



**Collaborative International Produce Safety Metrics
Team**

Train-the-Trainer Program 2017-2020

Evaluation Summary

Collaborative International Produce Safety Metrics Team
11-12-2020

Between 2017 and 2020, JIFSAN delivered 12 Train-the-Trainer trainings in Latin American countries. These participants came from 19 countries, including three from the United States. Most of the participants were from Mexico, one of the largest produce exporter to the U.S. Other major countries of origin (with more than 40 participants) for the participants include Argentina, Dominican Republic, Guatemala, Honduras, and Peru. In each training, the Joint Institute of Food Safety and Applied Nutrition (JIFSAN) and the Produce Safety Alliance (PSA) conducted training evaluations.

JIFSAN received responses from 575 participants. Among the participants, both genders are quite evenly represented. Most of the participants have at least college degrees and almost half of these participants had post-graduate degrees such as Masters or Doctorates degrees. Nearly three quarters of the participants have attended produce safety trainings previously, including Good Agricultural Practices trainings by JIFSAN.

The participants are quite evenly distributed among years of work experience groups, with only a small fraction of the participants with less than two years of experience in their current profession. In the remaining of the employment background questions, participants may report multiple answers when they have multiple employment or perform multiple functions. Over half of the response are from participants employed in the public sector. Participants also report that they work in multiple organizations. The majority of the participants work in either agencies for regulating/auditing or institutions for education, training, and consultancy. The participants' primary functions concentrate in two categories: over 60% as trainer (teach, train, consult, etc) and over 50% as technicians (inspect, research, audit, etc). Participants also report that their work involves food export, not only to the U.S., but also to other countries in and outside of the region. Many participants also report that the training fulfills (or let them help their clients to fulfill) food safety requirements from work. Almost 75% of the participants report that the training help them to fulfill requirements by the FSMA Produce Safety Rule; over 60% report about requirements to write a Farm Food Safety Plan; and over 30% reports about requirement by third-party audit.

Overall, the trainings are well-received by participants. Almost three quarters of the respondents¹ were very satisfied with the trainings and one quarter being satisfied. All respondent report increase in confidence in applying or teaching Produce Safety information after training. Half of the participants experience no difficulty during the training. Of the remaining half, language barrier (most of the participants are Spanish speakers, while some of the instructions were in English) and limited prior experience in produce safety are the most reported sources of difficulty. The respondents are mostly satisfied with the level of information provided in the training. However, some of them do suggest to include more information, especially that on how to implement produce safety practices.

Participant learning outcomes are measured by their performances in the pre- and post-training tests. Most of the participants obtain higher scores in post-training tests than in pre-training tests, showing positive learning outcomes. The distribution of test scores not only shift to the right in the post-training tests but is also more concentrated around higher scores. The change in score distribution shows that not only there is an overall improvement in knowledge level after training, the knowledge level among participants is more aligned. The average performance increased from 18 correct answers in 28 questions in the pre-training tests to 25 correct answers in 28 questions. At the question level, participant performance improved in all of the questions after training (i.e. a higher percentage of participants answer

¹ The participant feedback questions were included only in later trainings. Therefore, the numbers of respondents to some of the feedback questions are smaller to the total number of participants who submitted JIFSAN evaluation. They are addressed as "respondent" if they do not represent all of the participants who submitted JIFSAN evaluation.

correctly after training). However, there are six questions with less than 80% participants who answered correctly and one question with less than 60% of participants who answered correctly after training.

The PSA evaluation asks detailed satisfaction questions and participants' plans as future Produce Safety Trainers. PSA received responses from 528 participants.

The first part of the evaluation asks participants to evaluate a few statements for each of the Modules. There are eight Modules of produce safety contents (Modules 1 to 7, with Module 5 divided into Module 5-1 and Module 5-2) and three Trainer Modules on training delivery, training organization, and PSA training process, respectively. In each Module, the first question asks if participants agree with the statement that the Module improves their knowledge on the topic (in the Trainer Module: PSA Training Protocol and Course Logistics, the question is whether the information is clear). The second question (applies to Modules 1 to 7 and Trainer Module: Principles of Adult Education and Training) asks the participants to evaluate the statement that the Module prepares them to teach growers. The third question asks in each Module if the participants agree that the instructor is effective. Majority of the participants agree or strongly agree to the statements.

In addition, the PSA evaluation asks the participants about the teaching notes, curriculum material, and the Course. Majority of the participants give positive feedbacks.

Last but not the least, the PSA asks about participants' plans as future Produce Safety Trainers. Most of the participants state that they intend to become PSA Lead Trainers. Roughly half of the participants state that the PSA could provide additional assistance to future grower trainings. Most of the participants plan to teach (at least some) grower courses in teams, and they will be able to find qualified people to join the teams. Over half of the participants plan to offer grower trainings that spread out over multiple days, and only less than a quarter of the participants plan to offer one-day trainings. If they are offering multi-day training, half of the participants plan to include a Farm Food Safety Plan writing component or other additional information.

Collaborative International Produce Safety Metrics Team

November 12, 2020

Collaborative International Produce Safety Train-the-Trainer Program Evaluation Summary 2017-2020

Between 2017 and 2020, JIFSAN delivered 12 training sessions in Latin American countries. In each training session, Joint Institute of Food Safety and Applied Nutrition (JIFSAN) and the Produce Safety Alliance (PSA) conducted training evaluations. The evaluation results are summarized and reported below.

JIFSAN Evaluation

JIFSAN evaluation includes a brief questionnaire on participant background, a pre-training knowledge test, and a post-training knowledge test. The questionnaire was developed by JIFSAN overtime. The knowledge test was developed by the Southern Center for Training, Education, Extension, Outreach, and Technical Assistance to Enhance Produce Safety. The evaluations are available in both English and Spanish.

JIFSAN received 575 responses from the 12 trainings.

Due to the gradual improvement of JIFSAN questionnaire, participant feedback questions included in more recent have smaller number of answers. Updates to employment background questions could also result in smaller number of participants employed by international / regional organizations, extension services, and work as producers or retailers.

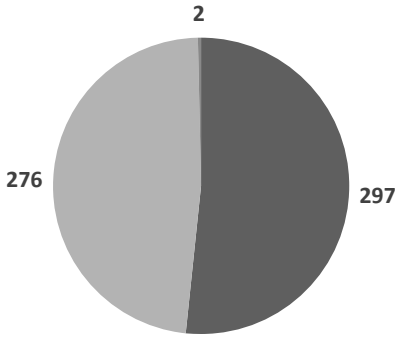
Country of Origin	#Participants
Argentina	43
Barbados	3
Brazil	4
Chile	11
Colombia	3
Costa Rica	16
Dominican Republic	38
Ecuador	16
El Salvador	1
Guatemala	41
Honduras	42
Jamaica	27
Mexico	256
Nicaragua	1
Panama	2
Peru	55
Saint Vincent	1
Trinidad and Tobago	12
USA	3
Grand Total	575

Participant Number by Countries of Origin



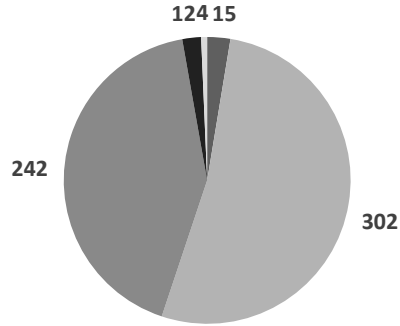
Basic Information

Gender



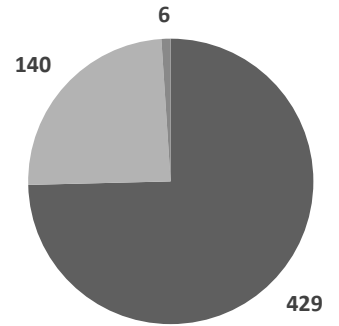
■ Male ■ Female ■ No response

Highest Education Attainment



■ No College ■ College ■ Post-graduate
■ Others ■ No response

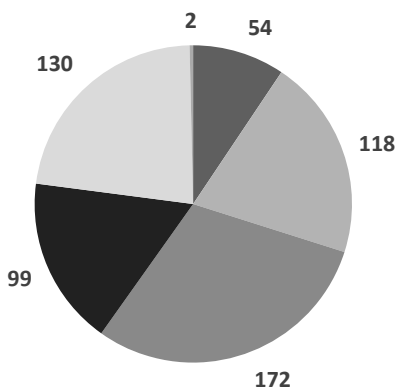
Previous Produce Safety Training



■ Yes ■ No ■ No response

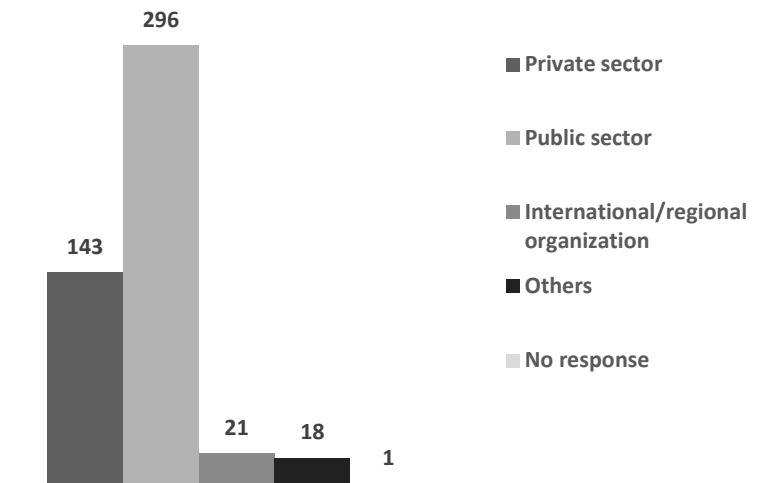
Employment Background

Years of Experience in Current Profession



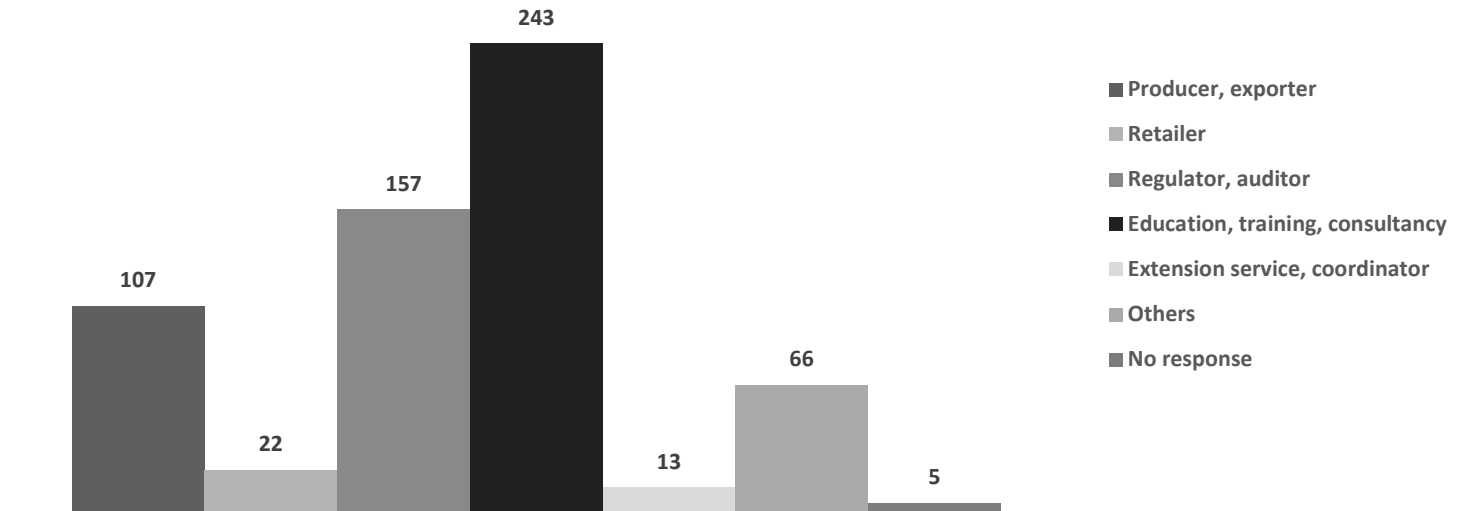
■ 2 years or less ■ 3-5 years ■ 6-10 years
■ 11-15 years ■ 16 years or more ■ No response

Sectors of Employment

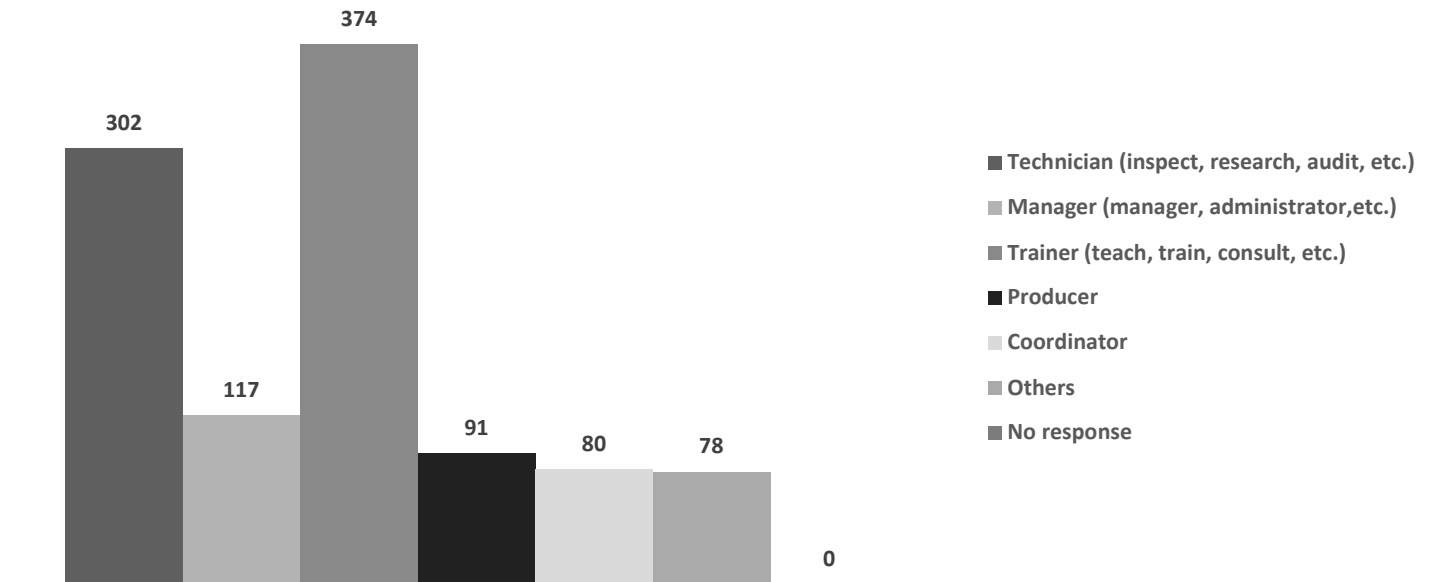


■ Private sector
■ Public sector
■ International/regional organization
■ Others
■ No response

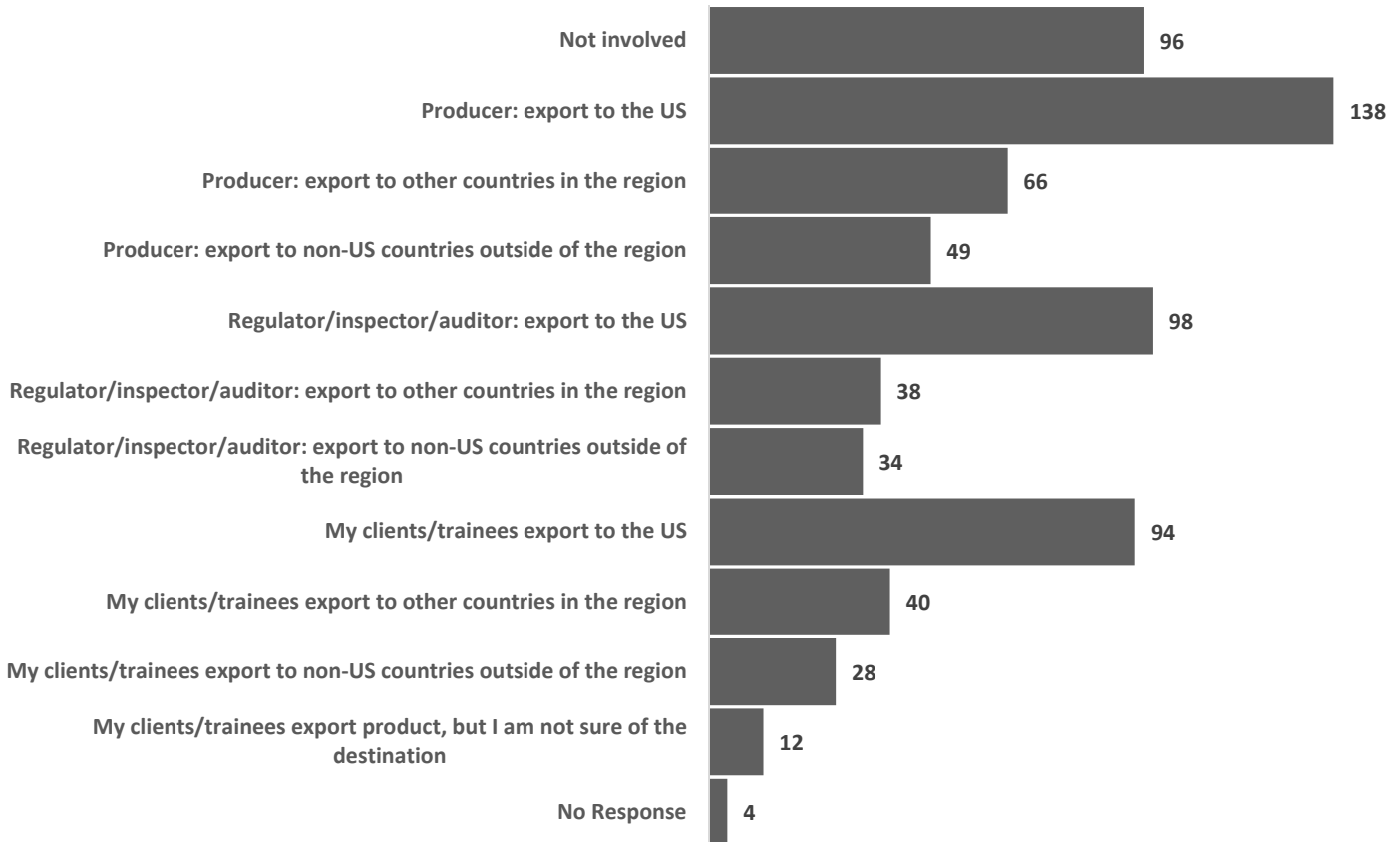
Organizations of Employment



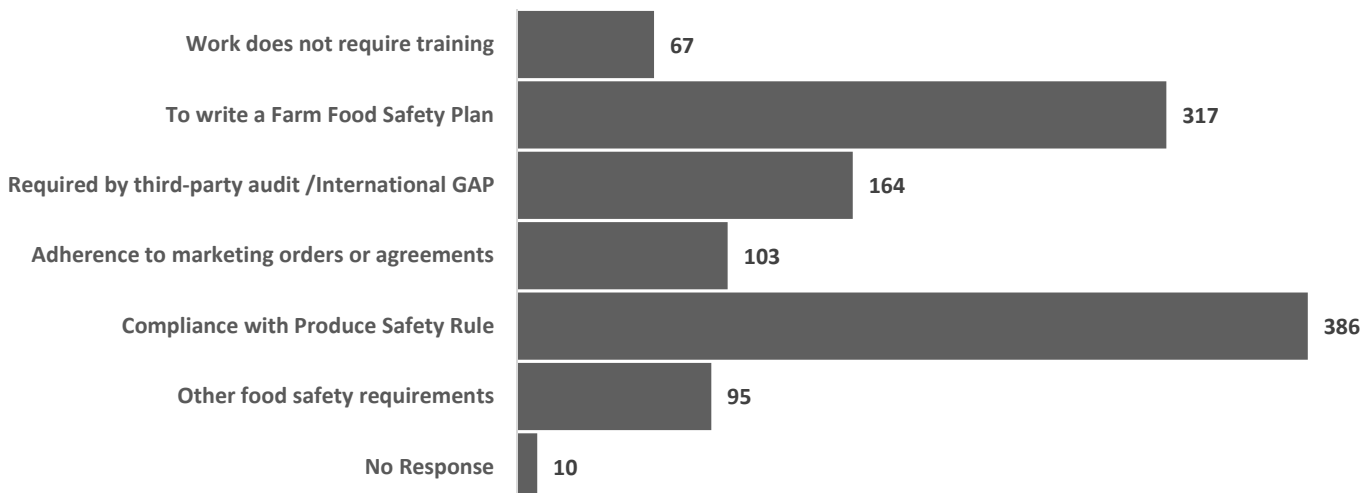
Primary Functions of Employment



Food Export Involvement at Work

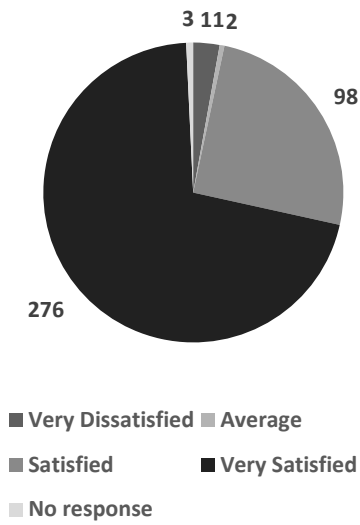


Training Request from Work

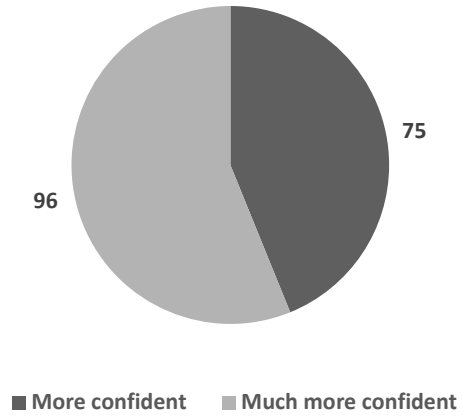


Participant Feedbacks

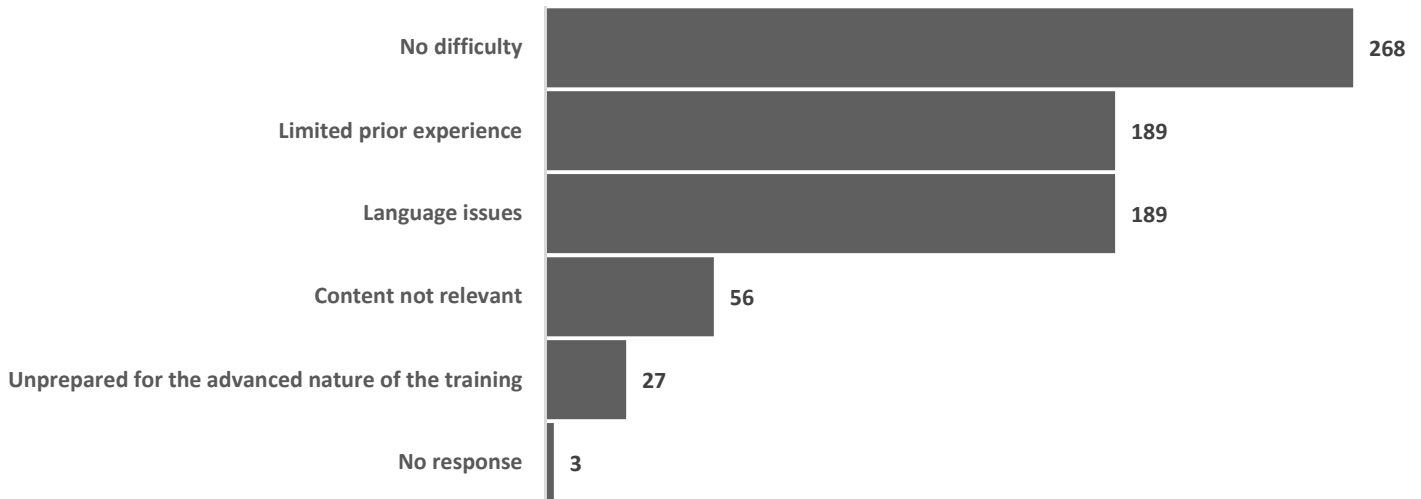
Overall Satisfaction



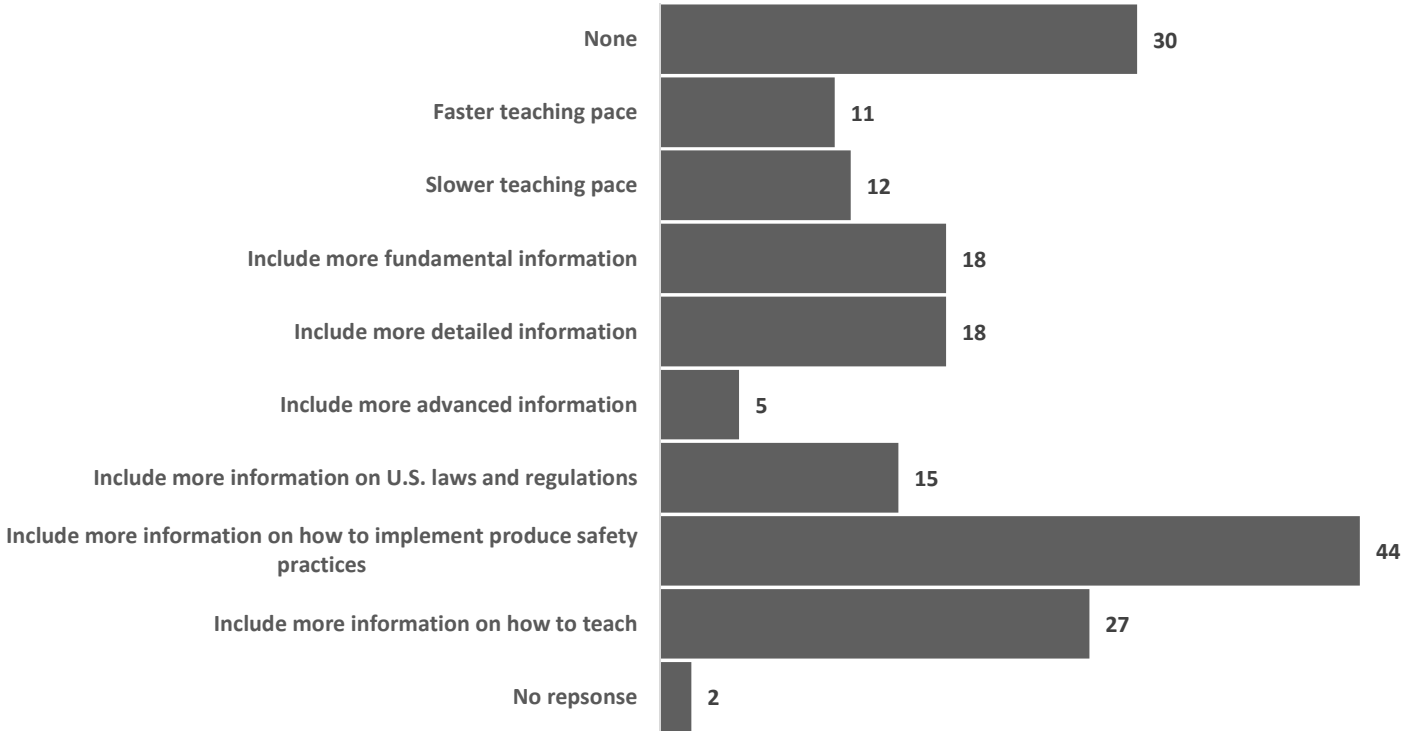
Change in confident in applying or teaching Produce Safety information after training?



Reasons for Learning Difficulty in Training

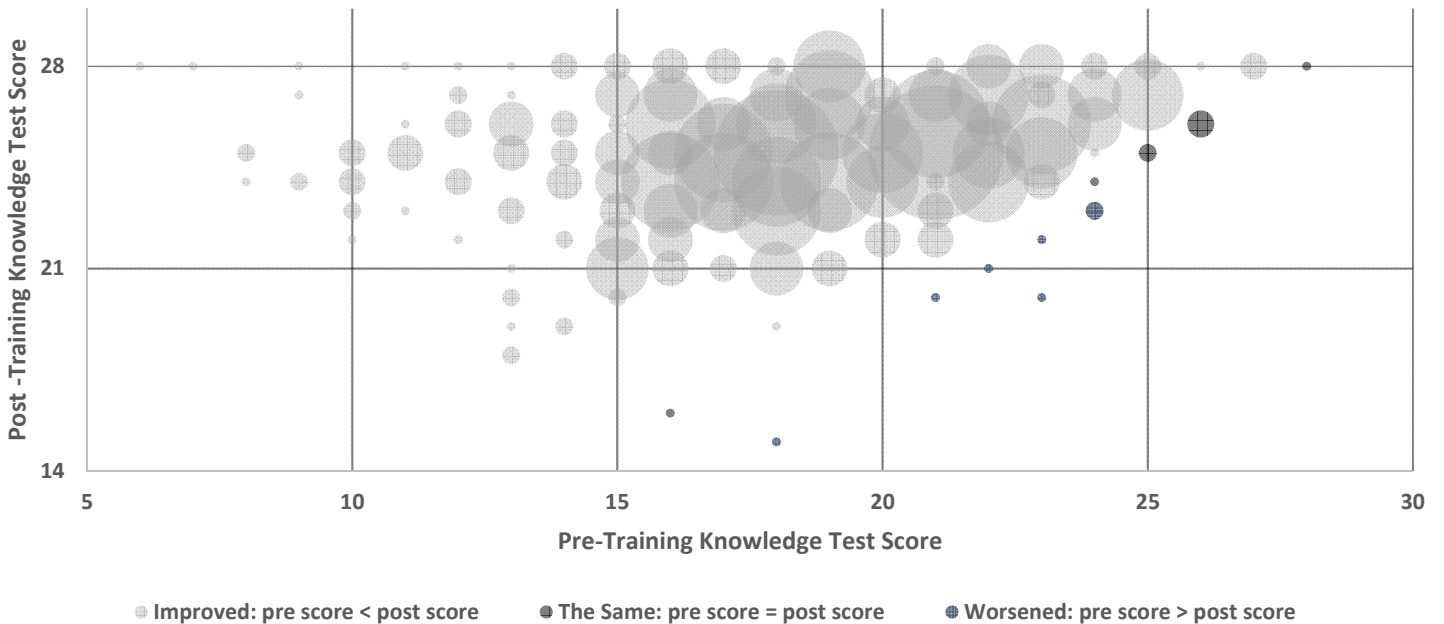


How would you suggest to improve the training?

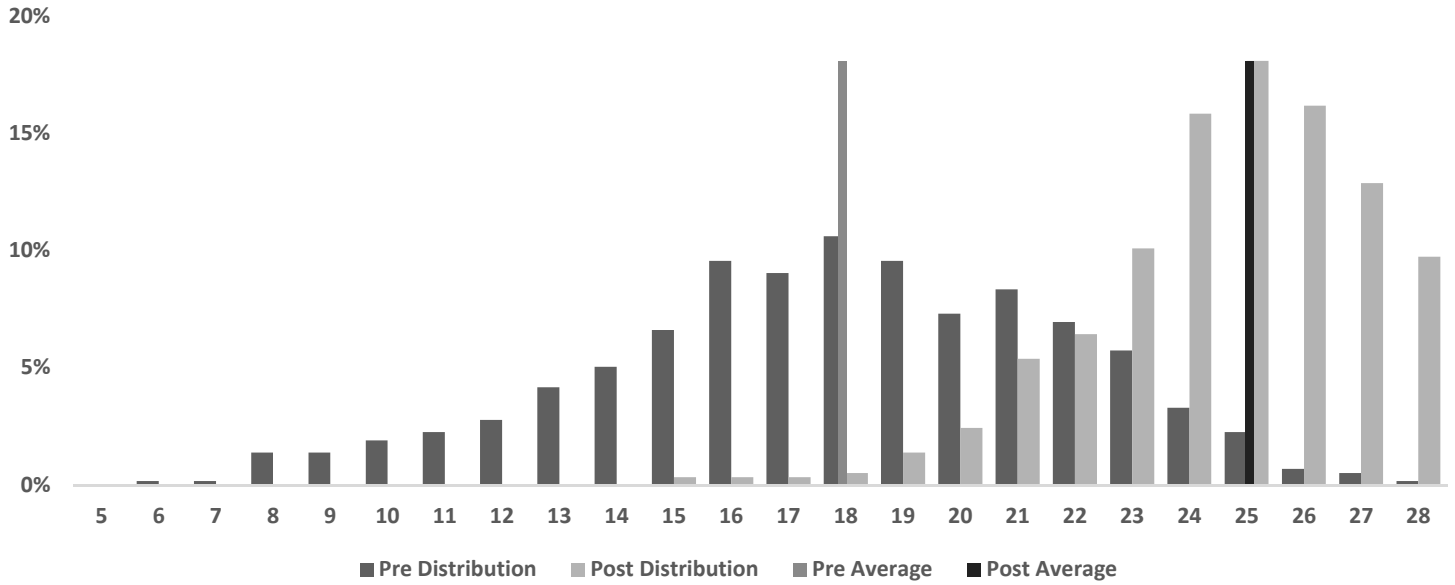


Learning Outcomes

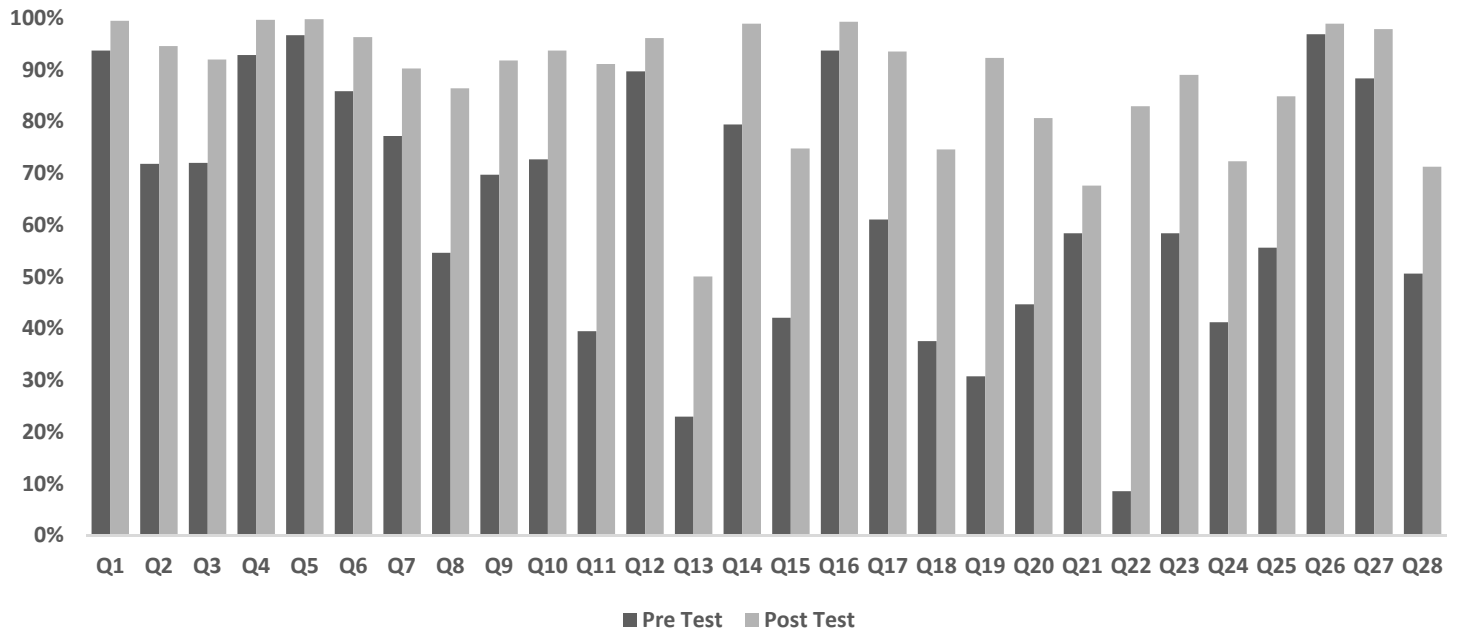
Comparing Knowledge Test Scores before and after Training



Distributions of Knowledge Test Scores before and after Training



Percentage of Correct Answers



Learning Outcomes -- Tables

Distributions of Knowledge Test Scores before and after Training

Scores	Pre Distribution	Post Distribution
5	0%	0%
6	0%	0%
7	0%	0%
8	1%	0%
9	1%	0%
10	2%	0%
11	2%	0%
12	3%	0%
13	4%	0%
14	5%	0%
15	7%	0%
16	10%	0%
17	9%	0%
18	11%	1%
19	10%	1%
20	7%	2%
21	8%	5%
22	7%	6%
23	6%	10%
24	3%	16%
25	2%	18%
26	1%	16%
27	1%	13%
28	0%	10%
Average Score	18	25

Percentage of Correct Answers

	Pre Test	Post Test
Q1	94%	99%
Q2	72%	95%
Q3	72%	92%
Q4	93%	100%
Q5	97%	100%
Q6	86%	96%
Q7	77%	90%
Q8	55%	86%
Q9	70%	92%
Q10	73%	94%
Q11	39%	91%
Q12	90%	96%
Q13	23%	50%
Q14	79%	99%
Q15	42%	75%
Q16	94%	99%
Q17	61%	94%
Q18	38%	75%
Q19	31%	92%
Q20	45%	81%
Q21	58%	68%
Q22	9%	83%
Q23	58%	89%
Q24	41%	72%
Q25	56%	85%
Q26	97%	99%
Q27	88%	98%
Q28	51%	71%

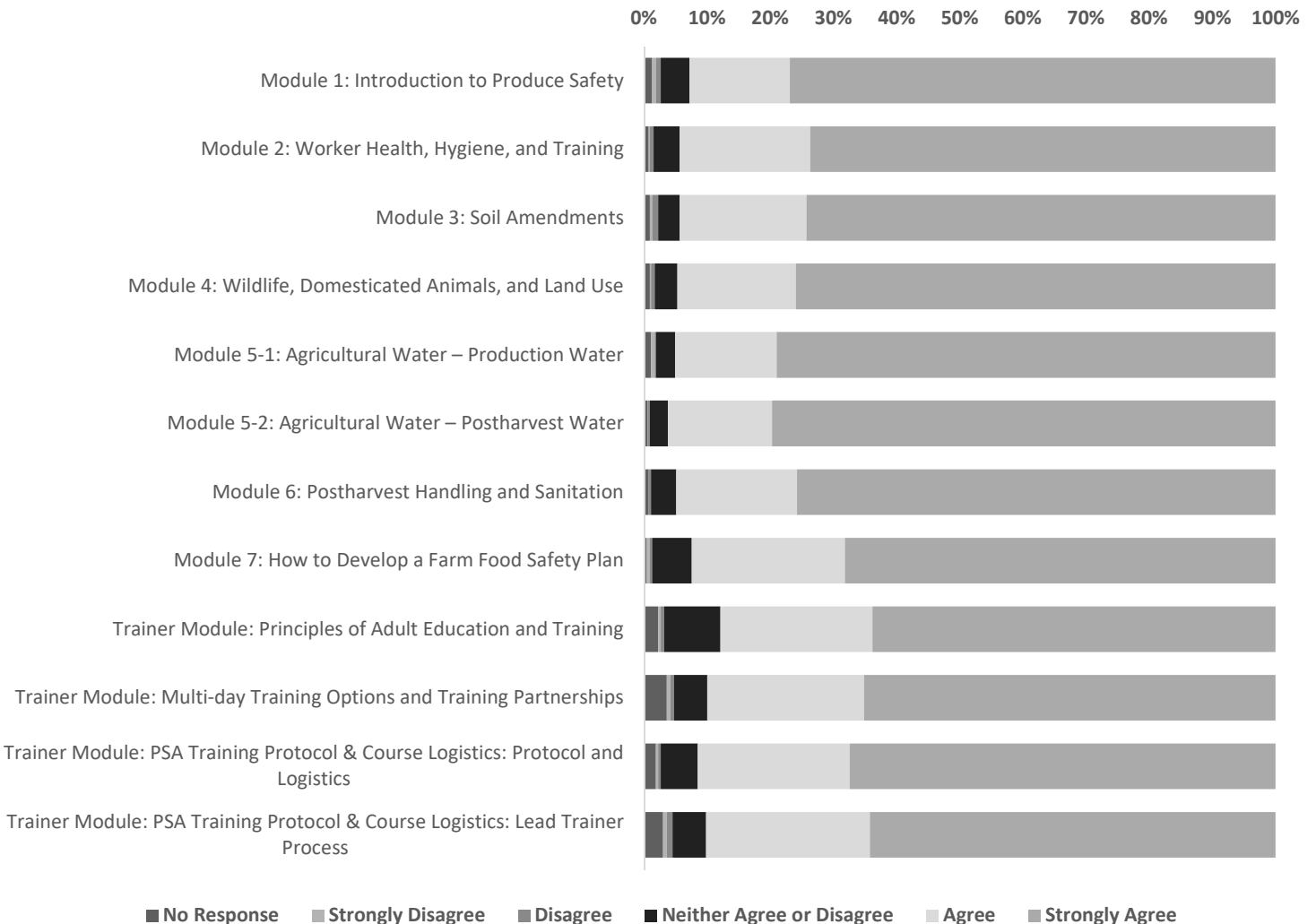
PSA Evaluation

The Produce Safety Alliance developed an evaluation for the Train-the-Trainer courses. 528 participants submitted their evaluation at the end of their trainings.

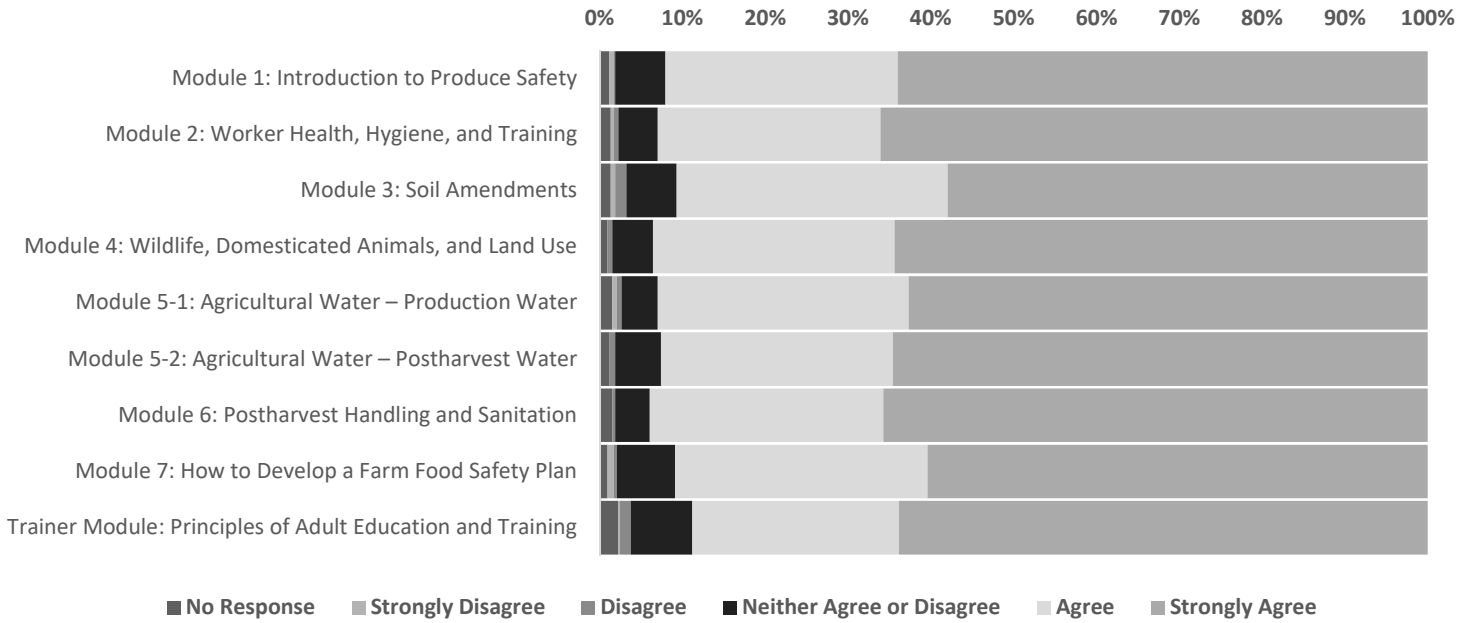
By-Module Evaluation Questions

Contents in Modules 1 to 7 are on information to be delivered in PSA Grower Trainings, where Modules 1 to 6 are on FSMA Produce Safety Rule requirements. The Trainer Module is additional information to help trainers organize and deliver PSA Grower Trainings.

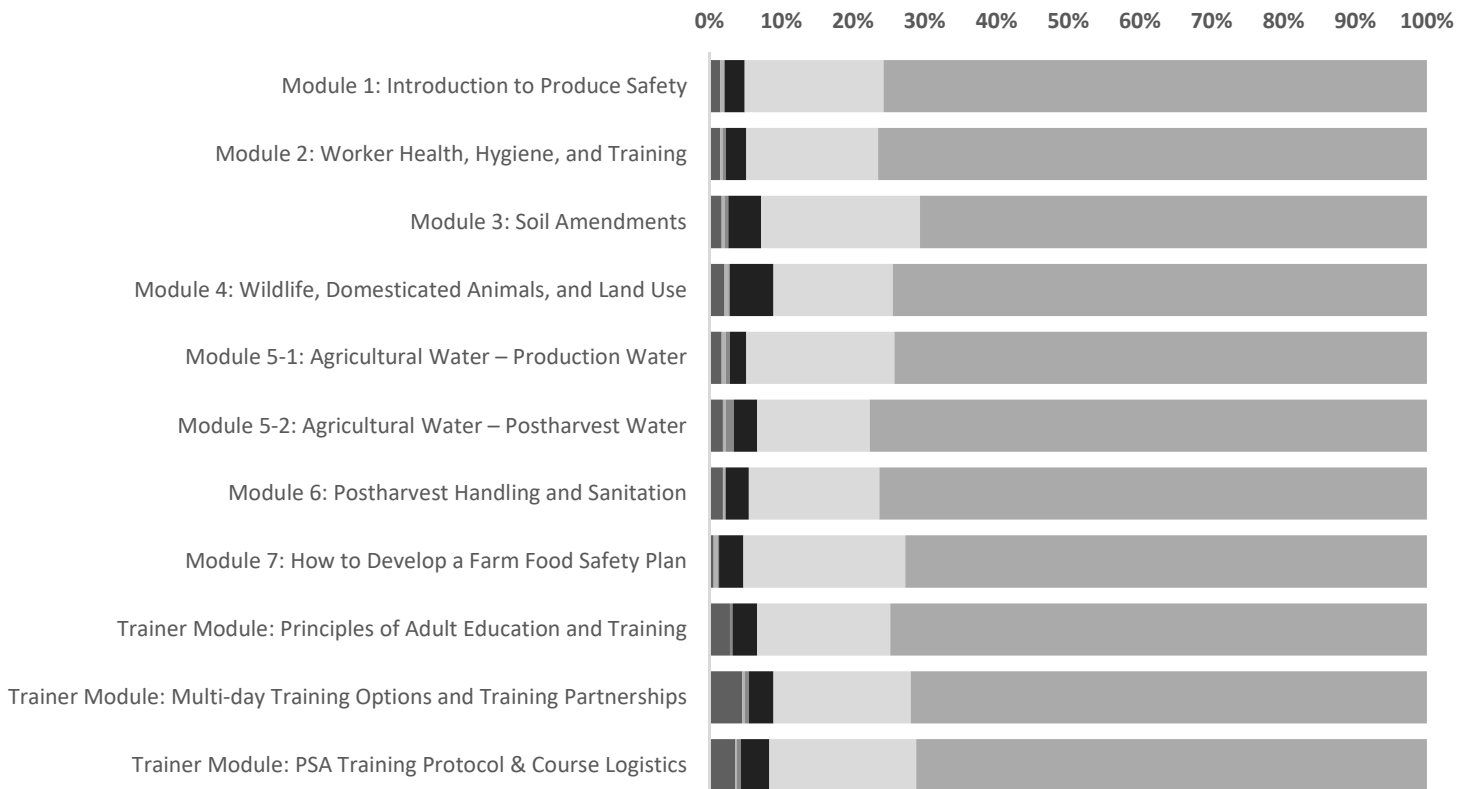
Question 1: This Module increased my knowledge of the topic



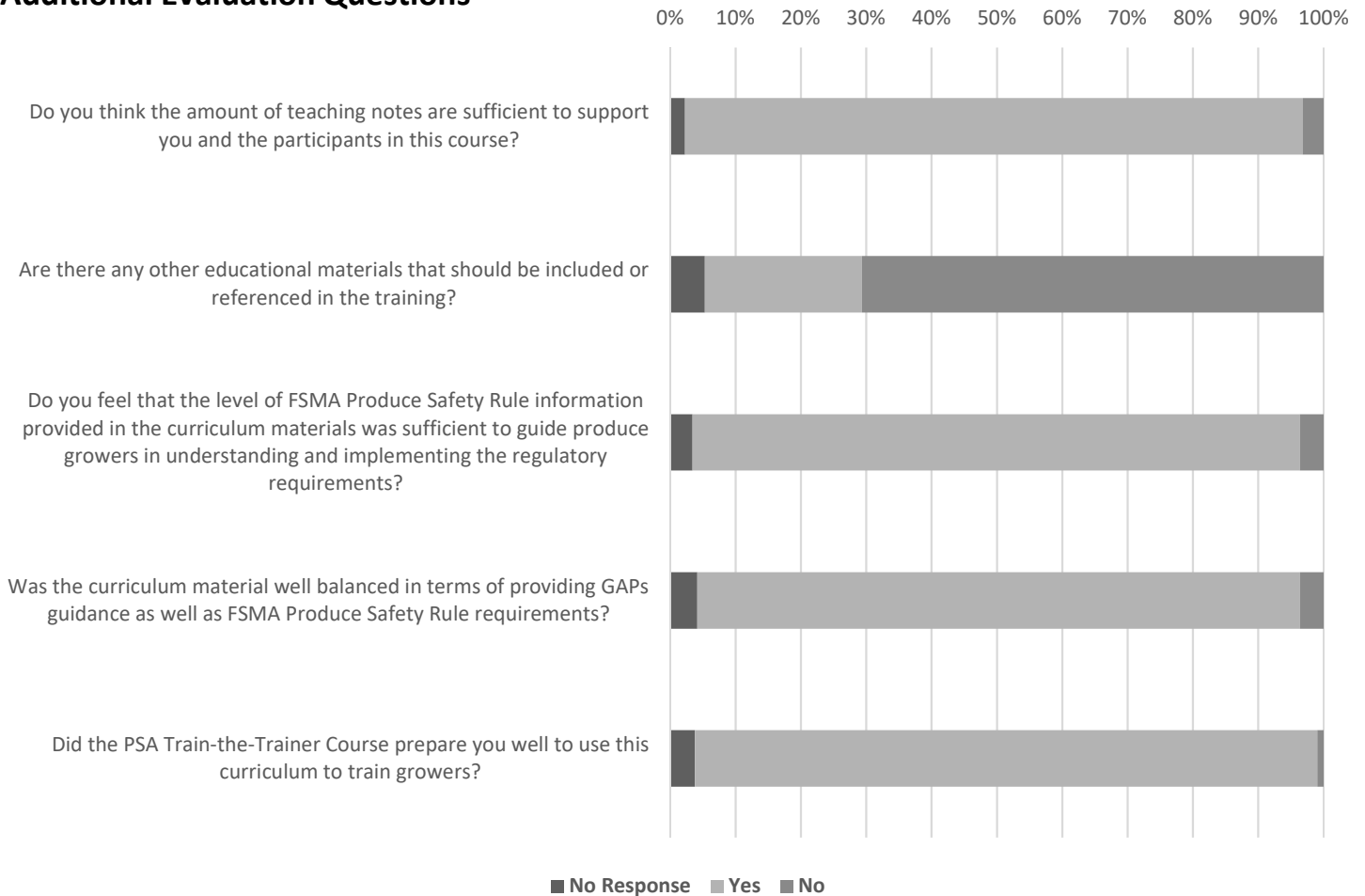
Question 2: This Module prepared me to teach growers



Question 3: The presenter was effective at delivering the content

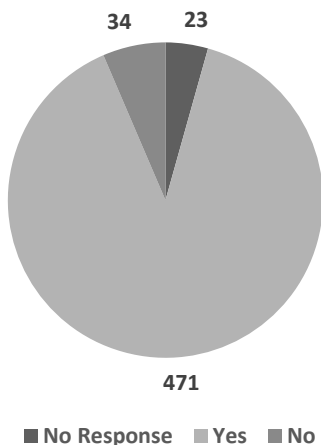


Additional Evaluation Questions

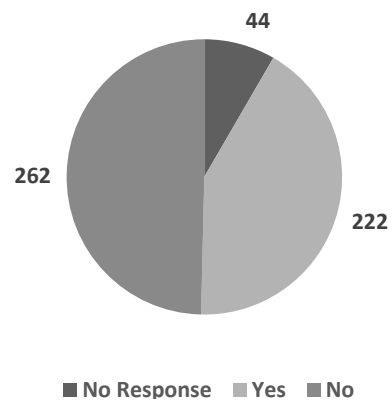


Plan as a Trainer

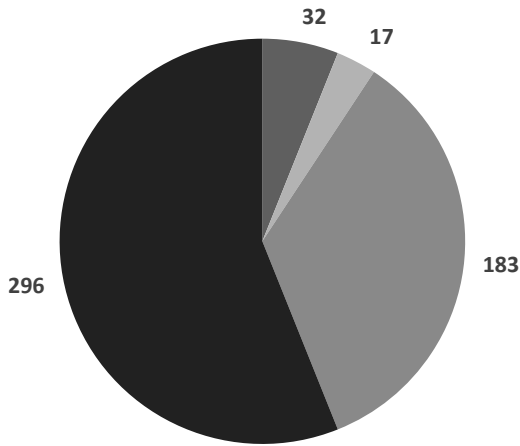
Do you intend to become a PSA Lead Trainer?



Is there additional assistance that the PSA can provide to facilitate a successful training?

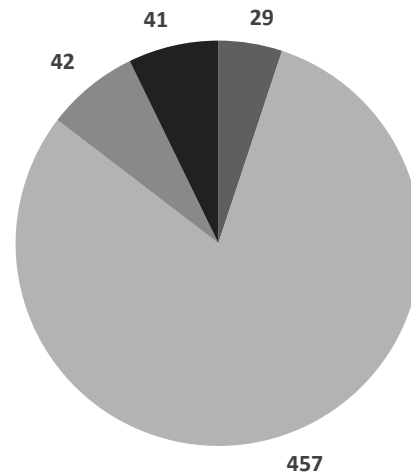


Do you plan to teach the course solo or build a team to deliver the curriculum to growers?



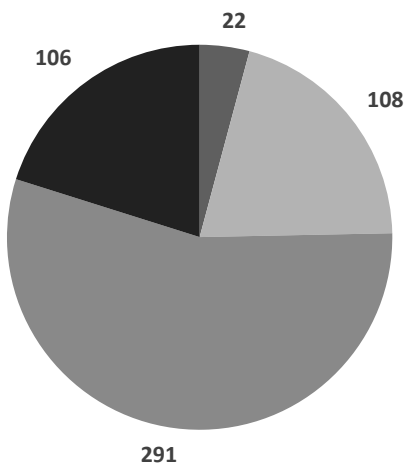
■ No Response ■ Solo ■ Team ■ Both

If training as a team do you feel that you will be able to find qualified people to join your team?



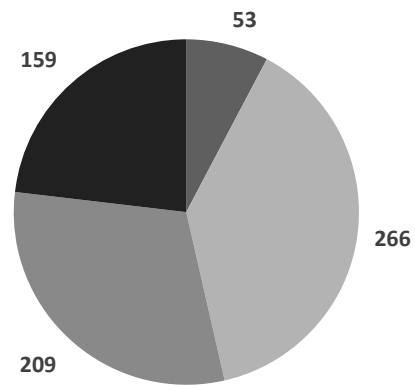
■ No Response ■ Yes ■ No ■ Not Sure

Do you plan to offer the training in one day or spread it out over multiple days?



■ No Response ■ One Day ■ Multi-Day ■ Not Sure

If you plan to host a multi-day training, do you plan to include a Farm Food Safety Plan writing component or other additional information?



■ No Response ■ Yes ■ No ■ Not Sure