

A photograph of a farm field. In the foreground, there is a field of golden wheat. In the background, there is a field of tall green corn plants. The sky is blue with some white clouds. The text is overlaid on the left side of the image.

**AMERICAN  
FARM BUREAU  
FEDERATION®  
USDA-NASS  
WORKING GROUP**

# AMERICAN FARM BUREAU FEDERATION'S USDA-NASS WORKING GROUP



## Farm Bureau NASS Working Group Recommendations

- Increase Transparency with the Agricultural Community
- Accelerate New and Innovative Technology Adoption
- Farm Bureau Pledges Partnership
- Strengthen NASS for U.S. Agriculture

## Background

Unprecedented flooding and weather-related planting delays in 2019 sparked a number of market-moving surprises relative to USDA-National Agricultural Statistics Service's estimates of planted area, crop production, yields and inventory. In most cases, these market surprises contributed to increased price volatility in both nearby futures contracts and cash markets.

In response, voting delegates to American Farm Bureau Federation's 101st Annual Convention recommended that the Farm Bureau board of directors convene a Farm Bureau-led coalition of our farmer members to review and make suggested improvements to USDA-NASS' data collection and reporting methodologies.

Over four months, Farm Bureau's 10-member farmer Working Group held monthly meetings and conducted more than a dozen interviews with staff and leadership from government, trade associations, market analysis firms and land-grant universities. This report summarizes the findings of the American Farm Bureau Federation's USDA-NASS Working Group.

## Sense of the Working Group

The USDA's National Agricultural Statistics Service's mission is to provide timely, accurate and useful statistics in service to U.S. agriculture. The agency holds trust, credibility, objectivity, statistical independence, policy relevance and commitment as its core values. Globally, USDA-NASS has a gold standard reputation among data users.

NASS reliably provides consistent access to critical data and information used by farmers, ranchers, policymakers and other agricultural industry stakeholders. Moreover, the agency creates a level playing field for access to agricultural market information. However, for a variety of reasons, farmer participation in statistical surveys has declined and following increased price volatility coinciding with NASS

releases, confidence that the agency's reports reflect market realities has faded in recent years. This Working Group report is intended to give farmers and ranchers a voice for suggesting improvements that can help rebuild farmers' trust in the Department's statistical arm.

The working group recommends NASS increase transparency and clarity with respect to their survey collection methods, data analysis and reporting processes; accelerate the adoption of new technologies and software; and use more real-time statistical and environmental data to complement existing survey-based data and reporting.

Put simply, farmer trust and engagement with NASS will grow as the agency makes every effort to be at the leading edge of technology adoption, data collection and statistical analysis, and transparency, clarity and communication.

## INCREASE TRANSPARENCY WITH THE AGRICULTURAL COMMUNITY

The statistical reports prepared by NASS have sweeping impacts across the agriculture industry that go beyond the gathering of agricultural information. These reports are critical for decision-making by farmers, ranchers, agribusinesses, farm organizations, commodity groups, policymakers and other agricultural industry stakeholders. The weight these reports carry should not be discounted.

To increase transparency and confidence in these reports, NASS should help farmers understand how the agency arrives at the numbers reported and provide clarity on the relationship between aggregate, state, county and field-level reported numbers, not just from a statistical perspective, but also from a communications standpoint. While NASS often invites farmers and stakeholders to the lock-up process and engages in #statchat conversations on social media, more can be done.

### Among the ways NASS could increase transparency:

- Conduct virtual or in-person town hall meetings across the U.S. with farmer and agricultural stakeholder organizations. These in-person or virtual events could include a multi-day mock lock-up session during which industry participants can observe the entire process from the receipt of survey data and verification and review of the sample data to the data aggregation process and calculation of the final report estimates.
- Coordinate with land-grant universities and other federal agencies to periodically review NASS data collection efforts and then replicate the statistical analysis and final report estimates. Having a third-party review of the survey collection, analysis and reporting process could identify areas where the process can be improved.
- Include in every NASS report a section identifying the statistical methodology. The section should include a description of the survey sample period, the number of surveys collected, the revision policy, reliability of the data estimates, the 90% confidence interval, root mean squared error and the performance of the report in prior years in terms of the distribution of report errors. Statisticians and economists expect these summaries. NASS should provide confidence intervals upfront for major market-moving information. For example, the June 2020 Acreage Report could have been reported as: "Corn planted area for all purposes in 2020 is estimated at 92.0 million acres, with a 90% confidence interval of 90.5 million acres to 93.5 million acres."
- If a report includes a significant revision to a previously estimated number, NASS should consider including a "Special Note" highlighting the revision, implications and relationships with upcoming USDA reports, such as the monthly World Agricultural Supply and Demand Estimates.
- If a significant market event that is likely to change supply and demand estimates in a subsequent report occurs during the survey analysis and report preparation process, NASS should include a "Special Note" indicating that the report does not include the most up-to-date market observations. NASS should also consider flexibility in report release dates, or an assignment of an alternate report release date for all economically significant reports.
- If NASS data collection efforts result in a panel data set (cross-sectional and time-series data), NASS should review the survey responses for anomalies. For example, in the event of significant changes or lack of significant changes in reported data for the same farm operation over time, the farm's data should be considered unusable until re-verified by NASS staff.



## ACCELERATE NEW AND INNOVATIVE TECHNOLOGY ADOPTION

For decades NASS has been viewed as the gold standard in survey-based data collection, analysis and dissemination. Our agricultural statistical arm is the model used worldwide for providing timely information on agricultural commodity markets both domestically and globally through USDA-NASS and the World Agricultural Outlook Board.

However, as the volume in commodity derivatives markets has rapidly increased in recent years, competition in the assembly and analysis of data is growing right along with it. Faster computers, faster algorithms, access to better data and access to proprietary models give agricultural industry stakeholders, traders and the investment community a competitive advantage in both domestic and global commodity market supply, demand and price analysis. Significant resources are needed to keep NASS ahead of the curve and level the playing field for farmers.

It is the perspective of Farm Bureau's USDA-NASS Working Group that NASS should be provided superior access to resources, information, data, software, hardware, talent and networks through which they can accelerate the development of innovative survey techniques and analysis for the benefit of the agricultural community.

### Among the ways NASS could accelerate technology adoption:

- Appropriators should significantly increase investment in agricultural research and statistics to provide NASS access to high-performance computing capacity (supercomputers), data, software, training and staff resources.
- USDA's fiscal year 2021 budget included \$10 million to provide support for a pilot study utilizing historical remotely sensed data, precision agriculture data, Farm Service Agency data, and survey data in combination with 3-m and 10-m resolution imagery to generate more precise and timely early-season predictions of harvested acres and production. In addition, NASS conducted a redesign of its survey process allowing for increased use of administrative data, reducing the burden placed on agricultural producers. These efforts should be continued to ensure NASS is on the leading edge of innovation.
- With additional financial resources, NASS could improve and complement survey-based statistical or subjective estimations by investing in more pilot projects using remote sensing data, Landsat data, monitoring and decision-making applications, machine-learning technology, and spatial and spectral imaging using high-frequency time-series satellite data from space-based assets. For example, high-frequency satellite data could be used to verify in-season crop conditions, yield and acreage reports. Similar data could also be used to estimate in-season damage to crops from natural disasters.
- NASS made significant strides in online data collection for the 2017 Census of Agriculture, which generated nearly 500,000 online responses, a 57% increase from the 2012 COA. However, with more than 3 million known and potential farms in the U.S., the online response rate represented 17% of these farm operations. Continuing to build

## Accelerate New and Innovative Technology Adoption *continued*

online and mobile data collection infrastructure will improve the capacity for NASS to receive, analyze and report agricultural data. When combined with machine learning algorithms, these online data collection efforts may help NASS release higher frequency statistical information such as monthly grain stocks estimates, daily crop condition reports, and daily or weekly yield projections. Moreover, reducing the burden to farmers for completing a survey, and even providing an estimated time of completion, will encourage farmers to provide more accurate and relevant information as well as increase the survey response rate.

- USDA collects a variety of farm-level information through multiple agencies within the Department. For example, NASS collects information to estimate crop acreage information, but the Risk Management Agency and FSA also collect farm acreage information. Similarly, NASS collects information used to estimate milk prices, while the Agricultural Marketing Service collects actual dairy farm payroll information. Meanwhile, the Economic Research Service collects survey data on production practices, resource use, and the economic well-being of America's farms and ranches. It is critically important for privacy and confidentiality to be protected, but the Department could improve coordination analysis and reduce the administrative burden on producers by aggregating these data silos into one data ledger for agriculture.
- As important to improved technology adoption as hardware, software and data are, so are staff and financial resources. NASS should be able to recruit, train and retain top talent in agricultural and statistical analysis. Fostering an environment conducive to growth and advancement within NASS would help to ensure that highly-qualified, innovative and forward-thinking staff can be retained and also promoted in leadership positions within the agency. NASS may consider reviewing how their employment and compensation packages compare with similar positions in other government agencies and the private sector.



## FARM BUREAU PLEDGES PARTNERSHIP

Representing almost 6 million member families through Farm Bureau organizations in all 50 states and Puerto Rico, the American Farm Bureau Federation is the largest general farm organization in the United States. To that end, Farm Bureau has a dedicated staff and expends considerable resources to advance, promote and protect the economic, business, social and educational interests of farmers and ranchers across the United States.

Many of our members are tasked with completing the surveys that ultimately drive reports released by the agency. Thus, it is in the interest of our membership and the agricultural industry as a whole for Farm Bureau to be a trusted and reliable partner to NASS.

## Among the ways Farm Bureau can support NASS' efforts:

- Farm Bureau should consistently seek to have staff or member participation in NASS' Advisory Committee on Agriculture Statistics. Farm Bureau's Chief Economist is currently a member of the committee. The Committee draws on the experience and expertise of its members to form a collective judgment concerning agriculture data collected and the statistics issued by NASS. This input is vital to keep current with shifting data needs in the rapidly changing agricultural environment and keeps NASS informed of emerging issues in the agriculture community that can affect agricultural statistics activities.
- Farm Bureau should continue to help organize and urge participation in Washington, D.C.-based USDA Data Users Meetings. During 2019, Farm Bureau partnered with NASS to host the first-ever USDA Data User's Meeting in Washington, D.C., at Farm Bureau's national office. NASS, in cooperation with the World Agricultural Outlook Board, FSA, ERS, AMS, Foreign Agricultural Service, and the U.S. Census Bureau, hosts this annual meeting to update data users on recent and pending changes in the various statistical and information programs important to agriculture and to seek comments and input on these programs.
- The agency's current in-person outreach efforts, such as attending the state or national Farm Bureau conventions, expose the agency's work to only a small segment of the producer industry. Farm Bureaus across the country should consider facilitating additional virtual or in-person meetings across the U.S. between farmer and agricultural stakeholder organizations and USDA-NASS. Meetings could be held ad hoc, or in conjunction with Farm Bureau events for their Young Farmers & Ranchers programs, commodity or issue advisory committees, or the state annual conventions. Additional avenues of outreach include Extension staff, farmer publications, webinar videos and coffee shop talks that are targeted to a broader farm and ranch audience. While social media is effective for some audiences, due to inadequate broadband access, many in farming and ranching are not engaged on those platforms.
- Research done by the Working Group indicates NASS' budget has been nearly stagnant for the last 10 years and among the 8,000-plus requests for funding sent to the Agriculture Appropriations Subcommittee for the 2021 budget, only around 10 were for NASS. Given that NASS produces over 450 reports annually and manages around 830 employees countrywide, the agency needs the resources to not only accomplish its mission and serve the agriculture industry but to continue to improve its efforts. Recent AFBF action included language in its FY2021 Agriculture Appropriations request letter for enhanced investment for agricultural statistics.
- Finally, and most importantly, Farm Bureaus across the U.S. should actively work to encourage farmers' accurate and timely participation in NASS data collection efforts. By increasing awareness on the importance of NASS surveys, encouraging participation, and amplifying content from NASS' communications department, the response rate would increase, and the information available to NASS when compiling reports would be more robust.

## THESE EFFORTS WILL STRENGTHEN NASS FOR U.S. AGRICULTURE

Farm Bureau's USDA-NASS Working Group spent a considerable amount of time researching and gathering insight from a multitude of industry representatives on how NASS operates, what it does well, and how the agency and its partners could improve to better serve U.S. agriculture.

By increasing transparency in how information is collected, reviewed, audited and reported, and improving communication on a report's findings and confidence levels, NASS will enhance its reputation as the world's leading governmental agricultural statistical agency. Then, with superior access to resources, information, data, software, hardware, talent and networks, NASS can accelerate the development of innovative survey techniques and analysis for the benefit of the agricultural community. Finally, with additional grassroots engagement at the county, state and national levels, Farm Bureau can help to secure additional resources for NASS' important efforts and communicate the benefits of the great work already being done by the agency as it serves agriculture.

## THE WORKING GROUP'S PROCESS

For four months, AFBF's 10-member farmer Working Group held monthly meetings and conducted more than a dozen interviews with staff and leadership from government, trade associations, market analysis firms and land grant universities.

### Government Engagement:

**HUBERT HAMER**, Administrator, USDA-NASS

**DAN KERESTES**, Director of the Statistics Division, USDA-NASS

**TRAVIS AVERILL**, Chief, Livestock Branch, USDA-NASS

**HERMAN ELLISON**, Acting Chief, Environmental, Economic, & Demographic Branch, USDA-NASS

**LANCE HONIG**, Chief, Crops Branch, USDA-NASS

**MARK SCHLEUSENER**, Illinois State Statistician, USDA-NASS

**BRAD SUMMA**, Director, Heartland Regional Field Office and USDA-NASS

**MARK JEKANOWSKI**, Chairman, USDA World Agricultural Outlook Board

### Capitol Hill:

**MATT ERICKSON**, Chief Economist, U.S. Senate Agriculture, Nutrition and Forestry Committee

**TOM O'BRIEN**, House Minority Clerk, Agriculture Appropriations Subcommittee

### Trade Association Representation:

**DOUG NOEM** (SD), Chair, NCGA Risk Management and Transportation Action Team, President of South Dakota Corn

**BILL LEIGH** (IL), Vice-Chair, NCGA Risk Management and Transportation Action Team, President of Illinois Corn Growers Association

**WAYNE STOSKOPF**, NCGA staff

### Academia:

**DR. SCOTT IRWIN**, Professor, University of Illinois, farmdoc

**DR. SETH MEYER**, Professor, University of Missouri's Department of Agricultural Economics, Former USDA World Agricultural Outlook Board Chair

**DR. KAIYU GUAN**, University of Illinois at Urbana-Champaign

**BART FISCHER**, Co-Director & Research Assistant Professor - Agricultural & Food Policy Center, Department of Agricultural Economics - Texas A&M University, Former Chief Economist, House Committee on Agriculture

### Industry Analysts:

**DR. BOB YOUNG**, President, Agricultural Prospects

**TODD HULTMAN**, Lead Analyst, DTN/Progressive Farmer

**DALE DURCHHOLZ**, Senior Market Analyst, AgriVisor, LLC

**ARLAN SUDERMAN**, Chief Commodities Economist, StoneX (formerly INTL FCStone Inc)

**JIM HENEGHAN**, SVP-Agribusiness, Gro Intelligence

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**ELAINE KUB**, Market Economist, Author of *"Mastering the Grain Markets: How Profits Are Really Made"*

## USDA-NASS WORKING GROUP MEMBERS

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