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Modernizing the NASS Customer Experience: Findings from Virtual Focus Groups on the Respondent Portal Dashboard

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I. EXECUTIVE SUMMARY

The National Agricultural Statistics Service (NASS) is undertaking an effort to modernize the way it collects data from—and shares data with—agricultural producers on the web. Furthermore, NASS hopes that modernization efforts will improve the customer experience for producers engaging with the Agency on the web. The work to improve the Agency’s online presence is spearheaded by the recently formed Strategic Initiative 1 (SI1) Team, which has put into motion the creation of a new customer-centric, web dashboard to accomplish the modernization goal.

The concept of a customer-centric dashboard is simple. Provide a single online resource where users can access all the tools they need to do business. Conceptually, the dashboard will provide producers with everything they need to make better and more informed decisions for their operations. For reporting data to NASS, the survey features of the dashboard are conceptually derived to reduce respondent burden by leveraging previously reported data, secondary-sourced data, and other data. The overall effect, improved customer satisfaction with NASS products and services on the web.

To accomplish the goals of the SI1 Team, a contractor was hired to bring the vision of the web dashboard to fruition. With the help of the contractor, prototypes of the dashboard were built. However, before making the prototypes operational, the SI1 Team sought respondent feedback on the concepts and features of the dashboard. As a result, a series of focus groups were conducted with agricultural producers in September 2020. In total, four focus groups with ten total participants partook in the research. Despite the relatively small sample size, a plethora of qualitative insights into producers’ perceptions of the dashboard were realized.

Overall, the focus group participants viewed the dashboard favorably, and most indicated a willingness to use the dashboard or at least try it out. Participants liked the cleanliness of the design and the organization of the features (e.g., the reports and surveys tabs). Despite this, not many participants viewed the dashboard in its current form as necessarily solving the biggest problems they face when engaging with NASS on the web. For example, even though participants thought the “Surveys” page was useful, NASS survey questions and reports were still viewed as burdensome to complete.

The focus group participants had many suggestions for actions NASS can take to improve their customer experience. For example, participants felt NASS should do more to increase the agricultural population’s awareness of the agency and the relevance and utility of its data. Many of the participants did not feel like they knew enough about NASS and the relevance of its data for their operations. This lack of knowledge was often cited as a reason why they did not use NASS as their first source for data gathering, and hence, tempered their expectations for how useful they would find the new web dashboard. In total, the participants offered multiple, specific recommendations for NASS to adopt that they indicated would make them more likely to find the dashboard useful and, therefore, more likely to use it. The purpose of this report is to detail those focus group findings and provide a summary of recommendations NASS may consider as it moves forward with the development of the dashboard to improve the Agency’s customer experience.

II. Recommendations for NASS and the Development of the Customer-centric Dashboard

Recommendations for NASS based on Focus Group Feedback

- NASS should make a concerted effort to market the dashboard to producers. Raising awareness of the dashboard and why producers should use it, may increase the likelihood of that producers would use the tool.
- NASS should optimize the dashboard for smartphones and tablets. Many participants noted that producers spend most of their time, and conduct most of their business, over their smartphones.
- The dashboard should have an easily recognizable help button, or FAQ feature.
- The dashboard should have instructional videos, both for how to use the dashboard, and more importantly, for how to fill out and complete online reports they are asked to provide data for.
- The dashboard should have a “Definitions” feature that provides clarifications for complex questions in the surveys that producers are asked to complete.
- The dashboard should have a calendar of important report dates that are relevant to the producer.
- The dashboard should be accessible by a single username and password that can be used across all USDA websites.
- The dashboard should allow users to select and customize notifications and reminders (such as email reminders, preferred contact methods and times).
- Producers would like the data they report to other USDA agencies, such as the FSA, to link to their dashboard page.
- The dashboard should provide an aggregation tool for all of the data producers report.
- The dashboard should automatically feed forward the data they reported in past surveys into future or current web surveys.
- The dashboard should have a feature that allows users to download paper copies of the web surveys they are asked to complete.
- The dashboard should have the capability of showing users data by local and regional levels, as well as other characteristics (e.g., operation size).
- The dashboard should show data that is “real-time” or close to real-time (e.g., updated daily).
- In addition to the “Trending” reports feature, the dashboard should have a feature that specifically highlights data NASS thinks is imperative for farmers to know (e.g., points out what is crucial data and information).

Abstract

The National Agricultural Statistics Service (NASS) conducts hundreds of surveys annually, producing numerous reports and data from the completed responses. However, response rates have declined in recent years, a trend that is happening across all survey research organizations. The reasons for declining response rates vary, but there are a number of actions organizations can take to mitigate nonresponse. One way to do this is to increase customer satisfaction and engagement with your organization. As a result, NASS is seeking to better serve its customer base by building a new customer-centric web dashboard that will function as a “one stop shop” for farmers that serves important business needs, such as gathering and reporting crucial information. This report details the findings from focus groups, conducted with NASS’s target population on the concept of the dashboard and prototypes of its design. The results of the focus groups highlight both broad and specific actions NASS can take to improve and modernize the customer relationship with regard to the dashboard and among the agricultural population overall.

Keywords: Focus Group, Dashboard, Data, Information, Surveys, Reports

1. INTRODUCTION

The National Agricultural Statistics Service (NASS) is currently undertaking an effort to modernize the way it collects data from—and shares data with—agricultural producers on the web. Furthermore, NASS (the Agency) hopes these modernization efforts will improve the customer experience for producers engaging with the Agency online. The work to improve the Agency’s online presence is spearheaded by the recently formed Strategic Initiative 1 (SI1) Team. The SI1 team initiated the creation of a new customer-centric web dashboard to accomplish the modernization goal.

Historically, NASS has introduced a variety of different tools and systems to modernize its data collections efforts. Systems have arrived at different times, workarounds were developed to link disparate systems, and new training, administrative, and data collection tools were implemented to fill the needs of NASS staff and data providers. The result has been a data collection process that is somewhat fragmented. For web survey respondents, fatigue from the authentication process, and the necessity of visiting multiple USDA sites to complete a single survey became a common complaint. Respondents often feel that finding survey results and reports is a cumbersome process. Thus, they often fail to see the value in the surveys they completed and the resulting data and reports.

Over the years, a common theme has been heard from respondents regarding their view on data collection at NASS. Their concerns were echoed once again in the findings recently released (Pick et al. 2018) by the Farmers’ Feedback Sub-team of the Response Rate Research Team. When asked “How can NASS better serve you, the farmer or rancher” responses included “Make reporting easy for me”, “Make questions/questionnaires easy to answer”, and “Use data I’ve previously reported to either NASS or other USDA agencies.” The consistent theme in these responses from producers over time, along with response rate declines and increasing data

collection costs, requires a novel solution. The creation of a customer-centric web dashboard, the SII Team believes, is a requisite step in this direction.

The concept of a customer-centric dashboard is simple: provide farmers with a “one stop shopping” experience where users can access the tools they need to do business. For respondents this will mean a single point of entry to complete surveys leveraging previously reported data. It will provide links to other frequently used sites as well as new data dissemination and visualization tools allowing them to better understand the value in reporting. Provide a central point of contact with NASS that allows producers to efficiently report data to NASS as well as access producer-specific analytics, based on the type of enterprise or household derived from NASS estimates and external data sources. The interface will help producers make better and more informed decisions for their operations. It will also reduce respondent burden by leveraging previously reported data, secondary-sourced data, and geospatial data. The overall effort is aimed at improving the customer experience and data collection process to make reporting data easier for the respondents, allowing them to report their data in a convenient way at a convenient time.

To help achieve its vision and operationalize the concept behind the customer-centric web dashboard, NASS hired a private contractor. Together, the SII Team and the contractor began by visualizing what the web dashboard could look like. This was an important initial step before actual work on an operational form of the concept began. The contractor ultimately produced a prototype of the dashboard, which included four different web pages within the dashboard that addressed the key conceptual domains outlined above (snapshots of the dashboard designs appear in section 1.1 of this report). Once the initial prototypes were ready, the SII team then turned its attention back toward the dashboard’s target audience—agricultural producers—to solicit feedback in the form of focus groups.

The purpose of this report is to detail the results of the focus groups that highlight important producer perceptions of the dashboard. These results, as well as other producer perceptions of challenges and opportunities with reporting and using data, lead to specific recommendations that NASS should take to further improve the customer experience (both with the dashboard and more generally). These results are presented at the conclusion of this report.

2. VISUALIZING THE CUSTOMER-CENTRIC WEB DASHBOARD

To help achieve its vision and operationalize the concept behind the customer-centric web dashboard, NASS hired a private contractor. After multiple rounds of talks around visualizing the web dashboard, the contractor produced a set of prototypes of the dashboard’s web page designs. The overall design contains four web pages within the dashboard that a producer could visit depending their reasons for visiting the site: a “My Dashboard” page, a “Surveys” page, a “Reports” page, and a “My Profile” page. Images of the prototypes of each of these pages that make up the dashboard appear below in this section of the report. Figure 2.1 below exhibits the prototype of the “My Dashboard” page – the first page a producer would see upon logging into their customizable web dashboard. Figure 2.2 displays what the producer would see on the lower half of that first page. Figure 2.3 is an image of the “Surveys” page, and Figure 2.4 is a visualization of what starting a survey on that page would look like. Figure 2.5 shows the

prototype of the “Reports” page, and Figure 2.6 is the rendering of what the producer’s “My Profile” page would entail.

When an agricultural producer enters their NASS customer-centric web dashboard, the first page they would see is their “My Dashboard” page. This page, visualized in Figure 2.1 below, is designed to reflect what a producer would see if they customized it to be informative for their specific operation.

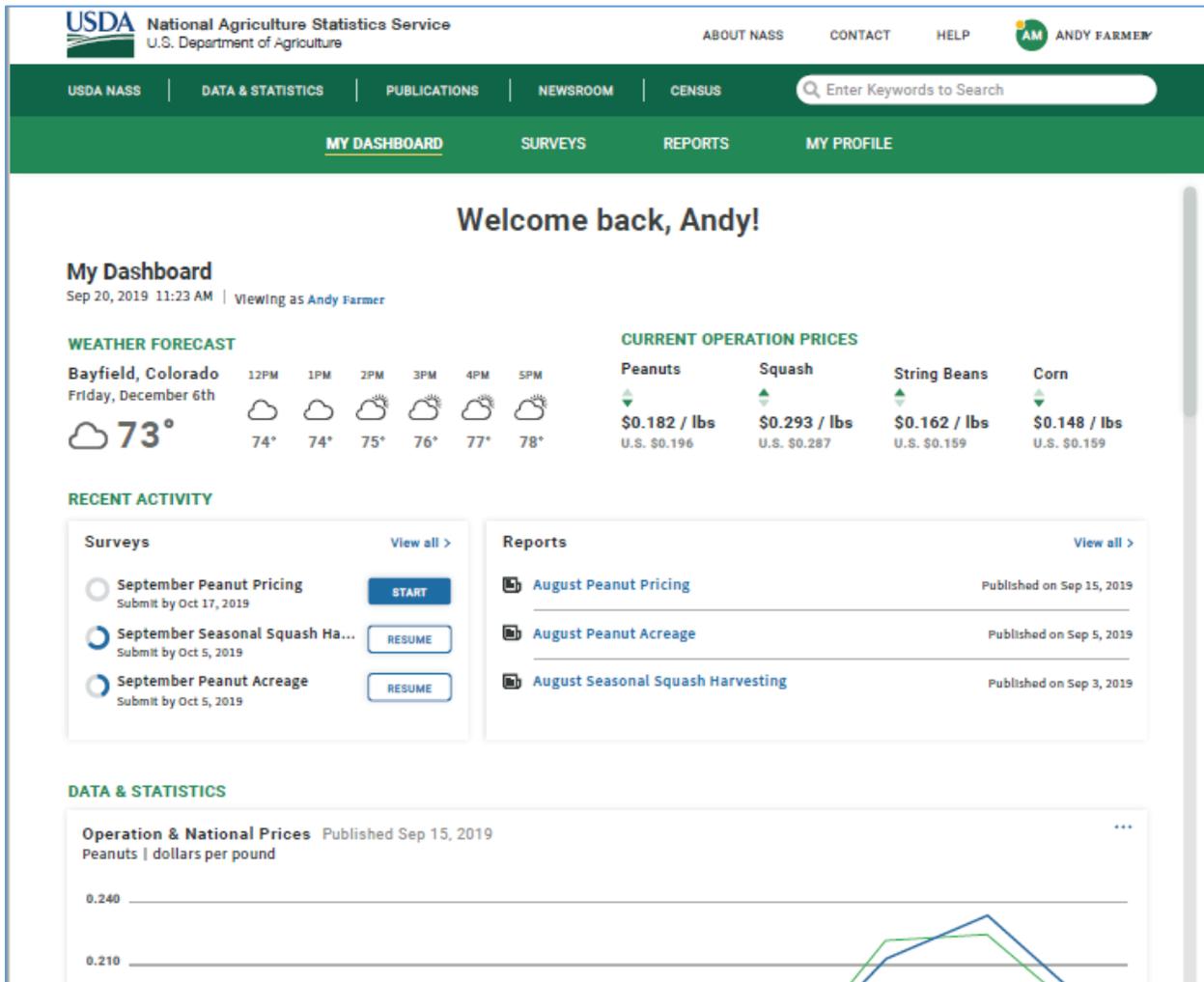


Figure 2.1 Dashboard Prototype: “My Dashboard” Page

The producer can see the weather forecast for their operation’s area, the current prices for the commodities the operation produces, the NASS surveys they have been asked to complete, NASS reports relevant to their operation, and other analytics that can track things like their commodity prices over time compared to a national average. This “My Dashboard” page is the fruition of NASS’s desire to provide agricultural producers with a “one stop shop” where they can provide and acquire data for their operations.

Figure 2.2 displays the lower half of the “My Dashboard” page a producer would see. The “Data & Statistics” portion of this page is designed to provide information back to producers likely important to their operation. This improves the two-way exchange of information between NASS and its data providers, an importance goal of NASS. While producers are able to provide data to NASS in the surveys they are sampled in, NASS can provide data back to producers in the form of charts of data points they may be interested in, such as commodity prices. In the Figure 2.2, the example is of NASS providing data back to the producer that compares their operation’s commodity (in this case, peanut) prices and stocks to the national average over time. With this tool, producers would get information that is often helpful for operational decision-making.



Figure 2.2 Dashboard Prototype: “My Dashboard” Page – Continued

Figure 2.3 below shows the visualized idea behind the goal of making responding to NASS surveys on the web easier and more efficient for producers. This page is called the “Surveys” page in the web dashboard prototype. The prototype displays three main functions for producers: 1) access to the new surveys they are being asked to complete, 2) access to the surveys they have already begun working on, but not yet completed, and 3) a view of a complete list of surveys they have already successfully completed. For the “New” surveys, producers can easily navigate

to the survey by simply clicking on the “Start” icon at the right of the screen. This feature is an attempt to make the authentication process much simpler than the current NASS survey web authentication process, hopefully reducing the burden on the producer when trying to begin a survey. Furthermore, the “In-Progress” icon helps show producers that they can save and exit a survey if they cannot complete it all in one sitting.

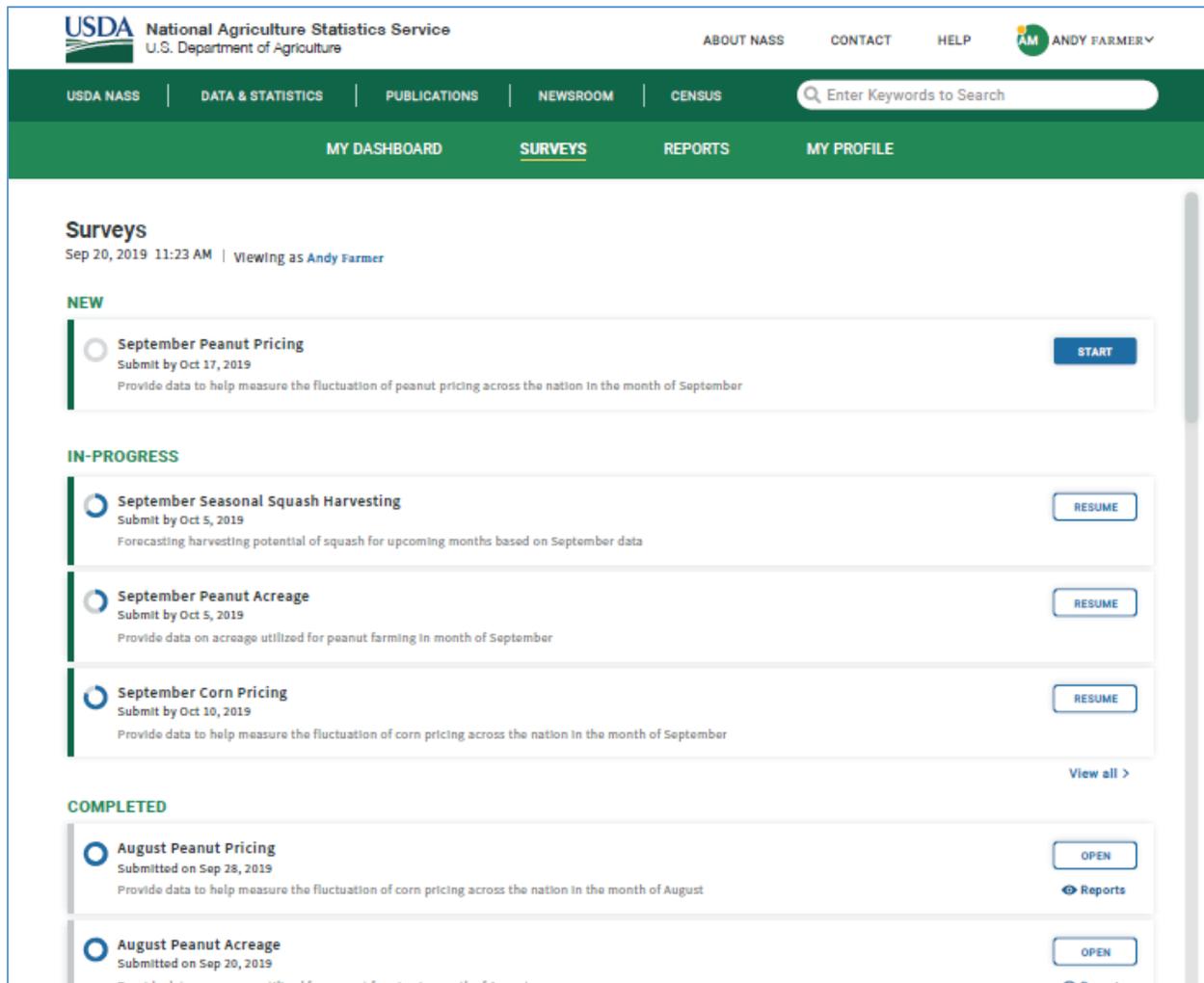


Figure 2.3 Dashboard Prototype: “Surveys” Page

The list also helps producers keep track of the surveys they are unable to complete in one sitting, which they can continue working on by clicking the “Resume” button found next to each survey still in-progress. Along similar lines, the complete list of “Completed” surveys allows producers to access their answers to previous surveys. This can be hugely beneficial to producers who rely on their historical data to help them figure out their answers to the surveys they are responding to currently.

Figure 2.4 is an illustration of what happens when the producer clicks the “Start” icon in the “Surveys” page of the web dashboard. Rather than taking them to a new webpage away from the dashboard location, this rendering envisions something more like a pop-up screen that overlays the web dashboard page. This allows the respondent to begin completing the survey, while still being able to get back to their dashboard when they exit the survey.

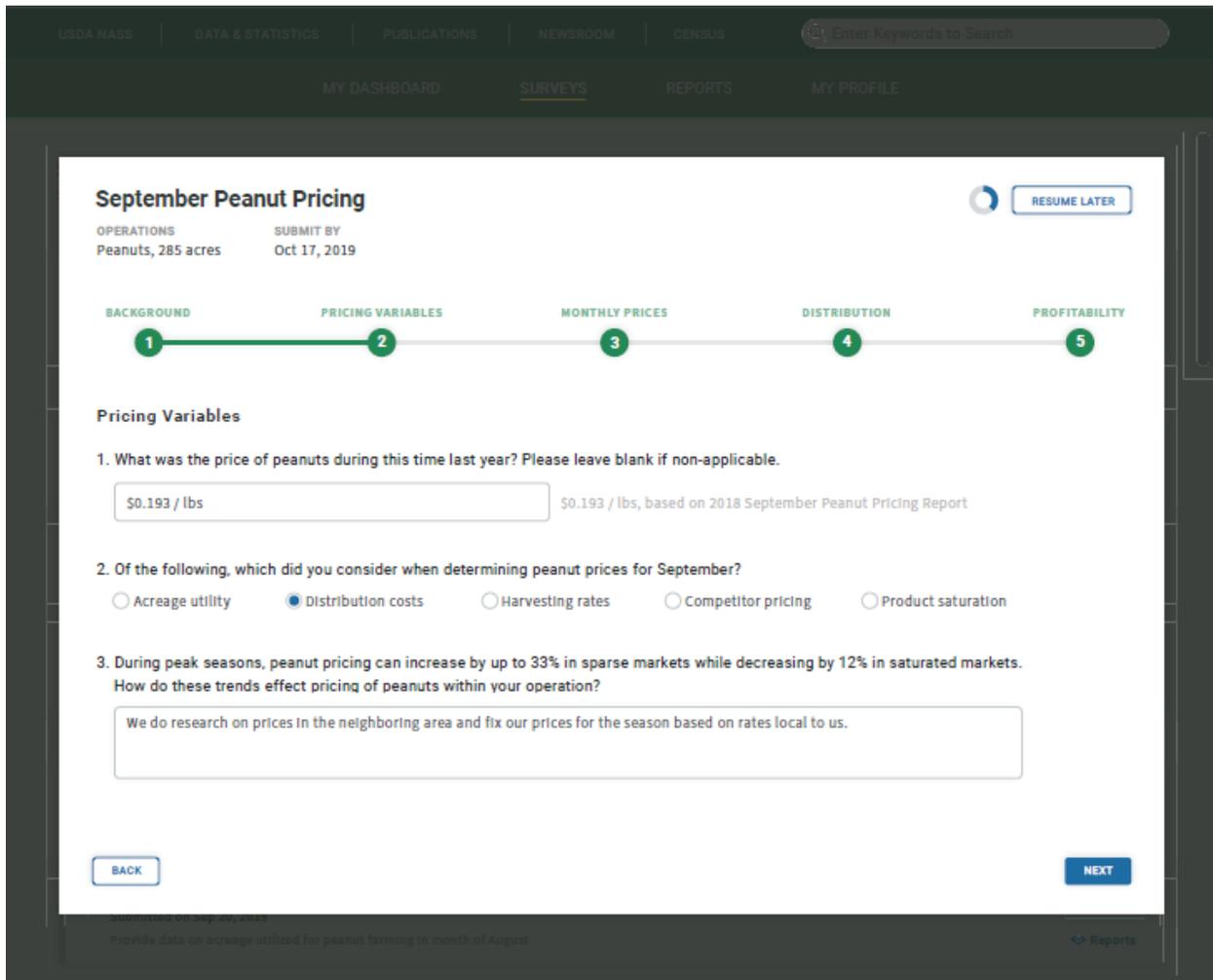


Figure 2.4 Dashboard Prototype: “Surveys” Page – Completing a Web Survey

This illustration of the web survey design includes a user-friendly design that may be more appealing to survey respondents than what is currently available. There are helpful information icons, such as a progress indicator. There is also information to remind respondents about the commodity they are reporting, the date by which they must submit their answers, historical pricing data that may help producers when thinking about their answers, and a “Resume Later” button if they need to finish later.

Figure 2.5 below details the current vision for the “Reports” page of the web dashboard. This page is designed to allow producers to find and access NASS data and reports that are of interest to them and their operation. Particularly, newly released data and other reports that are trending

(e.g., popular) among producers nationwide. If the producer has multiple operations they are involved with, they can click the dropdown “Select Operation” to change the operation for which they would like to see reports.

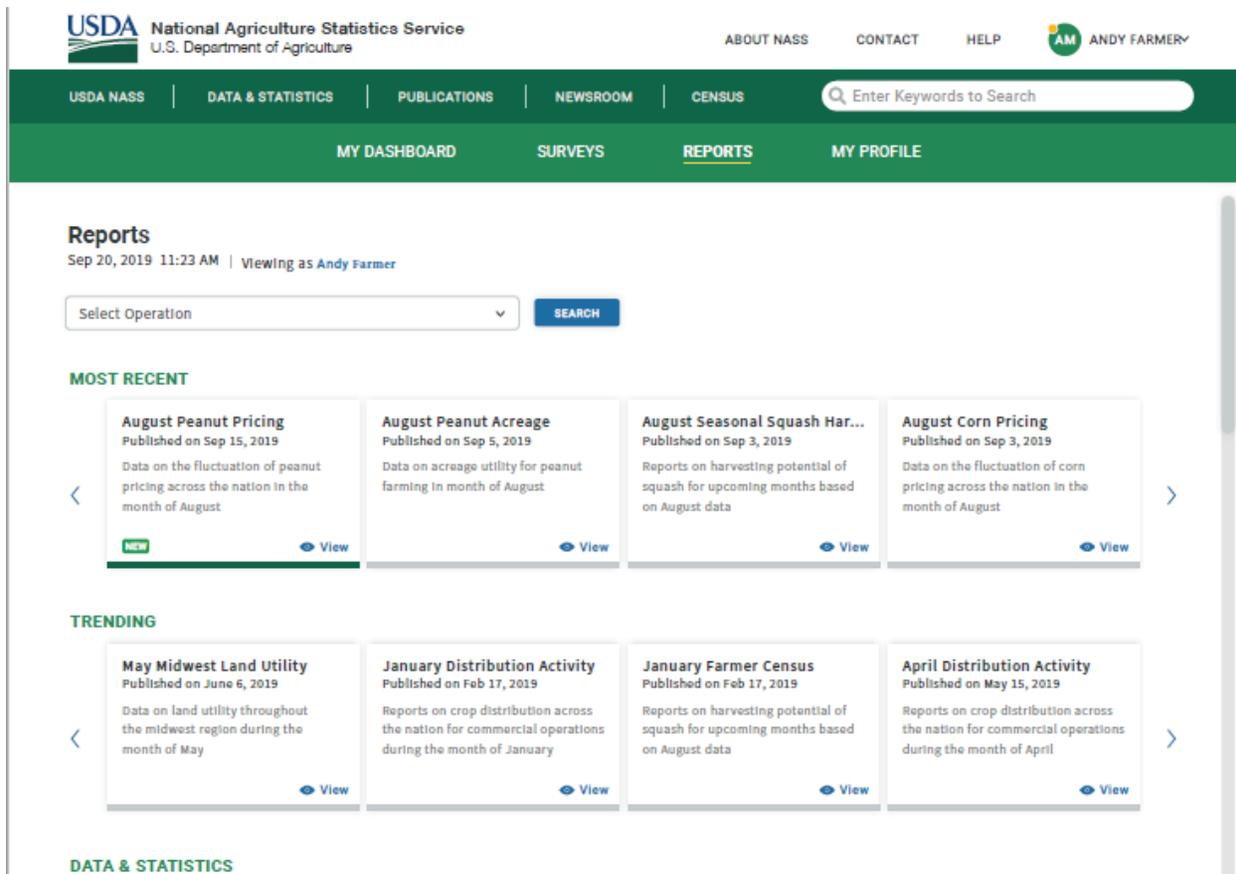


Figure 2.5 Dashboard Prototype: “Reports” Page

Lastly, Figure 2.6 below illustrates the dashboard prototype for a customizable respondent profile page called “My Profile.” On this page, the producer can fill out information about themselves and their operation. The producer can write a “Bio” about who they are, what they produce, or anything else such as what they are hoping to accomplish by joining this site (e.g., “I’m a Colorado-based peanut farmer. I provide peanuts in the local area and am looking to expand my operation outward.”). This page is also where the producer can provide their personal or operational contact information, key personnel associated with the operation, associations or memberships they or the operation belong to, and URLs pointing to their operation’s websites.

As mentioned earlier, the goal of each of the pages in the customer-centric web dashboard is to create more engagement between NASS and agricultural producers around the country on the web. NASS and producers have somewhat of a symbiotic relationship: NASS relies on producers to provide data so NASS can create timely and important statistics around all things agriculture, and many producers rely on NASS’s reports to help make important decisions on their operations.

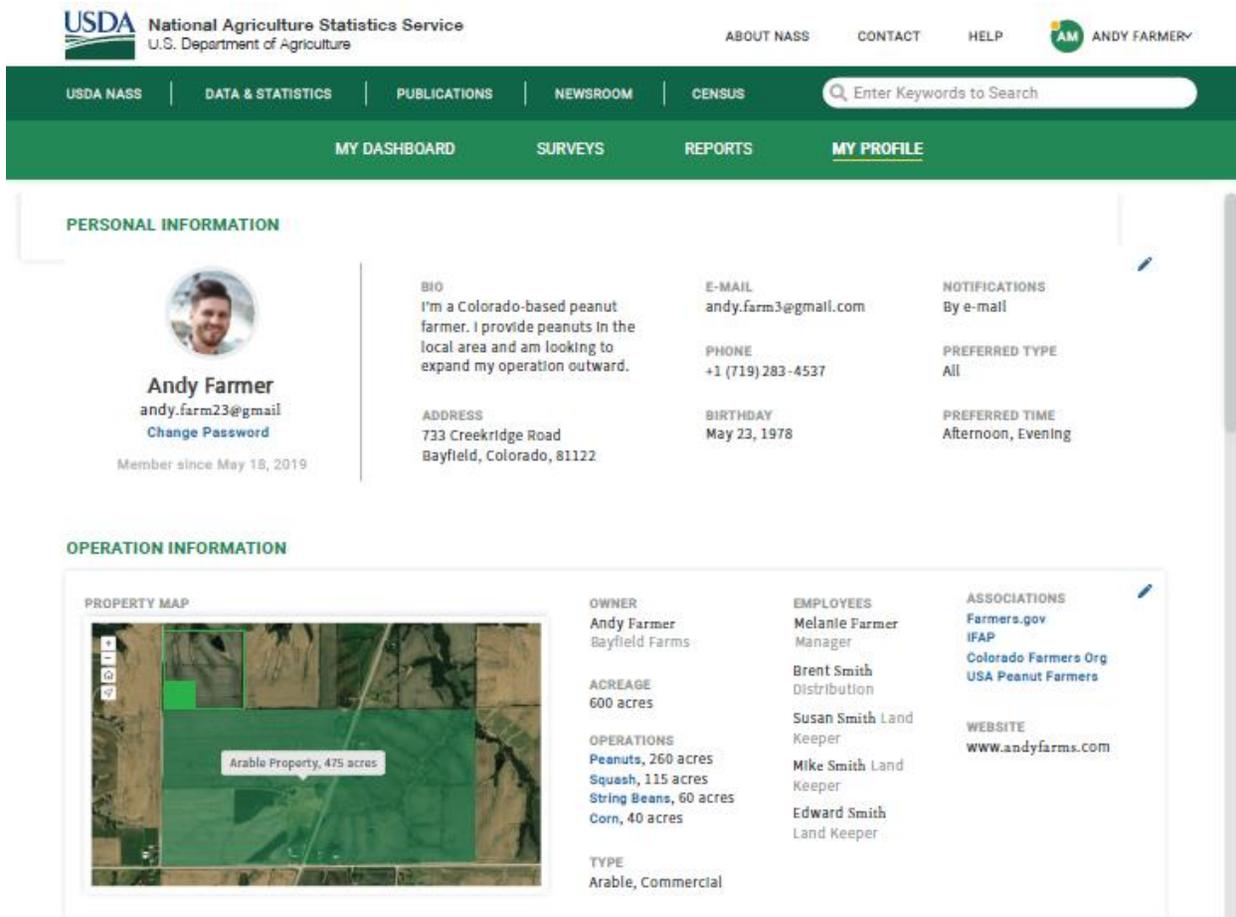


Figure 2.6 Dashboard Prototype: “My Profile” Page

Due to this important symbiosis, it was essential to the SI1 Team that producer feedback on the dashboard concept was sought. Important themes and insights from their feedback could then be used to improve and enhance the web dashboard concepts and designs. The following sections of this report detail the methodology, results, and conclusions the focus group research conducted for this purpose.

3. FOCUS GROUP RESEARCH METHODOLOGY

Focus group research is a well-established methodology in the business survey context (Snijkers 2002; Phipps et al. 1995; Gower 1994; Palmisano 1988). Focus groups are often conducted at any (or all) stage(s) in the development, testing, or evaluation of projects, products, and services. In the development stage, the goal is to understand respondent perceptions of the concept being studied, including respondent interpretations of the concept, how they define attributes of the concept, and how the concept relates to their business activity (Snijkers et al. 2013). Focus groups during the testing and evaluation stages are two sides of the same coin. At these stages, focus groups react to a draft of the product or service (such as a questionnaire, or in this case – a customer-centric web dashboard). Feedback regarding the appropriateness, usefulness, and compatibility with business activities and other general reactions (such as to the design) are

given in the conduct of this research with respondents (Snijkers et al. 2013; Snijkers and Luppés 2000; Babyak et al. 2000; Eldridge et al. 2000; Gower 1994; Carlson et al. 1993). The conduct of the focus groups for the customer-centric web dashboard included elements from all three of the stages listed here.

Procedures for conducting focus groups abound. Two recommended texts include Kreuger and Casey (2000) and Morgan (1997). Generally, focus groups are semi-structured discussions among a small group of people (8-12 participants) from a target population around a particular set of topics (Snijkers et al. 2013). Focus groups are led by a trained moderator, who facilitates the semi-structured discussion by first reading standardized questions from a discussion guide, and then using neutral or reactive probes to get participants to respond, react, or dive deeper into certain points made by participants in the ensuing discussions (Snijkers et al. 2013). The essence of the moderator is to encourage open discussion among the group while ultimately guiding it in a direction that is meaningful for the research topic (Snijkers et al. 2013). Typically, the direction of the focus group follows a funnel approach, where the discussion begins more broadly around the topic or concept of interest and then gradually gets more specific as the discussion advances (Snijkers et al. 2013).

The SII Team largely followed the above procedures. A focus group discussion guide structured in the funnel approach fashion was developed, and experienced focus group moderators were recruited to facilitate the discussions. The initial plan was to conduct two in-person focus groups with 8-10 participants per focus group with producers in the Northeast and Upper Midwest in the summer of 2020. However, the COVID-19 pandemic caused the SII Team to abandon the in-person focus group plans for safety concerns. Instead, the SII Team pivoted towards conducting virtual focus groups. Virtual focus groups are focus groups conducted via a remote meeting software (e.g., Zoom, Skype, WebEx), where each participant in the groups joins the meeting from an electronic device (e.g., desktop, laptop, tablet, or smartphone). Participants can join from their home, place of work, or any other place where they are able to connect to the internet and the location is convenient for them. Essentially, focus group participants are not present in the same physical location (as in in-person focus groups), but are instead each participating from separate physical locations in the same “virtual” room.

The change from in-person to virtual focus groups brought on other considerations as well. For one, the size (number of participants) of each focus group was changed from 8-10 to 4-6. Although it is unknown whether there is established literature regarding optimal virtual focus group sizes, members of the American Association for Public Opinion Research (AAPOR) who had experience conducting virtual focus groups recommended limiting the number of participants to four to six in discussion threads on the association’s email list serve. This being NASS’s first foray into virtual focus group data collection, the SII team thought it prudent to follow the advice shared by members of AAPOR. The benefit being that, if any one group experienced technical, or other, difficulties during the focus group, then any adverse effects would impact fewer participants and the quality of data collected from those participants. In addition, limiting the virtual focus group sizes to 4-6 was thought to mitigate the chance of technical difficulties or other disruptions that could influence the data being collected. Ultimately, the SII Team planned to conduct four virtual focus groups with four to six participants per group, with a goal of obtaining data from about twenty participants in total. In

addition, the number of SI1 Team members in the virtual focus groups was limited to three: one meeting host, one moderator, and one note taker. The meeting host made sure the recruited participants could access the meeting and handle any technical troubleshooting that arose, while also kicking off the meeting with an introduction about what to expect. The moderator guided the discussion, and the note taker was a silent observer that took notes during the discussion.

The decision to proceed with virtual focus groups created a new challenge regarding how to share the prototypes of the customer-centric web dashboard to the participants. The in-person focus group’s plan was to share print prototype copies with each participant and have them spend 5-10 minutes looking over and digesting what they were seeing, followed by pointed questioning about their perceptions of the concepts and attributes of prototypes. However, this would be difficult to accomplish in a virtual setting. The SI1 Team decided that a short video narration of the prototypes shared during the virtual focus groups by the meeting host could help overcome this challenge. Furthermore, using a narrated video had the advantage of providing every focus group participant with the same research stimuli (reliability), and likely increased the chances for participants to comprehend the prototypes in the way the SI1 Team meant them to be interpreted (validity).

The final version of the discussion guide can be found in Appendix A of this report. A transcript of the video narration of the focus groups can be found in Appendix B. Copies of the email text with the secure USDA government Zoom account meeting link for participants to access each focus group can be found in Appendix C. Table 3.1 below summarizes specific features of the virtual focus group methodology.

Table 3.1 Summary of the SI1 Customer-Centric Web Dashboard Focus Group Features

Features	Description
Setting	Virtual meeting conducted via USDA government Zoom account belonging to the Southern Plains Regional Field Office (RFO)
Focus group length	120 minutes maximum
Number of total desired participants	18 to 20
Number of desired participants in each focus group session	4 to 6
Number of desired focus group sessions	4 to 5
Number of recruited participants	18
Number that participated	10
Participant RFO domains	Participants were recruited by the Upper Midwest and Northeastern RFOs among agricultural producers in their respective domains

Focus group access	Participants and SI1 staff were individually emailed a secure, unique link generated by the SOR Zoom.gov account
Number of SI1 staff per focus group	Total of three: one host, one moderator, one note taker
Recorded meetings	Each virtual focus group was video recorded using the Zoom meeting software (each participant signed a video recording consent form)
Discussion Guide format	Funnel Approach beginning broadly with underlying concepts to more specific questions regarding features of the customer-centric web dashboard
Discussion Guide length	36 questions (excluding scripted probes)
Moderation style	Semi-structured: Moderators follow the discussion guide, but encourage and foster open discussion among the participants using proactive or reactive probes
Type of data collected	Qualitative

Of the 18 recruited participants, 10 were present for the focus group session they were assigned, for a participation rate of approximately 56 percent. There were two participants present in the first focus group, one participant present in the second, three participants present in the third, and four participants present in the fourth. Due to timing considerations, coordination, and recruitment for a fifth focus group were abandoned to avoid delays in proceeding with revisions to the customer-centric web dashboard. Lastly, each of the ten participants signed video recording consent forms prior to data collection, in order to record (via Zoom.gov function) each session. The recordings are advantageous in that they can be continually referenced as modifications to the customer-centric web dashboard are developed.

The discussion guide was designed to get producers to talk about some of the themes and key concepts underlying the development of the customer-centric web dashboard. As mentioned earlier¹, the development of the dashboard was founded on the idea of providing a “one stop shop” where producers could access everything they need (from a data perspective) to do business and respond to survey requests. Therefore, the discussion guide aimed to deconstruct these ideas through a series of questions that touched on particular themes underlying NASS ideas to enhance the customer experience with the web dashboard.

¹ The idea being NASS would make it easier for producers to find the data they need, lower the burden of accessing and responding to surveys, and overall improve their satisfaction with interacting (getting data from or providing data to) NASS online. The ultimate goal being to provide an online experience with NASS that producers would find useful and routinely use in the conduct of their business.

Theme #1: Perceptions of NASS. This theme kicked off the discussion with the participants led by the moderator. The goal was to see how the participants think of NASS. General sentiments, such as positive or negative sentiments, could be informative or predictive of whether they would be engaged with NASS online or likely to use a NASS customer-centric web dashboard in the future.

Theme #2: Internet Access, Usage, and Importance to the Producer's Operation. Internet access in rural areas has historically been lacking in many parts of the country. In order for producers to use the customer-centric web dashboard, they must first have reliable connection to the internet. Furthermore, the frequency with which a producer uses the internet for his agricultural business likely plays a significant role in whether the web dashboard is appealing. If producers do not use the internet very much, or do not use it to search for data relevant to the conduct of their business, then it may be unlikely that they would use the web dashboard. However, if they do use the internet for important business functions and data gathering, it would be useful to understand in what contexts they use the internet, and what websites they frequent, to accomplish their business tasks and goals.

Theme #3: NASS Web Response Behaviors and Perceptions. In regards to making the dashboard easier for producers to respond to NASS surveys online, it is important to understand how web responses to NASS surveys are currently viewed by data providers. Those who have responded via the web in the past and prefer this mode of reporting are more likely to respond to NASS surveys online in the future. Those who have not responded via the web, or have responded and did not enjoy the experience, or those who prefer to respond via mail or personal interview (telephone or in-person), are probably less likely to find the web dashboard's "Surveys" feature appealing. Therefore, questions aimed at illuminating the producer behaviors and perceptions of NASS's web surveys could be informative for understanding their reactions to the web dashboard.

Theme #4: Web Dashboard Prototype Reactions and Perceptions. After conclusion of the first three themes, the virtual focus group participants are shown the narrated video of the prototypes for the customer-centric web dashboard generated by the SII Team and the contractor. The basic premise of the questions are designed to elicit general reactions to the dashboard (e.g., did they like or dislike it overall), specific features of the dashboard (e.g., which ones they would find helpful or useful), and to find out how likely they would be to use it if it were available today (e.g., for what purpose, how often, etc.). Last, but not least, if producers do not perceive the dashboard prototypes to have much value for them in the context of their business, what could be changed about the portal that would increase their likelihood of using it? Answers to the questions in the first three themes would help to understand responses to questions in this theme, such as whether the likelihood of using the dashboard is related to features of the dashboard, or broader challenges like internet reliability or minimal association between the internet and the daily conduct of farm business.

Theme #5: Other Challenges with, and Opportunities for, Engagement with NASS. This theme concluded the focus group line of questioning for each session. This theme was designed to get focus group participants to share any other thoughts they had about obstacles or challenges they faced when interacting with NASS online (e.g., gathering and reporting data). This theme was

designed to see if there are other mechanisms about the nature of the Agency or their operations that made interaction online difficult, or something that a new customer-centric dashboard may or may not fix. The final remarks offered by respondents would hopefully illuminate general and specific ways NASS could improve their customer experience overall.

The full set of questions can be found in Appendix A, followed by a transcript of the narrated video of the dashboard prototypes in Appendix B. The following sections of the report summarize the findings of the focus groups, organized around the five themes of the research detailed above. After the findings are presented, conclusions about the results and recommendations are provided.

4. RESULTS FROM THE VIRTUAL FOCUS GROUPS

While there are many different ways to analyze qualitative data, the approach taken in this report is most similar to a theory-driven approach such as dimension and attribute analysis (Hox 1997). In other words, the five themes presented in the previous section represent dimensions of constructs and concepts, and the data collected on those concepts and constructs reflect the attributes or measures respondents ascribe to those concepts in their answers during the focus group interviews. Therefore, the data collected in the focus groups are organized around the themes of the concepts of the research in this section, proceeding in order from Theme 1 to Theme 5.

Theme #1: Perceptions of NASS

The goal was to see how producers think of NASS in general terms. **The responses from the participants were rather neutral (no positive or negative sentiments). In other words, the participants tended to objectively view NASS as something like an information utility.** Nearly all of the participants said “information,” “data” or “reports” when responding to the opening question, “When I say NASS, or the National Agricultural Statistics Service, what do you think of?” Some participants mentioned specific reports (e.g., “Hog and pig reports”) or the type of information they look for (e.g., “commodity prices,” “regional data,” “area information in Wisconsin”). Only one participant got specific about NASS being a data gatherer and provider: “I think of reports that I have to fill out.” As a result, it may be reasonable to infer that most respondents viewed NASS primarily as an objective data provider.

Participants do not have positive views of surveys. When asked to provide their top-of-mind thoughts when they think of surveys or questionnaires, the sentiments given were either neutral or had negative connotations related to respondent burden:

- “It’s a tool necessary to gather information.”
- “Opinions on specific suite of information you’re trying to acquire.”
- “I think about time...not specifically a NASS survey, but any survey.”
- “I hope I get it done in time, did I pass the deadline.”
- “Survey is a bad word.”
- “Badgering phone calls until you get the questionnaire answered.”

- “It’s difficult to provide the specific information asked for, depending on the time it’s asked for,” “some surveys are different for us, like the monthly Milk Survey – it takes like three minutes. But there are some like the Census of Ag that take much longer. It’s hard to figure out how the information we have fits into the answers on the Census of Ag.”

Theme #2: Internet Access, Usage, and Importance to the Producer’s Operation

Less than half of the participants (four out of ten) said they had fast and reliable internet for their operations. Historically, internet access in rural areas has been sparse and slower to emerge than in urban and suburban areas. Moreover, the internet that is available in many rural areas may not be very reliable. The focus group participants’ own experiences acknowledged as much:

- “It took a long time because we are very rural. My township sued public utilities for internet access.”
- “We are very rural and internet is not a big option for us.”
- “I live close to town, so my internet is great, but I know many others further away who do not have great internet.”
- “I live 50 miles from [the nearest city] and we do not have consistent, reliable internet.”
- “I have adequate internet access. It’s okay, not super, but better than some neighbors nearby.”
- “I have satellite internet. It’s pretty good. Not great, but 40 megabytes. If it’s raining or foggy or snowing it’s not so good. Bad weather drives down the speeds, but we have a hot spot for the cell towers. But it is worse internet, 8 or 9 megabytes. But it makes it so we don’t completely lose internet access. It’s fast and good when it’s working but not when there are weather events.”

For agricultural producers, accessing the internet is often done via smartphones and tablets. One participant said that when accessing the internet, “ninety-nine percent of the time it is on my iPhone.” Another participant said, “Most of the people I know have smartphones, and that’s how they get their internet access,” adding shortly after “internet access on my phone is more important than access on a computer, because most of my business is done on my smartphone.” The other participants in this person’s focus group all expressed agreement with this sentiment, indicating their situation was similar. **To reach or engage the agricultural audience, smartphone compatibility appears to be necessary.**

Furthermore, **all participants agreed that having internet access for their operation was important.** One put it this way, “If the satellites went down [farmers] would be SOL.” More mildly, participants indicated the internet was important to their operations for finding needed information (“My husband checks the grain prices online every day.” “I will survey multiple [online] markets for corn and soybean prices, and I do this more and more every day.” “I am on quite a few list serves where farmers exchange information...A lot of list serves with farmer to farmer interaction”), for completing business transactions (“during tree sell season, absolutely [internet access is important]”), for repairs, replacements and replenishments of supplies (“All our feed ordering is done online.” “I order parts online from places like Amazon.” “As a

vegetable grower, I order all my seeds online since I buy large quantities of them.”), and for buying and selling inventory or equipment (“My brothers do online auction sales...online auctions are becoming quite popular these days,”).

The websites participants visit to conduct farm business are varied. When asked to share types of websites they visit that are important to their operation, some mentioned specific websites or applications (“I use Google a lot; for everything including the farm.” “Sharepoint and OneDrive for collaboration across the farm internally.” “The John Deere websites for parts and fixing things, and YouTube for watching how to fix things.” “The Dairy Star online.” “I use the UMASS extension website for growing information.” “We use Quicken.”). Others mentioned websites in more general terms (“Various vendors for finding and buying things.” “To the places I do business with.” “I go to websites from links I get in emails [from farmer list serves]. “We do all our banking online now.”).

Theme #3: NASS Web Response Behaviors and Perceptions

Nine of the ten participants indicated they had completed a NASS survey on the web, but only five of the nine prefer responding via this mode. When asked about their overall experience of responding to NASS surveys on the web, the participants generally indicated agreement with the mode:

- “Generally, I think it is fine. I haven’t had any problems with it.”
- “I don’t remember anything being too onerous about it.”
- “I do all the surveys online.”
- “Once I figured out where to go to find the survey it was really easy to do online.”

Several participants noted that they find the paper questionnaire that is mailed to them beneficial for completing the survey on the web (“I like the paper copy, too. I figure out all my answers on the paper form and then go online to fill it out online.” “I do that, as well – get the paper form, scribble it in then go online to aid with reporting.” “I do it on the mail questionnaire first and then go online to report it.”). Other participants noted they prefer to just fill out the paper questionnaire and mail it back rather than fill out the survey online (“I have done both online and hard copy. I’m older so I’m used to paper and pencil. I’m nervous about putting the right numbers in the right place online.” “I like the paper questionnaire because I can look it all over and see all the questions. I sit and look through all the questions and then I get a better idea of how I’m going to fill it all out. It helps me figure out how to answer the questions.”).

Two of the participants noted that if NASS wants them to respond, they will wait until an enumerator contacts them and complete the survey in-person or over the phone (“I have a good relationship with the enumerator who comes to the house. If they ever need my response, I know the enumerator I’m friendly with will call me.” “I get calls and report for quantities and prices each month.”). For complex surveys, such as the NASS fields, comprehension of the questions, retrieval of answers, judgment of the correct response, and mapping it to the survey question can be difficult (“Everything doesn’t fit into categories. I have to do a lot to figure out how to make my data fit...It is a very, very difficult process for me.”). As a result, it may not be surprising that the participants need to turn to paper questionnaires or enumerators for help figuring out

how to report their answers. These behaviors may reflect a current shortcoming of web surveys, or NASS questionnaires more generally, that NASS can seek to address.

Theme #4: Web Dashboard Prototype Reactions and Perceptions

Overall, participants had a positive initial reaction to the web dashboard prototypes. When asked what their initial impression of the web dashboard was, the sentiment given by participants was generally favorable (“I thought it looked great. Seems like it’s not too busy, but to the point. You can go to different things that are on there – it looks nicely set up.” “I think it was nice, too.” “I think it would be very useful for a commodity you had data for.” “My overall impression is favorable.” “The dashboard is nice.” “I liked the weather.” “I loved it.” “It looked nice and clean.”). Those who elaborated tended to indicate they like that the dashboard could be customized to their operation (“Logging in to see all my information with regard to reports would be really helpful, as far as knowing which of my [farms] have completed the report and which haven’t. I liked seeing the data and reporting portion.” “I agree, being able to put in what you want.” “I like that they can go back and look at previous surveys they filled out.” “I liked the ability to pause in the middle of the survey and come back to complete it later.”).

Participants expressed they would be willing to use the dashboard in its current form in some capacity if it were available today. This ranged from simple curiosity to learn more about the dashboard to others saying they could already see themselves using it on a regular basis of some sort (“I could see myself using it a couple of times a month. At least to see if [the other operators] are completing the surveys. Probably a couple times a month for sure.” “Once a week. I would be looking for reports on a weekly basis.” “At least a couple of times a month. Maybe more during certain times of the year based on what is needed on the farm.” “I could see myself using it once every couple of weeks.” “I would try it, and that would tell me whether I would continue to use it.” “I could see myself using it weekly if I knew how to navigate it and how to use it.” “I would [use it] to look at rolling grain prices every day, or at least every day during planting and harvesting.” “I would use it periodically.” “The only reason I would use it is to click through and fill out surveys.” “Ditto [would click through and fill out surveys] – make sure to keep the NASS employees happy. And then poke around to see if there’s anything else and then move on.”).

Participants tended to agree that the features of the dashboard in its current form were useful; however, they had many requests for additions and improvements. Several participants noted they liked the weather feature in the dashboard, the ability to access previous reports and surveys they have completed, and that it seemed generally easy to use. However, none of the participants indicated favorability with the “My Profile” page. They either did not mention it or indicated negative reactions to it, (“The only thing I don’t care about very much is the profile page with personal and company information.” “I don’t think this would be the place where I’d like to have a personal page like the profile page.”).

Participants wanted a help button, or Frequently Asked Questions (FAQ) button added to the dashboard (e.g., “A frequently asked questions feature would be helpful, or a live help feature.” “How to get help if you’re having trouble on the website or a list of FAQs...in big bold

letters [so it is easy to find]. Sometimes websites don't make it easy to find help, so...a big bright button that says click here if you need help.”).

Participants wanted the ability to see data and charts on local levels (e.g., “Needs to be focused on local data for specialty crops like mine. Data at the county level would be useful.”). **The data, charts, and reports on the dashboard need to be closer to “real-time”** (“It would have to be within a week [for the data and reports to be useful].” “Live updates would be better, because everyone is trying to be as current as possible.” “By the time the [NASS] Hog and Pig Report comes most of the pigs are slaughtered, so the information is sort of out of date.”).

On the “Surveys” page, participants want the ability to download paper questionnaires and have a “definitions” feature (“I want to be able to download the paper questionnaire online and print it so I can fill it out first before going to the online surveys to fill in answers there.” “I think a definitions page on the dashboard would be useful. Something that explains ambiguities on how to report and use the website.” “I would like as much descriptions as possible for the questions. The questions need to be more specific, especially about the includes and excludes part. The more specific NASS can be in the request for information from farmers, the better it is for farmers. My answers to surveys really depend on how I interpret the question, and if there isn't enough information about how to answer the question, the wording isn't specific enough, it makes it harder for me to know how to answer.”).

Participants want the dashboard to be optimized for use on smartphones. (“Optimized for a smartphone would be best for someone like me. In tractors or elsewhere, smartphone is the screen I'm on most of the time.” “I agree, it needs to be accessible by [smartphone/mobile] apps.”).

Participants would like to see a customized calendar on the dashboard (“A calendar that shows reports that are coming out. A calendar that shows a schedule of reports coming out. Customized toward [desired reports]. Don't show any general things, if they don't apply to [the operation] I don't want to see it.”).

Participants want fewer usernames and passwords, and want one account that can be used across all USDA sites. (“I want one USDA password that can be used across all USDA sites.”).

Participants want to be able to link the dashboard to FSA, and other agencies' data (“If you could link to FSA and other USDA agencies, this would be very useful because it would be more comprehensive of my farm...I want to be able to link with all sorts of agencies, like NRCS.”).

Participants want their survey data automatically aggregated and fed forward into future surveys and end-of-year reports (“For some of the surveys I do regularly, will the data aggregate on its own? Will the reports I fill out automatically aggregate on the dashboard for future reports? Will the reports be able to add up what I put in so at the end of the year I won't have to calculate it. So, if I had to enter a monthly, on the first of the month, how many cows were on your farm, can it aggregate the data we had on those monthly snapshots? Or can it be predictive based on her previous input to estimate what she might have in the future?” “It would be nice if the [data I report] get [automatically] put into things like the Census of Ag reports.”)

Participants want a reports feature that highlights the most useful information for farmers, not just what is trending (“NASS showing farmers what data is most helpful to people.”)

Theme #5: Other Challenges with, and Opportunities for, Engagement with NASS

To wrap up the focus groups, participants were asked to share any other thoughts they had about the challenges of receiving the information they would like to receive from NASS, challenges to sharing information with NASS, whether the web dashboard would help overcome or alleviate these challenges, what else NASS could do to improve the two-way exchange of information between the agency and agricultural producers, and finally, any other thoughts they had that they would like to share.

When asked about the challenges of receiving information they want from NASS, some participants said that **the biggest challenge is not knowing enough about NASS** to know what data could be useful for them, **or feeling like NASS does not offer what they need** (“Some of it just reflects the nature of what I’m growing and what my markets are, so I don’t really use NASS.” “As [participant] mentioned earlier: knowing what you have. [NASS] may have a boatload of stuff we don’t know about that we could be utilizing. But...the biggest obstacle is knowing what’s already there.” “Sometimes the data isn’t broken out the way I want to see it, but I know that it’s possible for that data to be there. I want to see more state-by-state data and not just national data – year-by-year and month-to-month...would be really useful for me.”). Another participant mentioned that **NASS needs to be more proactive about sending information to producers**, as many rely on the information they get automatically from other sources in their email inboxes (“There are services that glean information and put it in our email inboxes already. The pertinent stuff I see...ends up in my inbox, which is easy.”). **NASS data needs to be more versatile**. Another participant wanted to see more historical data, to be able to track changes in growing and the industry over time (“In the organic world, the Organic Census has been changed so many times. The changes to the questionnaire have made it hard to compare current data to historical data on the organic census. I feel like the ability to see changes over time is really important, but that the Organic Questionnaire makes it hard to do. Challenges for farmers are not always financial, and I want to see if other farmers are having trouble on organic things across the county.”). Another participant wants **NASS to provide localized data by industry and size** (“I would like regional or state-by-state data. It would be more helpful, especially for benchmarking. The size of dairies is really important [to the participant]. I want to be able to compare my operation to operations of the same size in my region. More distinct benchmarking options when viewing reports would be nice.”).

When asked what the biggest challenges they had with sharing information with NASS, participants often said that **the data NASS requests are difficult to provide** (“Sometimes [the biggest challenge] is not having the data tallied up, or [not] having the time to have the data available.” “Do I have the data in the form [NASS is] looking for? I have to run queries to find what [NASS is] looking for.” Other challenges mentioned were that **the data NASS requests are not timely enough** (“The numbers were calculated before the windstorm hit, so now [when NASS is requesting data] the numbers need to be recalculated.”) **or relevant enough** to the producers (“A lot of the time the answers to the questions don’t have a lot of value to me. Having to report things that are not useful [to me]. I can see why it would be [useful] to NASS, or the government finds it useful, but it is not useful to me.” “[Participant] made good points earlier

about the brackets NASS puts things into. How we analyze things on our own farm, we have the information about our own farm, but the information requested from NASS doesn't seem useful.”). Another participant mentioned that email reminders and notifications about when reports are due would be useful, which suggests that **a challenge to reporting is that it is difficult for producers to keep track of NASS's deadlines** (“Maybe on the portal you could set up preferences about when to contact you regarding the surveys, and maybe you could check something to opt in or opt out of certain things that are mailed to you. It would be nice to set up data collection preferences. Also being able to set up email reminders from NASS about when things are due.”) One participant indicated that the **fear of negative consequences of participating in NASS surveys was the biggest challenge to reporting** (“If I share this information with you, this is going to affect the markets. [Farmers] don't want to do it because they are afraid it will negatively affect their prices. I know many who will do their ag report, but don't want to talk to ag statistics because they are afraid of affecting prices.”)

The focus group participants were next asked if they thought that having the customer-centric web dashboard would help alleviate the challenges they currently face with gathering data from, and reporting data to, NASS. A couple of the participants did not view the dashboard as necessarily improving upon the data challenges they face (“No, not really. The income questions would still be intrusive.” “If I knew the dashboard well-enough and was easy enough to use – human beings are creatures of habit. I'm used to relying on the call, email, or visit from [an enumerator] before I act on reporting...I think farmers are a different breed – just want to be left alone.”). However, one participant did think the notifications feature on the dashboard would be helpful (“I think it had very clear reminders. Like the reminders for when surveys are due, like this is due in two days or this is due in two months. I appreciated that.”) **In essence, participants did not feel strongly that the dashboard would change their current habits gathering and reporting data, and that NASS data requests would still be burdensome.**

When asked for any final suggestions for actions NASS could take to improve the two-way information exchange between the agency and producers, participants tended to want NASS to do more to inform producers about what data NASS has and why it is important. Two themes emerged from this question: 1) **NASS needs to make a concerted effort to raise awareness of this dashboard and why farmers should use it, and 2) it needs to provide data providers with better resources for them to comprehend the task of reporting.** One participant said, “[For] county meetings of ag boards, a lot of times it would be helpful if someone came from the ag statistics service to these meetings to increase NASS awareness for farmers....NASS outreach to farmers could be better...NASS needs better marketing tools, especially in-person marketing.” A participant in another focus group said, “If you can promote [NASS] more locally, through local groups, then NASS would get more buy-in [from producers] on this dashboard.” Other participants mentioned a need for NASS to provide more informative resources they can use to help with reporting (“Have some recorded instruction videos. How-to videos for whatever it happens to be that NASS is asking for. Farmers would then be able to watch it on their own time and preferences. I would like how-to videos for how to fill out your monthly report.” “A help tab or button, or YouTube link for videos on how to complete NASS reports.”)

5. CONCLUSIONS AND RECOMMENDATIONS

The SII Team, and NASS more broadly, understands that in order to stay relevant to the agricultural population it must modernize the way it engages its customers. The SII Team's mission to step forward down this path by developing a new, modern online dashboard tool for producers is one part of this process. The series of focus groups conducted in pursuit of this ongoing process sought to uncover qualitative insights into five themes that may underlie reasons why producers would or would not use the dashboard. Those five themes were: 1) *Perceptions of NASS*, 2) *Internet Access, Usage, and Importance to the Producer's Operation*, 3) *NASS Web Response Behaviors and Perceptions*, 4) *Web Dashboard Prototype Reactions and Perceptions*, and 5) *Other Challenges with, and Opportunities for, Engagement with NASS*. Each of these five themes represent a domain that may be informative for whether the dashboard is interesting or useful to producers, and also of where the dashboard can be improved to better serve the producers it is trying to reach.

The perceptions of NASS varied. Participants consistently viewed it as a data provider, albeit one they did not know enough about. The participants did not view NASS in any particular positive or negative terms, but did express sentiments that NASS should do more to increase the agricultural population's awareness of the agency. This is supported by other statements participants made about seeing the agency as not very relevant to their particular operation or daily business decisions, and this view could be the result of not knowing very much about NASS. However, NASS's idea to increase customer engagement by modernizing its website with a customer-centric web dashboard is a step in the right direction. Each participant mentioned that information they find on the internet is vital to the daily functioning of their operations. Many of the participants already have trusted websites they go to access the information they need to make business decisions on a day-to-day basis. NASS was not specifically mentioned by the participants as one of the websites they would go to first for information relevant to their business, but this could be partly driven by what was illuminated in Theme 1 -- participants felt like they do not know enough about NASS and what it has to offer them. However, each of the participants had generally positive views of the dashboard prototype, and several indicated that if the dashboard were available today they would use it, or at least try it. Despite this, however, not many participants viewed the dashboard in its current form as necessarily solving the biggest problems they face when engaging with NASS. For example, even though they thought the "Surveys" page was useful, they thought NASS survey questions and reports were still too burdensome to complete.

Overall, the participants did have suggestions for how NASS could improve customer engagement, and for features that could be added to the web dashboard that would make producers more likely to find the dashboard useful and, therefore, more likely to use it. The report concludes with a summary of recommendations NASS may consider as it moves forward with the development of the dashboard, and improving its relationship with its customer base more broadly.

Recommendations for NASS and the Development of the Customer-centric Dashboard

- NASS should make a concerted effort to market the dashboard to producers. Raising awareness of the dashboard and why producers should use it, may increase the likelihood of that producers would use the tool.
- NASS should optimize the dashboard for smartphones and tablets. Many participants noted that producers spend most of their time, and conduct most of their business, over their smartphones.
- The dashboard should have an easily recognizable help button, or FAQ feature.
- The dashboard should have instructional videos, both for how to use the dashboard, and more importantly, for how to fill out and complete online reports they are asked to provide data for.
- The dashboard should have a “Definitions” feature that provides clarifications for complex questions in the surveys that producers are asked to complete.
- The dashboard should have a calendar of important report dates that are relevant to the producer.
- The dashboard should be accessible by a single username and password that can be used across all USDA websites.
- The dashboard should allow users to select and customize notifications and reminders (such as email reminders, preferred contact methods and times).
- Producers would like the data they report to other USDA agencies, such as the FSA, to link to their dashboard page.
- The dashboard should provide an aggregation tool for all of the data producers report.
- The dashboard should automatically feed forward the data they reported in past surveys into future or current web surveys.
- The dashboard should have a feature that allows users to download paper copies of the web surveys they are asked to complete.
- The dashboard should have the capability of showing users data by local and regional levels, as well as other characteristics (e.g., operation size).
- The dashboard should show data that is “real-time” or close to real-time (e.g., updated daily).
- In addition to the “Trending” reports feature, the dashboard should have a feature that specifically highlights data NASS thinks is imperative for farmers to know (e.g., points out what is crucial data and information).

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APPENDIX A. VIRTUAL FOCUS GROUP DISCUSSION GUIDE

Strategic Initiative 1 Focus Group Topic Guide

Revised for Zoom Session

[SII Team Member reads Introduction]

Introduction (5 minutes)

Good afternoon, everyone! My name is [first name, last name] and I am a researcher at the USDA's National Agricultural Statistics Service, or NASS. In addition to you all and myself, we have [Moderator Name] from NASS who will be guiding our discussion today, and [Note Taker(s) name(s)] who will be silently observing in the background and taking notes.

I would like to begin first by thanking each of you for joining us today. We know your time is valuable, so we sincerely appreciate your willingness to dedicate some of your time to helping us with this research.

To give you a brief background of why we've asked you to talk with us today, NASS is currently seeking to transform and modernize its online presence so that it can better serve the American agricultural population. In order to do that, we need to hear from folks like you, so we can draw on your thoughts, experiences, and insights to reach this goal. Today, we are interested in hearing from you on a broad spectrum of topics related to the internet. Everything from the importance of the internet to your operation, to responding to surveys online, to envisioning what a NASS website with agricultural information tailored to your operation's needs would look like. What we hear and learn from you today will be taken to NASS's senior managers and will help guide the decision-making processes geared toward improving NASS's online presence to better serve American agriculture.

[If all participants have signed consent form] Also, as a reminder, this session will be recorded. Once [moderator name] begins the main questions after introductions, we will start recording.

With that said, I will turn the rest of this time over to [Moderator Name], who will be leading this focus group discussion. Thank you all again, and have a great time!

[Moderator take over here, and give an introduction of yourself]

I would like to begin by going over the process of how this focus group will work. We are here to learn from you. Your experiences and your thoughts are important to us. There are no right or wrong answers, and we are not trying to achieve a consensus. Each of your experiences and opinions may be different from one person to the next. Which is totally normal, and whether we agree with each other or not, we should aim to keep the discussion respectful of everyone's unique perspective, so we can all come away from this having had a positive experience.

Next, I would like to go over some Ground Rules for this focus group.

1. Number one: Everyone should participate. Having everyone's voice makes for richer conversations.
2. Two: Information provided in this focus group must be kept confidential. Please do not share any information provided here outside of this focus group.
3. Number three: Please keep your attention on this focus group and do not have any side conversations, either with another focus group member or someone off-screen. If you must have a side conversation with someone off screen, please hit the mute button on your screen so as not to distract the group.
4. Number four: Do not answer any phone calls or texts. If you absolutely have to, then please mute yourself before taking the call. If possible, however, please keep your phones turned off or away from you for the duration of this focus group.
5. Rule number five: Have fun!

Now that we have the ground rules covered, I would like to ask you all to introduce yourselves to the group. But before we do that, are there any questions about the ground rules?

a. Introductions (**5 minutes**)

- Go around the virtual room: First name, where they are from, how long they've been farming, use of internet and what they grow or raise and anything else they want to add.

Discussion begins, make sure to give people time to think before answering the questions and don't move too quickly. Use the probes to make sure that all issues are addressed, but move on when you feel you are starting to hear repetitive information.

Questions – General about USDA-NASS

b. I want to begin with a little exercise. When I say a word or phrase, I want you to tell me what comes to mind. **(5 minutes)**

- When I say NASS or the National Agricultural Statistics Service, what do you think of?

- When I say “survey,” or “questionnaire,” what do you think of?

- Do you remember the last NASS survey you participated in?

Questions – Internet Experience (10 mins)

- Do you have reliable internet access at your farm or ranch?
 - (If no) Where do you go to access reliable internet?

- Would you say the internet in your area is high speed?

Internet – Importance to Farm (10 mins)

- Is having internet access important to your operation?

- Why is it important for your operation to have internet access?

- What types of websites do you rely on for information that is important to your operation?

- What types of websites do you rely on for conducting business that is important to your operation?

- Do you use information, data, or reports available on NASS websites?
 - If yes, how do you use the data, or how does it serve your operation?
 - If no, why not?

Internet – NASS Survey Response (10 mins)

- Do you recall the last time you responded to one of our surveys online?

- In general, how was your overall experience responding to NASS’s surveys online?

- What do you like and dislike about responding to NASS’s surveys online?

- Were you able to easily use the unique survey code that was mailed to you to access the online survey?

- How would you feel about creating and maintaining a user account and password to access NASS surveys online?
- Do you think you will respond to NASS surveys online in the future?
- What improvements do you think we could make to the website where you complete NASS surveys?

Internet – New NASS Online Respondent Portal (20-30 mins)

Next, we would like to show you a short video of a proposed service that NASS is currently developing. The proposed service is designed to be a new online portal for farmers to use

1. To access to information that is relevant to them and their operations
2. To better manage gathering and sharing data
3. To better compare the activities of their farm operation to other operations in their county and state as well as the nation.

[Moderator Share screen with video uploaded]

[If video does not work, share screen of wireframe pdf and read from script]

[When video or script reading ends, Moderator pick up questioning here]

Okay, now we would like to ask you some questions about concepts just presented to you.

- To start, what is your overall impression of the customizable dashboard you have just seen? Did you like it, dislike it, and what did you like or dislike about it?

- Did the customizable dashboard seem intuitive, like it would be easy to use? Or did it, or any part of it, seem like it could be confusing or complex?

- Were there any features of the dashboard that seemed especially useful or helpful? And were there any that seemed not very useful or helpful?

- Was there anything missing that you would have liked to have seen on this dashboard? In other words, any features that would be useful to have but weren't already on the dashboard?

- Thinking about your operation, do you think having a customizable web page, such as in the video, would be useful for you or your operation?

- Do you think you would spend the time customize, edit, or periodically update a customizable dashboard, such as the one we have just shown you? Why or why not?

- Is there anything in the respondent portal mockup that strikes you as appealing? Unappealing?

- If this customizable dashboard was available to you today, would you use it? Why would or wouldn't you use it?

- How often do you think you would use or visit your online customizable dashboard?

- What tasks would you imagine would be most useful to on this customizable dashboard?
 - For instance, would you use the dashboard to:
 - Check the weather forecast?
 - Verify your contact information?
 - Access reports related to your operation?
 - See what surveys you may have to complete?

- Do you think you would use your customizable dashboard to respond to NASS surveys online? Why or why not?
- In the video, you saw that past reports and past surveys you have completed are available to be viewed. Do you think that you would find these old reports and surveys useful? Would you view them?
- When you respond to NASS surveys, what type of information would you want to have available to you on your customizable dashboard that might help you fill out or complete surveys you are asked to participate in?
- What is the basic functionality you would want on a NASS survey website?
 - What are the most important things it should do and be able to provide?

Questions – Wraps up and Final Remarks (5 – 10 mins)

All right, we have just about 10 more minutes left, so I want to end with some broader questions.

- What are your biggest challenges or obstacles to receiving the information you would like to receive from NASS or the USDA in general?
- What are your biggest challenges or obstacles to sharing your current farm information with NASS?
- Do you think NASS's concept a customizable producer dashboard, such as in the video, would help address or alleviate these challenges? Why or why not?
- What could NASS change, add, or do, that would help make the two-way information exchange between you and NASS easier for you?
- Do you have any final comments or suggestions you would like NASS to know about with regard to its website, the dashboard concept, information available online, or responding to surveys online?

Thank you all for your participation! We really appreciate your time. If you have any follow-up questions after this, please feel free to email me. Also, if you would like a copy of the results of the focus group research, please send me a message over email, and once the final report is ready I will pass it along to you. Thank you again, and have a great rest of your day! [[Host, make sure to save the Zoom recording to the Focus group folder](#)].

APPENDIX B. TRANSCRIPT OF THE VIDEO NARRATION

“Hello Focus Group Participants. This video is designed to give you a brief overview of NASS’s concept to reimagine and modernize the Producer Experience when visiting NASS’s website. Specifically, we are going to show you our idea for a web page that you, the producer, could customize to meet your and your operation’s needs and interests when visiting NASS’s website. After this short presentation, the focus group moderator will ask you some questions about some of the features you are about to see.

Before you now is the webpage for hypothetical producer Andy Farmer from Bayfield, Colorado who grows peanuts, squash, string beans, and corn. Andy has taken the time to customize his webpage towards things that he would like to see. As you can see in the lighter green bar near the top, there are four tabs: My Dashboard, Surveys, Reports, and My Profile. Currently, we are viewing Andy’s My Dashboard page, but we will also go through each of the other pages.

On Andy’s My Dashboard, he can view the weather forecast for his area, the current operation prices for his commodities, surveys he has completed and surveys he is in the process of completing, and NASS reports relevant to the commodities he grows. As we scroll down on his My Dashboard page, we can also see a line graph tracking the prices of Andy’s commodities over time (in this case, peanuts) compared to the national average. Below this, we can also see a graph of Andy’s operation’s stocks month-to-month, and another graph showing Andy his operation’s stocks month-to-month compared to the national average.

Upon logging into his personal webpage, Andy might see some notifications at the top right hand corner of his computer screen, which he can click on or ex out of. Looking at the Recent Activity area, we can see that Andy has some actions that he can take, specifically by clicking on the view all, Start, or Resume buttons in the Surveys icon, or in the Reports icon by clicking view all, or directly on blue lettered August Peanut Pricing, Acreage, or Harvesting reports. Let’s say Andy has clicked on the View All in the Surveys Icon.

Clicking on this button would take him to the Surveys page of his dashboard. On this page, Andy can see what new surveys he is being asked to participate in, what surveys he is in the process of completing, and a complete list of all surveys he has completed to date. On the right hand side of the screen, Andy can click the Open button on any individual survey to view his completed report, and he can also click on the reports icon to view the published NASS report that summarizes the findings from the surveys. Andy can also click the Resume button to continue filling out a survey from where he last left off, or he can click on the Start button for surveys he has newly been invited to participate in.

Now, let’s say Andy clicks on the Start button for the September Peanut Pricing survey he has been newly invited to participate in. Doing so would take him directly to the web survey. At the top, Andy can see that is taking the September Peanut Pricing Survey, the commodity he is reporting on and the number of acres he has associated with that commodity. He can also see the deadline to submit his responses, and his progress so far through the survey. Also, if he needs to, he can take a break by simply clicking the Resume Later button. His answers will be saved, and later he will be able to come back right where he left off. This web survey would also have other

features, such as the ability to see historical data that might be useful in helping him report his current answers, as shown next to the answer box where Andy would type in his answer.

Moving on, this is what Andy might see if he were to click on the Reports tab in his dashboard. Recent reports related to his commodities of interest, and also reports on varying topics that are trending nationwide, and given their popularity may be of interested to Andy as well.

Lastly, Andy could view his profile page in his dashboard. On this page, he can edit his personal information, upload a picture of himself, and share anything else about himself he felt comfortable sharing, including a short biography and his contact information and preferences. Andy could also update or edit his operation's information on his profile, such as the owner, the acreage, the type of operation, key employees, associations Andy and the operation are members of, and also his operation's website.

Thank you for listening to this presentation. These are just some of the new concepts NASS is considering as it reimagines the producer experience upon visiting the NASS website. Before NASS makes any decisions on the new concepts you have just seen, we would love to hear your thoughts, likes, dislikes or any ideas you may have that would improve your experience when visiting the NASS website. Thank you, and now back to the focus group moderator.”

APPENDIX C. VIRTUAL FOCUS GROUP EMAIL INVITATION TEXT

Greetings [PRODUCER NAME],

Thank you for agreeing to participate in a focus group with NASS. My name is [NASS STAFF PERSON], and I am in charge of coordinating the Zoom meeting where the focus group will take place. We sincerely appreciate your participation, and are very much looking forward to meeting you virtually!

Your scheduled focus group session will take place tomorrow, Thursday, September 10th, 2020 at 1PM CT.

Access to the meeting is available by clicking on this link: [https://www.zoomgov.com/\[unique characters\]](https://www.zoomgov.com/[unique characters])

If Zoom asks you for a meeting ID, type in [unique ID].

If Zoom asks you for an access code, type in [unique Code].

If you have any trouble accessing the Zoom meeting, please feel free to call me at [OFFICE NUMBER]. Sometimes, it can take several minutes to get situated in the meeting with audio and video. Please allow yourself about 5-10 minutes before the meeting officially starts to click on the Zoom link. Doing so will help us achieve a smooth, on-time start to the focus group. Also, as a courtesy to others in the meeting and to ensure a successful, positive experience for all, we are asking that each focus group participant join from a quiet space with little or no distractions in the background, if possible. Your cooperation with this request is greatly appreciated!

This focus group will consist of you and [NUMBER] of other agricultural producers, along with myself and two other NASS researchers who will be taking part in the session. The session will end no later than 3PM CT. In the focus group, we are interested in hearing from you on a broad spectrum of topics related to the internet. Everything from the importance of the internet to your operation, to responding to surveys online, to envisioning what a NASS website with agricultural information tailored to your operation's needs would look like. Don't worry, this will not be a test. Rather, it will be a friendly, cordial discussion among people with varying and unique perspectives that are important to NASS and its mission.

Again, we very much appreciate your participation, and we hope you have a good time in the focus group!

If you have any questions, do not hesitate to reach out to me via email or phone.

Thank you!