

The North Central Region Center for FSMA Training, Extension,
and Technical Assistance

NCR FSMA 2020 Evaluation Report

NCR FSMA 2020 Evaluation Report

Executive Summary

The North Central Center for FSMA Training, Extension, and Technical Assistance (NCR FSMA) has made progress on achieving nearly all its objectives.

One highlight of 2020 was the advent of monthly calls for state regulators and monthly farm inventory calls. In fact, every state government employee interviewed in 2020 indicated they worked with someone for the first time as a result of these calls.

Other highlights include that most interviewees greatly appreciate monthly listening sessions; participant observation data has shown that attendance at the sessions has greatly increased from 2019 to 2020.

Data collected from farmers who are taking the PSA grower training from NCR FSMA partners show they have increased their knowledge of produce safety and FSMA. The vast majority changed at least one food safety practice within one year of taking the training. In addition, approximately one in four growers made changes to infrastructure or equipment within one year of taking the training. These results show that knowledge gained by participants has translated into improved food safety practices and infrastructure.

Recommendations for next year of the center include:

- Consider new strategies for engaging the larger groups who have been attending listening sessions, potentially by using breakout rooms or asking each state to share how they have approached a topic or challenge, rather than to share updates.
- Consider how the NCR FSMA can focus more on diversity and inclusion and helping small scale farmers to make changes to on-farm food safety practices.
- Organize states to increase access to food safety inspections for exempt growers.
- Revisit the question of how the NCR FSMA might engage small scale food processors and professionals who educate processors.
- Be a resource for regulators as they undergo the process of standardization of the Produce Safety Rule.
- Encourage partners to apply for FSOP grants, especially to fund projects or programs for underserved audiences.

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Introduction

The North Central Region Center for FSMA Training, Extension, and Technical Assistance (NCR FSMA) formed in 2016 with funding from the US Food and Drug Administration (FDA). The purpose of the center is to unite food safety educators, professionals, and regulators from 12 midwestern states to equip them to help small scale farmers and food processors understand and comply with the Food Safety Modernization Act (FSMA).

After three years with funding from the FDA, the NCR FSMA was funded for another three years by the United States Department of Agriculture (USDA). During the current three-year cycle, the center is pursuing six objectives:

- Objective 1: Expand the successfully established produce safety network within the NCR
- Objective 2: Development and implementation of a communication system
- Objective 3: Support for Food Safety Outreach Program awards
- Objective 4: Support for development of FSMA add-ons and alternative curricula
- Objective 5: Develop a cadre of regional FSMA trainers
- Objective 6: Provide technical assistance to growers, processors and vendors in the NCR.

Throughout the life of the NCR FSMA, evaluation has been used to measure its impact and receive continuous feedback to improve its work. This report shares evaluation results related to each objective in 2020.

Methods

In 2020 (year five of the NCR FSMA) seven evaluation methods were conducted, listed in chronological order.

1. **Annual follow-up survey with Produce Safety Alliance Grower Training participants, January 2020**
Eight states participated in the 2020 follow-up survey (Illinois, Indiana, Kansas, Michigan, Missouri, Nebraska, South Dakota, and Wisconsin).

The survey was conducted electronically using Qualtrics™. Partners from each state (all extension educators) sent an invitation to participate in the survey to people who took the training in their state between July 1, 2018 and June 30, 2019. The invitation was sent via email to those who use technology and on paper to those who do not use technology. At least one reminder was sent to those who received the electronic invitation, and no reminder was sent to those who received paper invitations. The only variation was in Wisconsin, where they sent a paper copy of the survey to all participants as well as an electronic invitation to those who use technology. A total of 926 individuals were invited to participate in the survey.

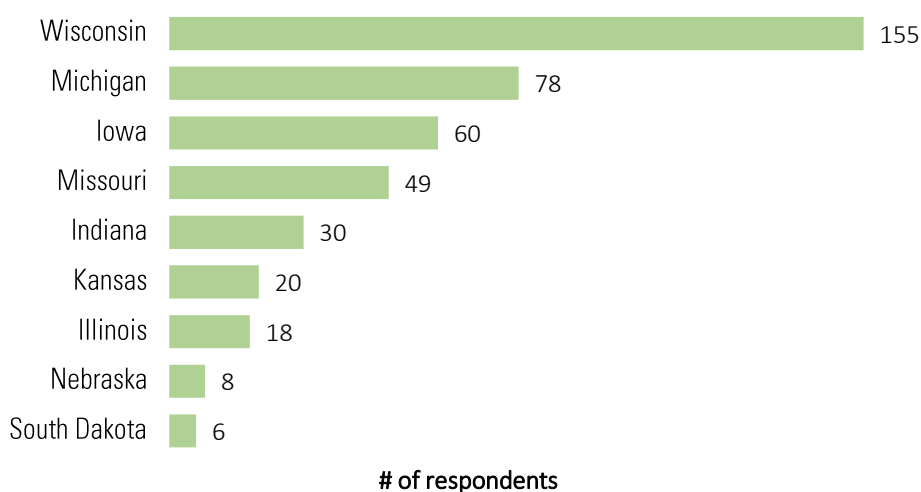
A total of 364 people responded (181 electronic and 183 paper). Therefore, the response rate was 39 percent. This is a very good response rate for this type of survey.

Partners in Iowa had recently surveyed participants from their state (in November 2019), so they did not participate in the NCR FSMA survey in January 2020; however, they shared their data, which was added to the NCR FSMA follow-up survey data set for a few questions that both surveys had in common. They received responses from 60 participants. Therefore, the dataset included a total of 424 responses, although most questions had only 364 responses.

The evaluator for the NCR FSMA analyzed the data using SPSS™ (version 26).

Figure 1 shows the number of responses from each state. More people responded from Wisconsin (155 responses) than from any other state. Wisconsin also had the highest response rate of any state (45 percent), which may be due to sending the survey on paper to all participants in addition to sending electronic invitations to those who use technology. Offering participants more than one way to participate and making multiple contacts with them appears to have boosted Wisconsin's response rate.

Figure 1: The data set includes responses from trainings in nine states.



2. Annual Conference post-event survey, April 2020

The 2020 NCR FSMA annual conference was originally planned to be held in person on April 1 and 2 in Eau Claire, Wisconsin. It was shortened and reformatted to be an online conference due to the COVID-19 pandemic.

The one-day conference was held online using Adobe Connect on April 2, 2020. Ninety-two people participated in the conference, for at least part of the day. Iowa State University Extension and Outreach Information Technology staff handled the technical aspects of the conference.

The NCR FSMA evaluator conducted an electronic evaluation survey over Qualtrics. The link was shared in the discussion box at the end of the conference and was emailed to participants the following day. Thirty-four of the 92 participants responded to the survey, for a 37 percent response rate.

3. Produce Safety Alliance Grower Training Knowledge Assessment, July 2020

The knowledge assessment was developed by Catherine Shoulders, PhD, at the University of Arkansas. The knowledge assessment is a quiz with 25 questions related to the seven modules of the PSA Grower

Training. Training participants were asked to complete the quiz on paper before beginning the training and again after the training. NCR FSMA states have been utilizing this knowledge assessment since 2017.

Trainers collected the paper copies and sent them to the NCR FSMA evaluation team. Data was entered into an Excel™ spreadsheet to create the dataset. Pre-test and post-test responses were matched using a unique identification number written on each quiz, along with the date of the training, and the state.

Only responses which included both a pre-test and a post-test from the same person were included in the analysis. (In a few cases, a person completed only the pre-test or only the post-test.) The evaluation team received 891 complete responses from 50 trainings in the NCR in 2019-2020.

The NCR FSMA evaluation team analyzed the data using SPSS™. They assigned each question to the related PSA Grower Training module and calculated a total score for each module. They averaged the scores by module and then rescaled the average so that each module is on a scale from zero to five. Rescaling allows comparison of participants' knowledge of each module with another module.

In addition, trainers completed a cover sheet for each training and returned the cover sheet along with the pre-tests and post-tests. The cover sheets provided information including the date of the training, the location, names of trainers, the number of participants, and whether the training was targeted toward any special population. Special populations tracked included Plain growers (e.g., Amish and Mennonite growers), minorities, local food growers, military veterans, non-English/limited English language, and other. Several trainings were hosted for Plain clothes growers in the region in 2019-2020 and one for local food growers, a first in the region. Three trainings were delivered using remote delivery due to the COVID-19 pandemic, also a first.

4. Annual partner interviews, Fall 2020

Approximately one third of active advisory board members, state leads, and active state regulators were invited to participate in the interview process in 2020. Thirteen partners were invited to participate, and nine responded to the invitation and were interviewed. Interviews were conducted over the phone or via Zoom from September through December 2020. Interviews were semi-structured, using a common interview template. The evaluator took notes of the conversation but did not record the calls. Interviewees were promised confidentiality, meaning their name would not be associated with their responses, and were informed that they could skip any question they did not want to answer. In addition, one person working to create an alternative curriculum participated in the interviews using a slightly different interview template but the same interview protocol.

Data was coded for themes by hand.

5. Food Safety Outreach Program survey, Fall 2020

Recipients of a Food Safety Outreach Program (FSOP) grant from the North Central Region completed an electronic survey. The survey was developed by Amy Harder, PhD, an evaluator at the University of Florida. The survey was conducted using Qualtrics™. Three grants recipients reported in 2020.

6. Participant observation, continual

The evaluator participated in monthly listening sessions and took extensive notes during the sessions, noting the level of participant engagement. She also received the monthly newsletters and participated in team lead meetings and conference planning meetings.

7. Success stories, continual

In a continual process, NCR FSMA partners identify success stories and inform the NCR FSMA evaluator or program coordinator that they have a story. The NCR FSMA evaluator or program coordinator contacts the people involved, usually farmers or food safety educators, and interviews them about their experience with the NCR FSMA. The evaluator or program coordinator then writes a story based off interview data and shares the story back with interviewees for their approval. In this way, the stories are verified to be true. Stories are posted to the NCR FSMA website at: <https://www.ncrfsma.org/impacts>.

Results

Objective 1: Expand the successfully established Produce Safety Network within the NCR

Indicator 1: Communication network increases reach

Newsletter subscribers **decreased** from **193 in 2019** to **176 in 2020** because they cleaned up the list to remove people no longer working in food safety.

The NCR FSMA maintains a list of people who subscribe to its email newsletters. In 2020, 176 people received the newsletter. This was a decrease of 17 people (9 percent) from 193 in 2019. The newsletter reach decreased because the NCR FSMA staff removed people who had changed positions and were no longer working in produce safety. While the NCR FSMA intends to grow its network, the 2020 indicator showed a decrease in number of partners. However, another indicator, listening session attendance, indicates growth. (This data is presented under indicator 2.1.)

Objective 2: Development and implementation of a communication system

Indicator 2.1: Network members demonstrate engagement

Eight of 11 listening sessions enjoyed **moderate participation** from participants.

The average number of people who attend listening sessions **increased** from **19 in 2019** to **33 in 2020**.

Through participant observation, the evaluator noted how many people spoke or shared something in the chat box during each listening session. In most sessions (8 of 11), between 35 and 49 percent of participants spoke or shared something in the chat box. These sessions were rated as having moderate participation. Two sessions had low participation, with fewer than 35 percent of participants sharing, and one session had high participation (50 percent or more sharing).

While the number of meetings with high engagement decreased from 5 in 2019 to 1 in 2020, the average *number* of people who share during a meeting increased from 8 to 13. Similarly, on average, the total number of people who participate in listening sessions nearly doubled from 19 in 2019 to 33 in 2020.

It appears that more people than ever find value in the listening sessions, which explains the uptick in participation numbers. However, higher participation creates the challenge of giving all who want to participate an opportunity to speak, which may explain the lower number of high-participation meetings. While the number of participants who share has increased, it has not kept pace with increasing participation numbers, which may indicate the NCR FSMA can explore ways to increase sharing during these high attendance meetings. One interviewee recommended using breakout rooms or asking each state how they've approached a certain topic or challenge, rather than giving updates.

Indicator 2.2: Increased collaboration among network members

Four of nine interviewees collaborated with a person with whom they had never worked before as a result of being a part of the NCR FSMA in the last year. All credited the regulator and inventory calls with fostering these **new relationships**.

One of nine interviewees **collaborated in a new way** with NCR FSMA partners in the last year.

The initiation of holding regular calls for state regulators and calls regarding state farm inventories was credited with providing new opportunities for collaboration. Regulators from Minnesota took the lead in organizing these calls, and accepted NCR FSMA support in setting up the calls over Zoom, sending out calendar invitations, etc. One respondent said, "It would have been difficult to get in one place to connect. Having NCR FSMA provide a platform has been valuable." Another interviewee credited the 2020 NCR FSMA Annual Conference with the start of those calls, recalling that a conversation during the conference led to the calls' initiation.

"A lot of states are learning together as we go, and it is good to have other people to lean on and learn how their state agencies are managing the produce safety rule."

~ State regulator

Other regulators described the value of being able to confidentially discuss food safety practices they have seen on farms and hear how other states have or would respond to similar situations.

"Our regulators appreciate the space to discuss violations in detail, because they are able to do that on these [confidential] calls."

~ State regulator

Finally, one respondent described making significant changes to how they conducted their farm inventory based on what they had learned from other states. "Those calls helped change the direction of how we do our farm inventories. We followed suit with [two other states on the call] and that is one change I can contribute one hundred percent to those calls."

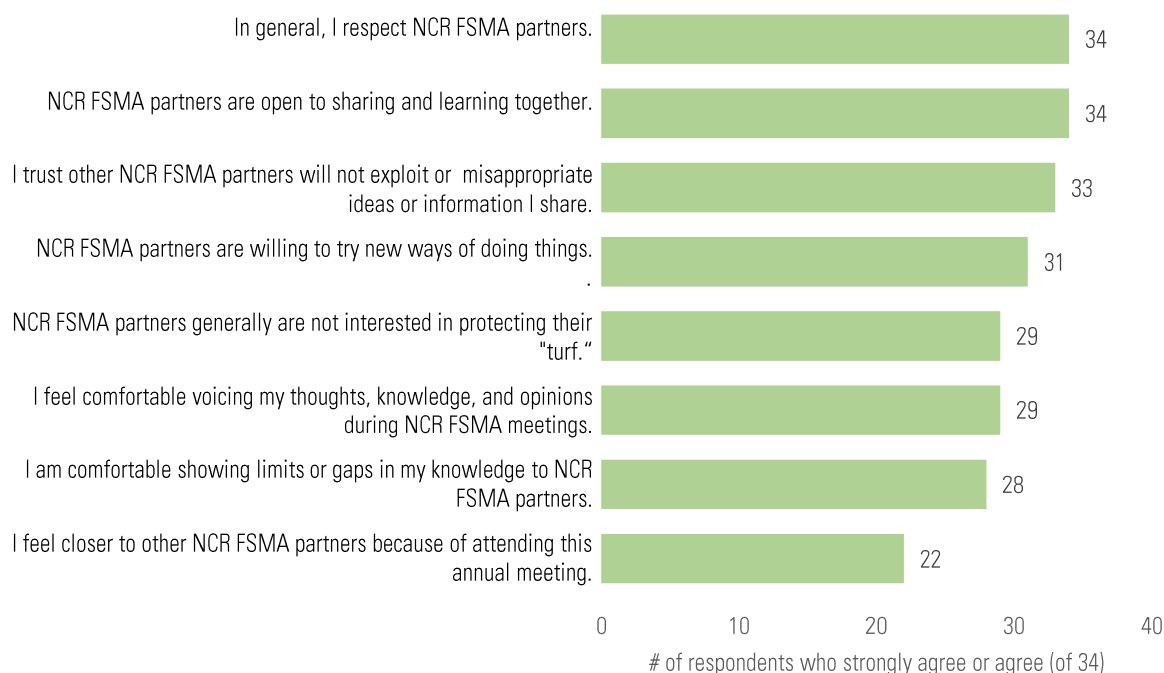
One person indicated they had worked on a new project as a result of the NCR FSMA. This person created a new Good Agricultural Practices manual and collaborated with food safety professionals at Cornell University to use some of their materials.

Indicator 2.3: Trust increases among network members

On average, **88 percent** of annual conference attendees agreed with statements measuring **trust** among partners.

When network partners trust one another, they are more likely to share their resources, ask questions, and offer new ideas, creating an environment in which partners can learn and collaborate with one another. The annual conference evaluation included a question to measure trust among partners. Results are displayed in Figure 2. On average, 88 percent of respondents agreed or strongly agreed with each statement. This is down from 94 percent in 2019, primarily because the number of respondents who agreed with the statement, “I feel closer to other NCR FSMA partners because of attending this annual meeting” was lower in 2020 than in 2019. This is likely because the 2020 conference was held virtually, which did not allow for relationship-building in the same way as a face-to-face conference.

Figure 2: NCR FSMA partners expressed a high level of trust toward one another.



Objective 3: Support for Food Safety Outreach Program awards

Indicator 3: Approved materials reach underserved audiences

FSOP awardees reported reaching **four types of underserved audiences** in 2020.

One FSOP awardee in 2020 reported reaching underserved audiences: socially disadvantaged farmers, small farmers, small processors, and potential entrepreneurs. The other two awardees did not report reaching underserved audiences.

In comparison, in 2019, 6 of 8 awardees reported serving underserved audiences, reaching 13 types of audiences.

While the number of underserved audiences reached by FSOP awardees has decreased, there were also fewer awardees. One interviewee, who is familiar with the FSOP award process, recognized that the number of FSOP applicants decreased in 2020, possibly because of the COVID-19 pandemic. This person recommended that the NCR FSMA continue to promote the FSOP grant program and encourage partners to apply.

Objective 4: Support for development of FSMA add-ons and alternative curricula

Indicator 4.1: Review process is clear and easy to navigate

The alternative curricula review process is still primarily **in the hands of FDA**.

National Sustainable Agriculture Coalition (NSAC) is the first and currently the only organization to create an alternative curriculum. An interview with a person from the NSAC revealed that the review process of the alternative curriculum is still largely in the hands of FDA. The interviewee's initial understanding was that materials would be sent first to the NCR FSMA for review and then to the FDA (this is also the expectation of the NCR FSMA staff), but it has occurred in the reverse. The FDA only recently forwarded one of the modules created by NSAC to the NCR FSMA for review. It is not clear at this time if additional alternative curricula will be developed in the future, and it is not known if future curricula would be reviewed first by the FDA or by the NCR FSMA.

The interviewee recommended that in the future if curricula are sent to the NCR FSMA for review, the curriculum should be delivered to the NCR FSMA in its entirety rather than one module at a time. This will allow reviewers to verify that all necessary elements are present in the curriculum, because alternative curricula may present some information in different modules than in the PSA Grower Training curriculum.

Indicator 4.2: Review improves alternative curricula accuracy/quality

The NSAC has **restructured their curriculum** and **improved their lesson plans** based on feedback and resources received from the NCR FSMA.

The NSAC was recently told by the FDA to restructure their curriculum slightly. They used feedback from NCR FSMA to reorder slides to ensure slides and learning objectives are in the right place. In addition, NSAC improved their lesson plans, because their original lesson plans were not very structured. They used a handout created by Angela Shaw, PhD, of the NCR FSMA as a guide to improve their lesson plans.

NSAC has also found the intake form to be a critical resource for developing the alternative curriculum. This form was created by Dr. Shaw and shows the learning objectives and their alignment with the Produce Safety Rule and draft guidance from the FDA. The NSAC interviewee recommended providing this resource to anyone who endeavors to create another alternative curriculum.

Objective 5: Develop a cadre of regional FSMA trainers

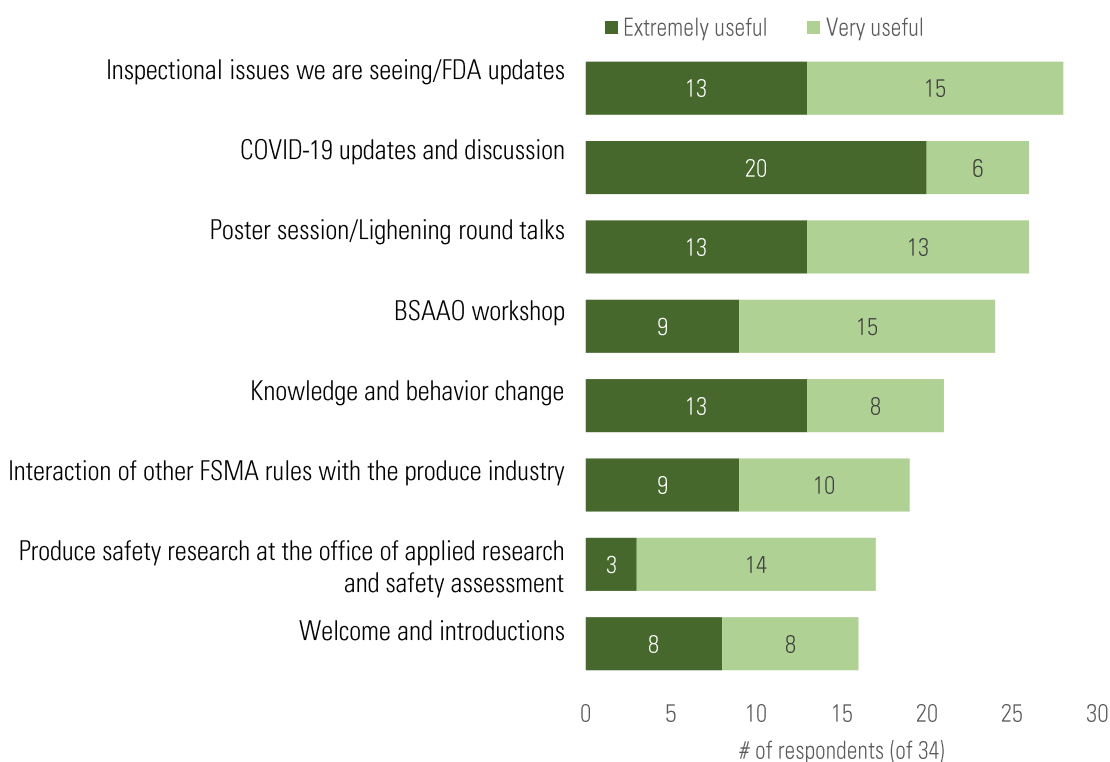
Indicator 5.1: Annual meeting provides relevant information

66 percent of respondents rated annual conference sessions as extremely or very useful.

In 2020, on average respondents found conference sessions to be very or extremely useful 66 percent of the time. This is down from 2019, when 79 percent of respondents found sessions to be extremely or very useful, on average. Switching the conference from a face-to-face conference to a virtual conference in a short period of time likely contributed to the decrease in number of people who found the sessions useful.

Through comments, respondents indicated that the Adobe Connect platform did not allow them to interact as much as they would have liked, which likely contributed to the decrease in the number of people who found the sessions useful. In contrast, one of the highest-rated sessions (Figure 3), COVID-19 updates and discussion, continued using an interactive platform. It was the last session of the day using Adobe Connect and was continued after the conference was over by giving participants a Zoom link, so they can continue the discussion over a more interactive platform. Twenty participants found this session to be extremely useful, more than any other session, likely because of its timeliness as well as using the more interactive Zoom platform.

Figure 3: FDA updates, COVID-19 discussion, and the poster session were the most useful.



Indicator 5.2: Food safety professionals increase capacity

NCR FSMA partners have **improved their work** and **increased their knowledge** through NCR FSMA events, listening sessions, and peer-to-peer learning.

As in past years, interviewees continued to find the greatest benefit of the NCR FSMA to be networking and opportunities for peer-to-peer learning. One interviewee said, “The connections with people is the biggest benefit. We bounce thoughts and ideas and issues off one another.”

Interviews also described how they have changed their work as a result of NCR FSMA-sponsored events. As mentioned earlier, one regulator said they revamped how they conduct farm inventories by adopting a process used in other states that they learned about during the inventory calls supported by the NCR FSMA. Another described preparing for an upcoming On-Farm Readiness Review at an orchard by talking with regulators from another state that has a lot of orchards. “We had our first apple orchard On-Farm Readiness Review in [our state] and I had never been to an orchard. Michigan has lots of orchards and I could ask what they look for at orchards. I received feedback and I appreciate that.”

In 2020, the NCR FSMA published two success stories highlighting how the NCR FSMA has contributed to professional development. One story describes the impact of the biological Soil Amendments of Animal Origin workshop held in Ankeny, Iowa, and sponsored in part by the NCR FSMA. The other story describes the role the NCR FSMA played in helping food safety educators transition their trainings to remote delivery during the COVID-19 pandemic.

“With the compost workshop, there was a lot to think about. I got to understand that portion of the rule better. I have a better idea of how to enforce that if I came across it on a farm.”

~ State Regulator

Objective 6: Provide technical assistance to growers, processors and vendors in the NCR.

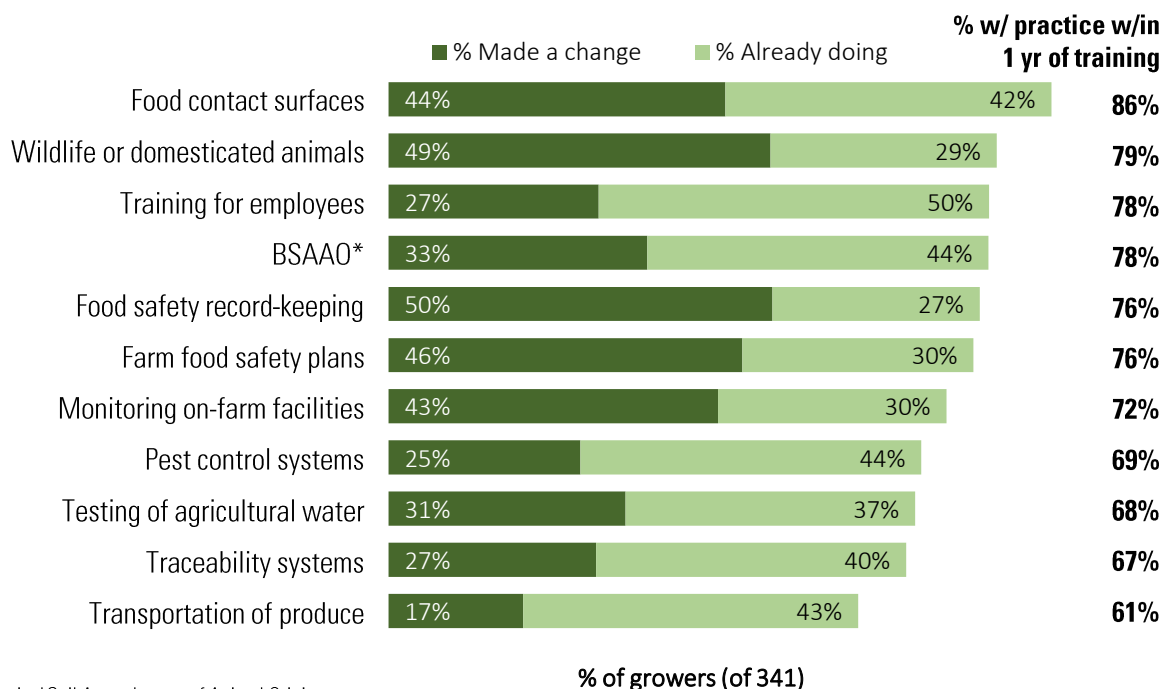
Indicator 6.1: Farmers implement new food safety practices

76 percent of growers who responded to the follow-up survey (259 of 341) **made some sort of change on their farm** to improve food safety practices since attending the PSA Grower Training.

Figure 4 shows which changes farmers/growers made, as well as which practices, they already had in place prior to the training (and therefore did not need to change). By the time the NCR FSMA conducted the follow-up survey (approximately one year after the training), 86 percent of farms had adequate practices for cleaning and sanitizing food contact surfaces and 79 percent had implemented practices for deterring wildlife or domesticated animals from growing areas.

Respondents most made changes to food safety record keeping systems (50 percent) and wildlife or domesticated animals (49 percent) since the training.

Figure 4: Growers most commonly had implemented practices for cleaning and sanitizing food contact surfaces within one year of training.



Indicator 6.2: Farmers change infrastructure

25 percent (69 of 276) of growers made changes to **infrastructure or equipment** to improve food safety practices after taking the training.

Making changes to infrastructure and equipment shows growers are making systems-level changes to improve food safety, which is a higher level of change than practice changes. Sixty-nine farms reported making changes to equipment or infrastructure since the training to improve food safety systems.

Changes included the following:

- 20 growers added *hand washing stations*.
- 15 growers replaced or updated *washing or sanitizing equipment*, such as stainless-steel surfaces and crate washing stations.
- 9 improved *water or irrigation systems*, with such as switching to drip irrigation or drilling a well.
- 8 added or upgraded *restrooms*, including adding portable toilets.
- 7 growers added or upgraded *buildings*, which included four new pack sheds, an addition, and two replaced ceilings.
- 5 upgraded *food contact surfaces*, including tables, shelving, and walls.
- 5 growers switched to different types of *storage or picking bins* that can be sanitized.
- 4 growers added *fencing or netting* to deter wildlife from growing areas.
- 2 respondents rearranged storage areas to create *clean zones*.

- 2 growers made changes to *growing areas* to improve food safety practices. One moved some growing stations to more isolated and contaminant free areas and the other put up a new hoop house designed with food safety in mind.
- Other changes, made by one grower each, included new lighting, improved produce transportation, and adding a loading dock to help keep dirt out of a pack shed.

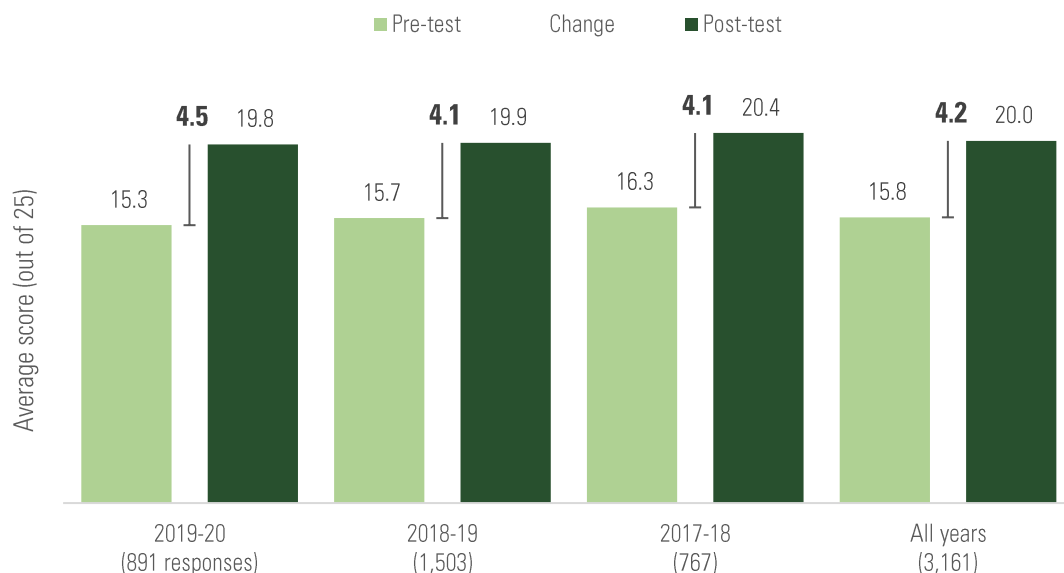
Indicator 6.3: PSA Grower Training participants increase knowledge

On average, knowledge assessment scores from the PSA Grower Training **increased** by **4.5 points** out of 25 possible in 2019-2020.

Respondents' knowledge of food safety and FSMA have improved in all years of training. On average, respondents' scores improved by 4.5 points (out of 25) from the pre-test to the post-test in 2019-2020, 4.1 points in 2018-19, and 4.1 points in 2017-18, as shown in Figure 5. The difference between pre-test and post-test scores is statistically significant for all years ($p=0.001$), meaning the difference is not likely due to chance, but to a true difference between pre-test and post-test scores in the population.

Since the first year of conducting the knowledge assessment in the NCR, pre-test and post-test scores have steadily declined, while knowledge change has steadily increased. On average, participants enter the training with a lower knowledge of FSMA and food safety now than in the past, possibly because those who attended in the first year were early adopters who already had an interest in food safety. On average, those who come to the training with a lower knowledge of FSMA and food safety learn more, which may contribute to increasing knowledge change scores over time.

Figure 5: Pre-test and post-test scores are steadily declining from year to year, but knowledge gain is increasing.



Indicator 6.4: Growers utilize the NCR Center's network of expertise

This indicator refers to the NCR FSMA's original plan to create a portal where growers could submit questions related to FSMA. This portal has not been created, because a similar resource is available through the [Food Safety Resource Clearinghouse](#) website.

Indicator 6.5: Regional centers contribute to food safety changes

The NCR FSMA collected **one story** related to how it has contributed to **food safety changes**.

The NCR FSMA gathers success stories through process of collecting information directly from farmers and food educators, writing it up as a story, and then asking them to verify that the information is true. In 2020, three stories were collected and one of them was related to on-farm impacts. The story explains how Harmony Valley Farm in Wisconsin experienced an On-Farm Readiness Review and inspection with the Wisconsin Department of Trade, Agriculture, and Consumer Protection (DATCP). As a result, they made changes to how they sign their daily inspection document and conduct the pre-season inspection of their irrigation well.

Conclusion

The NCR FSMA has made progress on nearly all indicators. One highlight of 2020 was the advent of monthly calls for state regulators and monthly farm inventory calls. In fact, every state government employee who was interviewed in 2020 indicated they worked with someone for the first time as a result of these calls.

Other highlights include that most interviewees greatly appreciate monthly listening sessions. Participant observation data shows that attendance at the sessions greatly increased from 2019 to 2020.

Data collected from farmers who are taking the PSA grower training from NCR FSMA partners show that on average they have increased their knowledge of produce safety and FSMA. The vast majority changed at least one food safety practice within one year of taking the training. In addition, approximately one in four growers made changes to infrastructure or equipment within one year of taking the training. These results show that knowledge gained by participants has translated into improved food safety practices and infrastructure.

Some of the center's plans have changed or been modified since receiving funding from the USDA in 2018. Specifically, the original plan to create a question portal where growers could submit their questions to the NCR FSMA was scrapped. In addition, the review process for alternative curricula is not yet well-established.

Recommendations from the 2020 NCR FSMA evaluation include:

- Consider new strategies for engaging the larger groups who have been attending listening sessions, potentially by using breakout rooms or asking each state to share how they have approached a topic or challenge rather than just sharing updates.

- Consider how the NCR FSMA can focus more on diversity and inclusion and on helping small-scale farmers make changes to on-farm food safety practices.
- Organize states to increase access to food safety inspections for exempt growers.
- Revisit the question of how the NCR FSMA might engage small-scale food processors and professionals who educate processors.
- Be a resource for regulators as they soon undergo the process of standardization of the Produce Safety Rule.
- Encourage partners to apply for FSOP grants, especially to fund projects or programs for underserved audiences.

Appendix A: Indicators table

Table 1: The six objectives of the NCR FSMA and how their attainment is measured.

	Indicator	Measure	2019	2020
Objective 1: Expand the Successfully Established Produce Safety Network within the NCR	Communication network increases reach	# subscribers receiving newsletters	193	176
Objective 2: Development and Implementation of a Communication System	Network members demonstrate engagement	Participant observation	5 high participation mtg. (≥50% of participants speak) 6 moderate (35-40%) 1 low (≤34%)	1 high participation mtg. (≥50% of participants speak) 8 moderate (35-49%) 2 low (≤34%)
	Increased collaboration among network members	# interviewees who collaborate for first time	3 of 6 (50%)	4 of 9 (44%)
		# interviewees who collaborate in a new way	1 of 6 (17%)	1 of 9 (11%)
	Trust increases among network members	% mtg. attendees who agree with statements about trust	94%	88%
Objective 3: Support for Food Safety Outreach Program Awards	Approved materials reach underserved audiences	# audiences reached by NCR FSOP projects	13	4
Objective 4: Support for Development of FSMA Add-ons and Alternative Curricula	Review process is clear and easy to navigate	Interview data about curricula review process	Not conducted in year 1	Review process has been conducted by the FDA and has not been clear
	Review improves add-ons and alt. curricula accuracy/quality	Interview data about curricula review process	Not conducted in year 1	Restructured the curriculum and improved lesson plans

	Indicator	Measure	2019	2020
Objective 5: Develop a Cadre of Regional FSMA Trainers	Annual meeting provides relevant information	# attendees who rate sessions useful	79%	66%
	Food safety professionals increase capacity	Impact stories	Story about News and Brews	COVID story, BSAAO story
Objective 6: Provide Technical Assistance to Growers, Processors, and Vendors in the NCR.	Farmers implement new food safety practices	# respondents changed practices	293 (73%) (data from 2018 + 2019)	259 (76%)
	Farmers change infrastructure	# respondents who added/ upgraded infrastructure	110 (28%) (data from 2018 + 2019)	69 (25%)
	PSA Grower Training participants increase knowledge	Average score change on knowledge assessment	4.1	4.5
	Growers utilize the NCR Center's network of expertise	# questions or info. requests/year	Not created in year 1	Not created in year 2
		# page visits to the FAQ page	Not created in year 1	Not created in year 2
	Regional centers contribute to food safety changes	Impact stories	Mennonite story	DATCP story