consultations to seventy-five (75) beginning producers who currently or begin managing seventy-five (75) fruit and vegetable acres.

The beginning farmer program and curriculum was designed as a series of 8 workshops held in the spring. The course was a combination of lecture and hands-on education, offered online during the 2020 COVID pandemic. During the course of the three years the program has graduated over 50 New and Beginning Fruit and Vegetable Growers.

Post evaluations specified that participants gained knowledge in business planning, soil health, variety selection, integrated pest management, season extension and irrigation and farm equipment. The eleven participants who responded to the survey (73%) indicated that they plan to incorporate the practices learned into their operations. Third year evaluations revealed that participants struggled with online learning, stating "It was okay because that was the best option under Covid to continue with the class" and "Not the same as traditional - but understandably worthwhile".

Although most of the participants desire to grow vegetables for home use a few have elected to pursue production for profit. Of the farmers who have participated:

- Two have started a vegetable operation and sell at farmers markets
- Two producers have purchased high tunnels and sell on farm
- One student runs the University of Delaware's Graduate Student Garden
- One retired and is moving to Virginia to start a farm and participate in the local farmers market
- One runs a garden on their employers campus
- One is in charge of the garden at the school where he teaches
- One manages a network of urban agriculture gardens
- One works for a coalition that produces medicinal herbs
- One has applied to Future Harvest to continue his Beginning farmer education
- One has moved to Pennsylvania and has started her own vegetable farm

One comment "having less fear of trial and error of farming" was common and gave the participants the confidence to start pursuing farming as a vocation.

In addition, after the 2018 series the University of Delaware was contacted by Future Harvest to align with their Beginning Farmer curriculum. The Future Harvest Beginning Farmer course is region-wide and offers three levels of training. This allows graduates from the Delaware Beginning Farmer Program to apply for a second level of certification with Future Harvest to further their education.

During the course of the workshop series five of agricultural service providers developed curricula for the Beginning Farmer workshops and 2 fact sheets. The providers also performed 213 consultations, conducted four on-farm demonstrations, three tours, six webinars and 23 workshops and field days. The five service providers surveyed also revealed that the workshop series is overall a great program but they had issues adjusting to the use of the remote classroom Canvas and the use of Zoom during year three. The lack of person to person lectures and being able to demonstrate tools and techniques during the final year was brought up as an issue. The Beginning Farmer series had over 50 participants that represent 440 acres and 50 animal units.

Performance Target:

Five (5) agriculture service providers who increase knowledge and skills in beginning a vegetable farm will provide educational programs and service, including but not limited to workshops, presentations, other educational materials and individual consultations to seventy-five (75) producers who manage seventy-five (75) fruit and vegetable acres.

Introduction:

The ability to bring in new farmers is critical to the agriculture industry. It can be difficult to start a farming operation and new farmers are a rarity.

However, sustainable agriculture and the local food movement offer some of the best opportunities for individuals who want to begin farming in Delaware. Delaware is fortunate to be within driving distance to major metropolitan areas with a diverse ethnic population along with many local farmers markets. Sales from all 25 Delaware community-run farmers' markets for the year 2016 totaled 2.9 million dollars and demand for locally grown vegetables and fruit remain strong.

Beginning farmers in Delaware tend to be first generation farmers with no farming background. They can be of any age and are typically operating at a much smaller scale than established farmers. Their learning needs are also different than those of established farmers. Beginning farmers generally lack knowledge about many aspects of developing a farm business and they need assistance with implementing best management practices. This project aimed to improve the viability of beginning farmers who currently have access to land. Working with small plots, farmers will build skills to become better farm operators.

In 2016, the state coordinator and members of the project team piloted a yearlong beginning farmer series to learn more about the interest in the state for beginning farmer education and the learning needs of this target audience. A total of 25 producers and aspiring producers participated in the series of workshops offered and the team identified interest and need for learning about business planning, crop selection and managing crops throughout the growing season.

A 2017 survey of Ag professionals demonstrated continued strong interest among beginning farmers to learn about access to land and to build skills ensuring viability of their businesses. The DE Fruit and Vegetable Specialist indicated that each year he receives 30 plus inquiries from clientele who are interested in starting a farm or adding a new crop to an existing operation. For example, in the preceding six months he advised 5 farmers new to growing tree fruits, 3 growers new to cut flowers and a farmer converting a hay field to vegetable production. Another extension agent indicated that in the last 2 years he had more inquires about starting a farm than in his first nine years.

This three-year initiative will continue and build on the successful 2016 pilot program by offering education to more beginning farmers. The knowledge and skills taught will benefit beginning and early stage farmers who may want to increase their knowledge base. All of these individuals need greater knowledge and skills to make sound decisions. Beginning farmers improve their chances of succeeding when they base their new enterprises on thorough planning and realistic goals, and when they quickly develop the requisite knowledge and skills for production.

Extension Educators are skilled in training experienced farmers, but when it comes to training beginning farmers, a new set of skills or specific approach is needed. For example, more emphasis is placed on business planning, simple crops to grow, regulation and basic integrated pest management. In addition participating as facilitators/co-learners experienced Extension Educators will new learn content areas and methods for working with beginning farmer audiences who they have not had a lot of experience working with before.

Advisors/Cooperators

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Educational Approach

Educational approach:

Twenty-five participants who are beginning farmers or who have interest in starting a farm were recruited each year to participate in the project (75 total). A team of 5 ag service professionals from Extension (including the state coordinator) participated in the project as facilitators of the trainings and as co-learners, building their knowledge and skills in the content areas outside of their areas of expertise as they work together to teach farmers. This model of facilitator/co-learner is beneficial in Delaware because there is a small number of Extension educators and most educators work as content area specialists rather than generalists. Hence, their capabilities to conduct educational programs outside their areas of specialty are limited. However, as a result of collaborating on beginning farmers training that encompasses content from numerous specialties, all ag service provider participants will become better able to educate and advise their clients. The 5 service providers on the project team have all indicated their willingness and interest to participate. The team used lecture based and hands-on educational approaches in this project. They also conducted on-farm workshops and tours to help with knowledge retention.

Milestones

Milestone #1

What beneficiaries do and learn:

Year 1) 5 ag service providers and 25 farmers participate in 3 workshops during Winter 2018:

Workshop 1: Participants learn how to create a beginning farm plan, develop a mission statement and improve record keeping skills. (Winter 2018)

Workshop 2: Participants learn about soil preparation techniques and equipment, soil testing and interpretation of soil analysis results, and appropriate nutrient applications to manage nutrients properly. (Winter 2018)

Workshop 3: Participants learn about marketing their product and increase their knowledge on how to find and cultivate market opportunities to ensure financial stability. (Winter 2018)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

20

Actual number of agriculture service provider beneficiaries who participated:

7

Proposed Completion Date:

March 31, 2018

Status:

Completed

Date Completed:

April 1, 2018

Accomplishments:

Currently 20 Farmers and 7 service providers have participated in the Beginning Farmer Workshop series.

Gordon Johnson and Laurie Wolinski presented the first workshop where the topics of creating a beginning farmer plan, developing a mission statement and ways to improve record keeping skills were taught. All participants received a document that they could create a plan and a mission statement that will be handed in at the conclusion of the workshop series.

Part of workshop 2 was delayed due to the weather. Soil preparation techniques and equipment were moved to a later date in spring. However, students learned how to pot and plant seeds in the green house that they could later transplant into their plots. In addition, Jarrod Miller instructed the class on soil testing and interpretation of soil analysis results, and appropriate nutrient applications to manage nutrients properly.

Gordon Johnson led workshop 3 where students increased their knowledge on how to find and cultivate market opportunities. This session was very educational and great group discussions on niche marketing such as what is a niche market, how do you develop a niche market and what crops are good for niche marketing.

All resources used during the workshop sessions are housed on the new website that we have created for the Beginning Farmer Workshop.

Milestone #2

What beneficiaries do and learn:

Year 1) 5 ag service providers and 25 farmers participate in 2 workshops during Spring 2018:

Workshop 4: Participants learn how to set up plastic and irrigation and increase their understanding of irrigation practices and the use of plastic mulch. (Spring 2018)

Workshop 5: Participants learn about vegetable selection/variety selection and increase their understanding of crops that grow best in our area. (Spring 2018)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

20

Actual number of agriculture service provider beneficiaries who participated:

4

Proposed Completion Date:

May 31, 2018

Status:

Completed

Date Completed:

April 1, 2018

Accomplishments:

Workshop 4 was postponed due to the weather. The set up of plastic, the use of irrigation and the use of plastic mulch will be held later in the spring. Workshop 4 was held in September of 2018 at a Beginning Farmer workshop participant's farm where they demonstrated how to lay plastic mulch for strawberries.

At workshop 5, Gordon Johnson discussed vegetable selection/variety selection. Students used seed catalogs and the Mid-Atlantic Commercial Vegetable production Recommendations to increase their understanding of crops that grow best in our area. Each student was required to find a vegetable that could grow in our environment, decide what time of year it is to be planted and when it can be harvested. This hands-on activity really drove home the message of knowing what to grow and when to grow it.

Milestone #3

What beneficiaries do and learn:

Year 1) 5 ag service providers and 25 farmers participate in 3 workshops during Summer 2018:

Workshop 6: Participants learn about scheduling production and increase their knowledge on the best crops for seasonal progression. (Summer 2018)

Workshop 7: Participants learn about Integrated pest management to minimize pesticide use and increase their knowledge on insect, disease and weed management. (Summer 2018)

Workshop 8: Participants learn about crop harvest and increase their knowledge on food safety, post-harvest storage and handling and storage of fruit and vegetables. (Summer 2018)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

20

Actual number of agriculture service provider beneficiaries who participated:

4

Proposed Completion Date:

September 30, 2018

Status:

Completed

Date Completed:

September 30, 2018

Accomplishments:

Workshop 6 was led by Gordon Johnson and was a continuation of workshop 5. The participants took the knowledge of vegetable/variety selection and put their knowledge to the test by developing a crop rotation so production can be continued through out the season. The importance of scheduling planting and harvesting of certain crops was stressed. The use of seed catalogs and seed packets were used as aids in vegetable/variety selection.

Workshop 7 - was conducted by The University of Delaware's Plant Pathologist, Dr. David Owens. The participants learned how to identify plant disease and insect damage as well as how to identify weeds. In addition, participants gained knowledge on how to prevent and treat common issues that relate to vegetable diseases.

Workshop 8 - Workshop participants learned about food safety at harvest. participants also learned how to properly handle and store fruits and vegetables after harvest.

Milestone #4

What beneficiaries do and learn:

25 farmer participants receive farm visits for trouble shooting support from the state coordinator and other team members. (Ongoing)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

5

Actual number of agriculture service provider beneficiaries who participated:

2

Proposed Completion Date:

October 31, 2018

Status:

Completed

Date Completed:

October 31, 2018

Accomplishments:

Dan Severson and Carrie Murphy participated in farm visits to students farms to check on the past and current growing season. Five of the participants were actively growing fruits and vegetables with 2 of the five selling produce. Two students just purchased a high tunnel and plan on construction soon. No issues were detected or brought to our attention except how to change the weather.

Milestone #5

What beneficiaries do and learn:

5 ag service providers assess their knowledge gain in content outside their areas of specialty to assess the workshop series and their performance as beginning farmer instructors. (Ongoing)

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of agriculture service provider beneficiaries who participated:

3

Proposed Completion Date:

October 31, 2018

Status:

Completed

Date Completed:

October 31, 2018

Accomplishments:

The three ag service providers who assessed their knowledge gain in content outside of their areas of specialty indicated that they will tailor their lectures to tie other components of growing vegetables to help the workshop series flow in a better way. Future Harvest, a group focused on building a sustainable Chesapeake foodshed, contacted our group and would like to collaborate. Our Beginning Farmer workshop and their level one workshop will be reciprocating so students may attend either course and will be able to move to level 2 of Future Harvests workshops.

Milestone #6

What beneficiaries do and learn:

Year 2) 5 ag service providers and 25 farmers participate in 3 workshop during Winter 2019:

Workshop 1: Participants learn how to create a beginning farm plan, develop a

mission statement and improve record keeping skills. (Winter 2019)

Workshop 2: Participants learn about soil preparation techniques and equipment, soil testing and interpretation of soil analysis results, and appropriate nutrient applications to manage nutrients properly. (Winter 2019)

Workshop 3: Participants learn about marketing their product and increase their knowledge on how to find and cultivate market opportunities to ensure financial stability. (Winter 2019)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

11

Actual number of agriculture service provider beneficiaries who participated:

2

Proposed Completion Date:

March 31, 2019

Status:

Completed

Date Completed:

March 23, 2019

Accomplishments:

Currently 14 Farmers and 7 service providers have participated in the Beginning Farmer Workshop series.

Gordon Johnson and Laurie Wolinski presented the first workshop where the topics of creating a beginning farmer plan, developing a mission statement and ways to improve record keeping skills were taught. All participants received a document that they could create a plan and a mission statement that will be handed in at the conclusion of the workshop series. 6 students submitted their mission statement for review.

Soil preparation techniques and equipment were demonstrated at the University Of Delaware high tunnel. Students learned how to pot and plant seeds in the green house that they could later transplant into their plots. The class has also rented garden plots from the University for students to have a place to put in action what they have learned in class. The students also participated in the clean up and preparation of the rented plots. In addition, Jarrod Miller instructed the class on soil testing and interpretation of soil analysis results, and appropriate nutrient applications to manage nutrients properly.

Gordon Johnson led workshop 3 where students increased their knowledge on how to find and cultivate market opportunities. This session was very educational and great group discussions on niche marketing such as what is a niche market, how do you develop a niche market and what crops are good for niche marketing.

All resources used during the workshop sessions are housed on the new Beginning Farmer on-line teaching classroom.

Milestone #7

What beneficiaries do and learn:

Year 2) 5 ag service providers and 25 farmers participate in 2 workshops during Summer 2019:

Workshop 4: Participants learn how to set up and plastic and irrigation and increase their understanding of irrigation practices and the use of plastic mulch. (Spring 2019)

Workshop 5: Participants learn about vegetable selection/variety selection and increase their understanding of crops that grow best in our area. (Spring 2019)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

9

Actual number of agriculture service provider beneficiaries who participated:

2

Proposed Completion Date:

May 25, 2019

Status:

Completed

Date Completed:

March 23, 2019

Accomplishments:

Workshop 4 was held at the University of Delaware's high Tunnels. The set up of plastic, the use of irrigation and the use of plastic mulch was taught by one of the farms interns. We plan on visiting a farm and help them lay plastic in the near future. Students were able to take the plants from the previous workshop home and prepare them for entry into their garden at home or in one of the University plots that we have rented.

At workshop 5, Gordon Johnson discussed vegetable selection/variety selection. Students used seed catalogs and the Mid-Atlantic Commercial Vegetable production Recommendations to increase their understanding of crops that grow best in our area. Each student was required to find a vegetable that could grow in our environment, decide what time of year it is to be planted and when it can be harvested. This hands-on activity really drove home the message of knowing what to grow and when to grow it.

Milestone #8

What beneficiaries do and learn:

Year 2) 5 ag service providers and 25 farmers participate in 3 workshop in Summer 2019:

Workshop 6: Participants learn about scheduling production and increase their knowledge on the best crops for seasonal progression. (Summer 2019)

Workshop 7: Participants learn about integrated pest management to minimize pesticide use and increase their knowledge on insect, disease and weed management. (Summer 2019)

Workshop 8: Participants learn about crop harvest and increase their knowledge on food safety, post- harvest storage and handling and storage of fruit and vegetables. (Summer 2019)

Proposed number of farmer beneficiaries who will participate:

23

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

8

Actual number of agriculture service provider beneficiaries who participated:

2

Proposed Completion Date:

August 31, 2019

Status:

Completed

Date Completed:

June 22, 2019

Accomplishments:

Workshop 6 was led by Gordon Johnson and was a continuation of workshop 5. The participants took the knowledge of vegetable/variety selection and put their knowledge to the test by developing a crop rotation so production can be continued through out the season. The importance of scheduling planting and harvesting of certain crops was stressed. The use of seed catalogs and seed packets were used as aids in vegetable/variety selection.

Workshop 7 - Workshop 7 was conducted by The University of Delaware's Plant Pathologist, Dr. David Owens and Dr. Mark VanGessel. The participants learned how to identify plant disease and insect damage as well as how to identify weeds. In addition, participants gained knowledge on how to prevent and treat common issues that relates to vegetable diseases.

Workshop 8 - Workshop participants learned about food safety at harvest. participants also learned how to properly handle and store fruits and vegetables after harvest.

Milestone #9

What beneficiaries do and learn:

25 farmer participants receive farm visits for trouble shooting support from the state coordinator and other team members. (Ongoing)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

2

Actual number of farmer beneficiaries who participated:

6

Actual number of agriculture service provider beneficiaries who participated:

2

Proposed Completion Date:

September 30, 2019

Status:

Completed

Date Completed:

June 19, 2019

Accomplishments:

Dan Severson and Carrie Murphy participated in farm visits to students farms to check on the past and current growing season. Five of the participants were actively growing fruits and vegetables with 2 of the five selling produce. Three of the students rent garden plots from the University and are growing for home use. Two students are thinking of applying to Future Harvest's level II training.

Milestone #10

What beneficiaries do and learn:

5 ag service providers and 25 farmers learn the beginning farmer curriculum and interact with the project team via an online classroom that will be created by the University of Delaware Professional and Continuing Studies in collaboration with the project team. The online classroom will supplement the curriculum and allow the project team to share information with participants and send and receive assignments in a more timely manner. It will also offer self-study opportunities for the 8 workshop topics and enable participants to share feedback about the Beginning Farmer workshops. The project team will also hold weekly virtual office hours to assist participants via the online classroom. (Ongoing)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

10

Actual number of agriculture service provider beneficiaries who participated:

4

Proposed Completion Date:

September 1, 2019

Status:

Completed

Date Completed:

August 2, 2019

Accomplishments:

This was the first year that the course was offered on-line using The University's distant learning program Canvas. The students stated that recording the classes and putting them online as well as having all the course material available 24/7 was a great value. The students appreciated being able to go back and watch the lectures after class. This allowed them to soak in information that they may have missed.

Milestone #11

What beneficiaries do and learn:

5 ag service providers assess their knowledge gain in content outside their areas of specialty to assess the workshop series and their performance as beginning farmer instructors. (Ongoing)

Proposed number of farmer beneficiaries who will participate:

25

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

10

Actual number of agriculture service provider beneficiaries who participated:

3

Proposed Completion Date:

September 30, 2019

Status:

Completed

Date Completed:

December 18, 2019

Accomplishments:

The use of an online classroom seemed to benefit many of the students and teachers. We have taken our experience with Canvas to make adjustments for the next project cycle.

Milestone #12

What beneficiaries do and learn:

Year 3) 5 ag service providers and 25 farmers participate in 3 workshop during Winter 2020:

Workshop 1: Participants learn how to create a beginning farm plan, develop a mission statement and improve record keeping skills. (Winter 2020)

Workshop 2: Participants learn about soil preparation techniques and equipment, soil testing and interpretation of soil analysis results, and appropriate nutrient applications to manage nutrients properly. (Winter 2020)

Workshop 3: Participants learn about marketing their product and increase their knowledge on how to find and cultivate market opportunities to ensure financial stability. (Winter 2020)

Proposed number of farmer beneficiaries who will participate:

15

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

23

Actual number of agriculture service provider beneficiaries who participated:

4

Proposed Completion Date:

March 31, 2020

Status:

Completed

Date Completed:

March 1, 2020

Accomplishments:

Currently 23 Farmers and 4 service providers have participated in the Beginning Farmer Workshop series.

Gordon Johnson and Laurie Wolinski presented the first workshop where the topics of creating a beginning farmer plan, developing a mission statement and ways to improve record keeping skills were taught. All participants received a document that they could create a plan and a mission statement that will be handed in at the conclusion of the workshop series. 3 students submitted their mission

statement for review during the in class exercise.

Students learned how to pot and plant seeds in the green house that they could later transplant into their garden. The class has also rented garden plots from the University for students to have a place to put in action what they have learned in class. In addition, Jarrod Miller instructed the class on soil testing and interpretation of soil analysis results, and appropriate nutrient applications to manage nutrients properly.

Gordon Johnson led workshop 3 where students increased their knowledge on how to find and cultivate market opportunities. This session was very educational and great group discussions on niche marketing such as what is a niche market, how do you develop a niche market and what crops are good for niche marketing.

All resources used during the workshop sessions are housed on the new Beginning Farmer on-line teaching classroom.

Milestone #13

What beneficiaries do and learn:

Year 3) 5 ag service providers and 25 farmers participate in 2 workshops during Spring 2020:

Workshop 4: Participants learn how to set up and plastic and irrigation and increase their understanding of irrigation practices and the use of plastic mulch. (Spring 2020)

Workshop 5: Participants learn about vegetable selection/variety selection and increase their understanding of crops that grow best in our area. (Spring 2020)

Proposed number of farmer beneficiaries who will participate:

15

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

23

Actual number of agriculture service provider beneficiaries who participated:

3

Proposed Completion Date:

May 31, 2020

Status:

Completed

Date Completed:

May 29, 2020

Accomplishments:

Workshop 4 was cancelled due to the beginning of the Corona virus. Added new workshop on Apiculture at the end of the workshop series to replace this workshop. The remainder of the workshop series was presented over Zoom. The

Zoom lectures were recorded and placed in the virtual classroom along with PowerPoint slides and other workshop related materials.

At workshop 5, Gordon Johnson discussed vegetable selection/variety selection. Students learned how to read seed catalogs and the Mid-Atlantic Commercial Vegetable production Recommendations to increase their understanding of crops that grow best in our area. Students discussed vegetables that could grow in our environment, what time of year it is to be planted and when it can be harvested.

Milestone #14

What beneficiaries do and learn:

Year 3) 5 ag service providers and 25 farmers participate in 3 workshop in Summer 2020:

Workshop 6: Participants learn about scheduling production and increase their knowledge on the best crops for seasonal progression. (Summer 2020)

Workshop 7: Participants learn about integrated pest management to minimize pesticide use and increase their knowledge on insect, disease and weed management. (Summer 2020)

Workshop 8: Participants learn about crop harvest and increase their knowledge on food safety, post-harvest storage and handling and storage of fruit and vegetables. (Summer 2020)

Proposed number of farmer beneficiaries who will participate:

15

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

23

Actual number of agriculture service provider beneficiaries who participated:

5

Proposed Completion Date:

August 31, 2020

Status:

Completed

Date Completed:

August 31, 2020

Accomplishments:

Workshop 6 was led by Gordon Johnson and was a continuation of workshop 5. The participants took the knowledge of vegetable/variety selection and put their knowledge to the test by developing a crop rotation so production can be continued through out the season. The importance of scheduling planting and harvesting of certain crops was stressed. The use of seed catalogs and seed packets were used as aids in vegetable/variety selection.

Workshop 7 - Workshop 7 and 8 was conducted by The University of Delaware's Plant Pathologist, Dr. David Owens and Dr. Mark VanGessel. The participants learned how to identify plant disease and insect damage as well as how to identify weeds. In addition, participants gained knowledge on how to prevent and treat common issues that relates to vegetable diseases.

Workshop 8 - Workshop participants learned about Apiculture from Deb Delany the University of Delaware's apiculture professor. This was an add on workshop as a make-up for the irrigation lecture.

Milestone #15

What beneficiaries do and learn:

25 farmer participants receive farm visits for trouble shooting support from the state coordinator and other team members. (Ongoing)

Proposed number of farmer beneficiaries who will participate:

15

Proposed number of agriculture service provider beneficiaries who will participate:

2

Actual number of farmer beneficiaries who participated:

4

Actual number of agriculture service provider beneficiaries who participated:

2

Proposed Completion Date:

September 30, 2020

Status:

Completed

Date Completed:

August 31, 2020

Accomplishments:

Farm visits were limited due to Covid. Dan Severson and Carrie Murphy participated in farm visits, phone conversations and emails with students to check on the past and current growing season. This was a difficult due to Covid but many of the participants were understanding.

Milestone #16

What beneficiaries do and learn:

5 ag service providers and 25 farmers learn the beginning farmer curriculum and interact with the project team via an online classroom that will be created by the University of Delaware Professional and Continuing Studies in collaboration with the project team. The online classroom will supplement the curriculum and allow the project team to share information with participants and send and receive assignments in a timelier manner. It will also offer self-study opportunities for the

8 workshop topics and enable participants to share feedback about the Beginning Farmer workshops. The project team will also hold weekly virtual office hours to assist participants via the online classroom.

Proposed number of farmer beneficiaries who will participate:

15

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

23

Actual number of agriculture service provider beneficiaries who participated:

6

Proposed Completion Date:

September 30, 2020

Status:

Completed

Date Completed:

September 13, 2020

Accomplishments:

This was the second year that the course was offered on-line using The University's distant learning program Canvas. Since Covid hit during the workshops it was nice to have a year of distance learning and Zoom under our belt. The students stated that recording the classes and putting them online as well as having all the course material available 24/7 was a great value. The students appreciated being able to go back and watch the lectures after class.

Milestone #17

What beneficiaries do and learn:

5 ag service providers assess their knowledge gain in content outside their areas of specialty to assess the workshop series and their performance as beginning farmer instructors.

Proposed number of farmer beneficiaries who will participate:

15

Proposed number of agriculture service provider beneficiaries who will participate:

5

Actual number of farmer beneficiaries who participated:

23

Actual number of agriculture service provider beneficiaries who participated:

5

Proposed Completion Date:

September 30, 2020

Status:

Completed

Date Completed:

September 13, 2020

Accomplishments:

A survey was sent to people who were featured speakers for the Beginning Farmer workshop as well as to the Beginning Farmer participants. A total of 2 speakers and 9 participants completed the survey.

The speaker survey revealed that the workshop series is overall a great program but they had issues with the use of the remote classroom Canvas and the use of Zoom webinar. One new workshop was created and added to the Beginning farmer series - Apiculture. The lack of person to person lectures and being able to demonstrate tools and techniques was also brought up as an issue. The speakers estimated that they impacted an average of 29 beginning farmers that farmed less than 50 acres with less 50 animal units.

The participants survey was similar to the speaker survey. The participants rated the workshop excellent overall but struggled with Canvas and Zoom. The participants were understanding and stated "It was okay because that was the best option under Covid to continue with the class" and "Not the same as traditional but understandably worthwhile".

Soil Health was the topic with a 100% rating on learned information and incorporation into farm management. When asked about what they enjoyed most of the course there was 9 responses that were all positive - "The time and effort that Carrie and Dan put in to answer all my questions with all of their knowledge. I really appreciate it!" and "The willingness of the instructors to help the students learn and succeed".

The survey also asked how the course may be improved. All of the responses had to deal with "no Covid". With Covid we were unable to use the garden plots on the University's property which upset some participants.

The participants expressed that they learned valuable information and enjoyed taking the course.

Milestone Activities and Participation Summary

Educational activities conducted by the project team:

Activity	Year 1	Year 2	Year 3	Total
Consultations	9	6	4	19
Curricula, factsheets or educational tools	3	3	2	8

On-farm demonstrations	4	4	1	9
Online trainings	0	1	6	7
Tours	2	3	0	5
Webinars, talks and presentations	4	2	2	8
Workshop / field days	2	23	0	25

Beneficiaries who participated in the project's educational activities and events:

Audience	Year 1	Year 2	Year 3	Total Individuals
Extension	5	5	5	5
Nonprofit	1	2	3	6
Service providers (other or unspecified)	10	0	0	0
Farmers / ranchers	20	12	23	55
Others	0	2	1	3

PARTICIPATION SUMMARY:

5 Number of agricultural educator or service providers reached through education and outreach activities

Learning Outcomes

5 Agricultural service providers reported changes in knowledge, skills and/or attitudes as a result of their participation.

23 Farmers reported changes in knowledge, attitudes, skills and/or awareness as a result of their participation

5 Ag service providers intend to use knowledge, attitudes, skills and/or awareness learned through this project in their educational activities and services for farmers

Key areas in which the service providers (and farmers if indicated above) reported a change in knowledge, attitudes, skills and/or awareness::

An end of the series evaluation was used to verify changes in knowledge, attitudes and skills.

In Year 1, two service providers became aware of the needs of small scale and urban farmers and are going to redirect their lectures to accommodate this audience. The attitude of the service providers towards this audience became more

appreciative as the course developed.

The 18 first year farmers stated they gained knowledge in business planning, soil health, variety selection, Integrated Pest Management (IPM), season extension and irrigation and farm equipment. Their ratings averaged 4 to 4.4 on a 5 point scale with a 5 indicating "strongly agree" that they learned new information pertaining to the topics. The biggest change in knowledge was in soil health and IPM. The farmers also rated their intentions to use new best management practices high, with scores in the similar range on the same rating scale.

The second year of the Beginning Farmer grant 10 students filled out a post workshop evaluation. The respondents gained knowledge and plan to adopt best management practices in Business planning, soil health, variety selection, IPM, season extension and irrigation.

The final third year survey was sent to people who were featured speakers for the Beginning Farmer workshop as well as to the Beginning Farmer participants. A total of 2 speakers and 9 participants completed the survey.

The speaker survey revealed that the workshop series is overall a great program but they had issues with the use of the remote classroom Canvas and the use of Zoom webinar. One new workshop was created and added to the Beginning farmer series - Apiculture. The lack of person to person lectures and being able to demonstrate tools and techniques was also brought up as an issue. The speakers estimated that they impacted an average of 29 beginning farmers that farmed less than 50 acres with less 50 animal units.

The participants survey was similar to the speaker survey. The participants rated the workshop excellent overall but struggled with Canvas and Zoom. The participants were understanding and stated "It was okay because that was the best option under Covid to continue with the class" and "Not the same as traditional but understandably worthwhile".

Soil Health was the topic with a 100% rating on learned information and incorporation into farm management. When asked about what they enjoyed most of the course there was 9 responses that were all positive - "The time and effort that Carrie and Dan put in to answer all my questions with all of their knowledge. I really appreciate it!" and "The willingness of the instructors to help the students learn and succeed".

The survey also asked how to the course may be improved. All of the responses had to deal with "no Covid". With Covid we were unable to use the garden plots on the University's property which upset some participants.

The participants expressed that they learned valuable information and enjoyed taking the course.

Performance Target Outcomes

PERFORMANCE TARGET OUTCOMES - SERVICE PROVIDERS

Activities for farmers conducted by service providers:

Activity	Year 1	Year 2	Year 3	Total
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Curricula, factsheets and other educational tools	0	3	2	5
Consultations	98	57	58	213
On-farm demonstrations	0	4	0	4
Online trainings			6	6
Tours	0	3	0	3
Webinars, talks and presentations	0	0	6	6
Workshops and field days	0	23	0	23

5 Total number of agricultural service provider participants who used knowledge and skills learned through this project (or incorporated project materials) in their educational activities, services, information products and/or tools for farmers

213 Farmers reached through participant's programs

Performance target outcome for service providers narrative:

Five service providers were sent a survey to provide outcome data about how they had used information related to the project. Two of the five responded to the verification requests. The service providers indicated that they educated/advised 98 beginning farmers in year one, 57 in year two and 58 in year three.

Additional Project Outcomes

Number of new working collaborations:

Year 1	Year 2	Year 3	Total
1	0	0	1

Additional Outcomes Narrative:

Future Harvest, which also has a Beginning Farmer series, wants to collaborate with UD to make our series reciprocating with their level 1 workshop. This will allow our participants to apply for and attend Futures Harvest's level 2 training.

For 2019 we had one graduate apply to Future Harvest for level 2 training.

For 2020 we had two participants interested in the Future Harvest program but due to Covid did not apply.

Success stories:

One of the Beginning Farmer participants provided a statement of participating in the program has done for them. "Since taking the Beginning Farmer workshop, I have learned an applied that knowledge to have an overflow of vegetables from my

16 by 16 square foot plot, I was and still am giving vegetables to family and friends. I've learned to start my own seeds indoors, harden them off, and plant outside which saves a lot of money. I applied the knowledge of the different soil types determine if or what types of fertilizer to use to bring my soil to a healthy PH. I also learned and applied the different learned methods to naturally ward off pests and weeds. This class took me from being a little gardener, growing herbs and vegetables in containers to next year expanding my 16 by 16 plot to a larger plot to grow more of a variety with hopes to sale at the local farmers markets."

Assessment of Project Approach and Areas of Further Study:

The process of moving the program to a virtual online classroom and recording the lectures during year two provided a great transition to year three due to Covid. The learning curve for this new technology was tough on both the speakers and the participants during year three. To assist with leaning the new technology the course held two open office hours for Canvas and Zoom orientation. As the year went on participants and speakers became more comfortable with the virtual learning platform and the use of Zoom.

SARE Outreach

Outreach about SARE:

SARE was promoted during each lecture series of the Beginning Farmer workshop. In addition, SARE was highlighted at our Ag In-service. I constantly send out emails to the Ag team with information about SARE and SARE grants. During farm visits I hand out information about SARE grant opportunities.

Recieved information about SARE grant programs and information resouces:

Audience	Year 1	Year 2	Year 3	Total
Service providers	20	10	10	40
Farmers	35	28	29	92

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture or SARE.



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