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Usability of the 2021 June Area Survey Prescreening Materials

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The findings and conclusions in this report are those of the author and should not be construed to represent any official USDA or U.S. Government determination or policy.

EXECUTIVE SUMMARY

The National Agricultural Statistics Service (NASS) conducts the June Area Survey annually. This survey provides direct estimates of acreage and measures of sampling coverage. Typically, data collection for the June Area Survey is completed entirely by personal interview during the first two weeks of June. Personal interviews must be conducted since operators within the selected segments are not known until significant screening is completed. However, due to the current Covid-19 pandemic, it is not feasible for interviewers to conduct personal interviews for the 2021 June Area Survey.

In 2020, NASS began exploring alternative methodologies for conducting the prescreening for the June Area Survey. One such method is to conduct the prescreening interviews via the telephone. Prior to the interviews, respondents would be mailed a cover letter and a simplified version of the June Area Screening questionnaire with a county inset map and an 11x17 aerial photograph with a segment and tracts identified using parcel data. NASDA enumerators would be provided copies of the maps respondents received as well as an aerial map constructed using FSA data, a CAPI version of the June Area Screening questionnaire, owner reports from the Parcel data and operator reports from FSA data, corresponding to their respective maps.

Usability testing was conducted to assess whether respondents would be able to utilize the maps to determine if they operated land within the segment and tract boundaries and answer questions regarding agricultural activity on that land. The usability testing also evaluated the information presented in the cover letter to determine whether the information provided was comprehendible and informative. The usability tests were conducted with four respondents. All tests took place over the telephone and each test lasted approximately 30 minutes. Prior to the usability test, respondents were mailed a draft cover letter and the respondent screening questionnaire.

The results from this testing showed that the maps were effective and respondents were able to identify the tracts of land they were operating and discuss the types of agricultural activity on that land. Respondents indicated that minor improvements could be made to the parcel map, such as the addition of major roadways. The cover letter was not effective in conveying information on how to respond to the survey and was not motivating. The letter contained too much text and did not use plain language, leading to comprehension issues. The respondent prescreening questionnaire was not evaluated during this test. However, respondents indicated there were several questions they did not understand and could not answer. Furthermore, the respondent questionnaire does not align with the enumerator questionnaire. The respondent questionnaire is not necessary to complete the task and may lead to additional burden for the respondents and enumerators.

In addition to the issues with the materials, several procedural issues emerged that would need to be addressed prior to data collection. Some respondents interpreted the cover letter as instructing them to complete the questionnaire. NASS should be prepared for respondents to return the questionnaire and have procedures in place to process these returned questionnaires. A few respondents indicated they would throw out the cover letter and questionnaire upon receiving it. Procedures should be in place to ensure an interview can still be conducted if the respondent no

longer has the map accessible. Some confusion arose regarding the NASS number assignments on the parcel map and respondents relied on their knowledge of other maps, such as FSA maps, to interpret the parcel map. When discussing the areas they operate, these respondents would reference numbers on their personal maps that did not correspond to the numbers on the parcel maps. This may lead to misunderstandings between the respondents and interviewers and affect data quality. Enumerators will need substantial training to collect these data over the telephone and to handle issues such as the ones that arose during this testing.

RECOMMENDATIONS

- 1. Reduce the amount of information in the cover letter.
- 2. The cover letter should emphasize three points: The respondent has been selected for the June Area Survey; an interviewer will contact them in the next couple of days; they need to retain a copy of the maps.
- 3. The Public Affairs Office (PAO) should review the cover letter, with special attention given to plain language.
- 4. Eliminate the respondent questionnaire. If the respondent questionnaire must be retained, survey methodologists should review the questionnaire for potential comprehension issues, comprehension issues identified in this testing should be addressed, and the questionnaire should be aligned with the enumerator questionnaire. Additionally, procedures need to be in place for processing returned questionnaires.
- 5. Add major road numbers/names to the parcel map where possible.
- 6. Provide enumerators a script to orient respondents to the maps, which explains the major map features, such as the section, township and range information and NASS numbering. For example, enumerators should explain the segment number refers to the center point of the segment and does not correspond to the numbers within the tracts. Enumerators should refer to the numbers within the tracts as either tract number or parcel ids and explicitly state these are not section numbers.
- 7. A procedure should be put in place to handle cases where respondents discard the map prior to receiving a phone call.
- 8. Inform enumerators of potential issues that might emerge based on this research and other expert reviews of the materials and procedures and ensure enumerators are trained to respond to these issues.

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Usability of the 2021 June Area Survey Prescreening Materials

Heather Ridolfo¹

Abstract

The June Area Survey is conducted annually and provides direct estimates of acreage and measures of sampling coverage. This survey utilizes an area sampling frame. The area frame consists of all land, stratified by land use, in all states except Alaska. A sample of nearly 11,000 segments are selected from each land use stratum for data collection. Typically, all farm operators operating within the boundaries of the selected segments are surveyed via a personal interview. Due to the Covid-19 pandemic, it is not feasible to conduct the interviews in person for the 2021 data collection. NASS is considering conducting data collection for the 2021 June Area Survey over the telephone. Prior to data collection, respondents would be mailed a cover letter and a simplified version of the screening questionnaire with enclosed county and aerial maps of the selected segment. The interviewer would then call the respondent to collect the information. Usability testing was conducted to assess respondents' ability to utilize the maps to determine whether they operated land within the segment and tract boundaries and answer questions regarding agricultural activity on that land. The testing also evaluated the cover letter. Results showed the maps were effective and respondents could identify the segments and tracts of land they operated. However, issues with the content of the cover letter and respondent questionnaire emerged, as well as procedural issues with administering the survey over the telephone.

Key Words: Usability Testing, Data Quality, Pretesting

1. INTRODUCTION

The National Agricultural Statistics Service (NASS) conducts the June Area Survey annually. This survey provides direct estimates of acreage and measures of sampling coverage. It utilizes an area sampling frame, which consists of all land, stratified by land use, in all states except Alaska. The primary sampling units (PSUs), based on land area, provide complete coverage of all agricultural activity occurring on that land and, therefore, all operators in the state. A sample of nearly 11,000 segments, smaller units of a PSU measuring roughly one square mile, is

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selected from each land use stratum for data collection. All farm operators operating within the boundaries of the selected segments are interviewed.

Typically, data collection for the June Area Survey is completed entirely by personal interview during the first two weeks of June. Personal interviews must be conducted since operators within the selected segments are not known until significant screening is completed. In addition, respondents must examine an aerial photograph to identify each field boundary and report the crop planted. Acreage data refer to the current crop year, while livestock and stocks data refer to the reference date of June 1. Due to the current Covid-19 pandemic, it is not feasible for interviewers to conduct personal interviews for the 2021 June Area Survey.

In 2020, NASS began exploring alternative methodologies for conducting the prescreening for the June Area Survey. One such method is to conduct the prescreening interviews via the telephone. Prior to the interviews, respondents would be mailed a cover letter and a simplified version of the June Area Screening questionnaire with a county inset map and an 11x17 aerial photograph with a segment and tracts identified using parcel data. The cover letter provided detailed information regarding the purpose of the June Area Survey, how respondents should proceed, and how the information collected from this survey would be used. NASDA enumerators would be provided copies of the maps respondents received as well as an aerial map constructed using FSA data, a CAPI version of the June Area Prescreening Questionnaire, owner reports from the Parcel data and operator reports from FSA data, corresponding to their respective maps.

Prior to implementing these new procedures, usability testing was conducted to evaluate whether respondents would be able to utilize the maps to determine whether they operated land within the segment and tract boundaries and answer questions regarding agricultural activity on that land. The usability testing also evaluated the information presented in the cover letter to determine whether the information provided was comprehendible and informative. The following report presents results from this testing.

2. METHODS

Five respondents were recruited for this test. However, one respondent was a no-show. The four respondents who participated operated farms and ranches in Oklahoma and were recruited from the FSA CLU and/or Report All listing provided by NASS's Research and Development Division. Prior to the usability test, respondents were mailed a draft cover letter and the respondent screening questionnaire. The usability tests were conducted over the telephone in January 2021. Interviews lasted approximately 30 minutes.

The purpose of the usability test was to evaluate the content of the cover letter and respondents' ability to (1) determine whether they operated land within the specified segment and tracts and (2) report agricultural activity on the tracts within the segment. The interviewer followed a semi-structured interview guide. Respondents were first asked to read the cover letter and were then

probed on their comprehension of and reactions to the content of the letter. Respondents were then introduced to the second task, which required them to review the county and parcel maps that were enclosed within the respondent questionnaire. Respondents were asked whether they operated land within the segment marked with red lines on the maps. If respondents indicated they did, they were then asked whether they operated land within the blue lines on the parcel map. The interviewer then collected information on the tracts operated. Following this the interviewer probed to determine how respondents concluded that they operated land within the areas specified on the map, which features of the map they found most useful, which features were confusing and which features they felt were missing. Materials used during the usability test can be found in the appendix.

3. RESULTS

3.1 Cover Letter

As mentioned above, the respondents were asked to read the cover letter at the start of the usability test. Two respondents indicated that they read the letter in its entirety; one respondent indicated that he skimmed it and the fourth respondent indicated that he read the letter in its entirety prior to the interview and only skimmed it during the interview. When probed on their understanding of the letter, one respondent had difficulty providing a response, and two others provided general summaries of the letter's content:

[The letter is] telling me why they're sending it... what I need to do to fill it out and how the results will be used.

I should do my part and tell you honest answers... and you're actually going to use the data.

One respondent indicated that he was confused by the content of the letter. He said, "That I'm going to be in a survey for the area that's in this map. I'm a little confused after reading it. So am I going to have to do this twice?" He thought the first paragraph was confusing. He interpreted the text as saying the enclosed survey was a pre-survey and there was going to be another survey in June, which seemed burdensome to him. "So there's going to be two?! That's confusing... You should not do this twice." He would prefer to be surveyed only once.

Respondents were asked how they would proceed if they received this letter and survey in the mail. Two respondents indicated they would throw it out. One respondent stated, "I'd probably throw it away. If I hadn't gotten a phone call, I'd probably open it up and take a look at it and it'd probably go in the trash. I don't deal with the USDA." The other respondent said, "I'm not a huge fan of these... I've always trashed these or turned down the phone calls." He said if he received this in the mail, he would throw it out without ever opening the envelope. These respondents were probed further to determine whether they comprehended the instructions in the letter. The respondent, who indicated he would throw out the envelope without opening it, interpreted the instructions as telling him to wait to complete the questionnaire until he received

a phone call from NASS. The other respondent indicated that he did not comprehend much of the letter's content. "There's a lot in there I don't really understand. Like I said I don't deal with you all so I don't follow along..." He said someone else who interacts with NASS more would probably understand what this letter was telling him. He assumed the letter was instructing him to complete the questionnaire. However, he did not feel he was obligated to complete the questionnaire since he does not receive government assistance and thus does not owe the government anything.

The other two respondents indicated they would participate in the survey. One respondent stated that he would complete the enclosed questionnaire upon receiving it in the mail. This respondent had read the letter in its entirety and completed the questionnaire prior to the interview. The fourth respondent indicated that he would reach out to a personal contact at NASS and ask him for assistance with the request. When pushed further for his interpretation of the instructions he said, "If I read it right, you want me to fill out the questionnaire just to be ready when they call and set up a time to actually do the survey."

Two respondents provided feedback on the content of the letter. One respondent thought the instructions under the header "What is in this packet and what do I need to do?" were the most important and should be in the first paragraph of the letter and formatted to stand out. He also commented that there was too much text in the letter. He said, "I probably use less words than a woman uses... Make it shorter, more concise... more easy reading...Get to the point sooner..." He said if the letter was shorter, "the likelihood of a guy like me reading it goes directly up." This same respondent said he would not reference the Covid-19 pandemic in the letter. He said, "I think I'd avoid 'to protect health' (referring to the sentence: To protect the health and safety of producers, partners, and employees, NASS is unable to work with you in person to complete this survey). No one wants to hear Covid crap anymore." Instead, he suggested changing the wording to "We're changing our procedures and to please wait until you receive a phone call following this mailing."

The other respondent found the instructions to be counter-intuitive. He said, "Where it says please do not complete... well asking someone to not fill out something you want them to complete is counterproductive for your interviewers." He said he would revise that sentence to "Please complete the questionnaire and have it ready when called by an interviewer." He said we needed to "word it better" so that respondents "would know to have it on hand and that it's not to be submitted." This same respondent commented that the letter did not provide a reason for this data collection. He said, "Don't really give a why. Why June? Why this? You say it's critical... data collection and list all this stuff. Just saying you're doing this in June and you people are the fortunate ones." He wanted to know more about why he is being asked to report this information.

Finally, one respondent commented that more could be done with the envelope to entice people to open it. He said, "If you could tempt some guy like me to open the letter... you'd be a winner. If you got somebody to open the letter you'd have a lot better chance." Note this is not the same respondent who was quoted earlier stating he would throw the envelope in the trash without opening it. This respondent said NASS needed to put something on the envelope to get people to

open it. Otherwise, he would just throw it in the trash. He also indicated that he is very busy in June and has little time to devote to a survey: "In June I'm harvesting wheat, and it's a stressful situation." He said if an interviewer called and he/she needed 30 minutes of his time during this time period, he would not participate. If the survey took only 10 minutes as opposed to 30, it would be a lot easier for him to participate.

3.2 Map Usability

To determine the usability of the maps, all respondents were asked the first question on the enumerator questionnaire (On June 1, did you operate land inside these red lines?) and if they answered yes, they were then asked if they could identify the land they operated within the blue lines on the map. Respondents were then probed on how they determined they operated land within the segment and tract boundaries drawn on the map.

All respondents were able to determine they operated land within the segment and were able to indicate the tracts they operated. Respondents relied on their familiarity with aerial photographs of their property, landmarks, such as fields, roads, and streams, and the section, township, and range information printed in the top right corner of the parcel map. Three of the respondents indicated they were very familiar with aerial maps of their property and the section, township and range. For example, when asked how he determined he farmed land within the segment, one respondent stated, "Well the map I'm looking at I can see the fields that I farm. I have different things planted... I can see the part I cut for hay." When asked how he knew these were his fields, he said, "Because I've looked at aerial photos of it before. So, I do." He then said, "[section, township and range removed]... I just know the sections of land we own. I know the legal descriptions." He said he is familiar with that number and he recognized the different creeks on his property. He said, "The picture I have stands out real well."

When probed on how he determined he operated the land within the segment, another respondent stated, that he first looked at the section, township, and range in the top right corner.

Section [section number, township and range removed]. ... That tells me the section of the township and the range that we're looking at... If I do anything I need to know that. If I hire an airplane to spray it or turning in records... In legal terms it's the northwest corner of [section, township, and range]... If I'm doing anything.

Like the other respondent, he also mentioned that it was easy to determine his land by the picture itself: "Clear enough picture to determine where we are."

A third respondent stated, "You live and die by the map with FSA. ...I know what my map looks like."

Respondents mostly relied on the parcel map to determine whether they operated land within the segment. However, respondents did use the county map to orient themselves. One respondent

said he first looked at the county map and identified the roads and boundaries and determined the area in the segment was his property. He then looked at the parcel map. This respondent mostly relied on the county map to orient himself because it had roads on it. He indicated that he had to look back and forth between the parcel map and the county map to determine the boundaries on the parcel map.

Respondents were able to identify the tracts of land within the segment that they operated and indicated the number that corresponded to each tract. There was some confusion regarding the NASS assigned numbers. This is discussed in more detail below. Respondents also said they would be able to answers questions regarding their agricultural activity on these tracts of land. However, they were not administered all of the questions on the enumerator questionnaire.

Although the respondents found the section, township and range information and the landmarks on the parcel map to be useful in determining whether they operated land within the segment and tracts, they thought a few features of the parcel map could be improved. A couple respondents would prefer the parcel map to have road numbers. One respondent stated, "[The parcel map] is better because I can see where the ponds and creeks are. ...the little one helped me locate it... I look at my maps all the time so I know what [my property] looks like and I'm out there every day." He said having roads marked on the parcel map "would have helped me find it right off." Another respondent stated, "If already have road numbers on the zoomed out, why not put then on these lines? If you're going to put the effort of putting numbers why not go to the effort of putting road numbers?"

One respondent felt the section, township and range could have included the full legal designation for his parcel of land. This respondent stated that this feature was the most useful in helping him identify his land but it could have been more descriptive. He said, "...you didn't give the whole legal... didn't break it down specifically to me." For example, he said the text could have read, "NW corner [section, township and range removed]." He also suggested only marking off the tracts for his property within the segment: "Could make only mine blue, my corner blue."

Two issues with the maps did arise when respondents were identifying their tracts of land. First, some respondents did not understand the numbering NASS assigned to the tracts of land. Second, respondents used their knowledge of FSA and county maps to interpret the maps enclosed in the survey and referenced number designations on those other maps when discussing the county and parcel maps in the survey.

Respondents generally assumed the numbers on the enclosed map were numbers NASS assigned to the tracts of land but were confused when these numbers appeared on the borders of the segment. For example, one respondent stated, "I don't know what the yellow numbers are or supposed to be. Most of them are on roads. Most are on the same side of the page, in the road. I haven't read all these questions. Maybe one of them denotes what these numbers are." The interviewer explained the yellow numbers represent the different tracts and when the segment boundary was drawn a portion of the tract within the segment is covered under the boundary line.

This respondent was particularly confused by the yellow numbers along the boundary lines of the tract he operates (see figure 1). He said, "I don't know why they would be there. The northwest corner is what I operate. It's all a big tract." This respondent did not believe there were other tracts of land bordering the tract of land he operated and the segment boundary. He then said he operates the field on the north side of tract 8 and the two fields on the bottom of tract 8. He said, "When you have distinctions like that (the creek) they (FSA) break it up." But he was adamant that the tracts on the north border of tract 8 do not exist. He said, "6, 11, and 12 don't exist. If you look up the legals the northwest corner is section [section, township and range removed]. In it 121 acres cultivation."



Figure 1. Example tract

Similarly, another respondent located the tract of land he operated and told the interviewer the number but then asked what the numbers that were located on two boundary lines of his tract represented (see figure 2). He asked, "Are 1 and 8 roads, I guess? ... being in the center, I believe 10 is the whole field. I don't know honestly because there's more than one number of each line and not numbers in each corner." This same respondent indicated that there were two number fours along the south boundary of the segment and this did not make sense to him. He said, "There's two number fours it looks like... I would just say for a suggestion if you're going to put in a number, put one per side." The interviewer explained that these numbers represented small tracts of land within the segment that are difficult to see on this map because of the segment line. This confused him further, particularly because he did not believe there were additional tracts of

land surrounding the tract of land that he operates within his segment. He asked, "So you be saying I farm in 1, 10 and 8? ...that doesn't make sense to me. When you go into an FSA office the two number fours maybe they touch in the south but shouldn't there be- if there's a different plot for every parcel why is there two number fours?" He said he would not be able to determine whether he farmed in tracts 1 or 8 without having the acreage for 1, 8 and 10. The respondent then referenced knowledge of his county maps to determine the land he operates. He said, "It's all one field as far as the county is concerned." He referred to it as "plot 1" but did confirm that he was referring to tract 10 on the survey map. "I farm the whole northwest corner of that section."

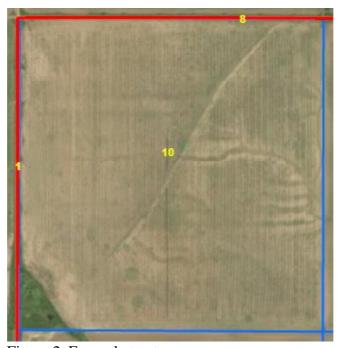


Figure 2. Example tract

If respondents reference features of county or FSA maps when discussing the maps in this survey, this could lead to confusion for both the respondent and interviewer. For example, in one interview, the segment had 31 tracts of land and the respondent indicated that he operated all tracts "except 15 and 16 on the far right and then section 27." Tract 27 is located on the west boundary of the segment, close to several other tracts the respondent reported operating. The interviewer used the map gridlines to determine that the respondent was not referring to tract 27 when he indicated he was not operating "section 27." The respondent explained that he was referencing his personal copy of a county map when interpreting the parcel map. He said his personal county map shows legal sections 29, 28 and 27. He used this map to determine whether he operates land within the segment marked on the parcel map and as far as he could determine, he operates everything except tract 15 on the parcel map. This could be potentially confusing to interviewers as the respondent was referencing legal section numbers that do not appear on the parcel map, and interviewers may misconstrue them to be tract numbers.

It is important to note that the section, township, and range information on the map refers to the center point of the red lined segment and does not correspond to any parcel id. Enumerators should refer to these numbers inside the tracts as either tract number or parcel ids and explicitly state these are not section numbers.

3.3 Respondent Questionnaire

Respondents were not probed on their comprehension of the respondent questionnaire; however, three respondents indicated they had difficulty comprehending some of the questions. One respondent was confused by Question 1, which asked, "On June 1, did you operate land inside these red lines?" If a respondent answers yes, they are then instructed to report the number of acres. This respondent did not know whether he should report his total acres operated or the number of acres he operated within the red lines. He said he knew the total area he operated but would have to guess at how much was in the red lines. Similarly, another respondent indicated that he was not sure whether Questions 3, 4, and 5, which all begin by asking "On the total acres operated," were asking about his entire operation or the tract of land he operated within the segment. He stated, "In this square or the total operated? 'On the total acres operated.' Is that in this square or my entire operation?" He assumed these questions were asking about his whole operation. The questionnaire transitions from asking about the land in the defined segment in Questions 1 and 2, shifts to the "the operation" in Questions 3-11 and then returns to asking about the segment in Questions 12 and 13. This order effect coupled with the fact that respondents operate additional land outside of the segment led to this confusion. Additionally, Question 14 references "this tract" but does not indicate which tract within the segment it is referring to and some respondents operated more than one tract within the segment.

One respondent felt NASS should already know the answer to Question 2 and did not understand why this would be on the survey. Question 2 asks, "Was any land inside these red lines administered or controlled by a public agency, industrial corporation, or grazing association for use on a fee per head or animal unit month (AUM) basis? (AZ, CA, CO, ID, KS, MT, NE, NV, NM, ND, OK, OR, SD, TX, UT, WA, and WY Only)."

Two respondents had difficulty with Question 5, which asks, "On the total acres operated on June 1, are any crops now in storage or will there be any crops stored before June 1, 2022?" One respondent indicated that he purchases hay from another operation and stores it on his operation for his cattle. He did not know whether he should report this hay in Question 5. The other respondent indicated that he did not know if he would still have crops stored or if they would be sold by that date.

One respondent was confused by Question 11, which asks, "On June 1, 2020 did this operation have any idle cropland or more than 99 acres of pasture?" He said he has no cropland. He does have more than 99 acres of pasture but he does not consider this land idle since it is all used for pasture. He did not know how to answer this question.

Finally, two respondents did not know what "DK" meant in the response options. One respondent asked, "DK is don't know? The older generation won't know that. My dad wouldn't know what to say." The other respondent also asked what "DK" meant and stated that he assumed it meant "don't know." He said, "DK means don't know I'm guessing. That's a little vague too."

Questions 5 and 14 have a reference date of 2022. This date should be 2021.

Finally, one respondent could not understand why NASS could not access this information from FSA directly. He said, "It's on my 578." He said from his perspective NASS and FSA are all USDA. He said, "The name on the parking space is USDA. The name on the door is USDA. The name on your letterhead says USDA... why can't you people share ...get it together."

4. CONCLUSION AND RECOMMENDATIONS

In conclusion, the cover letter needs revisions. The letter has too much information and is not written using plain language. The instructions are not prominent and it is not clear to respondents how to proceed. Some respondents interpreted the letter as instructing them to complete the questionnaire. NASS should be prepared for respondents to return this questionnaire and have procedures in place to process these returned questionnaires. In addition to the instructions not being prominently displayed, the text of the letter was not persuasive. Some respondents indicated they would throw out the questionnaire upon receiving it. NASS should have procedures in place to ensure an interview can still be conducted if the respondent no longer has the map accessible.

For the most part, the maps were effective. Respondents could easily determine whether they operated land within the segments and tracts. Additional information could be added to the parcel map such as major roads to help respondents orient themselves. Some confusion arose regarding the NASS number assignments and respondents relied on their knowledge of other maps, such as FSA maps, to interpret the parcel map. This could lead to confusion during data collection and may be difficult to resolve over the phone. Enumerators should refer to these numbers inside the tracts as either tract number or parcel ids and explicitly state these are not section numbers. Enumerators will need substantial training on how to administer this survey over the phone and handle issues such as the ones that arose in this research.

The respondent questionnaire has not been pretested. However, respondents in the usability test indicated that they had comprehension issues with several questions. Furthermore, the respondent questionnaire does not align with the enumerator questionnaire. The respondent questionnaire is not necessary to complete the task and may lead to additional burden for the respondents and enumerators.

A limitation of this research is it only included four usability tests. Three of these respondents were very experienced in reading aerial maps and were familiar with aerial maps of their property. Because of this, they had little difficulty identifying the land they operated within the

segment and tracts. Respondents, who are less familiar with reading aerial maps or maps of the land they operate, may have more difficulty with this task. During recruitment, NASS identified respondents who were known to operate land within the segments tested. It is likely this made the task easier for both the respondent and interviewer and is another limitation of this research. In addition, there may be other issues with the materials and procedures that were not uncovered in these four interviews. NASS should use their expertise to identify other potential issues and ensure enumerators are equipped to handle them.

Recommendations:

- 1. Reduce the amount of information in the cover letter.
- 2. The cover letter should emphasize three points: The respondent has been selected for the June Area Survey; an interviewer will contact them in the next couple of days; they need to retain a copy of the maps.
- 3. PAO should review the cover letter, with special attention given to plain language.
- 4. Eliminate the respondent questionnaire. If the respondent questionnaire must be retained, survey methodologists should review the questionnaire for potential comprehension issues, comprehension issues identified in this testing should be addressed, and the questionnaire should be aligned with the enumerator questionnaire. Additionally, procedures need to be in place for processing returned questionnaires.
- 5. Add major road numbers/names to the parcel map where possible.
- 6. Provide enumerators a script to orient respondents to the maps, which explains the major map features, such as the section, township and range information and NASS numbering. For example, enumerators should explain the segment number refers to the center point of the segment and does not correspond to the numbers within the tracts. Enumerators should refer to the numbers within the tracts as either tract number or parcel ids and explicitly state these are not section numbers.
- 7. A procedure should be put in place to handle cases where respondents discard the map prior to receiving a phone call.
- 8. Inform enumerators of potential issues that might emerge based on this research and other expert reviews of the materials and procedures and ensure enumerators are trained to respond to these issues.

APPENDIX. Material Used during Testing

June Prescreening Interview Guide December 2020

Advanced Letter

I want you to pretend you received this envelope in the mail. I want you to look over the contents how you normally would if you received an envelope like this from NASS in the mail.

Record any initial comments. If respondent says they would not read the letter, instruct them to do so.

How much of this letter did you read? Did you read this letter in full, skim, didn't read anything?

What is your initial reaction to this letter?

In your own words, what is this letter telling you?

What do you think your next steps would be after receiving this mailing?

What do you think you need to do with the questionnaire and map?

Is there anything on this letter than you don't understand or are confused about?

What information on this letter do you feel is the most important to you?

Is there any information that you feel is unnecessary?

Is there any information that you feel is missing?

Map & Initial Screening Questions

Each year NASS conducts the June Area Survey. The information collected in this survey is used to produce estimates on agricultural activity and to evaluate how good of a job NASS is doing when creating our mailing list for the Census of Agriculture.

When we conduct the June Area survey, we create aerial photographs to identify land segments across the country. Then NASS representatives will visit and personally interview all producers operating within the boundaries of each selected land segment. Because of Covid-19 restrictions, we have to modify how we conducting this survey this year. Instead of an interviewer coming to your door, you will be mailed a packet of information similar to the one I send you and then an interviewer will call you on the phone to collect your information. The interviewer will have the same map and questionnaire that you received in the packet.

What I want to do today is look over these materials with me and I will ask you a few questions and get some feedback from you on the maps and this process in general. I'm going to have you turn to the map on page. [Point out segment boundaries, houses and other identifying landmarks to help the respondent become familiar with the segment.].

[Note: If respondent asks, these maps were generated using publically available information from their local tax assessor office. We have assigned numbers to different tracts of lands within the segments for our own record keeping practices. The tax assessor boundaries do extend outside of the segment boundary but have been clipped. We are only interested in the land within the red lines. (For HR info only: lines = segments blue lines = tax assessed parcel boundaries There are owner's reports that go along with the tracts marked in blue, not available yet. Normally use FSA data in prescreening but can't send that).

I'm going to ask you a question and as you're trying to answer that question, I want you to try to walk me through your thought process of how you go about answering that question.

| 1. On June 1, did you operate land inside these red lines? |
|--|
| □ Yes □ No |
| 2. Do you operate land within the blue lines on this map? Which ones? (could be possible that there are multiple operators within tracts or boundaries span outside of the segment) |
| □ Yes □ No |

If able to easily answer yes to these questions, go through remainder of questionnaire and then probe. If not, probe more in depth.

Can you walk me through how you would go about using this map to determine the land that your operate?

What features on the map do you find useful?

Are there other features that you think would be useful?

USDA

United States Department of Agriculture National Agricultural Statistics Service



March xx, 2021

Why am I getting this packet?

Each June, the United States Department of Agriculture's National Agricultural Statistics Service (NASS) conducts the June Area Survey. A sample of approximately 9,000 segments of <u>land</u>, measuring roughly one square mile, is selected from all states except Alaska. You have been identified as a potential operator of land located inside one of these segments. Please join us in helping U.S. agriculture by completing this screening survey. It will ask questions about land you operate within the segment boundaries. The final sample of farms and ranches identified from this screening survey will be contacted in June to complete the June Area Survey.

To protect the health and safety of producers, partners, and employees, NASS is unable to work with you in person to complete this survey. Instead, we are mailing you this informational packet for use when we call to schedule a telephone interview at your convenience to collect the information found on the enclosed sample questionnaire.

What is in this packet and what do I need to do?

A sample screening questionnaire labeled "Informational Purposes Only" and maps (aerial photo and county map with segment identifiers) are enclosed to guide you through the survey with assistance from an interviewer.

- Please do not complete and return the paper questionnaire. Instead, use it to help plan ahead so your time on the phone with our representative will be shorter.
- The interviewer will call to set up a telephone appointment to complete the questionnaire with you and collect your operation information. This process can take up to 20 minutes.
- To make the interview go faster, please review the map and determine if you operate land inside the segment boundaries.

How will the survey results be used?

Your response will help identify the operators included in the upcoming June Area Survey. Results from the June Area Survey are used to develop comprehensive estimates of land uses and agricultural activities across the United States. This survey is a critical component of data collection and estimation for numerous NASS reports, including *Acreage, Land Values, Small Grains, Grain Stocks, Cattle, Hogs and Pigs, Crop Production,* and *Sheep and Goats*. Federal law (Title V, Subtitle A, Public Law 107-347) which keeps your identity and answers confidential protects your survey response. For more information on this survey visit:

https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/June_Area/index.

Thank you for your partnership and for your support of U.S. agriculture. If you have any questions, please feel free to contact us at (888) 424-7828.

2021 JUNE AREA SURVEY SCREENING FORM

Respondent Questionnaire

OMB No. 0535-0213 Approval Expires: xx/xx/xxxx Project Code: 197 Survey ID: 3838



United States
Department of
Agriculture



NATIONAL AGRICULTURAL STATISTICS SERVICE

USDA/NASS

National Operations Division 9700 Page Avenue, Suite 400 St. Louis, MO 63132-1547 Phone: 1-888-424-7828

Fax: 1-855-415-3687 Email: nass@usda.gov

INTRODUCTION

This is a national survey where agricultural producers are asked to provide information on crops and livestock.

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: https://www.nass.usda.gov/confidentiality. Response is voluntary.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number is 0535-0213. The time required to complete this information collection is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The area of land shown on this photo (map) has been selected for this survey.

| 1. | On June 1, did you operate land inside these red lines? | |
|----|---|-------|
| | | Acres |
| | Yes - Enter acres and continue | |
| _ | | |
| 2. | Was any land inside these red lines administered or controlled by a public agency, industrial corporation, or grazing association for use on a fee per head or animal unit month (AUM) basis? (AZ. CA, CO, ID, KS, MT, NE, NV, NM, ND, OK, OR, SD, TX, UT, WA, and WY Only) | |
| | | Acres |
| | | 849 |
| | Yes - Enter acres and conclude interview | |
| | No - Continue | |

| 3. | On the total acres operated on June 1, have there been or will there be any crops grown, hay cut, livestock, poultry, honey bees or aquaculture raised this year? | No - | - Go to Page 3. Continue. Continue. | | | |
|-----|--|-------------------|--|--|--|--|
| 4. | On the total acres operated on June 1, have you sold or will you sell agricultural products or receive government payments this year? | No - | - Go to Page 3. Continue. Continue. | | | |
| 5. | On the total acres operated on June 1, are any crops now in storage or will there be any crops stored before June 1, 2022? | No - | - Go to Page 3. Continue. Continue. | | | |
| 6. | Has this operation owned or raised any hogs or pigs in the past 12 months, or does it expect to own or raise any this year? | No - | - Go to Page 3. Continue. Continue. | | | |
| 7. | Has this operation owned or custom fed any sheep or goats since January 1, or does it expect to own or custom feed any this year?(AZ, CA, CO, ID, MN, MT, ND, NV, OR, SD, UT, WA, and WY Only) | No - | - Go to Page 3. Continue. Continue. | | | |
| 8. | On June 1, 2020 were there any horses, ponies, or other equine, regardless of ownership, on the total acres operated? | No - | - Go to Page 3. Continue. Continue. | | | |
| 9. | Excluding home use , have there been or will there be any vegetables, melons, fruit, nuts or berries, grown on this operation this year? | No - | - Go to Page 3. Continue. Continue. | | | |
| 10. | Excluding home use , have there been or will there be any nursery, greenhouse, floriculture, sod, cut Christmas trees or other woody crops grown on this operation this year? | No - | - Go to Page 3. Continue. Continue. | | | |
| 11. | On June 1, 2020 did this operation have any idle cropland or more than 99 acres of pasture? | No - | - Go to Page 3. Go to Question 13. Continue. | | | |
| 12. | If answered "yes" to any questions on page 2, how many total acres do you operate inside segment boundaries? Enter acres and conclude interview. | e the | Acres | | | |
| 13. | If answered "no" to all questions on page 2, how many acres of non-agricultural land do yo operate inside the segment boundaries? Enter acres and land use, then continue | | Acres | | | |
| | Land Use | | | | | |
| | | T _a ,- | | | | |
| 14. | Does this tract have potential for agriculture before June 2022? | | Yes - Continue. No DK | | | |

This completes the survey. Thank you for your help.

2020 JUNE AREA SURVEY SCREENING FORM - VERSION B

Enumerator Questionnaire

OMB No. 0535-0213 Approval Expires: 10/31/2022 Project Code: 124 Survey ID: 3838



United States
Department of
Agriculture



NATIONAL AGRICULTURAL STATISTICS SERVICE

USDA/NASS

National Operations Division 9700 Page Avenue, Suite 400 St. Louis, MO 63132-1547 Phone: 1-888-424-7828

Fax: 1-855-415-3687 Email: nass@usda.gov

AL, AR, DE, FL, GA, IL, IN, IA, KY, LA, MD, MI, MN, MS, MO, NH, NJ, NY, NC, OH, PA, SC, TN, VA, WV, WI

| State Stratum | | Segment | | |
|---------------|--|---------|--|--|
| | | 000 | | |

| Part | of | |
|--------|----|--|
| County | | |

INTRODUCTION

[Introduce yourself and ask for the operator. Rephrase in your own words.]

I am working on the June Agricultural Survey. This is a national survey where agricultural producers are asked to provide information on crops and livestock.

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: https://www.nass.usda.gov/confidentiality. Response is voluntary.

The area of land shown on this photo (map) has been selected for this survey.

[Show respondent photo or map. Point out segment boundaries, houses and other identifying landmarks to help the respondent become familiar with the segment.]

- 1. On June 1, did you operate land inside these **red** lines?
 - ☐ **Yes** [Continue with item 2.]
 - □ **No** [Determine who the tract operators are inside the segment. Thank respondent and conclude interview.]
- What were the boundaries of land operated inside these red lines? [Verify or draw tract boundaries in blue, then continue with item 3.]
- 3. Was any of this land (inside these blue lines) operated by someone else?
 - □ **Yes** [Correct boundaries, then continue with page 2.]
 - □ **No** [Continue with page 2.]

| 5 | 6 | | 9 | 10 | 11 |
|-----------------|--|---|---|--|---|
| T R L E T T E R | Line 1 – Full Name (First, Middle, Last) Line 2 – Mailing Address Line 3 – City, State, ZIP Code Line 4 – Telephone Number | On the total acres operated on June 1, have there been or will there be any crops grown, hay cut, livestock, poultry, honey bees or aquaculture raised this year? | On the total acres operated on June 1, have you sold or will you sell agricultural products or receive government payments this year? | On the total acres operated on June 1, are any crops now in storage or will there be any crops stored before June 1, 2021? | Has this operation owned or raised any hogs or pigs in the past 12 months, or does it expect to own or raise any this year? |
| | Name: | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire |
| | Address: | Queeniniano | Quodiomidiro | Quodioimano | Quodiomiano |
| | | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire |
| | Phone: () | □ No | □ No | □ No | □ No |
| | Name: | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire |
| | Address: | | = = = . | = = = . | |
| | | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire |
| | Phone: () | □ No | □ No | □ No | □ No |
| | Name: | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire |
| | Address: | | | | |
| | | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire |
| | Phone: (| □ No | □ No | □ No | □ No |
| | Name: | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire |
| | Address: | | | | |
| | | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire |
| | Phone: () | □ No | □ No | □ No | □ No |
| | Name: | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire |
| | Address: | | | | |
| | | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire |
| | Phone: (| □ No | □ No | □ No | □ No |
| | Name: | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire |
| | Address: | | | | |
| | | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire |
| | Phone: () | □ No | □ No | □ No | □ No |

| 13 | 14 | 15 | 16 | 17 | 18 | 20 | 20a |
|---|--|--|---|-------------|---|---|--|
| On June 1, were there any | Excluding home use, have there | Excluding home use, have there | On June 1, did this operation have any | | NON-AG How many acres | RICULTURAL Does this tract | TRACTS What best |
| horses, ponies, or other equine, regardless of ownership, on the total acres operated? | been or will there be any vegetables, melons, fruit, nuts or berries, grown on this operation this year? | been or will there be any nursery, greenhouse, floriculture, sod, cut Christmas trees or other | idle cropland or more than 99 acres of pasture? | O F U S E C | are inside these blue lines? | have potential for agriculture before June 1, 2021? | describes this non-agricultural tract? |
| | | woody crops grown on this operation this year? | | E | Enter acres and land use, then continue | Enter code | Enter code |
| ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | | 846 • LAND USE | 818 | 783 |
| □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | 00 | | □ YES = 1 □ DK = 2 □ NO = 3 | |
| □ No | □ No | □ No | □ No | | | | |
| ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | | 846 | 818 | 783 |
| □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | | LAND USE | □ YES = 1 | |
| Q | | Queensimune | Q. 4.5.1.5.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1. | 00 | | □ DK = 2 □ NO = 3 | |
| □ No | □ No | □ No | □ No | | 846 | 818 | 783 |
| ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | | LAND USE | 010 | 763 |
| □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | 00 | | □ YES = 1 □ DK = 2 □ NO = 3 | |
| ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | | 846 | 818 | 783 |
| □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | 00 | LAND USE | □ YES = 1 □ DK = 2 □ NO = 3 | |
| ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | ☐ Yes – Go to Questionnaire | | 846 • | 818 | 783 |
| □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | 00 | LAND USE | □ YES = 1 □ DK = 2 □ NO = 3 | |
| □ No □ Yes – Go to | □ No □ Yes – Go to | □ No □ Yes – Go to | □ No □ Yes – Go to | | 846 | 818 | 783 |
| Questionnaire | Questionnaire | Questionnaire | Questionnaire | | LAND USE | | |
| □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | □ DK – Go to Questionnaire | 00 | | □ YES = 1 □ DK = 2 □ NO = 3 | |
| □ No | □ No | □ No | □ No | | | _ 110 - 0 | |

A - 01 B - 02 C - 03 D - 04 E - 05 F - 06 G - 07 H - 08 I - 09 J - 10 K - 11 L - 12 M - 13 N - 14 O - 15 P - 16 Q - 17 Q - 17 R - 18 S - 19 T - 20 U - 21 V - 22 W - 23 X - 24 Y - 25 Z - 26 AA - 27 BB - 28 CC - 29 DD - 30 EE - 31 FF - 32 GG - 33 HH - 34 II - 35 JJ - 36 KK - 37 LL - 38 MM - 39 NN - 40 00 - 41 PP - 42 QQ - 43 RR - 44 SS - 45 TT - 46 UU - 47 VV - 48 WW- 49 XX - 50 YY - 51 ZZ - 52 AAA - 53 Etc...

В

| 1. | Total tract letters listed in Column 5, page 2 (sum of all Screen | eening Forms for this segment) | | |
|----|---|--------------------------------|-----------------|----------------|
| 2. | Number of tract letters listed on photo or map | | | |
| | | | (Item 1 must | equal item 2.) |
| 3. | Number of Area Version questionnaires completed | | | |
| 4. | Number of tracts with acreage listed in Column 18, page 3. | | + | |
| 5. | Total of items 3 + 4 | | = 53 | 326 |
| | | (Item s | 5 must equal it | ems 1 and 2.) |
| W | Ag Tract Acres | Non-Ag Tra | ct Acres | |
| | | | | |
| | | | | |
| | omment on any enumerating problems caused by segment undaries, split fields, aerial photo coverage, etc.] | OFFIC | E USE | |
| | | Activity | Date | Initials |
| | | Received Clarical Edit | | |
| | | Clerical Edit OL/NOL Check | | |
| | | 1st Manual Edit | | |
| | | 2 nd Manual Edit | | |
| | | Keyed | | |
| | | Verified | | |
| | | Interactive Edit | | |
| | | Submitted for processing | | |
| | | ELMA updates completed | | |
| | | Danamed Asses | OFFICE USE | 1 |
| ΕN | IUMERATOR: | Reported Acres (RA) | Digitized Acres | RA / DA |
| DA | ATE: | | | |