



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

# **North Central Regional Center for FSMA Training, Extension, and Technical Assistance**

## **Year 3, 6 Month Progress Report for the North Central Regional Center for FSMA Training, Extension and Technical Assistance to the National Center**

Developed by:

Angela M Shaw - Project Director  
Linda Naeve - Partnership Manager  
Catherine Strohhahn - Curriculum Manager  
Arlene Enderton - Evaluator  
Ellen Johnsen - Project Manager

### **Introduction**

In February of 2016, the North Central Regional Center for FSMA Training, Extension, and Technical Assistance (NCR FSMA) was established by the FDA to represent the 12 states (Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Ohio, and Wisconsin) in the Midwest region of the United States. The North Central Regional Center's specific aims are to:

- a) Establish a sustainable communication network connecting educators and grower/processors throughout the NCR to facilitate collaboration for FSMA compliance preparation and build training capacity;
- b) Conduct a regional needs assessment and identify the gaps in knowledge for growers and processors and necessary educational tools or technical assistance for educators;
- c) Develop and implement a food safety program that addresses the needs of small-scale growers, processors and educators, and provides region-specific technical and FSMA rule assistance in the NCR; and
- d) Use continuous evaluation of the impact of food safety training and technical assistance offered by the NCR FSMA as feedback to improve training and other services.



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

### Accomplishments in the First Two and Half Years

#### Objective 1: Establishment of Sustainable Communication Network

##### 1.1 Identify growers/ processors and educators in NCR:

###### Year 1

- Signed nine state lead sub-contracts. Each subcontract has an established statement of work on how to best spend the money.
  - University of Illinois, Purdue University, Kansas State University, University of Minnesota, Lincoln University, University of Nebraska-Lincoln, North Dakota State University, South Dakota State University, and University of Wisconsin-Madison.
- Service agreement was established with Michigan State University in January 2016 for their time and efforts on the grant.
- Co-PI Linda Naeve collaborated with State leads to identify organizations and agencies with direct contact to growers and/or processors in the NCR.
  - We created a spreadsheet that identified Partners, with between 2 to 36 stakeholders per state. Partners assist in dissemination of NCR information and support for our food safety education programs. With the support of these Partners, we are able to reach farmers without asking for confidential contact information or membership lists. We estimate that with this database we can reach over 2,000 growers in the 12 state region.

###### Year 2

- Signed original nine state lead sub-contracts. Each subcontract has an established statement of work on how to best spend the money.
  - Sub-contracts are with the following universities: University of Illinois, Purdue University, Kansas State University, University of Minnesota, Lincoln University, University of Nebraska-Lincoln, North Dakota State University, South Dakota State University, and University of Wisconsin-Madison.
- Established a service agreement with Michigan State University to assist with development of educational add-ons.
- Distributed \$500 payments to each of the 22 of our extension group partners (i.e. farmers, processors, non-profit organizations, etc.) who receive compensation for participation in the NCR FSMA's activities (i.e. providing feedback on materials, working with add-on product development groups, attending virtual meetings, etc.).
  - Bear Butte Garden, Happy Hollow Farm, The Salad Garden, Millsap Farms, Minnesota Farmers' Market Association, Minnesota Food Group, Marquette Food Co-op, Pittsburg Farmers Market, Kansas Fruit and Vegetable Growers Association, Berry Patch Farms, Strawridge Farm, Rendleman Orchards, Grani's Acres, and Pekarek Produce, Entrepreneurial Center for Horticulture, Pine Ridge Extension, Pine Ridge Ag Economy Initiative, Organic Valley Cooperative, Dan Zimmerman, Misty Philips, FairShare CSA Coalition, and MOSES



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

### Half-way through Year 3

- Signed nine state lead sub-contracts. Each subcontract has an established statement of work on how to best spend the money.
  - Sub-contracts are with the following universities: University of Illinois, Purdue University, Kansas State University, University of Minnesota, Lincoln University, University of Nebraska-Lincoln, North Dakota State University, South Dakota State University, and University of Wisconsin-Madison.
- Established a service agreement with Michigan State University to assist with development of educational add-ons.
- Distributed \$500 payments to 25 of our extension group partners (i.e. farmers, processors, non-profit organizations, etc.) who receive compensation for participation in the NCR FSMA's activities (i.e. providing feedback on materials, working with add-on product development groups, attending virtual meetings, etc.).
  - Michigan Group GAPs, Minnesota Farmers' Market Association, Happy Hollow Farm, Millsap Farms, Pekarek Produce, Daniels' Produce, Strawridge Farm, Hilltop Farm, Frey Farms, Flora Produce, Entrepreneurial Center for Horticulture, Pine Ridge Extension, Pine Ridge Ag Economy Initiative, Bear Butte Garden, FairShare CSA Coalition, MOSES, K-State Extension, Rendleman Orchards, Grani's Acres, Cedar Valley Produce Auction, The Salad Garden, Nebraska City Farmers' Market, Berry Patch Farms, Kansas Fruit and Vegetable Growers Association, Harriet Behar, and Misty Philips

### 1.2 Develop public website and internal website interface:

#### Year 1

- Our team established an internal communication web portal (Box) where the team can exchange and hold grant documents for grant team members with login privileges given for privacy ([https://iastate.app.box.com/files/o/f/7362071885/NCR\\_FSMA](https://iastate.app.box.com/files/o/f/7362071885/NCR_FSMA)).
- We also created a public/external website interface (<https://ncrfsma.org/>).

#### Year 2

- Information, including FDA updates, local trainings, and job openings, are frequently added to the website.
- We expanded the Resource section to include listings by states and topics.
- Subgroup members use the internal Box as a portal for collaborative work and a clearinghouse for material review.

### Half-way through Year 3

- Website is updated regularly with new resources, FDA announcements, and newsletters.
- The internal Box is used by state leads and extension partners. We utilize FoodShield for sharing with the FDA.



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

### 1.3 Provide training on how to use public and internal website:

#### Year 1

- Training was provided during bi-monthly meetings in May and July of 2016 along with a developed guidance document to ensure all grant team members had access to the web portal.

#### Year 2

- We provided training for Wisconsin, Ohio, and Minnesota Department of Agriculture and other partners wanting to be more involved with the NCR FSMA add-on material development who needed access to the internal website.

#### Half-way through Year 3

- This has not been necessary in Year 3.

### 1.4 Communication Plan (milestone):

#### Year 1

- Bi-monthly virtual team meetings are recorded and a monthly newsletter was disseminated to State leads and Partners as a communication tool noting updates of all NCR activities and action items, current and forthcoming.
- To increase dialog opportunities, beginning in January 2017, listening sessions are held the second Tuesday of each month. These additional sessions were initiated because of the annual review by our Evaluator with each State lead, where State leads and Partners voiced a need to have more time to communicate with others about topics without a set agenda.

#### Year 2

- Conducted five NCR FSMA virtual meetings for state leads, extension partners, and other partners.
  - Minutes and recordings for the meeting on May 5, August 11, October 13, December 8, 2017, and Feb. 9<sup>th</sup>, 2018 are available in the Box (internal website).
- Conducted eleven optional listening session calls for our Extension Partners, State Leads, and Department of Agriculture, Produce Safety Alliance, and FDA staff.
  - Minutes and recordings for the meetings on March 21, April 18, June 20, July 18, August 15, September 19, October 10, November 21, December 19, 2017, January 16, 2018 and February 20<sup>th</sup>, 2018 are available in the Box (internal website).
- Added an evening Listening Session in September of 2017 to broaden the opportunity for stakeholder involvement.

#### Half-way through Year 3

- Conducted three NCR FSMA virtual meetings for state leads, extension partners, and other collaborators.
  - Minutes and recordings for the meetings on April 13, June 8, and August 10, 2018 are all available in the Box. Minutes were uploaded to FoodShield.
- Conducted six optional Listening Sessions for extension partners, state leads, and staff from Departments of Agriculture, Product Safety Alliance, and FDA.



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- Recordings and minutes from meetings on March 20, April 17, May 15, June 19, July 17, August 21, 2018 Listening Sessions are available in the Box.
- Ended the evening listening sessions due to low attendance.

### **Objective 2: Conduct Needs Assessment with Growers/ Processors and Educators**

2.1 Develop needs assessment surveys, 2.2 Administer two needs assessment surveys, and 2.3 Information gathering and consensus building through a modified Delphi approach.

#### Year 1

- Co-PI Dr. Catherine Strohbahn led development and validation of a needs assessment survey for growers.
  - Protocols were developed to describe the modified Delphi approach to ensure representation from stakeholder groups. The modified Delphi approach with two rounds of surveys focused on information needs and preferred methods of delivery for materials to assist in compliance with the FSMA Produce Safety rule.
  - Round One was more general and completed November 30, 2016. This round assessed respondents' perceived knowledge and information needs regarding key topic areas of the Produce Safety Rule (soil, water quality, animals, worker health, equipment and tools, and other information needs) using a five-point Likert rating scale. The survey included a similar scale to assess preferred methods of information delivery. Comment boxes were available in all sections.
    - The survey requested demographic information related to the respondent (i.e. age, gender and number years farming) and the farm (i.e. types of crops, market venues used). Partners and State leads disseminated the electronic survey using the developed database and distributed 100 paper versions at producer meetings and other gatherings.
    - Data from 325 respondents from all states in the NCR were analyzed using descriptive statistics. Open-ended responses were independently themed by four reviewers who then discussed and reached consensus.
  - Based on these findings, the Round 2 survey was developed. This survey was more focused to identify greatest information needs and most useful methods of delivery. Results of this survey are included in Year 2.
- Dr. Angela Shaw and Ms. Arlene Enderton, developed and validated a supplementary survey for the Preventive Controls Human Food Course.
  - This survey was disseminated to the State leads and Partners in June of 2016 for use at end of such trainings. As of Feb. 28<sup>th</sup>, 2018, 20 surveys from our State leads have been received. Low response is likely due to lack of involvement with Preventative Control trainings. We shared the survey with other Regional Centers.



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- An audit checklist is also being developed for processors of fruits and vegetables based on the Preventive Control Human Food Rule.

### Year 2

- Round Two of the Grower Needs Assessment was disseminated January 2017 using the same process for Round One and closed at the end of February.
  - The survey identified the top needs for information and growers' preferred methods of delivery. Results showed that respondents least understood topics related to soil and water requirements, and domestic and wild animal fecal risk prevention.
  - Qualitative responses were independently reviewed by three researchers with consensus reached on themes. Educational resources to reach alternative, underserved stakeholders (i.e. non-English speakers and the Plain Community) through the use of visual based messaging and support on how to provide worker training were identified as needs.
  - Checklists or fact sheets were the most preferred methods of information delivery. Respondents also preferred resources incorporating hands-on learning (i.e. field days).
- We pilot tested the audit checklist for processor with two sets of five fruit and vegetable processor companies in the NCR in February and April of 2017.
- We disseminated a needs assessment survey to all 12 states in NCR in September 2017 with an end date of October 31, 2017. Sixteen personnel with a wide variety of managerial titles in Iowa, Michigan, Illinois, and Wisconsin completed the survey. The processors preferred to receive new information via online modules/short courses, checklists, and PDF fact sheets. The topics of lowest knowledge and highest information needs regarding Preventive Controls for Human Food were Supply-chain program, Validation, and Verification. The lowest Current Good Manufacturing Practice knowledge areas and highest information needs areas were holding human food for animal feed and Defect action levels. With regard to the Sanitary Transportation Rule, the lowest knowledge areas and highest information need areas were Vehicles and transportation equipment, Transportation operations, and Training and Records. With Registration, the lowest knowledge area and highest information needs area was waiver requests. Processors also need more information on compliance dates for small businesses and the Foreign Supplier Verification program. Due to low participation in the needs assessment among processors, we will conduct phone interviews in spring of 2018 to gather more information on needs. We received human subject approval for this next phase of the needs assessment on December 11, 2017 (IRB #17-595).

### Half-way through Year 3

- One manuscript is in review with Food Protection Trends and two manuscripts are in review with Journal of Extension related to the needs assessment development and results.



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

### 2.4: Assess current curricula at federal, state, and local levels that meet the priorities identified in the needs assessment

#### Year 2

- We saved electronic versions of resources that addressed top educational needs identified in the Growers' Needs Assessment to the Box for subgroups to evaluate if currently available materials were useful for their needs.
- These resources were also added to the website as a resource under each topic for public access.

#### Half-way through Year 3

- Actively updating website with new curricula developed nationally that meets the needs assessment priority areas.

### 2.5: Develop list of extension and research priorities

#### Year 2

- Developed a list of educational and research priorities based on the Growers' Needs Assessment and review of available curricula. The NCR FSMA identified 14 topic areas for which to develop new educational add-ons. State leads and Extension Partners signed up for their preferred topics and subgroups began meeting in July. See Objective 3 for progress.
- The NCR FSMA project team submitted one manuscript on development of the Growers' Needs Assessment for peer-review, and the second round review was completed in January 2018. A new revision was submitted for peer review by March 30, 2018. A second peer review manuscript will be submitted in March 2018 to the Journal of Extension on the development and implementation of the processors checklist tool. A third peer review manuscript was submitted in April 2018 on results of the second round of the Growers' Needs Assessment.

#### Half-way through Year 3

- Since the needs assessment was conducted, the Listening Sessions have been utilized to determine new extension and research priorities in the region.
- Individual states have utilized the results from our needs assessment to leverage additional non-grant funds to develop new add-on materials to help with meeting growers and processors needs. Examples include BSAOO factsheet by Kansas State University and two videos on cleaning coolers and crates and machinery by Iowa State University.

## **Objective 3: Development of a NCR Food Safety Program Based on the Identified Regional Priorities**

### 3.1: Development of NCR Food Safety Program

#### Year 2

- Subgroups have been developing fact sheets, videos, and flipcharts to address the 14 identified topics. Here is the current stage of progress.
  - The following items have been reviewed by the FDA and the NCR FSMA is making necessary changes:
    - Wildlife Management Guidance



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- Value Added Product Guidance: Pickles and Relish; Fermented Foods; Jams and Jellies; Frozen and Dehydrated (4 separate)
- Practical Record Keeping: Exemption Worksheet
- On-Farm Training Guide for Employees and Volunteers
- U Pick Guidance
- Guidance for Wine and Hops and Wine Grapes (3 separate)
- Domestic Animals Guidance
- Biological Soil Amendments Guidance
- Bodily Fluid Clean Up on the Farm
- We are supporting the work of other organizations/partners, therefore, new materials specific for the following are not being produced:
  - Organic Production Group - We are collaborating with Georgia Organics to review their documents. We are also working with another Organic group for FSMA/Organic training for inspectors.
  - Plain Community - The Ohio State University and Michigan State University have grant funding to work on food safety materials for this audience. We are supporting their efforts through reviewing materials and letters of support.
- Other documents in development
  - Interactive quizzes for Value added products processors were developed.
  - Additional record keeping documents for on-farm use.
  - Four Hmong videos have been recorded and currently are in post-production with recording by Hmong actors for voiceover narration. English subtitles are included.
- Documents with FDA Courtesy Review and Edited:
  - Checklist for Preventive Controls Human Food and Good Manufacturing Practice. Available on the [NCR FSMA website](#).
- Document for which FDA review was not needed:
  - Practical Record Keeping: Qualified Exemption Review Flow Chart Worksheet (excel sheet). A graphic designer is working on the formatting.

### Half-way through Year 3

- Resources available for use:
  - Checklist for Preventive Controls Human Food and Good Manufacturing Practice. Available on the NCR FSMA website.
  - Practical Record Keeping: A tool to aid growers in determination of qualified exemption and documentation.
  - Interactive quizzes are on the NCR website for those who make Value Added Products and wish to test their knowledge about FSMA requirements.
  - GAP training videos in Hmong (with English subtitles).
  - Checklist for Retail Purchasing for Local Fresh Produce.
- In late July, the FDA returned these educational add ons after their review. The following resources are undergoing final formatting by our graphic designer:
  - Wildlife Management Guidance
  - Domestic Animal Guidance
  - Biological Soil Amendments (Compost) Guidance





## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- U-Pick Guidance
- Practical Record Keeping: Pre-Harvest Checklist
- FSMA Guidance for Orchards
- Guidance for Bodily Fluid Clean Up on the Farm
- Value Added Products Fact Sheets: Fermented Foods; Jams and Jellies; Frozen and Dehydrated Foods; and Pickled Vegetables
- Items still in development include:
  - Guidance for Winery
- The following resources are being reviewed by the subgroups and will soon be sent to our graphic designer:
  - On-Farm Training Guide for Employees and Volunteers
  - Guidance for Vineyards
  - Guidance for Hops

### 3. 2: Feedback and Modifications

#### Year 2

- As educational add-ons have been developed, extension partners have provided feedback. They send their comments and suggestions to the subgroups to incorporate changes as needed.
- The FDA has been providing feedback via FoodShield. See Objective 3.1 for details.
- The first round of reviews was provided in February 2018. A second round of reviews was completed by April 2018. Target completion date of final product review is end of June 2018.

#### Half-way through Year 3

- Review process is almost complete on all the add ons. Expected release by November 2018.

## **Objective 4: Increasing the Knowledge and Capacity of Educators Providing NCR Food Safety Programs (Trainings and Technical Assistance)**

### 4.1: Establish a network of lead trainers

#### Year 1

- To increase the knowledge and capacity of educators in the NCR, the NCR FSMA funded 63 members of the project network to attend Produce Safety Alliance Train-the-Trainer Courses (18 at a Kansas State University training, 22 at a Minnesota training, 1 in Illinois and 23 at Overton, Texas [due to availability]). An additional 60 members of the project network from Michigan and Ohio have also been trained using funds outside the NCR grant in Year 1.
- We estimate that 29 people in the North Central region have applied for Lead Trainer status, and another 16 intend to apply, but haven't done so yet. Because of the lengthy review process, no one had received Lead Trainer status at end of Year 1. A list of Approved Lead Trainers for Produce Safety and Preventative Controls Human Food was provided once available.



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- The NCR FSMA Center network was involved with 39 outreach efforts reaching an estimated 919 number of participants.

### Year 2

- Our State leads and Extension Partners hosted Train-the-Trainer courses in St. Louis on October 11-12 and St. Paul on November 28-29, 2017.
- We continued to offer honorariums for affiliates of the NCR FSMA to attend Train-the-Trainer events held in our regions. This effort is to increase the number of lead trainers and trainers that provide technical assistance and educational programming in the NCR.
- As of March 2018, there are 206 PSA trainers in the North Central Region listed on the PSA website. Of those, 35 are Lead Trainers.
- The NCR has also provided funding to our State Lead partners to support Produce Safety Alliance Grower Training. This support includes purchasing items needed for PSA courses (i.e. manuals, binders, handouts), assistance in transporting growers to training (i.e. mileage, hotel, transportation), and PSA lead trainer exchange (i.e. PSA leader transportation to course). Most of these efforts are targeted to under-represented populations. Examples include transportation for four Plain Community growers to attend a PSA training in Missouri, transportation and hotel reimbursement for growers who must travel several hours to attend a PSA training in South Dakota, and transportation reimbursement of trainers to provide a PSA training at the Great Plains Conference. Funds were provided to fund a Preventive Controls course in Kansas. The NCR also helped a graduate student attend a PSA Train the Trainer event. Many extension specialists do not have funding to provide PSA trainings outside of their time as in-kind. The NCR has provided PSA manuals, binders, and handouts for trainings in Michigan, South Dakota, Nebraska, Minnesota, Kansas, and Missouri.

### Half-way through Year 3

- We continue to support produce safety in the region by allowing each state lead to allocate funds where needed in their state. We have paid honorariums for people attending PSA and FSPCA train-the-trainer events; purchased resources for trainings; and provided matching funds for other grant opportunities.
- As of September, 2018, there are 226 PSA trainers in the NCR that are listed on the PSA website. Of those, 38 are Lead Trainers.

## 4.2 Develop educators' food safety program

### Year 2

- A needs assessment of educators who attended the Produce Safety Alliance Train-the-Trainer course was completed to determine what additional support materials we could develop to increase trainers' confidence in presenting the curriculum. NCR FSMA staff invited 64 NCR FSMA partners, many who had taken the PSA train-the-trainer course, to take an electronic survey during the summer of 2017. Data was analyzed using Predictive Analytics Software (PASW). We received 13 responses (20% response rate). Results indicated that, on



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

average, the respondents had 9 years of experience working in the area of food safety and with produce growers. Trainers are fairly confident answering questions on most of the modules, but less so on 3 (Biological Soil Amendments of Animal Origin; Wildlife, domesticated, and land use; and Agricultural Water). Specifically, the least understood topics from the PSA training were: (1) co-management strategies for wildlife, domesticated animals, and land use that address conservation and food safety goals, and (2) types of agricultural water tests required. Trainers indicated they are most likely to use web-based handouts and checklists and least likely to use Facebook/Twitter and DVDs. Respondents wrote in additional educational materials they would like developed, which included: (1) A half-day curriculum that is introductory/supplemental to the PSA training; (2) Blurbs trainers can use to communicate with farmers, such as templates; (3) More opportunities to interact/co-teach with other trainers; (4) In-depth resources on water testing and composting; (5) A quick guide of how to handle/clean the most common types of produce; and (6) A checklist for each section relaying exactly what is prescriptive or required by the FSMA Produce Safety Rule as a "minimum." As a result of these findings, six action items were completed by January 31, 2018. (1) Update of resources specific to the three modules about which trainers are least confident in presenting (Biological Soil Amendments of Animal Origin; Wildlife, domesticated, and land use; and agricultural water) with direct links to materials on the ncrfsma.org website. (2) Educational webinar/document guidance was promoted through the NCR website, newsletters, listening session, bi-monthly meetings, and emails. (3) We also created a collaborative document on CyBox that lists questions trainers have received from participants during Produce Safety Alliance grower training sessions and their answers. Anyone is able to add questions and answers into the document. Instructions on how to utilize this document are provided in the document. (4) We also created documents about who to contact with questions about the Produce Safety Rule, (5) tips on preparing for a Produce Safety Alliance Training and (6) suggestions on working with state level agencies that have FDA Cooperative agreements.

### Half-way through Year 3

- Frequently Asked Questions document was developed to assist trainers of Produce Safety Alliance Grower Course. The questions come from the Grower courses and have been added to by State Lead Partners.
- Listening Sessions are an opportunity for trainers to get their questions answered.
- A demonstration document is being developed to assist trainers with ideas related to hands-on activities for courses.
- Produce Safety Alliance along with Phil Tocco at Michigan State University will be hosting an in-person and web-based outreach event for Produce Safety Alliance Trainers on October 23<sup>rd</sup> in Detroit for all educators.

### 4.3: Feedback and Modifications

#### Year 2



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- As materials are developed, they are reviewed by NCR FSMA network stakeholders and the FDA, with modifications made as necessary.

### 4.4: Train the Lead Trainers

#### Year 2

- We continue to offer honorariums for NCR FSMA network stakeholders attending Train-the-Trainer events held in our region. Our goal is to increase the number of educators who provide technical assistance and educational programs throughout NCR.
- Based on results from Objective 4.2, we developed an action plan, which provides additional NCR education to educators through Listening Sessions. Listening sessions, scheduled once a month at noon and 7pm, provide an opportunity for open conversations on topics related to FSMA.

#### Half-way through Year 3

- We're developing a list of questions asked during actual PSA trainings to help trainers prepare for courses. We continue to discuss trainings and OFRR's as part of the Listening Sessions.

## **Objective 5: Delivery, Implementation, and Evaluation of NCR Food Safety Program for Growers and Processors**

### 5.1 Develop evaluation surveys:

#### Year 1

- Arlene Enderton and Alice Topaloff have created several evaluation surveys. These include: post-training survey for processors fruits and/or vegetables at the end of Food Safety Preventive Control Alliance (FSPCA) courses; an electronic follow-up survey to send to fruit and/or vegetable processors 12 months after the FSPCA course to measure impacts; and a short survey regarding produce safety to administer to growers at field days and workshops. They also assisted with the design and analysis of the two rounds of grower needs assessments described in objective 2.3. They conducted interviews with State leads to learn ways to improve collaborative work and assess impacts of the work thus far. Project evaluators participate in all of the bi-monthly calls with updates of their work.

#### Year 2

- Arlene Enderton continues work on the evaluation of the project- collecting data and stories to highlight the Center's work. She is working with evaluators from other regional centers to ensure consistency in evaluation work.
- In 2017, we conducted interviews with 18 extension partners, who included growers as well as professionals working for grower or educational organizations. This is part of our formative evaluation. We also conducted year-end interviews with 12 State leads, as part of our process evaluation.
- The year 2 impact report is posted on the website at <https://ncrfsma.org/files/news/files/NCR%20FSMA%20Year%202%20Impact%20Sheet.pdf>.

#### Half-way through Year 3



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- Four impact stories have been developed for the north central region. More impact stories and graphics can be found on our website.

### 5.2 Validation of evaluation surveys

#### Year 2

- We worked with evaluators from the other three regional centers to develop common metrics and evaluation tools. We collaborated to create a 12-month follow-up survey for the Produce Safety Alliance Grower trainings and an interview template to gather impact stories. This was sent out by two states in January 2018, and two more states are administering it in March 2018.
- We began using the Southern Center's Knowledge Assessment in PSA courses across the NCR in October 2017. Preliminary results from the knowledge assessment are included in the Year 2 Impact Report.

#### Half-way through Year 3

- Arlene Enderton, Project Evaluator, conducted a 12-month follow-up survey with growers who attended a PSA course. The executive summary can be found at [https://www.ncrfsma.org/files/news/files/executive\\_summary\\_12\\_mo\\_survey.pdf](https://www.ncrfsma.org/files/news/files/executive_summary_12_mo_survey.pdf).
- Arlene Enderton and graduate students continue to assess the PSA courses through a Pre- and Post- Knowledge Assessment. Over 700 participants took both the pre- and post- surveys.

### 5.3 Delivery and Implementation of NCR Food Safety Program

#### Year 2

- We plan to upload the developed add-on educational materials onto the internal website in May 2018 following FDA review. This is slightly behind our original release date due to delays in return of reviews by FDA in December 2017, and the requirement for a second round of reviews to ensure raised concerns are addressed.

#### Half-way through Year 3

- The majority of the add ons will be released by November 2018. Impacts of these materials will be captured in late Year 3.

### 5.4 Assessment of effectiveness; 5.5 Assessment of program reach

#### Year 2

- We have developed a 12-month follow-up survey for the PSA Growers Training and an interview template to write impact stories to assess our effectiveness and reach.
- To date, our evaluator has captured two impact stories and has plans in year 3 to complete more.

#### Half-way through Year 3

- Additional impact stories have been written and shared on our website.

## **Objective 6: Dissemination of North Central Region Food Safety Program**



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

### 6.1 Branding and packaging NCR Program:

#### Year 1

- We developed marketing materials to provide information about the NCR and its functions. We created a mailing and email list, a Twitter account (<https://twitter.com/NRCFSMA>), a Facebook page (<https://www.facebook.com/NRCFSMA/>), a logo for the North Central Regional Center and a display stand for conferences and events. To ensure communication between State leads and the other four regional centers and national center, team members travelled to conferences. In addition, NCR staff visited University of Minnesota and University of Illinois to determine any specific state needs the center can address.
- Angela Shaw attended the Southern Region Annual meeting at International Association of Food Protection and met with members from National, Western, Southern and Northeastern Regional Centers. National priorities were discussed.
- Angela Shaw travelled to Oregon State University Innovation Laboratory in Portland, Oregon and met with the lead PIs of the Western Center and to Fayetteville, Arkansas to meet with the Tribal Center lead.
- Linda Naeve led development of a Partners' database which includes, but is not limited to, regional food and farming systems groups, specialty crop grower's associations, organic producer associations, farmer NGOs, regional food hubs and produce auctions, extension agents, state SARE coordinators, state departments of agriculture, university and community college faculty, immigrant and tribal farming groups and agencies who serve them, and more. Each state had unique channels for disseminating the needs assessment and information about NCR FSMA accomplishments. These channels included 24 different fruit and vegetable listservs, 5 different Facebook and Twitter pages, and word of mouth through 10 different extensions specialist and governmental units.

#### Year 2

- Angela Shaw travelled to the Western Center Annual Conference in Honolulu, HI in March of 2017 to participate in their annual conference and needs assessment session.
- Linda Naeve, M.S. travelled to Cornell University in Ithaca, New York for the Native American Tribes Outreach, Education, and Training to Enhance Food Safety and FSMA Compliance cooperative agreement quarterly meeting in April 2017.
- Angela Shaw attended the summer 2017 Southern Region Annual meeting at International Association of Food Protection and met with members from National, Western, Southern and Northeastern Regional Centers, where they discussed national priorities
- Linda Naeve, M.S. travelled to Washington D.C. to attend the Local Food Producer Outreach, Education, and Training to Enhance Food Safety and FSMA Compliance cooperative agreement bi-annual meeting to discuss priorities for the center in August of 2017.
- Joe Hannan, Cathy Strohbehn and Linda Naeve, from Iowa State University, hosted NCR FSMA information booths at the Iowa Fruit and Vegetable Growers



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

and the Great Plains Growers' Conferences in January of 2018. Information was also distributed at the MOSES conference in February of 2018.

- Cathy Strohbahn attended the Southern Region Annual meeting and the S.E Fruit and Vegetable Growers Conference in Savannah January 2018.
- Angela Shaw attended the MOSES Annual meeting in Lacrosse, Wisconsin in February 2018.
- NCR FSMA provided support to Michigan State University, University of Nebraska, University of Minnesota, North Dakota State University, South Dakota State University, Kansas State University, Lincoln University, and University of Missouri to provide Produce Safety Alliance grower trainings within their states. Support included purchasing growers' manuals, binders, handouts, transportation and travel support for growers and trainers.
- We discontinued the use of the Twitter account due to lack of stakeholder interest, but continue to post to Facebook most business days.
- The Brenton Center at Iowa State University is developing templates for the factsheets and flipcharts so the educational materials will have a consistent look.

### Half-way through Year 3

- Cathy Strohbahn visited the Western Center Annual Conference at University of California Davis in March of 2018 to participate in their annual conference and needs assessment session.
- Angela Shaw attended United Fresh Conference in Chicago, Illinois in June 2018 to participate in national produce food safety conversations.
- Angela Shaw attended summer 2018 Southern Region Annual meeting at International Association of Food Protection in Salt Lake City, Utah in July 2018 and met with members from National, Western, Southern and Northeastern Regional Centers, where they discussed national priorities.
- Angela Shaw attended The Food Safety Outreach Program Project Director meeting in Blacksburg, Virginia in August 2018 and met with members from National, Western, Southern and Northeastern Regional Centers, where they discussed national priorities.
- Angela Shaw met with Wisconsin Department of Agriculture to discuss collaboration opportunities for Wisconsin and the NCR in August 2018.
- Ellen Johnsen attend a Produce Safety Alliance training in Michigan and a farm safety plan writing workshop in Kansas.
- We worked with a graphic designer to give our educational add-ons a consistent look. He is currently putting the final touches on most of the add-ons.
- NCR PIs and staff will be attending numerous conferences and events around the North Central Region this fall and winter.

### **Other Center Outputs**

- The International Association of Food Protection Conference was held July 9-12, 2017 in Tampa, Florida and the NCR FSMA led one workshop and two poster presentations on the work of the NCR FSMA.



## North Central Region

Center for FSMA Training, Extension  
and Technical Assistance

- "National and Regional FSMA Training Centers: Application of Lessons Learned" was presented on Wednesday, July 12 from 8:30 AM to 10:00.
- Graduate Students funded by NCR FSMA, Bridget J. Perry and Jacques Overdiep, presented posters on their NCR FSMA related work on Tuesday, July 11, from 10:00 AM - 6:00 PM.
- The International Association of Food Protection Conference was held July 8-11, 2018 in Salt Lake City, Utah and the NCR FSMA had one poster presentations on the work of the NCR FSMA.
  - Graduate Student funded by NCR FSMA, Bridget J. Perry, presented posters on Midwest Region Round Two Needs Assessment of FSMA Produce Safety Rule on Tuesday, July 10, from 10:00 AM - 6:00 PM

### Follow-Up

Dr. Cathy Strohbehn and Linda Naeve retired in the past few months. They have completed the work necessary for the NCR before their retirement. Please let me know if there are additional details, you wish to know about our centers progress at [angelaml@iastate.edu](mailto:angelaml@iastate.edu) or 515-294-0868. Angela M. Shaw, PhD