

NASS Survey Planning Meeting Report

USDA-NASS Headquarters

Washington, DC

January 25, 2013

Participants: Joel Ransom, Don Hershman, Pierce Paul, Carl Bradley, Gary Bergstrom, Art Brandli, Christina Cowger, Brian Ashford (North Carolina certified seed producer) and several NASS employees including Rich Hopper, NASS point person for this survey. Participating by phone: Michele Marra, Ag Economist at NCSU.

Definitions

For the rest of this document,

- Wheat types are winter, durum, and other spring.
- Wheat classes are hard red, soft red, hard white, and soft white.
- Wheat varieties are proprietary seed names like Barlow, Glenn, Faller, etc.

Output Discussion

The survey was initiated by members of the US Wheat & Barley Scab Initiative Management Committee in an effort to identify the extent of adoption, and barriers to adoption, of scab management techniques. The overall goal is to help Initiative members and stakeholders more effectively encourage adoption of these techniques. The survey will also help the Initiative measure its impact. The USWBSI Executive Committee determined that in addition to soft wheat states, hard wheat and barley states needed to be included. Throughout the meeting, it was mentioned that this survey would provide baseline data that would allow progress to be measured in the future.

Information from the data is hoped to answer questions such as:

- Where does scab fit in the list of management priorities for growers in various states?
- Was scab a factor in what commercial wheat variety was planted?
- Specifically, where does scab resistance fit in a farmer's decision to use fungicide?

The Initiative does not have a handle on the extent to which practices, particularly variety resistance, are adopted east of the Mississippi River.

The template study from North Dakota summarized data using percentages of what they are doing or not doing as well as reasons for not doing it.

DECISIONS MADE

By state

By type (barley, other spring wheat, durum, winter)

Percentage use fungicide

Percentage use rotation

Percentage use variation in planting dates

Percentage that use scab-resistant varieties

Ranking

- How much attention is paid to scab risk
- How does scab risk influence decisions on variety selection
- How is scab (risk) resistance a force in those decisions in fungicide selection?
- Where is information about scab risk and management obtained?

Summarize by the intensity of the scab problem (as defined by how the respondent answers a question on scab frequency) and possibly by other factors, such as relative size of wheat operation, relative importance of wheat to the operator, years of experience farming, etc.

Sampling

The original States were selected by the Initiative based on scab risk. Sampling rigor is a high priority, so maximization of power is preferred. There was confusion about the sample sizes provided. The 3 percent precision of the 16,200 sample size was for 100 percent response. A 5 percent precision can be obtained with an approximately 40 percent response which is a good goal for this project.

Since an overall publication goal is to have percentages based on the total population, limiting the (barley, winter wheat, durum wheat, other spring wheat) samples to States with published estimates might lead to a more efficient sample. This would in turn allow the sampling breakout to be

State	Types for Sampling		State	
AR	W		NE	W
IL	W		NY	BW
IN	W		NC	BW
KS	BW		ND	BWDO
KY	W		OH	W
MD	BW		PA	BW
MI	BW		SD	BWDO
MN	BW		VA	BW
MO	W		US	16,218

B=Barley; W=Winter Wheat; D=Durum Wheat; O=Other Spring Wheat

DECISIONS MADE

Total sample size nationally is 16,200.

Barley and each wheat type (Winter, Durum, Other Spring) will be sampled only in States where NASS publishes a harvested acreage estimate.

Select each grain independently (do not factor if an operator grows multiple wheat types).

The initial sample counts presented were:

State	Sample Size		State	Sample Size
AR	811		NE	976
IL	1,034		NY	714
IN	976		NC	909
KS	1,064		ND	1,034
KY	989		OH	1,053
MD	811		PA	989
MI	989		SD	976
MN	989		VA	870
MO	1,034		US	16,218

The counts may be adjusted based on the types of small-grain grown in the state and the desire to publish data by small-grain type within each State.

Statistical Methodology

There were no details of a report that will be published from the data. Typically NASS provides the respondent a copy of the results of the survey, if it is requested. Just to reiterate, if there will be other analysis or a publication, the results and tables should be detailed and mock-ups laid out during (or before, preferably) question development to ensure the survey provides appropriate and complete results.

From the meeting, it appears Dr. Marra is planning to do a type of regression analysis on the variables, but didn't go into the details. We assume the independent and dependent variables are whatever is reported on the questionnaire though.

Suzette discussed some disclosure issues. Suzette listed some considerations for them to regard in their work, and made some general recommendations. Once publication plans are finalized, NASS can provide further guidance. NASS will review any publication prior to public release for disclosure and sampling and survey methodology issues.

Suzette mentioned various methods are available to handle unit nonresponse (whole questionnaire is blank) and item nonresponse (an individual question is blank). While there are several imputation methods possible and would be appropriate for some questions like acres, she advised against imputation. For the questions discussed, most of which are categories and/or rankings, she recommended a reweighting technique. This should be applied at the item level, and will cover both unit nonresponse and item nonresponse in one step. Essentially, the weights of respondents are increased to account for the entire population (response bias is assumed to be zero). To illustrate, suppose 80 out of 100 respondents answer a question. The original weight of the 80 respondents would be multiplied by 1.25 for nonresponse adjustment and result in a final weight for expansion. The sample may be just a simple random sample within each state, however if there is going to be some kind of stratification by acres, nonresponse adjustment should be calculated within each strata.

Survey Methodology

SCREENING QUESTIONS

Have you harvested wheat or barley in any of the past 5 years?

Check all that apply -- what was grown in past 5 years (barley, winter, other spring, durum)

After the screening questions, discussion focused on the ND questionnaire.

ACREAGE QUESTIONS:

1 and #2 - NASS standard bank of acreage questions

#3 and #4 - What is the wheat acreage the last time grew wheat (instead of 3) for each type of wheat?

In the last year you grew wheat (or barley) what were the two most important varieties – How is it going to be keyed????

Check with CATI programmers how wheat varieties are coded (codes)??

What was the wheat yield last time grow wheat?

Insert question: In the field(s) in which you most recently grew wheat, what was the previous crop?

Insert question: What is the level of importance of wheat in your operation compared to other crops? Rank it 1 to 5, with 1 being the least important and 5 being the most important.

5 - Will assume opCounty is where the wheat and barley are grown. Take question out.

#6 - Keep average annual yield

- # 7 - How many years out of the past 5 years has scab affected potential yields? {continuous}
NOTE: How is "problem defined"? Can this be rewritten to say how many years out of the past 5 has scab affected potential yields?
How many years out of the past 5 years has DON (vomitoxin) been a problem? {continuous}
How many years out of the past 5 years have you experienced load rejection or dockage due to scab?
- #8 Remove the word consistently from the question
For item b should read "Apply a recommended fungicide with scab as the primary target at heading (barley) / flowering (wheat), if warranted by a risk forecast."
- #9 is a low priority question – may be removed if space is a concern.
Insert question: Which of the following are the most important obstacles to managing scab effectively? Check the three most important ones:
- Information on scab resistance of varieties is not available or is not timely.
 - Seed of scab-resistant varieties is hard to obtain.
 - Available scab-resistant varieties do not appear to be as high-yielding as scab-susceptible varieties.
 - Information about weather-related scab risk is hard to get in a timely way.
 - The most effective scab fungicides are hard to obtain.
 - The most effective scab fungicides are too expensive.
 - Weather prevents application of scab fungicides at the best time, which is early to mid-flowering for wheat (or heading for barley).
 - Rotations that keep wheat or barley from following corn or small grains are not practical.
- #10 Which one best describes use of fungicides to control scab, as opposed to a routine foliar spray for leaf diseases?
Recommend including "over the past 5 years to be consistent"
Add "which product did you apply for scab the most recent time you sprayed with scab as the primary target?"
- #11 During the past 5 years, . . .
- #11 A and B) tolerant should be replaced with resistant
Combine #12 and 14 and put after #13:
On the most recent occasion fungicide was applied with scab as the main target, did you use a custom applicator (Y/N)? If so, was it aerial or ground application?
If you yourself made the most recent application of fungicide that had scab as the main target, did you adjust the nozzle angle on the sprayer to angle at 30 to 45 degrees from horizontal?
- #13 is continuous
#15 is eliminated
#16 + were questions to determine where the operators get their information
#16 should be expanded to extension activities instead of just field days
#17 was measuring how important meetings are in ND (maybe could be eliminated)
- #18 Which sources of information about scab management do you use? (checklist instead of ranking)
A) Check all that are important: cooperative extension / land-grant university (combining a, b, c into just one item), agrichemical representatives, other farmers, grain buyers, crop consultants.
B) Which one is the most important?
- #19 How do you prefer to receive information about scab management?
A) Check all that are important: meetings, printed materials, online publications, text alert to cell phone or listserv email, social media (Facebook/Twitter), risk forecasting website, other (list).
B) Which one is the most important?

#20 remove – was intended to see if member of crop improvement association – and replace with:

Have you used a web site that forecasts scab risk? (Y/N) Was it useful for scab management? (Y/N)

#21 Do you use a paid crop consultant to provide advice on wheat or barley production? make sure that the consultant only applies to wheat and barley not other crops

#22 and beyond (except 24 and 26) use NASS questions

#23 Do you have internet access? Y/N. If so, is it high-speed or dial-up? (gives an indication of scab prediction website)

How does ARMS ask Internet question with the rise in cell phone use???

#24 – eliminate (not useful in ND)

#25 – change to standard census bureau wording

#26 – Low priority. Leave in to obtain information on human capital.

OMB

David Hancock and Rich Hopper briefed the group on the OMB approval process and which materials must be submitted for a questionnaire to be approved. The materials include supporting statements, pre-survey materials, publicity materials, questionnaires, and publication plans.

Regional commodity groups need to publicize – USWBSI should organize commodity group support
Cowger asked if a brochure can be added to the mailing – Hopper will need to check once the measurements of the brochure are submitted.