

NATIONAL AGRICULTURAL STATISTICS SERVICE

Statement of Mr. Joseph Reilly, Administrator Before the Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies

Chairman Aderholt, Ranking Member Farr, and members of the Subcommittee, I appreciate the opportunity to present the President's 2016 Budget request for the National Agricultural Statistics Service (NASS). NASS administers the U.S. Agricultural Estimates program, which began at the United States Department of Agriculture (USDA) in 1863. NASS also has conducted the Quinquennial U.S. Census of Agriculture since 1997, first collected by the Department of Commerce in 1840. Both the agricultural estimates and the census program align with the basic mission of NASS to provide timely, accurate, and useful statistics in service to U.S. agriculture.

Major Activities

Agricultural Estimates and the Census of Agriculture. The primary activity of NASS is to provide reliable data to meet the decision-making needs of the agricultural industry. The agency fulfills its mission through an annual agricultural estimates program and the quinquennial Census of Agriculture. NASS prepares estimates for over 120 crops and 45 livestock items that are published annually in more than 400 separate reports, of which 110 are Principal Economic Indicators of the U.S. Farmers, ranchers, and agribusinesses voluntarily respond to a series of nationwide surveys about crops, livestock, prices, chemical use, and other agricultural activities each year. Surveys are conducted during the growing season to measure the impact of weather, pests, and other factors on crop production. In many cases, NASS supplements farmer surveys with field observations and measurements of plant counts. NASS also uses administrative data from other USDA, Federal and State agencies; data on imports and exports; and other survey data to ensure official estimates accurately represent agricultural inventories.

International Programs. NASS provides technical assistance and training to improve agricultural statistical programs in other countries in cooperation with other government agencies on a cost-reimbursable basis. The NASS international program focuses on developing and emerging-market countries in Asia, Africa, Central and South America, and Eastern Europe.

NASS assists countries in applying modern statistical methodology, including sample survey techniques. Accurate information about other countries is essential for successfully marketing U.S. farm products throughout the world. NASS has been an important contributor to the U.N. Global Strategy for Agricultural and Rural Statistics, and to the U.S. Feed the Future Program, contributing to better statistics for USDA global estimates of food supply.

Stakeholder Input. NASS annually seeks input from the public on determining priorities and improving its products and processes. It consults with customers and stakeholders through meetings of the Secretary of Agriculture's Advisory Committee on Agriculture Statistics, interaction with producers, data users meetings with agribusinesses and commodity groups, special briefings for agricultural leaders during the release of major reports, and numerous individual contacts. In response to this input, NASS continues to improve the quality and accessibility of its reports. The agency has adjusted its agricultural estimates program and published reports, and has expanded electronic access capabilities. All reports issued by NASS' Agricultural Statistics Board are made available to the public at a previously announced release time to ensure equal access to the information. All national statistical reports and data products, including graphics, are available on the Web, as well as in printed form, at the time they are released. Customers can electronically subscribe to NASS reports and download them in an easily accessible format using standard software. NASS also provides free Rich Site Summary (RSS). A summary of NASS and other USDA statistical data is produced annually in USDA's *Agricultural Statistics*, available on the NASS home page or in hard copy.

Collaboration with Other Agencies. NASS conducts special surveys and provides consulting services for USDA agencies, other Federal or State agencies, universities, and agricultural organizations on a cost-reimbursable basis. Consulting services include assistance with survey methodology, questionnaire and sample design, information resource management, and statistical analysis. NASS has assisted USDA agencies in programs that monitor nutrition, food safety, environmental quality, and customer satisfaction. In cooperation with State Departments of Agriculture, land-grant universities, and industry groups, NASS conducts over 130 special surveys each year covering a wide range of issues such as farm injury, nursery and horticulture, equine, farm finance, fruits and nuts, vegetables, and cropping practices.

For example, NASS conducts the Agricultural Resource Management Survey (ARMS) in collaboration with USDA's Economic Research Service. ARMS data are the primary input for the Nation's farm income statements—one of the country's federal principal economic indicators. These data are the basis for much of the targeted analysis conducted by USDA economists on the Farm Bill and other important issues. The Natural Resources Conservation Service (NRCS) and NASS have also collaborated together to conduct the Conservation Effects Assessment Program (CEAP). This is a multi-agency effort to quantify the environmental effects of conservation practices and programs and develop the science base for managing the agricultural landscape for environmental quality. Project findings are used to guide USDA conservation policy and program development and help conservationists, farmers and ranchers make more informed conservation decisions.

Farm Labor Survey and Adverse Effect Wage Rate (AEWR). The Department of Labor (DOL) is responsible for determining and implementing the AEWR. The current H-2A DOL regulations state that the AEWR shall be equal to the highest of the following three indicators: (1) The Prevailing Wage Rate, (2) The Minimum Wage Rate, or (3) The annual weighted average hourly wage rate for field and livestock workers (combined) for the region as published by USDA based on its quarterly wage survey.

In order to determine these rates, DOL has a reimbursable agreement with the National Agricultural Statistics Service (NASS) to collect data on the number of hired farm workers; average hours worked, and wage rates. NASS collects survey data based on DOL specifications. Estimates are published at the regional and national level for all states except California and Florida. These regions were established by USDA in the 1980's and have been used ever since.

The target population for the Farm Labor Survey includes U.S. farms with sales of \$1,000 or more. The survey uses a combined sample size of about 12,000 farms. Survey data is collected for the week in which the 12th of each month occurs in January, April, July, and October. Data is collected through computer-assisted telephone interviews. Personal interviews are reserved for special classes of non-respondents, some large operators, and other special cases.

An Enhanced Research Program. NASS is conducting a number of statistical and survey research projects to improve methods and techniques for collecting, processing, and disseminating agricultural data.

NASS is developing model-based estimation techniques to improve the statistical reliability of published forecasts/estimates and to provide accurate measure of error. A model that incorporates multiple data sources, including current and historical data, and administrative/auxiliary information has been developed for state-level corn and soybean yields and is being transferred into production. Time series techniques are being utilized to model estimates of hogs and pigs as well as cattle. Several models transferred from research to development and will be operational later this year. NASS has worked collaboratively with consultants from outside of the agency to develop the methodology for all of these endeavors.

NASS uses its area frame both as a stand-alone frame to estimate numbers of farms and a wide variety of commodities, and as a measure of incompleteness for its list surveys -- including the Quinquennial Census of Agriculture. New methods were used in adjusting the estimates and measures of uncertainty for those estimates were published for the 2012 Census of Agriculture. Similar techniques have been developed to adjust the area frame's estimate of the number of farms for misclassification; measures of uncertainty are developed for each estimate. The area frame estimates are being tested and should move into development within the next year.

NASS is exploring methods to identify operations for which it is most unlikely to obtain responses in future surveys during data collection. Classification tree models have been developed for the Crops/Stocks and ARMS surveys to assign scores for the strong tendency for nonresponse to survey sample cases. Methods to adaptively use this information to manage data collection have been developed and are being used to obtain responses more efficiently. Future research will evaluate methods of using this information in statistical estimation.

NASS, working jointly with the Multi-Agency Collaboration Environment (MACE); whose mission is to create data sharing partnerships across the federal government, is conducting a pilot study of the urbanized area of Chicago to determine whether satellite imagery can be used to enhance the Agency's estimates associated with urban agriculture. Algorithms using information from the satellite imagery, social media, and available administrative list will be developed to identify potential agricultural activity. A survey will then be used to classify the identified areas as non-agricultural, agricultural non-farm, and agricultural farm. The number of people, entities, sales, and land will be estimated for the two agricultural classifications. The results will be compared with those obtained from the 2012 Census of Agriculture as well as recent studies that were conducted through manual inspection of satellite imagery. If successful,

the pilot study can provide information on the costs to develop a national survey of urban agriculture.

Since the release of the 2012 Census of Agriculture, feedback from NASS's Agricultural Statistics Advisory Committee and the public has led NASS to re-evaluate how it quantifies the contribution of women and new/beginning farmers. In response, NASS has asked the National Institute of Statistical Sciences (NISS), as a neutral third party, to establish an expert panel on behalf of NASS. The purpose of the panel is to provide guidance on how to improve reporting for women and new/beginning farmers given the diversity in organizational structure of modern farms. Based on the panel's feedback, NASS anticipates making some revisions to the questions relating to women and young/beginning farmers for the 2017 Census of Agriculture with perhaps more extensive revisions for 2022.

Work has continued on the modernization of the agency's Area Sampling Frame and acreage estimation. Some activities include: 1) development of automatic stratification models based on multiple response variables of interest and an algorithm to minimize sample variance; 2) revisions in the proposed permanent grid after testing an earlier version in three states; 3) further acreage model development to combine the Cropland Data Layer information, June Agricultural Survey estimates, and the bias-adjusted Farm Service Agency data.

NASS is operationalizing Significance Editing, a statistical data editing and selective editing methodology developed by Statistics Canada. This methodology reduces the time and effort spent manually reviewing and correcting survey questionnaires without damaging the quality of the resulting data and focuses the manual effort on ensuring the accuracy of the survey responses that strongly impact the survey results. NASS will run significance editing in parallel with the operational crop stocks survey programs in FY 2015 with implementation in other survey programs to follow. This research will reduce costs associated with manual editing of questionnaires and result in higher data quality due to a consistent automated edit.

George Mason University and NASS completed the work on a National Aeronautics and Space Administration (NASA) competitive grant titled "A National Crop Progress Monitoring System Based on NASA Earth Science Results." NASS primarily benefited from the technology development which supports the web portal VegScope. The research showed that the vegetative indices (color gradations) are not sufficient to determine the vegetative and reproductive stages of the crops. The web portal VegScope is most useful to identify the green-up and senescence of

the crops. VegScape is one of the analysis tools NASS uses to validate and verify survey estimate results. VegScape is one to the tools available to the public and is used by researchers, farmers, and rancher.

NASS's research program, which is focused on innovation and enhancement in statistical methods, business processes and data products in support, sustainment and improvement of NASS programs, has allowed the development of new statistical models for the estimating program; computer editing applications to replace manual review; expanded modes of data collection to include Computer Assisted Personal Interviewing and Computer Assisted Web Interviewing; implemented quality assurance protocols in routine operations; developed two new tools using remote sensing data -- CropScape and VegScape; and further benefited from computer-based processing technology.

2016 Budget

The agency's 2016 Budget request is \$180.3 million, a net \$7.9 million increase over the 2015 level. Of the requested level for 2016, \$134.6 million is for the Agricultural Estimates Program – a \$10 million increase over 2015 and \$45.7 million is for the Census of Agriculture Program – a \$2.1 million decrease from 2015. This funding level is necessary to restore some previously suspended programs, to support new initiatives for the Agricultural Estimates Program, and to continue with a robust set of follow-on studies within the Census of Agriculture Program.

Agricultural Estimates

Annually, NASS issues over four hundred agricultural estimates reports that are critically important in assessing current supply and demand in agricultural commodities. Producers, agribusinesses, farm organizations, commodity groups, economists, public officials, and others use the data for decision-making. The statistics NASS collects and disseminates ensure buyers and sellers have access to the same official statistics at the same pre-announced time, and making markets fair. The free flow of information minimizes price fluctuations for U.S. producers, makes commodity markets more efficient, and makes our Nation's agricultural industry more competitive. The data has become increasingly important as producers rely on future contracts to manage risks.

NASS proposes an increase in funding to address pollinator health and augment the Colony Loss Surveys to support the objective of the Presidential Memorandum "Creating a

Federal Strategy to Promote the Health of Honey Bees and other Pollinators” (June 2014). To this end, NASS is committed to collaborating with USDA and the other departments on a unified and complementary approach to the President’s pollinator health initiative and to deliver consistent, statistically defensible pollinator loss estimates to better inform decision makers.

Once the baseline data is collected from these new NASS surveys (in 2015), additional statistical analyses are planned to examine causes and sequelae of Colony Collapse Disorder (CCD). NASS places a high priority on ensuring the Colony Loss surveys fully support the President’s Memorandum. The additional funding request in 2016 is needed to enable more analysis of the Colony Loss survey data and determine if a larger sample size is needed for the Colony Loss surveys.

An increase in County Estimates is proposed for FY 2016 to cover the increased data needs with the passage of the 2014 Farm Bill which authorized the Agriculture Risk Coverage (ARC) Program and Price Loss Coverage (PLC) Program, administered by FSA. ARC/PLC provides revenue and price loss payments to eligible producers for the 2014 through 2018 crop years.

NASS restored much of the annual Fruit and Vegetable program in 2015 to fulfill data users’ requests and to provide acreage statistics necessary for conducting the chemical use program. In 2016, NASS proposes to augment the annual Fruit and Vegetable program by providing the in-season forecasts for fruits and nuts, and to standardize the reports. These are needed by industry and include a variety of reports including the monthly Crop Production reports, annual Cherry Production report, and the annual Cranberries report. For vegetables, NASS will resume publishing in-season forecasts in the fall. Additionally, NASS will resume publishing a preliminary Annual Summary for all noncitrus fruits and nuts in January. The annual data is required to conduct the fruit and vegetable chemical use surveys.

In 2012 the chemical use program crop rotations were changed so that individual crops were surveyed less frequently in response to federal funding reductions. In 2016 NASS proposes to restore the chemical use data series to the 2010 level, including more frequent data on major row crops, and fruit and vegetable chemical use data on an alternating year basis.

The chemical use data collected by NASS have been used in building a database for the USDA Pesticide Data Program. This database is used by the Department to evaluate the safety of the Nation’s food supply. Additionally, the implementation of the Food Quality Protection Act (FQPA), in 1996, increased the need for actual, reliable chemical use data. FQPA requires

the Environmental Protection Agency (EPA) to conduct an accelerated review of tolerance levels for re-registration of pesticide products. Part of the review includes using actual chemical usage data that only growers can provide. The absence of these data has created difficulties for EPA and industry to effectively conduct and analyze these reviews. In the absence of actual data, EPA is often in the position to assume maximum label rates are being applied on all acreage. This has the potential of over-estimating actual pesticide usage.

An increase for Pulse Crops is requested to cover the growing need for this data and to provide stability for the program.

An increase for the new Combating Antimicrobial Resistant Bacteria NASS proposes to add questions to some of the annual surveys already established for Cattle on Feed, Hogs and Pigs, and develop an annual Poultry survey. This new data can be used to establish a baseline for these livestock and help track this growing problem.

A Geospatial Improvement Initiative is proposed for FY 2016. This new program will enhance the current satellite based agricultural statistics monitoring program. It will research and institute systems to provide satellite based crop condition, soil moisture, crop progress (phenological development of crops), and crop yields. This will leverage strategic cooperative partnerships with university partner, USDA Climate Hubs and the National Oceanic and Atmospheric Administration Regional Climatic Centers.

Census of Agriculture

The Census of Agriculture is taken every five years and provides comprehensive data on the agricultural sector at the national, State, and county level. The Census of Agriculture is the only source for this information on a local level and is extremely important to the agricultural community.

NASS published census data for all 50 States and also Puerto Rico. NASS makes all data publicly available on its website. NASS issued a preliminary release of 2012 Census of Agriculture data in February 2014 that contained high level estimates at the U.S. and State level. In May 2014 NASS released the full Volume I series of data at the U.S., State and county level.

In addition to the in-depth large publication released in May 2014, a number of special tabulations were subsequently released. Those include State and county profiles; Congressional District Profiles; Watershed Publication; Race, Ethnicity and Gender Profiles and Specialty Crop Report.

The 2016 Budget request included resources for NASS to continue producing the vital Current Agricultural Industrial Reports (CAIR). These surveys are part of the Census of Agriculture and, as such, are required by law. Commodities covered in these reports include: Oilseeds, Beans & Nuts; Fats and Oils; Cotton Manmade Fiber Staple & Raw Linters; Flour Milling Products, and Grain Crushing's & Co-Products Produced. NASS plans to publish the first CAIR report February 19, 2015. This request supports estimation requirements for NASS, Economic Research Service (ERS), the World Agricultural Outlook Board (WAOB), and the USDA Chief Economist. Private industry uses CAIR data to monitor the effect of international trade on domestic production, evaluate the relationship between company and industry performances, market analyses, assess current business conditions, and plan future operations.

An increase is requested to conduct a new special follow-on survey to the 2012 Census of Agriculture on the Modern Farm Structure and its contributors, focusing on women and new farmers. NASS will modify statistical tools to better reflect the changing face of agriculture, especially including women, new farmers, and veterans on the farm.

An increase is requested for a local Foods Special Study that relates directly to the Farm Bill and will help evaluate the manner in which local food systems improve community food security, and assist populations with limited access to healthy food.

Review of the 2012 Census of Agriculture reported data has progressed to review possible reasons for reporting inaccurate data. Comparisons of errors in reported data in the 2007 and 2012 censuses are being used to assess potential areas for future improvement to the census report form or data collection procedures. The 2017 Census Testing team is developing forms for testing proposed changes in the content and design of the 2017 Census questionnaire, including a review of the online form.

NASS's dedication to research and continued process improvement will ensure the organization remains relevant and viable to fill the urgent need for timely, accurate, and useful statistics in service to U.S agriculture.

This concludes my statement, Mr. Chairman. Thank you for the opportunity to submit this statement for the record.