

ISU Annual Report FDA IDALS grant

Developing a Coordinated Effort within Iowa to Implement an Infrastructure, Education, Technical Assistance, and Inventory Program in Alignment with the FDA's Produce Safety Rule

Section A - Cover page

Section B – Accomplishments

Section B.1. What are the major goals and objectives of the project?

The main goals of Iowa State University portion of this project are: (1) Establish a sustainable communication network connecting educators and growers through Iowa to facilitate collaboration for FSMA compliance training and build training capacity; (2) Conduct a needs assessment and identify the gaps in knowledge for growers and incorporate these gaps in knowledge into curriculum for educators; (3) Conduct on-farm inventory assessments and follow ups to ensure the growers are in compliance with the FSMA Produce Rule; (3) Teach the FDA Produce Safety Alliance curriculum and develop specialized technical assistant sessions for growers to ensure knowledge is transferred and (4) Use continuous evaluation of the impact of the proposed training and technical assistance as feedback to improve training and other services. Achieving these objectives will meet the goal of the project. The initial steps and goals for the first year are to: (1) Design a website with information for the Iowa public, train 7 educators to be lead trainers of the FDA Produce Safety Alliance curriculum, and schedule 12 meetings amongst extension educators and 2 meetings between team members and IDALS; (2) Develop an Iowa based on farm self-assessment tool; (3) Conduct 10 on-farm inventory assessments; (4) Schedule 10 FDA Produce Safety Alliance Trainings (for year 2) and 10 Technical Assistance sessions (for year 2); (5) Schedule and conduct 2 meetings with the entire team and finalize the annual report summary.

Section B.2. What was accomplished under these goals?

In Year 2 accomplishments listed below have been completed:

Under objective 1 (Establishment of a Sustainable Communication Network and Infrastructure Development) our major goals were to have a fully functioning website that allows growers to interact with the team members and twelve meetings amongst extension educators and two meetings amongst team members and IDALS. We completed a website that provides information to the public of Iowa with materials on FSMA compliance (<http://safeproduce.cals.iastate.edu/fda-produce-safety-rule>). Dr. Angela Shaw, project director, developed an internal communication web portal (Box) where the team can exchange and hold grant documents for grant team members with log in privileges given for privacy (<https://iastate.app.box.com/folder/11412010806>). We held nine virtual meetings with extension educator on June 20th, July 18th, August 15th, September 12th, November 14th, and December 12th, 2017 and January 30th, February 13th, and March 6th along two in-person meetings on October 23rd and April 30th.

Under objective two, our major goals were to develop a data entry and analysis of the on-farm inventory assessment and FDA Produce Safety rule trainings and follow-up sessions, determine compliance level amongst growers, and have a third party data collection as part of state and national evaluation. Our team developed an on-farm inventory assessment system that distinguishes farm and processor designation of full compliance, qualified exempt, and exempt that is housed on the internal website. Data was collected through the Produce Safety rule trainings as optional and current listservs that ISU based participants hold. Participant's information was also utilized for follow up evaluations and technical assistance.

Under objective 3 (Conducting on-farm inventory assessments and follow-ups), we planned to conduct reviews and follow-ups in all 20 regions of Iowa and perform 20 on-farm inventory assessments or On-Farm Readiness Reviews. There was a delay in the training in year 1, so 10 of these on-farm inventory assessments had to be transferred to year 2. In March of 2018, four team members were trained in Fort Meyers, Florida for the On-Farm Readiness Reviews. During this training, our team was informed that the training materials will not be ready until June 2018. Due to this delay, we will not be able to begin providing until mid-June 2018 with a goal of performing at least five assessments by the end year 2. For delays and actions on how we plan to resolve this issue please refer to Section F – Changes/Problems.

Under objective 4 (Conducting extension education, outreach and technical assistance), we partnered with Iowa organizations and provided food safety workshops, presented at conferences, and had Produce Safety Alliance Trainings in 11 of the Iowa Extension Regions. We developed two videos on cleaning walk-in coolers and washing harvesting bins and had workshops at 19 conferences, field days, and educational programs in Iowa. Below is a list of all the programs and dates and participants numbers (n=1017).

1. January 27th, 2017: Iowa Fruit and Vegetable Grower Conference (2 workshops), Ankeny, IA. 40 Participants. Presenters: Teresa Wiemerslage, Joe Hannan
2. February 10th, 2017: Farm Manual workshop with the GGAP FSMA manual, Amana, IA. 4 farms. Presenter: Teresa Wiemerslage
3. March 9th, 2017: Farm Manual workshop with the GGAP FSMA manual, Decorah, IA. 4 farms. Presenter: Teresa Wiemerslage
4. March 13-15th, 2017: Preventive Controls Human Food, Cedar Rapids, IA. 18 Participants. Presenters: James Dickson, Ross Jabaay, Daniel Uthe, Joseph Cordray
5. April 18th, 2017: In-person GAP 101 workshop, Dubuque, IA. 7 beginning farmers. Presenter: Teresa Wiemerslage
6. April 18th, 2017: A farm incubator program about food safety policies and procedures, Dubuque, IA. 1 farm. Presenter: Teresa Wiemerslage
7. May 8-10th, 2017: Preventive Controls Human Food, Ames, IA. 32 Participants. Presenters: Angela Shaw, James Dickson, Ross Jabaay, Daniel Uthe, Joseph Cordray
8. July 10th, 2017: Field Day at White Oak Cellar, Cambridge IA. 22 Participants. Presenters: Shannon Coleman, Jennie Savits, Manreet Bhullar, Smaranda Andrews

9. September 14th, 2017: Timeless Prairie Orchard Field day, Masonville, IA. 20 Participants. Presenters: Smaranda Andrews, Linda Naeve, Manreet Bhullar, and Joe Hannan.
10. September 28th, 2017: Field Day Buske Farm, Fort Dodge, IA. 34 Participants. Presenters: Shannon Coleman, Joe Hannan, Manreet Bhullar, Smaranda Andrews
11. November 2nd, 2017: Produce Safety Alliance Grower Training, Fort Dodge, IA. 21 Participants. Presenters: Joe Hannan, Shannon Coleman, Smaranda Andrews, Angela Shaw
12. November 9th, 2017: Produce Safety Alliance Grower Training, Harlan, IA. 20 Participants. Presenters: Joe Hannan, Shannon Coleman, Smaranda Andrews, Manreet Bhullar
13. November 16th, 2017: Produce Safety Alliance Grower Training, Sioux City, IA. 10 Participants. Presenters: Joe Hannan, Smaranda Andrews
14. November 20th, 2017: Iowa Organic Conference (Booth and Workshop), Iowa City, IA. 220 Participants. Presenters: Teresa Wiemerslage, Smaranda Andrews, Manreet Bhullar
15. December 7th, 2017: Produce Safety Alliance Grower Training, Calmar, IA. 22 Participants. Presenters: Teresa Wiemerslage, Smaranda Andrews, Linda Naeve
16. January 11th, 2018: Produce Safety Alliance Grower Training, Indianola, IA. 26 Participants. Presenters: Smaranda Andrews, Angela Shaw, Manreet Bhullar
17. January 12th and 13th, 2018: Great Plains Growers Conference Booth, St. Joseph, MO. 100 Participants. Presenters: Linda Naeve, Manreet Bhullar, and Joe Hannan.
18. January 25th and 26th, 2018: Iowa Fruit and Vegetable Growers Conference Booth, Ankeny, IA. 140 Participants. Presenters: Linda Naeve, Manreet Bhullar, and Joe Hannan.
19. January 31, 2018 Farm Food Safety Plan workshop, Mason City, IA. 10 participants. Presenter: Teresa Wiemerslage
20. February 1st, 2018: Produce Safety Alliance Grower Training, Ottumwa, IA. 30 Participants. Presenters: Smaranda Andrews, Lakshman Rajagopal, Morgan Hoenig
21. February 15th, 2018: Produce Safety Alliance Grower Training, Cedar Rapids, IA. 24 Participants. Presenters: Teresa Wiemerslage, Lakshman Rajagopal, Morgan Hoenig
22. February 17th, 2018: Produce Safety Alliance Grower Training, Iowa City, IA. 30 Participants. Presenters: Smaranda Andrews and Iowa Organic Association and National Young Farmers Coalition
23. February 18th, 2018: Iowa Wine and Grape Growers Annual Conference, Indianola, IA. 30 Participant. How FSMA affects your Vineyard and Winery. Presenters Jennie Savits and Smaranda Andrews
24. February 22, 2018: Organic University, MOSES Conference, LaCrosse, WI. 50 participants. Presenters: Teresa Wiemerslage and MN, WI partners.
25. March 5, 2018: Farm Food Safety Plan workshop, 2 participants, Dubuque, IA. Presenter: Teresa Wiemerslage
26. March 8, 2018: Farm Food Safety Plan workshop, 11 participants, Cedar Rapids, IA. Presenter: Teresa Wiemerslage

27. March 8th, 2018: Produce Safety Alliance Grower Training, Sheldon, IA. 10 Participants. Presenters: Joe Hannan, Smaranda Andrews, Linda Naeve, Manreet Bhullar
28. March 27-29th, 2018: Preventive Controls Human Food, Ames, IA. 22 participants. Presenters: James Dickson, Ross Jabaay, Daniel Uthe, Joseph Cordray
29. March 29th, 2018: Produce Safety Alliance Grower Training, Mason City, IA. 27 Participants. Presenters: Teresa Wiemerslage, Smaranda Andrews, Joe Hannan, Lakshman Rajagopal
30. April 12th, 2018: Produce Safety Alliance Grower Training, Fairfield, IA. 30 participants. Presents: Smaranda Andrews, Linda Naeve, Joe Hannan, John Krzton-Presson.

Under objective 5 (Multi-Year Planning), we held nine virtual meetings with extension educator on June 20th, July 18th, August 15th, September 12th, November 14th, and December 12th, 2017 and January 30th, February 13th, and March 6th along two in-person meetings on October 23rd and April 30th.

Section B.3. Competitive Revisions/Administrative Supplements.

None

Section B.4. What opportunities for training and professional development has the project provided?

Paul Ovrom and Smaranda Andrews attended the NASDA/FDA Consortium for Produce Safety Program Development in Irvine, California on March 6-9, 2018. Drs. Shaw, Andrews, and Mr. Hannan, Mrs. Wiemerslage, and Mr. Ovrom attended the On-Farm Readiness Reviews Train-the-Trainer in Fort Meyers, Florida in May 2018. The team provided education at many conferences this year (see B.2) with a goal of educating on best practices for growers, processors, and holding owners and workers. These trainings reached about 1017 growers in year 2. Team members developed online videos on How to Clean Walk in Coolers and How to wash harvest bins. The videos are being finalized and will be disseminated summer of 2018.

Section B.5. How have results been disseminated to community of interest?

Linda Naeve and Joe Hannan developed a database which includes, food and farming systems groups, specialty crop grower's associations, organic producer associations, farmer NGOs, food hubs and produce auctions, extension agents, university and community college faculty, immigrant and tribal farming groups and agencies who serve them. Nine Iowa primary organizations involved in the produce industry and seventeen secondary contacts within the state were added to the list. We have also developed a list of major Iowa growers that need to be in compliance with FSMA and a list of medium and small growers that will need food safety training. Most farmers growing covered produce in the state received communications from 4 major producer organizations: Practical Farmers of Iowa, Iowa Fruit and Vegetable Growers Association, Regional Food System Working Groups, and Iowa State University Extension and Outreach. Team members developed online trainings on Good Agricultural Practices that covered pre-harvest, post-harvest, and a general introduction to food safety concerns and

maintained a web portal at www.safeproduce.cals.iastate.edu or www.iowafoodsafety.org . Team members also created postcards with the state of Iowa map divided into 20 regions which corresponds to the Iowa State University Extension Outreach 20 regions. The extension offices in each region will be able to help us conduct FDA Produce Safety Alliance training. The postcards are announcements of future trainings in each region. Two press releases announcing training opportunities were sent to Extension offices, grower groups, farmer associations and other farm organizations. Four handouts/information sheets were also created and will be distributed at trainings.

Section B.6. What do you plan to do during the next reporting period to accomplish the goals and objectives?

Our central hypothesis is that Iowa-specific on-farm inventory assessments, FSMA education and access to technical assistance will provide the crucial tools for growers to facilitate compliance with FSMA Produce Rule regulations of growers. We will build a sustainable educational infrastructure specific to Iowa that will leverage existing relationships and extant curricula while developing the identified missing tools to meet FSMA requirements.

Objective #1: Establishment of a Sustainable Communication Network and Infrastructure Development. The website we designed in the first year www.safeproduce.cals.iastate.edu will allow in the second year for Iowa growers to interact with the team members. We are also planning 12 meetings amongst extension educators and two meetings amongst team members and IDALS; some of the meetings have already been scheduled.

Objective #2: Conduct a Self-Assessment for Growers. In year three we will continue to collect grower information through the Produce Safety Alliance Courses and the online developed form. We will analyze that data to determine compliance level amongst growers. Base on the data we will determine any new priority educational needs for Iowa and we will start a list of research gaps that needed to be addressed.

Objective #3: Conducting on-farm inventory assessments and follow-ups
Due to the National Association of State Departments of Agriculture (NASDA) delay in providing the outlines for the Farm Readiness Reviews we have deferred all the on-farm inventory assessments into year three (see Section F Changes/Problems). We will conduct 20 regional on-farm inventory assessments in year 3 (cover the entire state) and the conduct follow up on-farm inventory assessments in years 4 and 5 on the same farms.

Objective #4: Conducting extension education, outreach and technical assistance. We plan to conduct in year 3, 10 FDA Produce Safety Alliance Trainings and 10 Technical Assistance sessions covering the whole state on Iowa. We will also identify and participate in continuing education trainings for our all team members. The results from the trainings with Iowa farmers will be disseminated in oral and poster forms at state and national conferences.

Objective #5: Multi-Year Planning. Team members are in constant contact with each other determining additional activities and keeping each other posted with the team's progress. Year three will give us the opportunity to evaluate what went well and also the changes we need to implement to move our work forward. We are planning three

meeting with the entire team and we will work cooperatively on the end of the year report/summary.

Section C - Products

Iowa State University Website for Local Foods:

Information Flier and Agenda for Produce Safety Alliance Trainings, also for short training on FSMA Produce Safety Rule.

Videos: How to clean walk-on coolers; How to wash harvest bins (Videos are being finalized and will be disseminated summer of 2018).

Section D – Participants

Angela Shaw, PhD Project Director. Assistant Professor, ISU Food Science and Nutrition

Shannon Coleman, PhD Assistant Professor, ISU Food Science and Nutrition

Lakshman Rajagopal, PhD Associate Professor ISU Dept. of Apparel, Events and Hospitality Management.

Catherine Strohbehn, PhD Adjunct Professor, ISU Apparel, Events and Hospitality

Paul Ovrom, State Horticulturist. Iowa Department of Agriculture and Land Stewardship

Joe Hannan, Commercial Horticulture Field Specialist, ISU Extension and Outreach

Linda Naeve, ISU Extension Program Specialist, Value Added Agriculture

Teresa Wiemerslage, ISU Extension Specialist, Local Foods

Smaranda Andrews, PhD, ISU Extension Program Specialist

Morgan Hoenig, ISU Extension Specialist, Local Foods Coordinator

John Krzton-Presson, ISU Extension Specialist, Horticulture & Local Foods Program Coordinator

Manreet Bhullar, Graduate Student, ISU Food Science and Nutrition

Bridget Perry, Graduate Student, ISU Food Science and Nutrition

Jacques Overdiep, Graduate Student, ISU Food Science and Nutrition

Section E. Impact

We have formed an Iowa Produce Food Safety Team. The Team is contributing to forming a network of food safety professionals in Iowa, which has already led to new projects and new collaborations. We have one impact story from a grower who has been impacted by our work. This story can be viewed here ->

(<https://www.ncrfsma.org/buske-and-puffer>)

Section F – Changes/Problems

Section F.2. Actual or anticipated challenges or delays and actions or plans to resolve them.

We had planned, for YR1, 10 on farm inventory assessments. However, due to the delay in FDA On Farm Readiness Reviews (OFRRs) guidelines we are pushing the farm inventory assessments into year two. We went to training for the OFRRs in March of 2018 and were informed that the OFRRs modules will not be ready until June 2018.

With this delay, we will not be able to complete 20 on farm inventory assessments before the conclusion of year 2 on June 30th, 2018. The goal of the OFRRs is to provide

effective, uniform and consistent application of the FSMA Produce Rule. Without the guidelines, we are not able to effectively complete this objective. We now hope to complete 30 OFRRs in year 3 to make up for the previous 2 years. Nevertheless, we have taken the following steps to ensure that we will be ready for the guidelines when they become available. (1) We are planning additional trainings for Iowa growers and we have taken the appropriate measures to schedule them. (2) We have identified that many Iowa growers need additional Good Agricultural Practices trainings (GAPs) and Produce Safety Alliance Trainings. We have scheduled more meetings with produce organizations throughout year 2 and offered 11 PSA trainings instead of 10 (see accomplishments). (3) We are actively requesting, through press releases and Team members connections, on-demand education opportunities for Iowa growers.

Because the On-Farm Readiness reviews did not begin in year 1, we are not able to do the 10 follow up assessment in year 3. We hope to complete at least 5 On-Farm Readiness reviews in year 2 of this project that those will have the follow up still in year 2 (June 15-30th, 2018 will have follow ups June 15-30th, 2019).

F.3. Significant changes to human subjects

IRB under review at Iowa State University for observational studies required for the on-farm readiness review. We were granted IRB approval for the dissemination of knowledge assessments for the Produce Safety Alliance Trainings (18-004 granted 1/25/2018).