

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 and 10 Technical Assistance sessions; (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 4 accomplishments listed below have been completed:

Under objective 1 (Establishment of a Sustainable Communication Network and Infrastructure Development) our major goals were to hold 12 meetings amongst extension educators and two meetings amongst team members and IDALS; We held nine virtual meetings with extension educators and IDALS on July 30th, 2019, August 26th, 2019, September 24th, 2019, October 28th, 2019, November 25th, 2019, December 20th, 2019, January 27th, 2020, February 24th, 2020 and March 23rd, 2020. We have three additional meeting scheduled for the rest of year 4 on April 30th, 2020, May 28th, 2020, an June 29th, 2020. We have also already schedule year 5 preparation meetings for July 27th, 2020 and August 27th, 2020. The FDA Produce Safety Network collaborated with the NCR FSMA Center and Iowa State University Extension and Outreach to develop a 1.5 day conference and tour in Iowa to discuss biological soil amendments of animal origin on Septmeber 11th-12th, 2019. The conference, primarily targeted towards educators, regulators, and industry, was intended to help those who work with regulated growers understand how to comply with the current requirements.

The FDA staff also provided updates on the status of the BSAAO Risk Assessment and associated research, and they discussed what the results mean for the possible future of Subpart F provisions for the use of untreated BSAAO on covered farms. Fifty people from around the country attended the event in September 2019.

Under objective two, our major goals were to 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. Based on the data, we will determine any new priority educational needs for Iowa, and we will start a list of research gaps that need to be addressed. 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 in year two. Data was collected through the Produce Safety Rule trainings as optional and current listservs that ISU based participants hold. Participants' information was also utilized for follow up evaluations and technical assistance. We continued to populate this database in year three and modified the entries with additional information at the request of FDA.

Under objective 3 (Conducting on-farm inventory assessments and follow-ups), our major goals were to conduct 10 on-farm readiness reviews assessments in year 4 and then conduct 10 follow up on-farm inventory assessments in years 4 and 5 on the same farms. Between June 2019 and January 2020, we have conducted 17 on-farm readiness reviews. We currently have 10 people on our request list for on-farm readiness reviews. Due to the COVID-19 pandemic, our goal is to provide virtual educational opportunities around the topic of on-farm readiness for inspection. We have also utilized this time to update our farm inventory with so many growers at home.

Under objective 4 (Conducting extension education, outreach and technical assistance), we planned to conduct 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. We plan to complete at least three new videos on produce food safety topics. We plan to develop at least five new standard operating procedure documents in year 4. To date, we have conducted 8 FDA Produce Safety Alliance Trainings, 30 Technical Assistance sessions and dissemination opportunities, and completed 2 videos. The NASDA Produce Consortium Meeting in March 10-12th, 2020 was planned to be attended by Joe Hannan, Angela Shaw, Dan Fillius, and Paul Ovrom but was cancelled due to COVID-19. The last FDA Produce Safety Alliance Training scheduled for March 26th, 2020 and was also cancelled due to COVID-19. Team member Morgan Hoenig planned two food safety at community/ donation garden workshops for March 2020, but due to COVID-19 these were cancelled. Morgan Hoenig is helping growers with food safety and volunteer safety plan, and is helping to design a hands-free handwashing station for local markets in April 2020.

1. July and August 2019: One farm food safety plan writing plan assistance.
Presenter: Teresa Wiemerslage
2. July 3rd, 2019: Wash Station Building Field Day at Cumming, IA. 6 Participants.
Presenters: Joe Hannan, Dan Fillius

3. July 8th, 2019: Well Inspection Field Day at Logan, IA. 2 Participants. Presenters: Joe Hannan, Dan Fillius, Smaranda Andrews
4. July 9th, 2019: Water Sample Collection, Dallas Center, IA.
5. July 16th, 2019: OFRR demonstration Field Day in Ottumwa, IA. 15 Participants. Presenters: Joe Hannan, Smaranda Andrews
6. July 15th, 2019: Water Sample Collection, Lamoni, IA
7. July 17th, 2019: Water Sample Collection, Decorah, IA
8. July 23rd, 2019: Water Sample Collection, Atlantic, IA
9. July 24th, 2019: Water Sample Collection, Algona, IA
10. July 29th, 2019: Apple Pest Management Field Day, Cambridge, IA. 15 Participants
11. July 30th, 2019: Water Sample Collection, Bloomfield, IA
12. August 2019: Two farm mock USDA GAP Audits in Minnesota (farms sell in Iowa) with both successfully passing the USDA GAP audit. Presenter: Teresa Wiemerslage
13. August 5th, 2019: Iowa State Horticulture Field Station Field Day, Ames, IA. Dan Fillius, Joe Hannan, Morgan Hoenig, Manreet Bhullar, and Smaranda Andrews tabled, networked, and disseminated information to growers in attendance.
14. September 18th, 2019: Midwest Mechanical Weed Control Field Day, Waukesha, WI. Dan Fillius networked with and disseminated information to growers in attendance from Iowa and the North Central Region.
15. October 2019: Assisted three farms update their farm food safety plans from GAP/GHP to Harmonized GAP (FSMA aligned) and pass a third-party audit. Presenter: Teresa Wiemerslage
16. November 2019-December 2019. Assisted with updated Harmonized GAP food safety plans for seven growers. Presenter: Teresa Wiemerslage
17. November 2019: A train-the-trainer workshop for wisconsin food safety educators so they can help farms implement farm food safety plans. An abbreviated, FSMA-only template was created for their use. Presenter: Teresa Wiemerslage
18. November 6th, 2019: Produce Safety Alliance Grower Training, Harlan, IA. 9 participants. Presenters: Dan Fillius, Shannon Coleman, John Krzton-Presson
19. November 8th, 2019: Western Produce Auction Connection Meeting, Clark, MO. Dan Fillius networked with and disseminated information to Plain Community growers in attendance from Iowa.
20. Nov. 24-25th, 2019 Iowa Organic Conference, Iowa City, IA. Anirudh Naig tabled and disseminated information to growers in attendance. 190 registrants
21. December 3rd, 2019: Plain Community Produce Safety Alliance Grower Training, Kalona, IA. 31 participants. Presenters: Dan Fillius, Angela Shaw, Morgan Hoenig
22. Jan. 9-10th, 2020 Great Plains Growers Conference, St. Joseph, MO. Presenters: Joe Hannan. Trade Show Booth: Joe Hannan
23. Jan 8, 2020 Mid-Ohio Growers meeting Dan Fillius networked with and disseminated information to growers in attendance.
24. January 14th, 2020: Produce Safety Alliance Grower Training, Emmetsburg, IA. 8 Participants. Presenters: Angela Shaw, Dan Fillius

25. Jan. 16-18th, 2020 Practical Farmers of Iowa State University Dan Fillius networked with and disseminated information to growers in attendance.
26. January 23rd, 2020: Plain Community Produce Safety Alliance Grower Training, Elma, IA. 67 Participants. Presenters: Anirudh Naig, Teresa Wiemerslage, Dan Fillius. On-site administrative support: Ellen Johnsen, Paul Ovrom
27. Jan. 23-24th, 2020 Iowa Specialty Producers Annual Conference. Presenters: Dan Fillius and Shannon Coleman Trade Show Booth: Joe Hannan and Dan Fillius
28. Jan. 28th, 2020: Plain Community Produce Safety Alliance Grower Training, Independence, IA. 21 Participants. Presenters: Joe Hannan, Dan Fillius
29. Jan 31-Feb 1, 2020 Organic Vegetable Production Conference Dan Fillius presented Practical Steps for Maintaining Food Safety, and moderated 2 sessions on vegetable production.
30. February 2020. Taught a farm food safety plan workshop for workers on tribal farms. Used the Harmonized GAP template. Presenter: Teresa Wiemerslage
31. Feb. 1st, 2020 Iowa Farmers Market Association Annual Meeting. Shannon Coleman and Paul Ovrom provided an overview of the food safety programming opportunities for growers and farmers market managers
32. February 4th, 2020: Produce Safety Alliance Grower Training, Iowa City, IA. 16 Participants. Presenters: Joe Hannan, Dan Fillius, Morgan Hoenig
33. February 11th, 2020: Produce Safety Alliance Grower Training, Knoxville, IA. 6 Participants. Presenters: Joe Hannan, Dan Fillius
34. February 25th, 2020: Produce Safety Alliance Grower Training, Ottumwa, IA. 9 Participants. Presenters: Dan Fillius, John Krzton-Presson
35. March 3rd, 2020: Produce Safety Alliance Grower Training, Rockwell City, IA. 7 Participants. Presenters: Joe Hannan, Dan Fillius
36. April 2nd, 2020: North Central Regional FSMA Center Virtual Annual Conference. Presented about plains community grower work. Virtual. 85 participants. Presenters: Dan Fillius

Shannon Coleman led the video team in the development of two videos on field contaminants ([link](#)) and water infiltrations ([link](#)). The videos are available on the safe produce site and shared to the NEACFS clearing house. We will also have an educational video on preparing for an OFRR, before the end of year 4 but have been delayed due to COVID-19.

Our team has incorporated technology and non-technology methods in year 4 as well. Specifically, our team has increased its awareness of underserved populations within Iowa and have made efforts to ensure they are included. Realizing that known Amish communities were not attending our trainings, we reached out to them and found transportation to be a common barrier to participation. All communities thus far have had large enough numbers of growers to justify organizing a PSA training in each community, eliminating the need for the growers to travel a long distance.

Dan Fillius has published a newsletter 5 times for growers who attended PSA grower trainings. The goal for these is to keep growers updated about FSMA deadlines and current about food safety best practices. These newsletters are emailed to most growers and mailed using USPS for growers without computers. Roughly 50% of growers utilize this resource.

Using the same mailing list as the newsletter list, we sent out a survey to growers to learn how they have changed their on-farm food safety practices since attending the PSA grower training. Results were tabulated in early 2020 and outreach is being tailored to our growers based on the results.

Under objective 5 (Multi-Year Planning), Team members are in frequent contact with each other determining additional activities and keeping each other posted with the team's progress. Year four will give us the opportunity to evaluate what went well and also the changes we need to implement to move our work forward.

We have also worked with other states Departments of Agriculture to ensure uniformity and lessons learned are shared. Specifically, Joe Hannan and John Krzton-Presson attended a meeting of state inspectors in Wisconsin in October 2019 which was convened to assess consistency between states with regards to farm inspection criteria and judgment. Angela, Dan, John, and Teresa attended NCR Blastoff II October 9-10, the regional NCR FSMA Center's annual education and development meeting, which Joe helped plan. They strengthened connections with other regional educators, participated in training exercises, and learned new teaching techniques. Dan and Teresa completed Success stories for the NCR site and Dan's was an ANR success story also. Teresa is working with MN and WI to conduct a record keeping workshop. We have hosted joint Produce Safety Alliance Trainings with Wisconsin, Minnesota, and Missouri and have sent members of our team to Ohio, Indiana, Michigan, Nebraska, Kansas, South Dakota, Wisconsin and Minnesota for educational sharing at grower conferences and field days.

Section B.3. Competitive Revisions/Administrative Supplements.

None

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

Joe and John attended the state inspector meeting (See B.2), and Dan, Angela, John and Teresa attended the NCR Training Blastoff II (See B.2) The team provided education at many conferences this year (see B.2) with a goal of educating on best practices for growers, processors, holding owners, and workers. These conferences reached about 550 growers in year 4. Teresa attended Harmonized GAP auditor training. She used that experience to update the farm food safety template and help farms implement food safety programs.

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

Teresa Wiemerslage 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. 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 updated the produce safety information on two main food safety web portal at www.safeproduce.cals.iastate.edu or www.iowafoodsafety.org. Team members also created and updated 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. On a national level, Joe Hannan presented Iowas work at the Local Food Conference in Washington D.C. in December 2019 to 20 national and the team presented at the Southern FSMA Center meeting in Savannah, South Carolina in January 2019, Great Plains Conference in St. Joseph, Missouri in January 2019, Northeast FSMA Center meeting in February 2020 in New York, and the North Central Regional FSMA Center virtual meeting in April 2020. A team member will be presenting at the Western FSMA Center meeting in May 2020 virtually.

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

Objective #1: Establishment of a Sustainable Communication Network and Infrastructure Development. The goal is to establish a communication network to facilitate the exchange of knowledge and resources within and between the: 1) Extension Educators; 2) Iowa Department of Agriculture and Land Stewardship; and 3) FDA and other government bodies AND develop the infrastructure to collect data and educator the growers. We will rely on virtual meetings, developed website and Cybox to share the materials learned between these bodies. The year five benchmark is to have twelve meetings amongst extension educators and two meetings amongst team members and IDALS and update the database of all the participating growers and ensure the website is up to date.

Objective #2: Conduct a Self-Assessment for Growers. Our goal is to complete an Iowa based self-assessment for the growers to determine the educational priorities and population-specific educational needs. The developed self-assessment survey for the North Central Regional Center for FSMA training will be modified to be specific for Iowa. Dr. Shaw will assist with the development, while the extension educators will assist with the dissemination of the surveys. For year five, the benchmarks are to complete 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. Third party data collection as part of state and national evaluation. Final report on compliance with all participants.

Objective #3: Conducting on-farm inventory assessments and follow-ups. Our goal is to develop an on-farm inventory assessment that can determine if growers are in compliance with the FSMA Produce Rule and conducting reviews and follow ups in all 20 regions of Iowa. We will develop the on-farm inventory assessment specific to Iowa based on the developed on-farm inventory assessment developed for the North Central Regional Center for FSMA training. In year 5, we will review any on-farms that had critical violations and require more technical extension assistance. The year five benchmark is to provide farm visits to five farms that are in need of critical violations technical assistant sessions.

Objective #4: Conducting extension education, outreach and technical assistance. Our goal is to provide education and technical assistance to those growers that must be in compliant with FSMA Produce Rule will be the emphasis. Our benchmark for year five is 10 follow up FDA Produce Safety Alliance Trainings session from year 3; all 7 educators have professional continuing education. Peer-reviewed journal of the results from project. Presentation of results in oral and/or poster form at state and national conferences.

Objective #5: Multi-Year Planning. Our goal is to determine additional activities and progress of the team from year to year. This will include virtual meetings, bi-annual meeting with the entire team. This will include reviewing the documentation of the knowledge and behavioral changes through pre- and post-training surveys of growers; documentation of on-farm inventory assessment and follow up documents. For each year five benchmark will be to have two meetings with the entire team and an annual report summary.

Section C - Products

Videos: How to test water; Pest management; Infiltration; and Best practices for field contaminants. We will also have an educational video on preparing for an OFRR, before the end of year 4.

Podcast: Joe Hannan and Dan Fillius discussing the value of SOP's and a worker training program in April 2020. Joe Hannan and Paul Ovrom discussing Farmers Market Best Practices in April 2020. In June and July 2020, plan is to produce three more podcast about On-farm readiness review and inspection on farm best practices.

Press Releases related to COVID-19:

- Angela Shaw, Ellen Johnsen, Alexis Townsend (Animal Science Undergraduate student), Shannon Coleman, and Anirudh Naig led the effort in development of the Extension COVID-19 webpage.
<https://www.extension.iastate.edu/disasterrecovery/covid-19>
- Angela Shaw, Joseph Hannan, Shannon Coleman and Ellen Johnsen. Assisting the Iowa Department of Agriculture and Land Stewardship with the Iowa Farmers Market Summer 2020 guidance. Not finalized yet.
- Angela Shaw Featured in YouTube Video. April 3rd, 2020. People are more dangerous than food! (COVID-19 food safety tips).
https://www.youtube.com/watch?v=vhx5RM41Pk&feature=youtu.be&fbclid=IwAR3ufBKB69pTdZ9PzLt1bDsrkKJUJbDnhOZK6M7eKjuDGiMUba73NU_lrTc
- Dr. Shaw featured in newspaper article by The Courier. April 3rd, 2020. ISU food safety expert debunks notion of washing veggies with soap.
<https://wcfcourier.com/news/local/isu-food-safety-expert-debunks-notion-of->

[washing-veggies-with-soap/article_3bdb008f-df31-5f21-b42d-52f40fbf1936.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share&fbclid=IwAR2Wif_ObYrUfpmIkO1t6r35ySOg_DExJCxdpC3ON6qSeaodiHtRIi9DDAE](https://www.extension.iastate.edu/news/follow-grocery-shopping-best-practices-during-covid-19?fbclid=IwAR3Suo3CrXPleOwrhWXReQvTrLok9SzNRchL_JuocyngBAFztHq5FcjvC_s)

- Angela Shaw, Shannon Coleman, Anirudh Naig. April 6th, 2020. Follow Grocery Shopping Best Practices during COVID-19 .
https://www.extension.iastate.edu/news/follow-grocery-shopping-best-practices-during-covid-19?fbclid=IwAR3Suo3CrXPleOwrhWXReQvTrLok9SzNRchL_JuocyngBAFztHq5FcjvC_s
- Angela Shaw, Shannon Coleman, Anirudh Naig. March 31st, 2020. No Evidence COVID-19 Is Transmitted through Food and Food Packaging.
https://www.extension.iastate.edu/news/no-evidence-covid-19-transmitted-through-food-and-food-packaging?fbclid=IwAR1T7_92jBQLnoXvC2fz0jC8dVumeqVZ-66IRGZzvBO41z6VJNeFhidZmNo
- Anirudh Naig. April 1st, 2020. Free Food Safety and COVID-19 Training Opportunities for Food Handlers throughout April.
<https://www.extension.iastate.edu/news/free-food-safety-and-covid-19-training-opportunities-food-handlers-throughout-april?fbclid=IwAR2Nf4wjjoTeoTFu3vLQ39ibNP4gWZpXoW42cEvyCiHvYdbDb5QLhQXnAns>
- Anirudh Naig, Angela Shaw, Shannon Coleman. April 4th, 2020. Use Cleaning and Disinfectant Agents Safely to Fight COVID-19.
<https://www.extension.iastate.edu/news/use-cleaning-and-disinfectant-agents-safely-fight-covid-19>

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
- Anirudh Naig, PhD Associate Professor ISU Dept. of Apparel, Events and Hospitality Management.
- Paul Ovrom, State Horticulturist. Iowa Department of Agriculture and Land Stewardship
- Joe Hannan, Commercial Horticulture Field Specialist, ISU Extension and Outreach
- Teresa Wiemerslage, Food System Field Specialist, ISU Extension and Outreach
- Dan Fillius, ISU Extension Specialist, Food Safety Educator
- Smaranda Andrews, PhD, Department of Food Science and Human Nutrition, Lecturer
- Morgan Hoenig, ISU Extension Specialist, Local Foods Coordinator
- John Krzton-Presson, Marketing Specialist, Iowa Department of Agriculture and Land Stewardship
- Manreet Bhullar, Graduate Student, ISU Food Science and Nutrition

Section E. Impact

The Iowa based Produce Safety Team won the Research Based Team Award for Iowa State University Extension and Outreach

(<https://www.regcytes.extension.iastate.edu/eac/awards-ceremony/>), and has completed two success stories about our work. 1) The FDA Produce Safety Network collaborated with the NCR FSMA Center and Iowa State University Extension and Outreach to develop a 1.5 day conference and tour in Iowa to discuss **biological soil amendments of animal origin**. 2) Plain community growers are generally concentrated in small areas. Bringing trainings to their communities can generate large audiences for trainings if an **educator has built a relationship with the community**.

Section F – Changes/Problems

Change in Personnel

- Manreet Bhullar, PhD Student funded by this project, graduated December 20th, 2019.
- John Krzton-Presson accepted the position of Marketing Specialist with IDALS at the end of Year 3, leaving his position at ISU Extension and Outreach, but remaining on our grant team.

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

The COVID-19 pandemic has put all in-person trainings/meetings on hold. The team is working to provide remote options. Specifically, the Iowa State University team is not to hold any in-person meetings nor travel to any farms between March 15th, 2020 and May 31st, 2020. This conclusion date may be extended depending upon the pandemic status in Iowa.

F.3. Significant changes to human subjects

The human subject approval was modified and approved for surveying the Plain Grower population about the outreach in February 2020. The human subject number was not altered.