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TAPS Program Evaluation – Non-Producers

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Executive Summary

Of the educators, industry members, Extension personnel, and agency personnel that filled out the non-producer survey, a vast majority of them felt positively about how the TAPS program has influenced their relationships with producers. They competed in the TAPS program to better relate and to be more knowledgeable for the farmers they serve or interact with. They share the information they learn and feel the program to be valuable. What is missing is what the program hopes to teach non-producers as well as what it hopes to get *from* them. It is recommended that the TAPS program state the learning objectives for those participating in the program who are non-producers. If behavior change on the farm is the desired outcome for producers, what is the desired outcome for educators, industry members, and agency personnel? As important members of the farming community how can the expertise of non-producers also be utilized in the experiential education experience of TAPS participants. This too, should be considered and sited in the objectives and outcomes of the program.

Introduction

The mission statement of the Testing Agricultural Performance Solutions (TAPS) program is:

To fully engage agriculturalists, scientists, educators, students and industry in an innovative endeavor, to TAP into the University of Nebraska's potential to facilitate and create an environment for all stakeholders to work together in finding solutions through innovation, entrepreneurialism, technological adoption, new managerial applications, improved techniques, and cutting edge methodologies for Nebraska's future farms, farm businesses, and farm families to maintain profitability, sustainability, and productivity.

This mission is carried out through several interactive real-life farm management competitions in farm production. In Nebraska, four competitions are held: sprinkler corn, Subsurface Drip Irrigated (SDI) corn, sorghum, and winter wheat. Competitors make production and marketing decisions for their TAPS “farm”, which includes three plots representative of a contemporary farm for each crop. These decisions are made on a password-protected online portal for each competitor. Onsite program staff then execute participants’ decisions on their plots. Management decisions include:

1. Hybrid selection
2. Seeding rate
3. Crop insurance
4. Nitrogen management
5. Irrigation management
6. Grain marketing

Plaques and cash prizes are awarded at the end of season for the following three categories of each competition: most profitable, highest input use efficiency, and greatest grain yield.

TAPS competitions bring together UNL scientists and extension professionals, producers, industry leaders, agriculture students, government regulators and agency personnel aiming to become part of a highly engaged network focused on evolving profitability and input-use efficiency.

TAPS allows producers to use their preexisting knowledge while also developing new proficiencies to demonstrate their farming skills/knowledge in the competition. This is done without having to incur risk on their own operation. The program also offers a variety of

educational components, ranging from peer-to-peer learning to industry leaders providing state-of-the-art information and technology to the participants.

TAPS is unique compared to traditional farming competitions in that the top prizes go to those who are most profitable and the most efficient users of water and nitrogen. This is intended to encourage stewardship and forward thinking.

The program is shared widely through a number of media sources, a monthly digital newsletter, social media presence, and presentations given by the TAPS team. As a result of the popularity of the competition, other states are now replicating the program. Due to the expansion of the competition and to ensure the quality and the longevity of the TAPS competition, this report will examine the impact of the program.

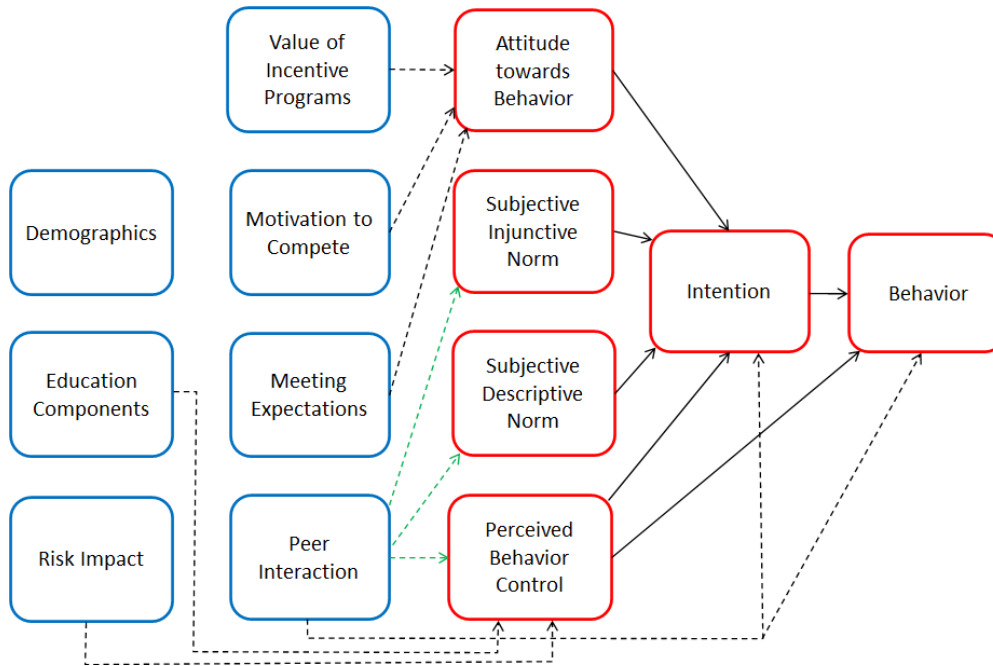
Methodology

This evaluation investigates the impact of the TAPS program on its non-producer participant alumni, specifically examining participant attitudes, motivations and decision-making processes and their resulting behavior change. The behavior was how non-producer alumni relate to farmers about their use of agricultural technology/management practices. Survey items specifically gauged participants perceptions of how they relate to farmers through the following concepts:

- 1) Attitude towards adoption (improving how they relate to farmers)
- 2) Injunctive norms (approval of peers in improving farmer relations)
- 3) Descriptive norms (if peers would change how they relate to farmers)
- 4) Perceived behavioral control of behavior (if they have the skills to improve farmer relations)
- 5) The value of incentives (additional reasons for improving farmer relations)
- 6) The motivation to compete
- 7) How TAPS did or did not meet expectations
- 8) Peer interaction
- 9) Demographic variables
- 10) Experiential education

11) Risk impact

TAPS Behavioral Model



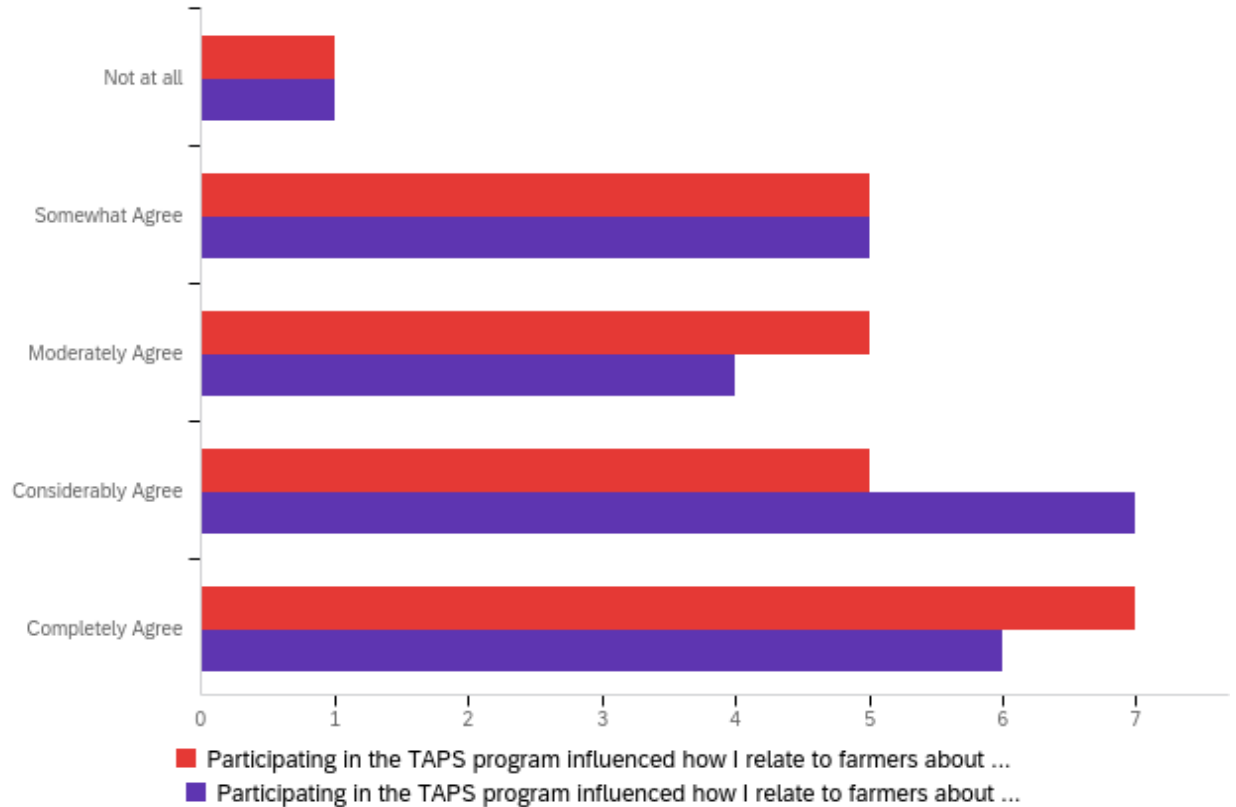
Survey Procedures

An online survey was developed to fit two groups of TAPS participants: agricultural producer alumni and all other alumni who are not producers. The language for the producer survey centered on the adoption or change in attitudes/beliefs regarding new technologies and management strategies *on the land that they farm*. Non-producers were labeled as “others” and their questions focused on how TAPS impacted their relationships with producers, as most of them were educators, industry members, Extension personnel, and agency personnel. In this way, both groups were asked about the same concepts, but questions were applicable to their role. Online surveys were open to TAPS alumni of two years or greater from August 2022 through December 2022. Nineteen non-producers completed the survey in its entirety. Responses from the producer alumni survey are discussed in another report.

Results

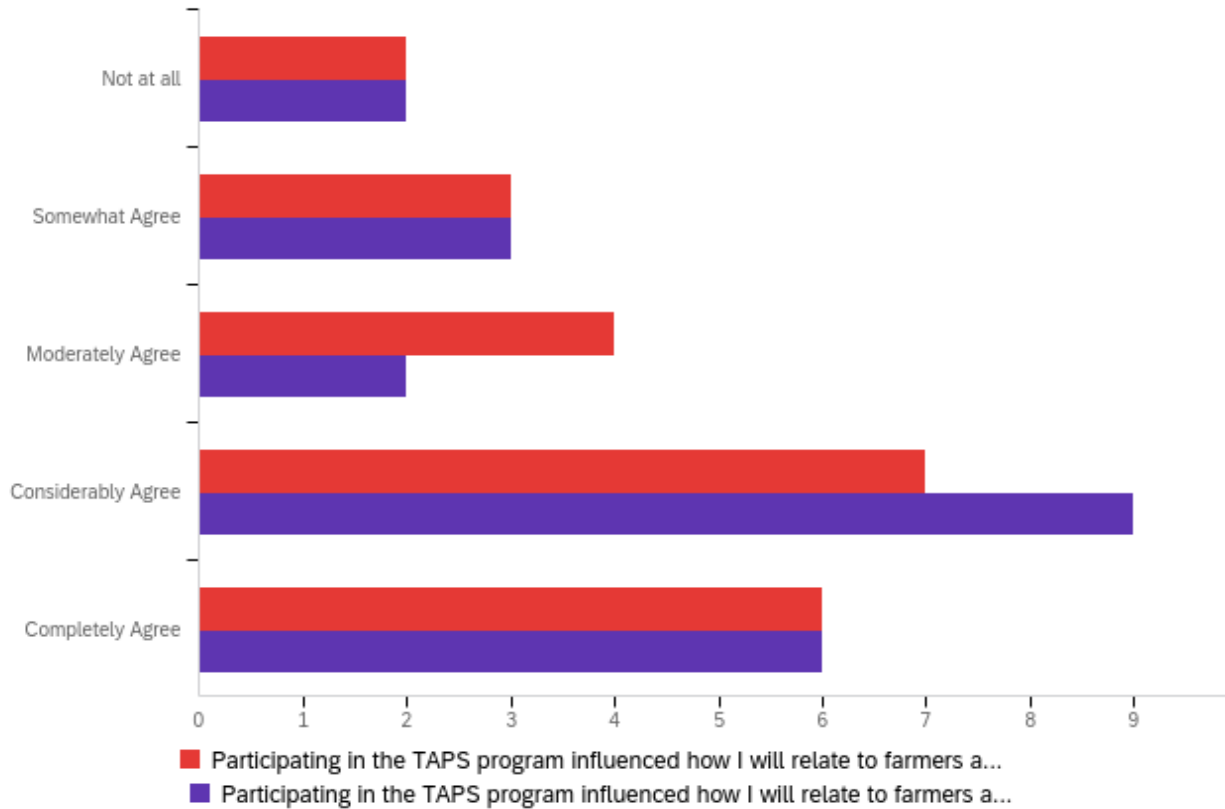
Behavior

When asked if they agree that participating in the TAPS program influenced how they relate to farmers about their use of agricultural technology/management practices, 76% of the 23 respondents at least moderately agreed.



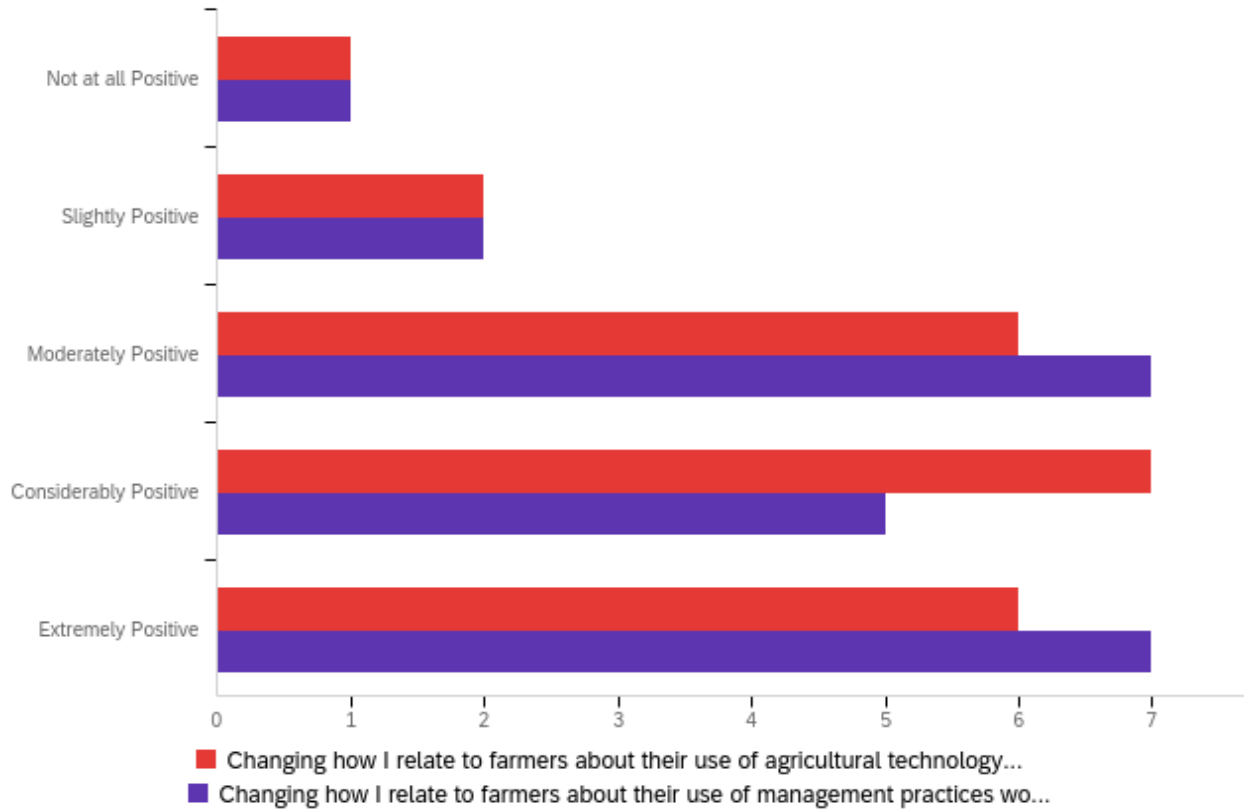
Intention

Intention is a subset of behavior. In this regard, we asked participants if any future changes in how they relate to farmers were intended. Of the 22 respondents, 77% at least moderately agreed that participating in the TAPS program influenced how they will relate to farmers about their use of agricultural technology/management strategies in the future.



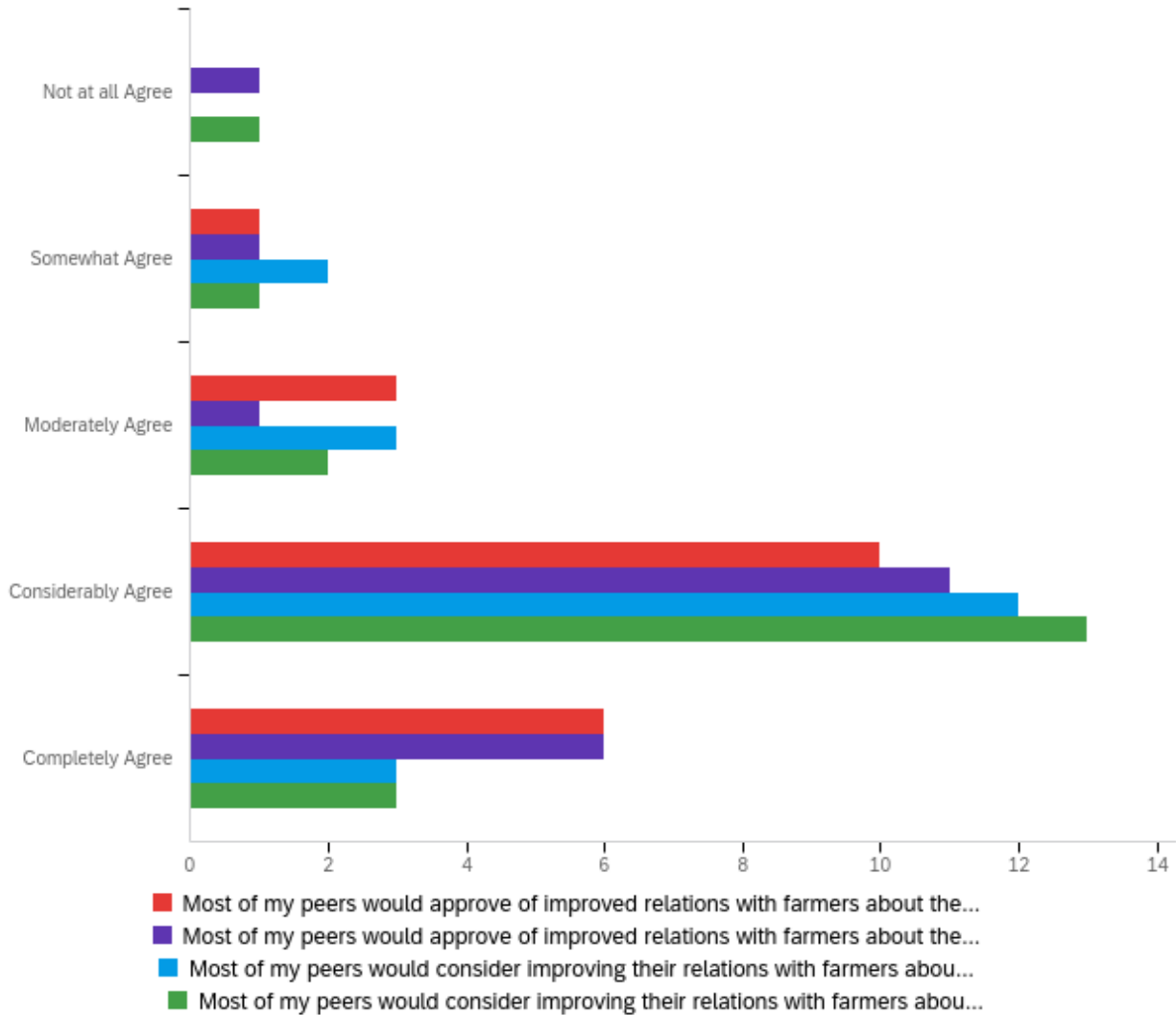
Attitude

Attitude is a precursor to intention and behavior. If a person's attitude toward a behavior is positive, they are more likely to adopt that behavior. We asked non-producers if changing how they relate to farmers about their use of agricultural technology and management practices would be positive. Of the 22 that responded, 86% considered changing how they relate to farmers about their use of agricultural technology and management practices would be at least moderately positive.



Social Norms

Both injunctive and descriptive social norms were examined: one asking if peers would approve of improved relations with farmers about their use of new management practices/technologies and the other asking if their peers would consider improving relations themselves.



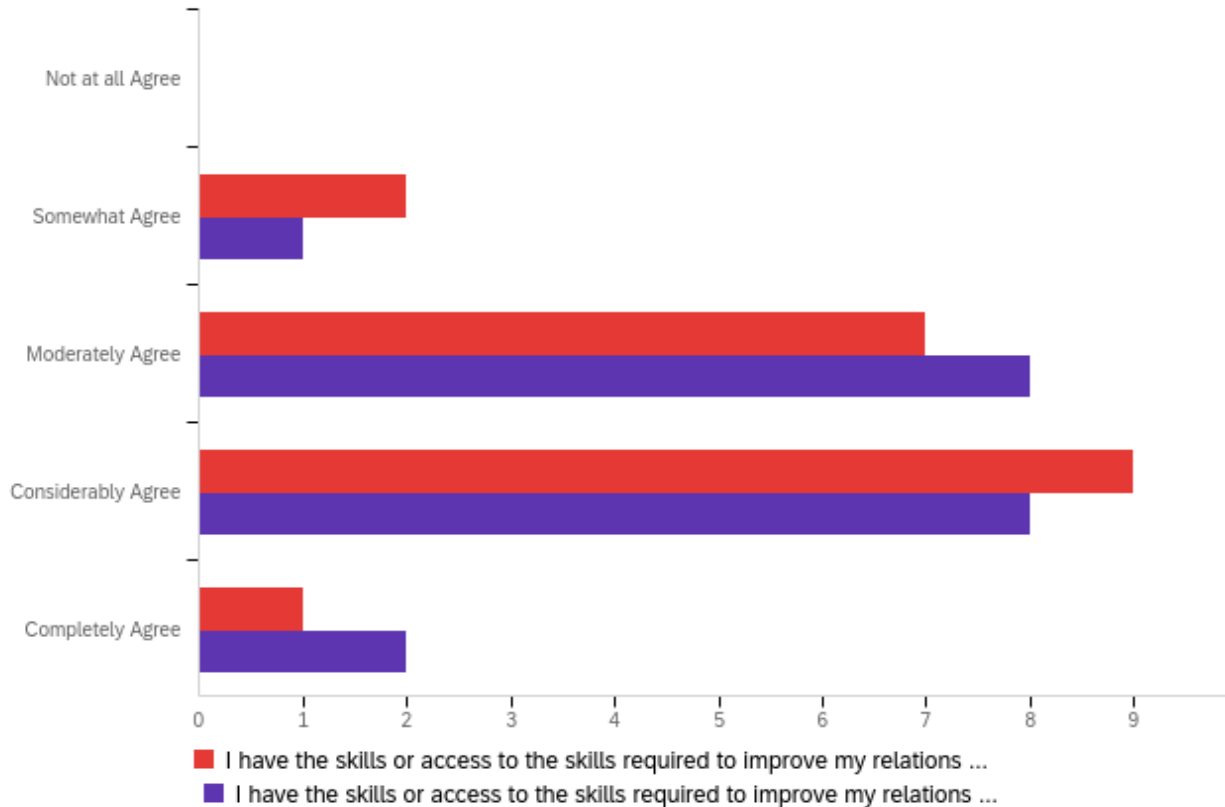
When asked how much they agree that most of their peers would approve of improved relations with farmers about their use of agricultural technology, 95% at least moderately agreed; 90% at least moderately agreed with ag management strategies.

When asked how much they agree that most of their peers would consider improving their relations with farmers about their use of agricultural technology if provided an opportunity, 90% at least moderately agreed. Ninety percent at least moderately agreed regarding ag management strategies.

Perceived Behavioral Control

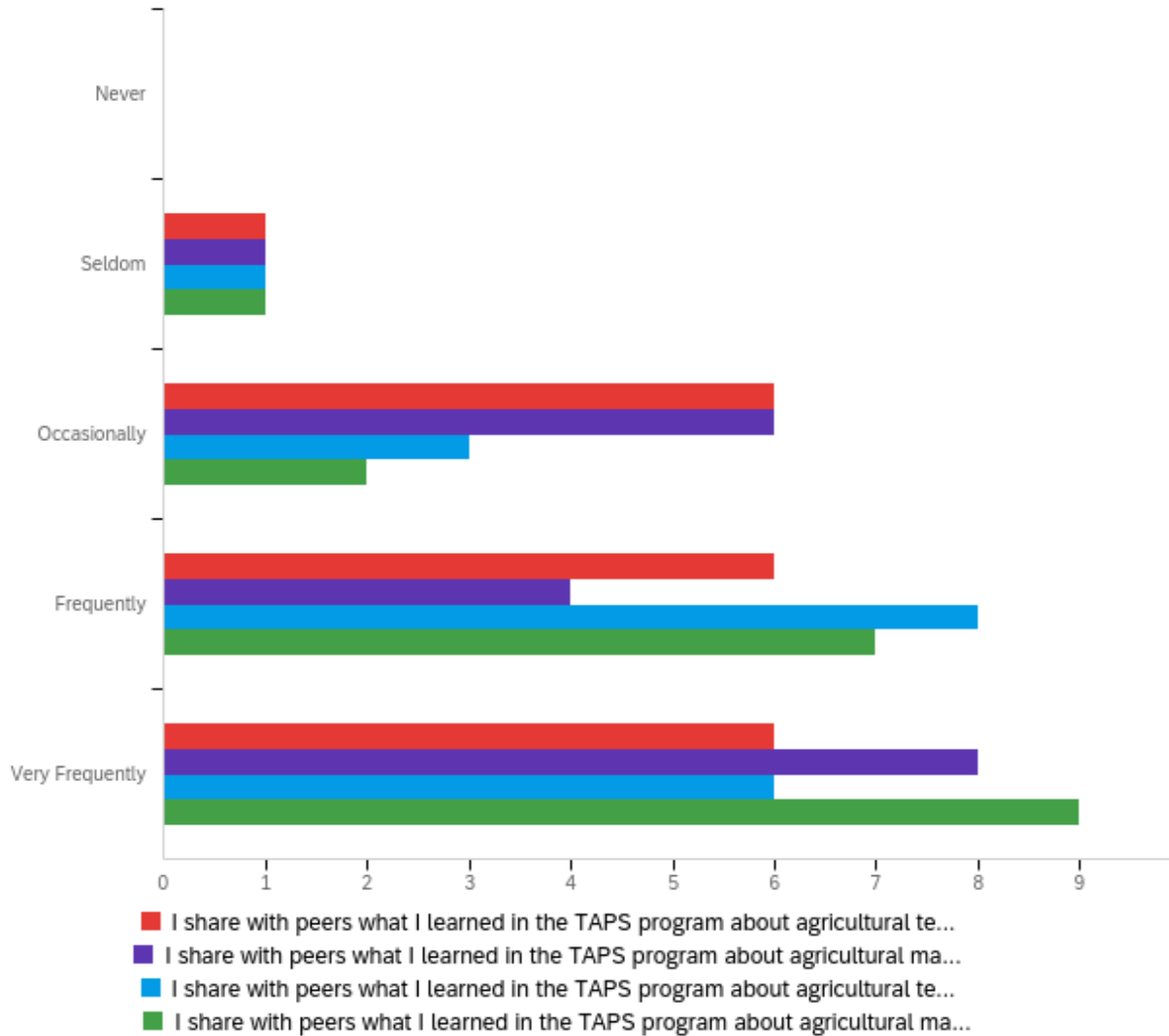
Seventeen of 19 respondents (89%) at least moderately agreed that they have the skills or access to the skills required to improve their relations with farmers about their use of

agricultural technology. Eighteen of 19 respondents (95%) at least moderately they have the skills or access to the skills required to improve their relations with farmers about their ag management practices.



Peer Interaction

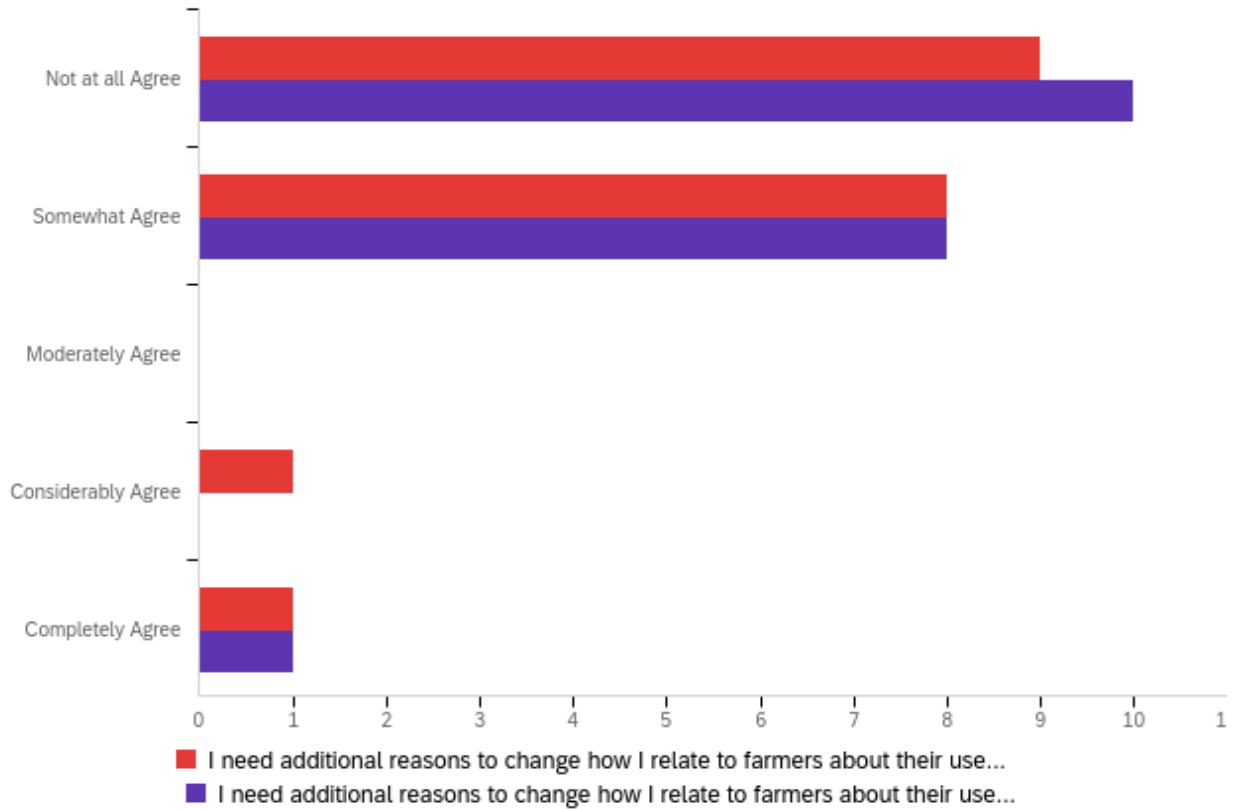
Peer interaction, for the non-producer survey, focused on how often participants share what they learned participating in the TAPS program. All but one of the 19 respondents (95%) shared at least occasionally. None of them responded never. Ninety-five percent responded they at least occasionally share with peers what they learned about ag management practices.



Seventeen of 18 respondents (94%) said they at least occasionally share with peers what they learned about ag technology when asked. Eighteen of 19 respondents (95%) said they at least occasionally share with peers what they learned about ag management practices when asked.

Value of Incentives

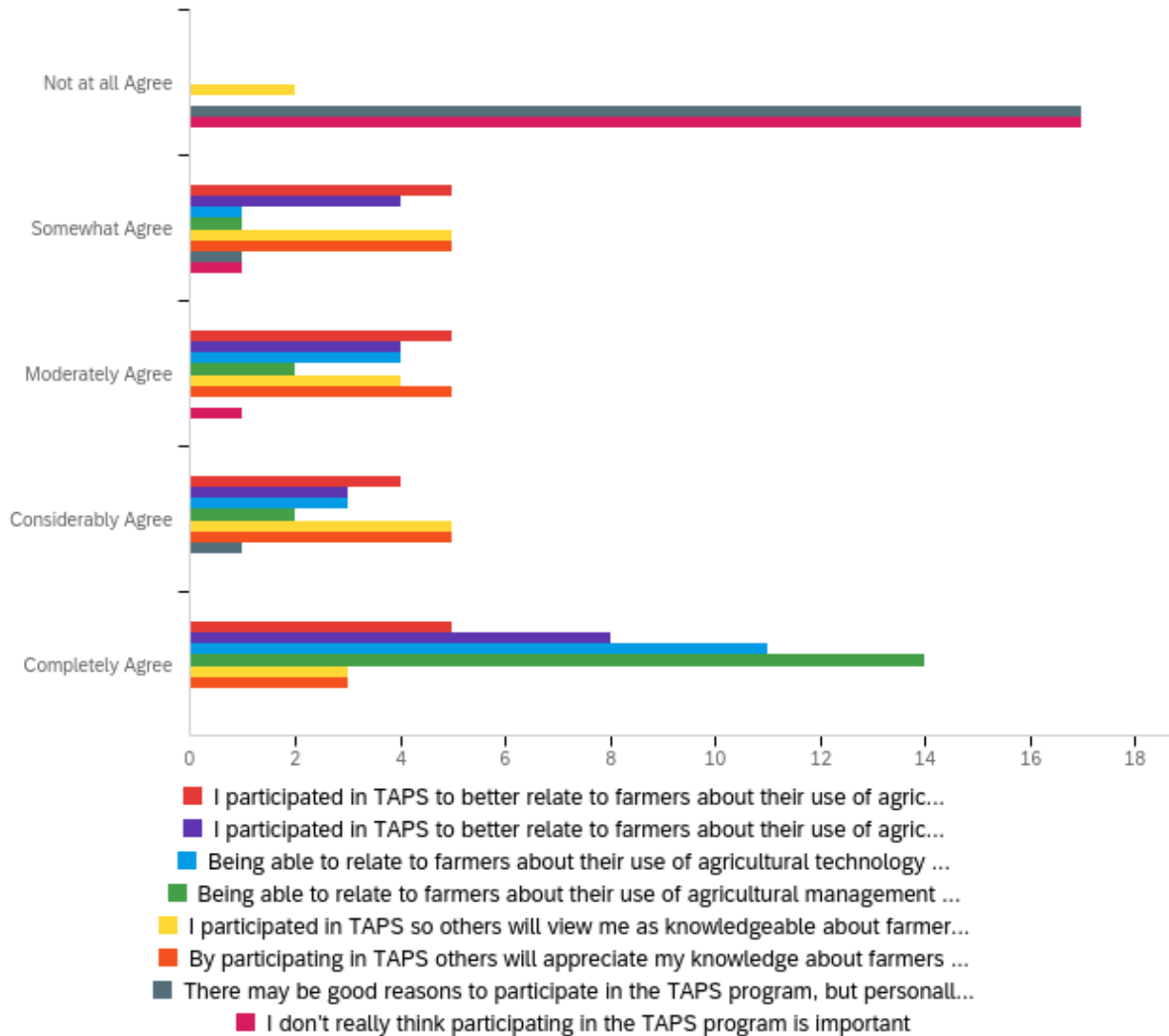
When asked if they need additional reasons to change how they relate to farmers about their use of agricultural technology, 89% did not at all agree or just somewhat agreed. One considerably agreed and one completely agreed.



Ninety-five percent did not at all agree or just somewhat agreed that they need additional reasons to change how they relate to farmers about their use of ag management practices.

Motivation to Compete

Fourteen of 19 respondents (74%) at least moderately agreed that they participated in the TAPS program to better relate to farmers about their use of agricultural technology, and 79% to better relate to farmers about their use of ag management strategies.



Eighteen of 19 of respondents (95%) at least moderately agreed that being able to relate to farmers about their use of agricultural technology and management practices is important to them.

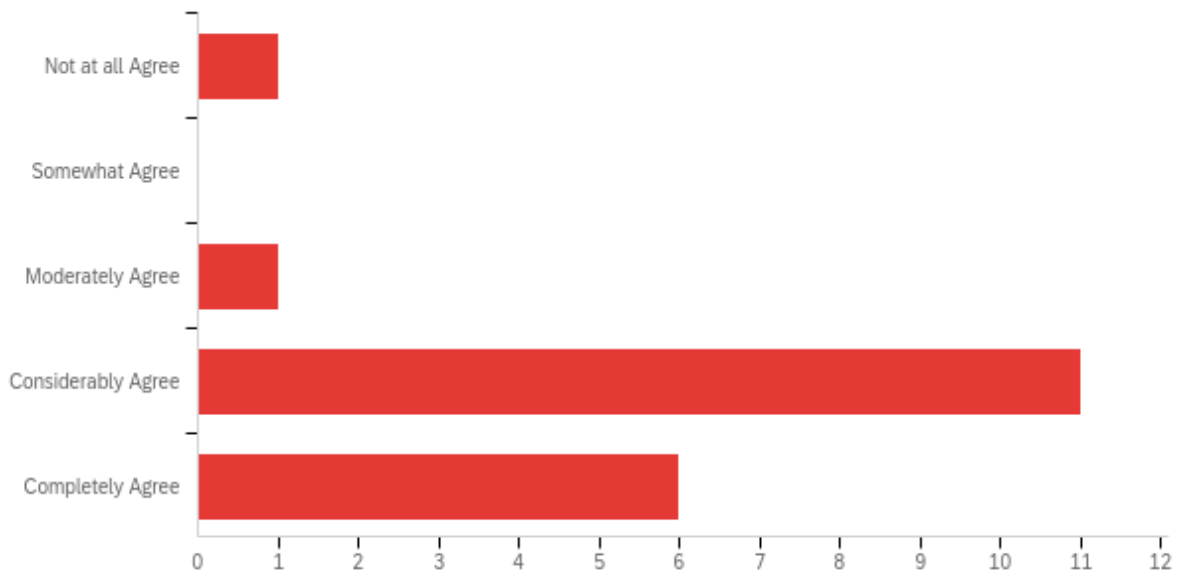
Eleven of 19 respondents (58%) at least moderately agreed that they participated in the TAPS program so others will view them as knowledgeable about farmers use of irrigation technology or management strategies. Thirteen of 18 respondents (72%) at least moderately agreed that by participating in the TAPS program others will appreciate my knowledge about farmers use of irrigation technology or management strategies.

Seventeen of 19 respondents (89%) completely disagreed that there may be good reasons to participate in the TAPS program, but personally they don't see any. One somewhat agreed and one considerably agreed.

Seventeen of 19 respondents (89%) completely disagreed that they don't really think participating in the TAPS program is important. One somewhat agreed and one moderately agreed.

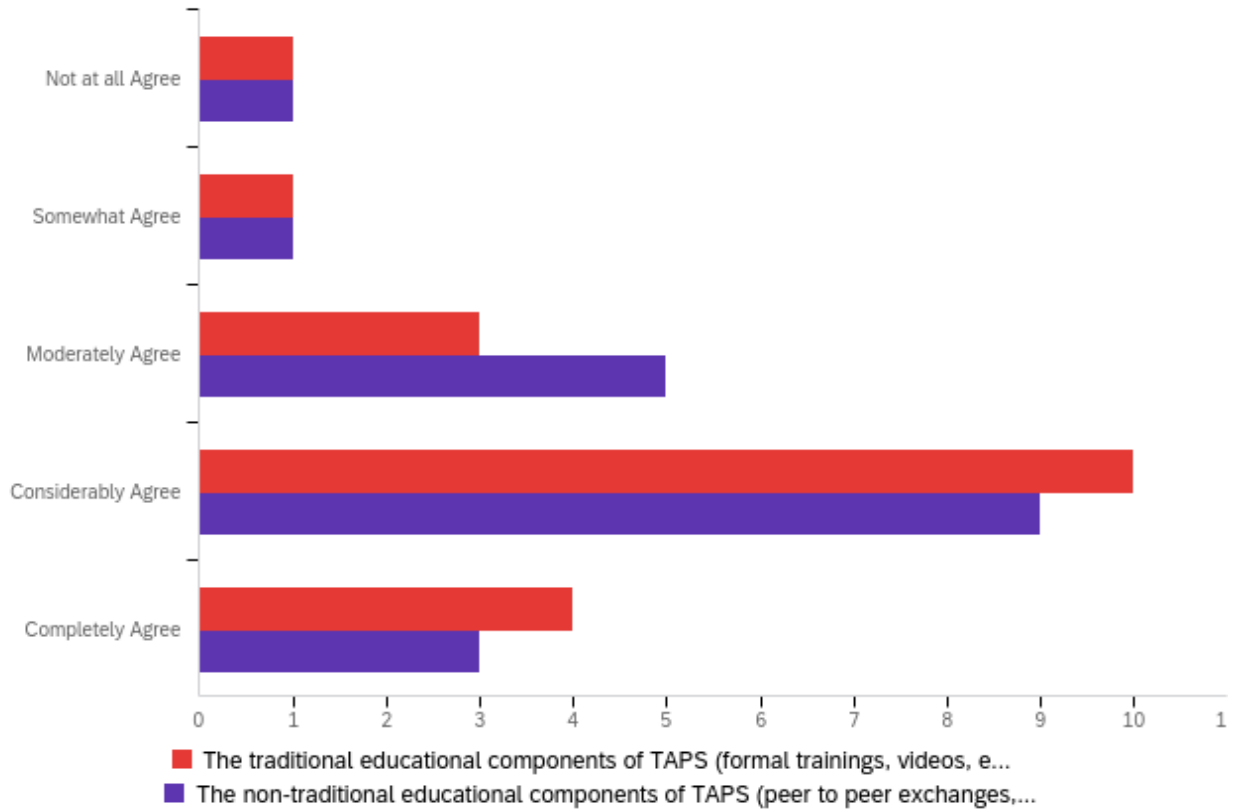
Meeting Expectations

Eighteen of 19 respondents (95%) at least moderately agreed the TAPS program met their expectations.



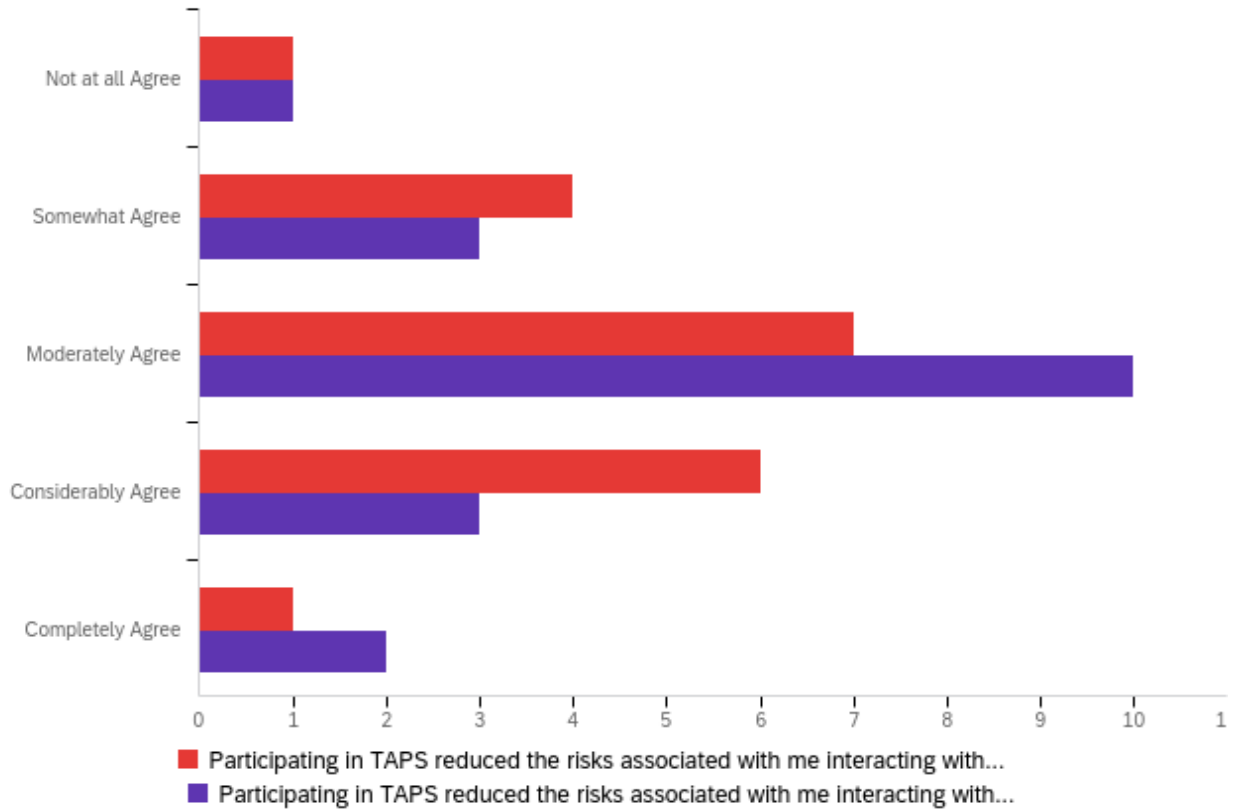
Experiential Education

Seventeen of 19 respondents (89%) at least moderately agreed that the traditional educational components of the TAPS program (formal trainings, videos, etc.); and 17 of the 19 respondents (89%) at least moderately agreed that the non-traditional educational components of the TAPS program (peer to peer exchanges, informal discussions, etc.) were valuable to them.



Risk Impact

Fourteen of 19 respondents (74%) at least moderately agreed that participating in the TAPS program reduced the risks associated with them interacting with farmers about their use of agricultural technology and management strategies. Fifteen of 19 respondents (79%) at least moderately agreed that participating in the TAPS program reduced the risks associated with them interacting with farmers about their use of agricultural management practices.



Discussion and Recommendations

Of the 19 educators, industry members, Extension personnel, and agency personnel that filled out the non-producer survey, a vast majority felt the TAPS program positively influenced their relationships with producers and reduced the risks associated with interacting with producers about their use of agricultural technology and management strategies. More, a vast majority of respondents felt the TAPS program positively influenced how they will relate to producers in the future. They completed in the TAPS program to better relate to producers and be more knowledgeable about their adoption of agricultural technology and management strategies. They share the information they learned and feel the program to be valuable.

In the TAPS Evaluation Producer Report, it was suggested that the TAPS team create a new mission statement based on a logic model. The recommendation carries over to this report—it would be useful for TAPS to state the learning objectives for those participating in the program who are non-producers. If behavior change on the farm is the desired outcome for producers, what is the desired outcome for educators, industry members, and agency

personnel? If producers are the focus of TAPS curriculum what is intended goal of including others? What curriculum will be included to ensure that the learning objectives of non-producers are met? It is likely that this group of education, industry, Extension, and agency personnel bring to the program their own knowledge/expertise. How can that knowledge be incorporated into the experiential learning process for producers?