

## **Evaluating Impacts of Five Years of Beginning Farmer Webinar Training**

### **Abstract**

The Michigan State University Extension Beginning Farmer Webinar Series has been implemented statewide since 2012. For the period 2012–2016, 63 webinars were provided to 607 participants. Regular evaluation efforts capture impact data from participants 6 to 10 months after they complete the series. However, to determine longer range impacts of the program, we developed a follow-up online evaluation and distributed it via email invitation to 2012–2016 participants for whom contact information was available. The evaluation results indicate an encouraging level of impact with regard to knowledge retained, farm practices changed, and positive economic metrics such as new farm start-ups and new jobs.

**Keywords:** [beginning farmer](#), [evaluation](#), [farm management](#), [webinar](#)

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## **Introduction**

The Beginning Farmer Webinar Series is a training program developed in 2012 as a response to ongoing inquiries from inexperienced people interested in becoming engaged in agriculture in Michigan's Upper Peninsula, a region with sparse population, a widely scattered farming community, and a total of three agricultural Extension educators serving 15 geographically large counties. The decline of agriculture in this region is similar to that in other parts of the state and country, with the average farmer age increasing and the number of multigenerational farms declining (Sirrine, Eschbach, Lizotte, & Rothwell, 2016). However, the number of new farmers, typically starting on small acreages and interested in local sales, is increasing.

In addition to listening to local input regarding individual needs, Michigan State University Extension is focused on using resources to target economic issues listed on the Michigan Dashboard (State of Michigan, n.d.). Two of the economic indicators listed are unemployment and gross domestic product (State of Michigan, n.d.). In addition, in 2011 the Governor's Summit on Production Agriculture listed four goals for the subsequent 5 years. Two of those goals were to increase economic impact of the food and agriculture industry and to increase food and agriculture career jobs. We determined that for the Beginning Farmer Webinar Series to be successful, it should increase employment, increase economic activity in agriculture, and increase the value of agriculture product produced in Michigan.

## Background

A series of four in-person meetings occurred with potential new farmers during the winter of 2011–2012 in two Upper Peninsula locations. Topics included farm business basics, animal-based enterprises, plant-based enterprises, and farm equipment. Participation was limited by the long driving distances involved for participants to attend. We expanded the effort by offering similar subject material in the form of three webinars following completion of the in-person meetings. Webinars as an Extension educational tool have been shown to be satisfactory to participants and convenient and affordable for Extension educators (Rich et al., 2011, Robinson & Poling, 2017).

Following successful programming efforts in 2012 and 2013, the webinar series was expanded into a statewide effort and has continued into 2018. The series consists of 1- to 2-hr presentations on a variety of topics of interest to beginning farmers and existing farmers interested in new enterprises. Sixty-three webinars were offered over the 5-year period of 2012 to 2016 on the topical categories of farm business, field crops, fruits and nuts, livestock, machinery, marketing, organic agriculture, pollinators, poultry, and vegetables. Table 1 presents a list of topics covered during the 2015 and 2016 programming years.

**Table 1.**  
Presentation Topics of the Beginning Farmer Webinar Series for  
Two Program Years

<b>Topic</b>	<b>Year</b>
Small grains	2015
Cover crops in organic vegetable rotations	2015
Integrated pest management	2015
Manure storage, handling and mortality management on small farms	2015
Beekeeping for honey and pollination	2015
Value-added agriculture	2015
Farm food safety	2015
Sheep and goat management	2015
USDA organic certification	2015
Hops production	2015
Season extension	2015
Marketing	2015
Malting barley	2016
Tomato diseases, insects, and disorders	2016
Climate change and agriculture: What do Michigan farmers think?	2016
The basics of raising pigs	2016

An introduction to edible chestnut production	2016
Growing raspberries in high tunnels	2016
New crops for new customers	2016
Native bees for pollination	2016
Integrated pest management resources at MSU	2016
Wheat agronomy	2016
Growing cider apples	2016
Biosecurity: Protecting farm animal health	2016
Growing and marketing Christmas trees	2016
Getting land ready to grow organically, certified or not	2016
Meat goats	2016
Basics of insect morphology	2016
Hay production	2016
Compost production and use for small and mid-sized farms	2016
The Food Safety Modernization Act: What farmers need to do	2016
Specialty cut flower production and handling	2016
Irrigation on small farms	2016
Selecting a tractor for a small farm	2016
Business planning and financial readiness	2016
Accepting food assistance benefits to increase sales	2016

*Note.* USDA = U.S. Department of Agriculture. MSU = Michigan State University.

Outcomes for the webinar series were selected from the reporting guidance of the U.S. Department of Agriculture National Institute of Food and Agriculture (2010, 2011) Beginning Farmer and Rancher Development Program. Evaluation of the webinar series has involved documenting self-reported impacts common across all topics, including whether the series has contributed to a participant's

- starting a farming business;
- expanding an existing farming business;
- making changes to his or her operation relative to areas such as production management practices, financial management practices, marketing, equipment purchases, and labor;
- creating new jobs;

developing a farm business management plan, or

- changing a farm business management plan relative to areas such as marketing, finances, size of operation, and commodities produced.

We conduct program evaluation using a combination of questionnaires administered during and after the program (Hachfeld, Bau, Holcomb, & Craig, 2013). Informal polls are administered during webinars. A more comprehensive annual evaluation is administered to all webinar participants annually through an online survey instrument approximately 6 to 10 months following completion of the series. Information regarding impacts such as knowledge gained, acres affected, new business enterprises initiated, and jobs created has been gathered and reported each year. However, we agreed that a follow-up evaluation targeting all participants who participated over the first 5 years of the series was needed to provide a better indication of the actual impacts of the effort over time.

## Method

In late 2016, we developed a brief online survey instrument to address the impacts of the webinar series over time. Survey questions, with response choices where applicable, are shown in Figure 1.

### Figure 1.

#### Beginning Farmer Webinar Series Follow-Up Survey Questions

Describe role on farm. Response options: *currently farming, want to farm, resource agency*

*person, student, educator, other*

Number of acres currently managed or impacted in Michigan.

County the majority of acreage is located.

Commodities produced.

Dollars generated in annual gross revenue from the farming operation.

Has the beginning farmer webinar series contributed to you starting a farming business?

Response options: *no, yes with description how*

Has the beginning farmer webinar series contributed to you expanding your farming

business? Response options: *no, yes with description how*

Has the beginning farmer webinar series contributed to you making changes to your

operation? Response options: *no, yes*

If yes, changes to operation, mark all that apply. Response options: *production*

*management practices, financial management practices, marketing, equipment purchases,*

*labor, other*

Has the beginning farmer webinar series contributed to you creating new jobs? Response

options: *no, yes with description how*

As a result of the beginning farmer webinar series, have you developed a farm business

management plan? Response options: *no, yes*

As a result of the beginning farmer webinar series, have you made changes to your farm

business management plan? Response options: *no, yes*

If yes, changes to farm business management plan, mark all that apply. Response options:

*marketing, finances, size of operation, commodities produced, other*

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We distributed the survey to 2012–2016 participants of the Beginning Farmer Webinar Series for whom contact information was available ( $n = 607$ ). Two reminder email messages were sent at 2-week intervals. Our follow-up survey captured information from farmers who had attended sessions up to 5 years previously and, therefore, would have had more time to implement the knowledge they gained. Consequently, we hoped to observe higher rates of farmers who had actually started or expanded their farming businesses, increased their economic activity, and increased the number of agricultural jobs created.

We used SurveyMonkey to collect responses and analyze the data. We sent the SurveyMonkey link via invitation email to the aforementioned 607 participants of the webinar series and received 105 responses (17% response rate).

## Results

Program participants in the sample reported residency in 47 of 83 Michigan counties. Most participants were farming at the time of the survey, were operating small farms, and had small gross revenues. Of the respondents, 53% reported that they were currently farming, 21% wanted to farm in the future, 6% were students or educators or worked as resource agency personnel, and 20% selected "other" and included write-in descriptions indicating statuses such as retired farmer, part-time farmer, hobby farmer, gardener who might expand to become a farmer, and an inheritor of farmland with no farming experience. Of farmers responding to a question about the amount of acreage farmed, most indicated that they were small-scale farmers, with 12% farming less than 1 ac and 55% farming between 1 and 50 ac. The remaining acreages recorded were 51 to 200 ac (23%), 201 to 1,000 ac (8%), and 5,000 ac (2%). Gross revenues also were relatively small, with 36% of

respondents reporting less than \$5,000, 19% reporting between \$5,001 and \$10,000, and 24% reporting between \$10,001 and \$50,000. Some respondents reported generating large revenues, with 5% at \$50,001 to \$95,000, 12% at \$100,000 to \$200,000, and 5% at \$250,000 to \$275,000. Acreages and revenues reported as zero are not included in these percentages.

The webinar series was successful in getting Michigan residents started in farming and in encouraging those already involved in farming to make changes to their operations. As to whether the series contributed to participants' starting a farming business, 57% indicated "yes," and 45% reported that they had expanded their existing businesses as a result of the program. The webinar series contributed to 70% of producers' making changes to their farming operations. Of the respondents indicating they had made changes, 78% had made changes in production, 26% in financial management, 34% in marketing, 24% in equipment purchases, and 19% in labor; 23% indicated having made other changes. Additionally, the webinar series led 12% of participants to create new jobs on their operations.

A majority of participants either had developed a farm business management plan or had made changes to an existing farm business management plan. Specifically, as a result of the Beginning Farmer Webinar Series, 32% of respondents had developed farm business management plans, and 36% had made changes to their existing plans. Of those indicating that they had made changes, 45% had made changes related to marketing, 31% to finances, 41% to operation size, and 53% to commodities produced; 26% indicated having made other changes.

## **Participant Comments**

Comments made by the past program participants were helpful for informing future metrics to collect related to outcomes of the beginner farmer webinars. We organized the comments into the following topics: new farmer start-ups, existing farm expansions, farm operation changes, and job creation. The comments indicated positive participant experiences and were complimentary of the webinar series, lending support to the usefulness of the program.

In addition to thematically organizing the comments from the participants, we summarized general observations about the program. The webinar series can be credited with increasing producers' confidence in their ability to start or expand a farming operation, increasing enterprise diversity on many farms, and contributing to the creation of new training-level and entry-level jobs. There also were indications that producers chose not to start a new operation or enterprise because of knowledge gained from the webinar. Comments regarding such decisions may represent the greatest and most beneficial impact of the program in that it provides solid information participants have used to make the informed decision not to proceed with a potentially risky new enterprise.

## **Conclusions and Implications**

The Beginning Farmer Webinar Series started from the concept of addressing state economic measures through attention to specific ideas from individual clientele and stakeholder groups convened at a summit focused on creating more agricultural jobs in the state. Extension programs are frequently successful when they address community and individual needs through needs assessment. The webinar series is no exception and has continued to have success because of an ongoing evaluation process involving clientele and industry stakeholders that results in information about participant needs. Moreover, diligence in collecting program enrollment registrations for the webinars allowed us to conduct a successful program evaluation that captured impacts across several years.

Our study did have a couple of limitations. One related to the inability to know how many webinars each participant had actually watched as people could purchase the entire series for viewing as live or recorded segments. Therefore, it is unknown whether a particular amount of webinar education contributed to the measured impacts. Additionally, the response rate for the follow-up survey was lower than the average 33% return rate obtained for the 2015 and 2016 annual surveys for the program. We followed best practices for increasing response rates, such as using an electronic survey collector and allowing enough time for outcomes to be realized by participants, but it is possible that the 5-year time frame contributed to lower survey returns overall (Koundinya, Klink, Deming, Meyers, & Erb, 2016). However, the impact data from 105 participants across multiple years is still valuable for documenting longer term outcomes of the webinar training.

We continue to seek input for future topics and programming ideas. In the future, we may make changes to the format to provide more extensive and focused details for every aspect of production, finances, and marketing as they relate to specific commodity enterprises.

Overall, we suggest that providing programming such as the Beginning Farmer Webinar Series can have important beneficial results. Due to our intentional program focus on core objectives, the webinar series has been successful in increasing farm business activity and employment, as evidenced by the number of people starting or expanding farm businesses and the number of new jobs created on new or expanded farms. New farm businesses provide jobs, income, and increased economic activity and social stability, and they bring increased food security to rural and other communities. Providing basic, practical information to people interested in, or already engaging in, new farm enterprises helps these entrepreneurs develop sound production and marketing plans.

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