

2018 President's Budget

National Agricultural Statistics Service

Contents

Purpose Statement.....	17 - 1
Statement of Available Funds and Staff Years.....	17 - 2
Permanent Positions by Grade and Staff Year Summary.....	17 - 3
Motor Vehicle Fleet Data.....	17 - 4
Salaries and Expenses	
Appropriations Language.....	17 - 5
Lead-off Tabular Statement.....	17 - 5
Summary of Increases and Decreases.....	17 - 5
Project Statement.....	17 - 6
Justifications of Increases and Decreases.....	17 - 7
Geographic Breakdown of Obligations and Staff Years.....	17 - 12
Classification by Objects.....	17 - 13
Shared Funding Projects.....	17 - 14
Status of Programs.....	17 - 16
Summary of Budget and Performance	
Key Performance Outcomes and Measures.....	17 - 32

Purpose Statement

The National Agricultural Statistics Service (NASS) was established by Secretary's Memorandum No. 1446, Supplement 1, of April 3, 1961, under Reorganization Plan No. 2 of 1953 and other authorities. The mission of the agency is to provide timely, accurate, and useful statistics in service to U.S. agriculture.

The statistical data provided by NASS is essential to the public and private sectors for making effective policy, production, and marketing decisions on a wide range of agricultural commodities. Every five years the Census of Agriculture provides comprehensive national, State, and county data as well as selected data for Puerto Rico, Guam, Virgin Islands, and Northern Mariana Islands. NASS' responsibilities are authorized under the Agricultural Marketing Act of 1946 (7 U.S.C. 1621-1627), and the Census of Agriculture Act of 1997, Public Law 105-113 (7 U.S.C. 2204g).

- **Agricultural Estimates Program** – Annually, NASS publishes approximately 450 agricultural statistical national reports and thousands of additional agricultural statistical State reports, covering more than 120 crops and 45 livestock items. These basic and objective data are necessary to maintain an orderly association between the consumption, supply, marketing, and input sectors of agriculture. NASS uses scientifically designed surveys to provide the basis for developing estimates of production, supply, price, and other aspects of the agricultural economy. Official USDA national, State, and county estimates and statistical reports are issued relating to the number of farms and land in farms; acreage, types, and production of farm crops; number of livestock on farms and of livestock products; stocks of agricultural commodities; value and utilization of farm products; prices received and paid by farmers; agricultural chemical use; and on other subjects as needed. The field offices forward the estimates to NASS headquarters where they are combined and released at preannounced scheduled times to the press and public through the Agricultural Statistics Board. The statistical data provided by NASS enhances the competitiveness and sustainability of rural farm economies by leveling the playing field. All parties have equal access to official statistics. NASS field offices regularly survey thousands of operators of farms, ranches, and agribusinesses who provide information on a confidential basis. As a Federal statistical agency, NASS protects respondent confidentiality and ensures that official agricultural statistics are universally accessible at predetermined and publicized dates and times.
- **Census of Agriculture** – The Census of Agriculture is conducted every five years and provides comprehensive data on the agricultural economy, including data on the number of farms, land use, production expenses, value of land and buildings, farm size and characteristics of farm operators, market value of agricultural production sold, acreage of major crops, inventory of livestock and poultry, and farm irrigation practices. The Census of Agriculture data collection is conducted in close cooperation with the national agricultural user groups and farmer organizations. The Census of Agriculture ensures that the list frame used to draw sampling records for the Agricultural Estimates program and reimbursable program is current. Results from the 2012 Census of Agriculture were released in May 2014. Under this appropriation in 2015, NASS started and plans to continue publishing the Current Agricultural Industrial Reports, previously eliminated by the Department of Commerce.
- **Work Performed for Others** – NASS lends technical expertise and conducts surveys for other Federal agencies, State governments, and private organizations on a reimbursable basis. Through the reimbursable program, NASS provides support and assistance with questionnaire and sample design, data collection and editing, analysis of survey results, and training. NASS also provides technical consultation, support, and assistance for international programs under participating agency service agreements. The Census of Agriculture is essential to the reimbursable program and provides a current list frame to draw sampling records from which to do client work.

NASS maintains a central office in Washington, D.C. and a network of 12 Regional field offices, including a National Operations Center (NOC) in St. Louis, Missouri. This network serves all 50 States that operate through cooperative agreements with the National Association of State Departments of Agriculture (NASDA) or universities.

As of September 30, 2016, NASS had 971 permanent full-time employees, including 400 employees in Washington, D.C., 488 in the field offices, and 83 in the NOC.

National Agricultural Statistics Service

Statement of Available Funds and Staff Years (SY)
(Dollars in thousands)

Item	2015 Actual		2016 Actual		2017 Estimate		2018 President's Budget	
	Amount	SYs	Amount	SYs	Amount	SYs	Amount	SYs
	Discretionary Appropriations - Salaries & Expenses.....	\$172,408	876	\$168,443	859	\$168,123	876	\$185,677
Adjusted Appropriation.....	172,408	876	168,443	859	168,123	876	185,677	916
Balance Available, Start of Year.....	179	-	356	-	270	-	-	-
Other Adjustments (Net).....	4,274	-	10,943	-	-	-	-	-
Total Available.....	176,861	876	179,742	859	168,393	876	185,677	916
Balance Available, End of Year.....	-356	-	-270	-	-	-	-	-
Subtotal Obligations, NASS.....	176,505	876	179,472	859	168,393	876	185,677	916
<u>Obligations under other USDA appropriations:</u>								
Ag. Marketing Service - Pesticide work & data on milk prices, export certification, & base month series.....	35	-	428	2	82	2	82	2
Agriculture Research Service - Soybean Samples and Wheat & Barley Scab.....	111	-	3	-	-	-	-	-
Animal and Plant Health Inspection Service - Animal health monitoring system.....	525	2	905	-	75	2	75	2
Economic Research Service - Agricultural resource management & small farms data.....	9,215	37	7,783	34	6,801	34	6,800	34
Foreign Agricultural Service.....	1,164	5	1,322	5	1,016	5	1,016	5
Farm Service Agency - Estimates & Surveys.....	2,596	34	6,431	34	6,424	34	6,424	34
Forest Service - Grazing fees & woodland owners.....	71	-	71	-	74	-	74	-
Natural Resource Conservation Service & Farm Service Agency - Conservation effects assessment.....	4,000	10	10,000	10	4,000	8	4,000	8
Risk Management Agency - County estimates.....	825	4	2,325	5	825	5	825	5
World Agricultural Outlook Board - Lock-up & printing support & cotton objective yield.....	8	-	19	-	19	-	19	-
Miscellaneous USDA Reimbursements.....	4	-	119	2	131	2	131	2
Total, Other USDA.....	18,554	92	29,405	92	19,447	92	19,446	92
Total, Agriculture Appropriations.....	195,059	968	208,878	951	187,840	968	205,123	1,008
<u>Other Federal Funds:</u>								
Dept. of Interior, BLM; Survey Fees.....	70	-	70	-	73	-	73	-
National Institute for Occupational Safety & Health.....	-	-	-	-	-	-	-	-
Dept. of Labor - Agriculture Labor.....	1,200	1	1,200	1	1,200	1	1,200	1
National Science Foundation - data collection.....	115	1	615	1	115	1	115	1
National Aeronautics & Space Administration.....	12	-	12	-	-	-	-	-
United Soybean Council.....	40	-	40	-	40	-	40	-
CNSTAT Core Contribution (OMB).....	-	-	45	-	45	-	45	-
CNSTAT Core Contribution (DOT).....	-	-	30	-	30	-	30	-
Total, Other Federal.....	1,437	2	2,012	2	1,503	2	1,503	2
<u>Non-Federal Funds</u>								
State Agencies - Survey work.....	2,772	12	2,594	12	3,266	12	2,500	12
Miscellaneous Reimbursements - Agricultural reports, data, & mailings.....	-	-	-	-	-	-	-	-
Total, Non-Federal.....	2,772	12	2,594	12	3,266	12	2,500	12
Total, NASS.....	199,268	982	213,484	965	192,609	982	209,126	1,022

National Agricultural Statistics Service

Permanent Positions by Grade and Staff Year Summary

Item	2015 Actual			2016 Actual			2017 Estimate			2018 President's Budget		
	Wash. D.C.	Field	Total	Wash. D.C.	Field	Total	Wash. D.C.	Field	Total	Wash. D.C.	Field	Total
SES.....	9	1	10	9	1	10	9	1	10	9	1	10
SL.....	2	-	2	2	-	2	2	-	2	2	-	2
GS-15.....	29	17	46	29	17	46	29	17	46	29	17	46
GS-14.....	56	71	127	56	71	127	56	71	127	56	71	127
GS-13.....	205	90	295	205	90	295	205	90	295	205	90	295
GS-12.....	32	155	187	32	155	187	32	155	187	32	155	187
GS-11.....	19	43	62	19	43	62	19	43	62	19	43	62
GS-10.....	2	3	5	2	3	5	2	3	5	2	3	5
GS-9.....	22	63	85	22	63	85	22	63	85	22	63	85
GS-8.....	12	20	32	12	20	32	12	20	32	12	20	32
GS-7.....	17	106	123	17	106	123	17	106	123	17	106	123
GS-6.....	1	19	20	1	19	20	1	19	20	1	19	20
GS-5.....	3	16	19	3	16	19	3	16	19	3	16	19
GS-4.....	1	13	14	1	13	14	1	13	14	1	13	14
GS-3.....	-	6	6	-	6	6	-	6	6	-	6	6
Total Perm. Positions.....	410	623	1,033	410	623	1,033	410	623	1,033	410	623	1,033
Unfilled, EOY....	-10	-41	-51	-10	-52	-62	-	-	-	-	-	-
Total, Perm. Full-Time Employment, EOY.....	400	582	982	400	571	971	410	623	1,033	410	623	1,033
Staff Year Est.....	435	547	982	435	530	965	435	547	982	435	587	1,022

National Agricultural Statistics Service

Motor Vehicle Fleet Data

The 2018 budget estimate for NASS proposes to maintain the current level of motor vehicles.

All passenger motor vehicles operated by NASS are located at various field offices and are assigned based on approved program needs and geographic region. NASS uses its fleet to conduct agricultural statistics programs through its 12 Regional and 33 State offices that together serve all 50 States.

The NASS fleet is comprised primarily of sport utility vehicles (SUVs) that allow for passengers and equipment to easily travel to farms, ranches, and fields. Among the Regional and State offices, there are 13 NASS-owned vehicles and 35 leased from the General Services Administration (GSA). All 12 NASS Regional and State offices require the use of motor vehicles, but it is often more cost-effective to acquire vehicles through existing cooperative agreements with the National State Departments of Agriculture, through leases from State motor pools, or via rental agreements. Field offices monitor and track vehicle use and costs. NASS plans to move from owned to lease as owned vehicles are reported excess. Where possible NASS uses short-term rental and shared motor pools. The use of common carrier is not feasible. The ability to reach the nation’s farms, ranches, and fields is crucial to the NASS mission and for ensuring accurate data are being collected and reported.

Changes to motor vehicle fleet. At the end of 2016, NASS had 51 vehicles; 12 owned vehicles and 39 GSA leased vehicles.

Impediments to managing the motor vehicle fleet. There are no identified impediments to managing the motor vehicle fleet in the most cost-effective manner.

Size, Composition, and Annual Operating Costs of Vehicle Fleet

Fiscal Year	Number of Vehicles by Type *							Annual Operating Costs (\$ in 000) **	
	Sedans and Station Wagons	Light Trucks, SUVs, and Vans		Medium Duty Vehicles	Ambulances	Buses	Heavy Duty Vehicles		Total Number of Vehicles
		4x2	4x4						
2015	2	20	25	1	-	-	-	48	\$224
Change	-	+1	+2	-	-	-	-	+3	+4
2016	2	21	27	1	-	-	-	51	228
Change	-	-1	-2	-	-	-	-	-3	+5
2017	2	20	25	1	-	-	-	48	233
Change	+1	+2	-	-	-	-	-	+3	+7
2018	3	22	25	1	-	-	-	51	240

* Numbers include vehicles owned by the agency and leased from commercial sources or GSA.

** Excludes acquisition costs and gains from sale of vehicles as shown in FAST.

National Agricultural Statistics Service

Appropriation Language

The estimates include appropriation language for this item as follows (new language underscored; deleted matter enclosed in brackets):

Salaries and Expenses:

For necessary expenses of the National Agricultural Statistics Service, [\$168,443,000] \$185,677,000, of which up to [\$42,177,000] \$63,900,000 shall be available until expended for the Census of Agriculture: Provided, That amounts be made available for the Census of Agriculture may be used to conduct the Current Industrial Report surveys subject to 7 U.S.C. 2204 g(d) and (f).

Lead-Off Tabular Statement

Budget Estimate, 2018.....	\$185,677,000
2017 Annualized Continuing Resolution.....	<u>168,123,000</u>
Change in Appropriation.....	<u>+17,554,000</u>

Summary of Increases and Decreases
(Dollars in thousands)

	2015 Actual	2016 Change	2017 Change	2018 Change	2018 President's Budget
Discretionary Appropriations:					
Agricultural Estimates.....	\$124,566	+\$1,700	-\$320	-\$4,169	\$121,777
Census of Agriculture.....	47,842	-5,665	-	+21,723	63,900
Total, Appropriation or Change.....	<u>172,408</u>	<u>-3,965</u>	<u>-320</u>	<u>+17,554</u>	<u>185,677</u>

National Agricultural Statistics Service

Project Statement
Adjusted Appropriations Detail and Staff Years (SYs)
(Dollars in thousands)

Program	2015 Actual		2016 Actual		2017 Estimate		Inc. or Dec.		2018 President's Budget		
	Amount	SYs	Amount	SYs	Amount	SYs	Amount	SYs	Amount	SYs	
	Discretionary Appropriations:										
Agricultural Estimates.....	\$124,566	646	\$126,266	629	\$125,946	646	-\$4,169	(1)	-	\$121,777	646
Census of Agriculture.....	47,842	230	42,177	230	42,177	230	21,723	(2)	+40	63,900	270
Total Adjusted Approp.....	172,408	876	168,443	859	168,123	876	+17,554		+40	185,677	916
Total Appropriation.....	172,408	876	168,443	859	168,123	876	+17,554		+40	185,677	916
Bal. Available, SOY.....	+179	-	+356	-	+270	-	-270		-	-	-
Recoveries.....	+4,274	-	+10,943	-	-	-	-		-	-	-
Total Available.....	176,861	876	179,742	859	168,393	876	+17,284		+40	185,677	916
Bal. Available, EOY.....	-356	-	-270	-	-	-	-		-	-	-
Total Obligations.....	176,505	876	179,472	859	168,393	876	+17,284		+40	185,677	916

Project Statement
Obligations Detail and Staff Years (SYs)
(Dollars in thousands)

Program	2015 Actual		2016 Actual		2017 Estimate		Inc. or Dec.		2018 President's Budget		
	Amount	SYs	Amount	SYs	Amount	SYs	Amount	SYs	Amount	SYs	
	Discretionary Obligations:										
Agricultural Estimates.....	\$124,566	646	\$126,266	629	\$125,946	646	-\$4,169		-	\$121,777	646
Census of Agriculture.....	51,938	230	53,206	230	42,447	230	21,453		40	63,900	270
Total Obligations.....	176,505	876	179,472	859	168,393	876	+17,284		+40	185,677	916
Bal. Available, EOY.....	+356	-	+270	-	-	-	-		-	-	-
Total Available.....	176,861	876	179,742	859	168,393	876	+17,284		40	185,677	916
Bal. Available, SOY.....	-179	-	-356	-	-270	-	+270		-	-	-
Recoveries.....	-4,274	-	-10,943	-	-	-	-		-	-	-
Total Appropriation.....	172,408	876	168,443	859	168,123	876	+17,554		+40	185,677	916

Justification of Increases and Decreases

Agricultural Estimates Program

(1) A net decrease of \$4,169,000 for the Agricultural Estimates Program (\$125,946,000 and 646 staff years available in the 2017 Budget).

Base funding for the Agricultural Estimates Program (AEP) provides objective data essential to both the public and private sectors of the agriculture industry. Base funding for the AEP will be used to continue collecting integrated surveys and estimates used for over 450 agricultural statistical reports that:

- Directly impact the market,
- Directly contribute to the Federal Principle Economic Indicators of the United States,
- Provide data for which NASS reports are the only publicly available objective sources of information,
- Support USDA program delivery, and
- Have specific legislative requirements for release.

Providing market information was one of the USDA key missions when it was created in 1862. Critical market-sensitive data are used by the commodity and agricultural markets to operate efficiently, providing a fair and equitable environment for price discovery in the marketplace. Without a Federal provision of objective data available for the U.S. and world markets, key market information would be in the hands of a few. Individual producers and ranchers would be at a disadvantage compared to those who have resources to pay for information, and markets could be exposed to manipulation.

Funds will be used for salaries and benefits, travel and transportation, rental payments, communications and utilities, printing and reproduction, goods and services from non-federal and federal sources, research and development, equipment, operation and maintenance of equipment, and supplies and materials.

The NASS AEP is very integrated; most report costs cannot be itemized as separate costs for a single report. For example the June Area, Crops, and Objective Yield surveys provide direct estimates or are a component of data collection and estimation for the following publications: June Acreage; Cattle Inventory; Small Grains Summary; Crop Production Summary; Hogs & Pigs Inventory; Sheep Inventory; Farm Production Expenses; Agricultural Land Values; and Farms, Land in Farms, and Livestock Operations.

As does the base funding, the increases and decreases shown below support the mission, vision, and goals of the agency. The funding changes are requested for the following items:

An increase of \$1,346,000 for a pay cost increase for the Agricultural Estimates Program. This includes \$381,000 for annualization of the 2017 pay raise and \$965,000 for the anticipated 2018 pay raise.

This amount will enable NASS to maintain staffing levels which are critical to achieving the agency's principal goal to assist rural communities to create prosperity so they are self-sustaining, repopulating and economically thriving. Approximately 64 percent of NASS' budget is in support of personnel compensation.

National Agricultural Statistics Service

- a. A decrease of \$4,187,000 for Agricultural Estimates Programs (\$95,558,000 available in 2017).

NASS is streamlining the Agricultural Estimate program by reducing the sample sizes for the programs listed below. As consequence, fewer estimates (i.e. reducing the number of published states by commodity) will meet the publication standards.

Agricultural Estimates Surveys Reduced (Dollars in Thousands)			
	2017	Change	2018
Crop Progress	\$1,330	-\$100	\$1,230
Agricultural Prices	8,555	-518	8,037
Acreage, Crop Production, Grain Stocks & Prospective Plantings	65,876	-1,327	64,549
Cattle on Feed	2,672	-272	2,400
Hogs & Pigs Reports	4,586	-476	4,110
County Estimates	6,156	-856	5,300
January Cattle	2,211	-211	2,000
January Sheep and Goats	795	-50	745
Cotton Ginnings Estimates	500	-50	450
Cold Storage Estimates	500	-50	450
Milk Production Estimates	1,911	-211	1,700
Dairy Product Estimates	466	-66	400
Total	95,558	-4,187	91,371

- b. A decrease of \$600,000 for a Geospatial Improvement Initiative (\$800,000 available in 2017).

With a 75 percent decrease in the Geospatial Improvement Initiative funding, NASS will maintain only the current services which include the in-season production of the Cropland Data Layer for use by the Agricultural Statistics Board, continued production of Cropscape and Vegscape, and the development of remotely-sensed estimates of crop acreage (nationally) and yield for the Agricultural Statistics Board. No new initiatives will be produced.

- c. A decrease of \$728,000 for rent (\$5,251,000 available in 2017).

NASS is utilizing less space, since NASS consolidated and relocated the remaining Research and Development Division employees to DC from Fairfax, VA. This is the last decrease in space expected from the re-organization.

Census of Agriculture Program

The Census of Agriculture (COA) is conducted every five years to obtain agricultural statistics for each County, State, and the Nation. The COA also includes the outlying areas: Commonwealth of Puerto Rico, Commonwealth of the Northern Mariana Islands, the United States Virgin Islands, American Samoa, and Guam. The COA is the leading source of statistics about the Nation’s agricultural production and the only source of consistent, comparable data, at the county level. The COA is authorized by law under Title 7, U.S. Code 2204g, and is conducted in close cooperation with the Nation’s agricultural user groups and farmer organizations.

The entire Census of Agriculture Program consists of: the COA conducted every five years; the Current Agricultural Industrial Report (CAIR) program; and Special Studies, for example; Census of Horticulture, Farm and Ranch

Irrigation Survey, and the Census of Aquaculture. COA is broken down into five general categories detailed below. Due to the cyclical nature of the COA, appropriated funds will shift among these five broader categories over the five year cycle of activities. Research, evaluation and analysis are conducted during the entire COA cycle to ensure data quality and efficiency.

Direction and Planning: This category includes planning, administration, and support for the entire Census program. The category encompasses developing timelines, milestones, deliverables, and quality assurance measures associated with the Census of Agriculture, as well as collaboration with USDA, other Federal and State agencies, and private sector stakeholders to incorporate critical periodic and emerging data needs into the plan.

Content Determination and Design: Staff from many units in NASS evaluate and test the questionnaires for the COA. Any proposals for new content, whether from staff or from external stakeholders, must be tested before being included in the questionnaire to ensure respondents will understand the question correctly and answer consistently. NASS staff conduct cognitive interviews to obtain vital feedback on questionnaire content and design. The COA questionnaire is developed to facilitate NASS' capability to survey specific sub-populations without the additional cost of screening for those populations.

The category includes implementing the findings from research, evaluation, and analysis activities. In improving the questionnaire design and modifying the questions, NASS relies on research done throughout the census cycle. For example, NASS staff use metrics from the census edit system to determine how frequently and what kinds of changes are made during the edit process. This enables NASS to discern which questions need to be adjusted to more accurately collect data that leads to higher-quality data products.

Mail List Development and Mail Out: The activities necessary to develop a robust, inclusive and proficient census mail list (CML) are similar to those needed to maintain NASS' list frame for the ongoing Agricultural Estimates Program. NASS uses the information collected from the COA to build a sampling frame used in the AEP. This sampling frame is critically important to adequately cover specific commodities and farm attributes that are routinely estimated in the more than over 450 reports that NASS produces each year. NASS builds and improves the list on an ongoing basis by obtaining information from outside sources such as Federal and State government agencies, producer associations, seed growers, pesticide applicators, veterinarians, marketing associations, and other agriculture-related interest. NASS also obtains special commodity lists to address specific list deficiencies. Staff review the outside sources to determine whether they already are or should be included on the CML. Many names on newly acquired lists are already on the CML. Records not on the CML are treated as potential farms until NASS can confirm whether they are a qualifying farm.

NASS conducts the National Agricultural Classification Survey (NACS) in the three years leading up to the COA. The NACS questionnaire is sent to new additions to the CML: It includes four pages of questions used to assess whether the operation meets the farm definition for inclusion in the COA. NACS allows NASS to prescreen all new operations and reduce the overall cost of the COA. Following the third year of NACS, the CML is a comprehensive list of all known farms and ranches in the United States.

This category also covers all activities related to screening potential farms. Included are the cost for assembling and labeling the mail packets, and the return postage costs for questionnaires returned by mail.

Data Collection and Processing: This category involves all activities associated with system development, programming, and data collection for the COA. A high census response rate is important both for conducting an accurate census and for keeping the list frame up to date. NASS staff process, edit, and analyze all online and mailed responses. Also included is outreach to Native American farms and tribes, outlying areas, and small or disadvantaged farm operators (including outreach to the community-based organizations). NASS outsources some data collection and processing activities in cooperative agreements with the National Association of State Departments of Agriculture (NASDA) and the Census Bureau's National Processing Center (NPC) in Jeffersonville, Indiana.

Publication and Data Dissemination: This category includes marketing, production, and dissemination of print and electronic products created to promote data collection as well as products created in connection with data release for the Census of Agriculture. NASS conducts publicity prior to and during data collection to encourage better response rates. Public relations and customer service activities are important functions that encourage the continued willingness of farmers, ranchers, and agribusinesses to provide information on which most NASS statistics are based. Also included is staff time for developing publication tables, creating summary and disclosure programs, and reviewing data and data products prior to release.

This category also includes research into value-added data products and dissemination techniques that respond to data user needs and requests. In response to such requests, for example, NASS examined ways to improve the visual representation of census data, which produced a dynamic new web-mapping product first made available for the 2012 Census of Agriculture data.

(2) An increase of \$21,723,000 and 40 additional staff years for the Census of Agriculture (\$42,177,000 and 230 staff years available in 2017).

Funds will be used for salaries and benefits, travel and transportation, rental payments, communications and utilities, printing and reproduction, goods and services from non-Federal and Federal sources, research and development, equipment, operation and maintenance of equipment, and supplies and materials. NASS will continue to collaborate with NASDA for data collection services.

NASS plans to use \$2 million of the base funding for contract services associated with the printing of forms, letters, instructions, and envelopes for the mailing of approximately 3 million records projected as the CML. Data for the Census of Agriculture is predominantly collected via mail but NASS will do a big push to encourage online response using the enhanced online data collection tool unveiled in 2017. All farmers and ranchers will be able to complete the survey online at their convenience. To achieve desired response rates and control cost, NASS will mail the questionnaires in three phases. The initial mailing will be mailed in three phases and will occur in the beginning of December 2017. With the high volume of records in the CML, it is critical to contract with an outside vendor to produce over 6 million questionnaires, which consist of two mailings, in a professional and consistent manner. NASS works with the Census Bureau's NPC under an interagency cooperative agreement and NPC conducts the bidding process for the Print Contract. Due to the time needed to award the contract, perform quality assurance, and produce the contracted materials, NASS needs to obligate the funds for the interagency cooperative agreement with the NPC in October, 2017.

- a. An increase of \$550,000 for a pay cost increase for the Census of Agriculture. This includes \$113,000 for annualization of the 2017 pay raise and \$437,000 for the anticipated 2018 pay raise.

This amount will enable NASS to maintain staffing levels that are critical to achieving the agency's principal goal to assist rural communities in creating prosperity so they are self-sustaining, repopulating and economically thriving. Approximately 64 percent of NASS' budget is in support of personnel compensation.

- b. An increase of \$18,788,000 (of which \$235,000 is IT related) for the Census of Agriculture (\$42,177,000 requested in the 2017 Budget)

Fiscal Year 2018 marks the fourth year in the five-year funding cycle for conducting the 2017 Census of Agriculture. The largest portion of the funding will be used for outsourcing all necessary functions associated with mailing and processing the Census of Agriculture. Due to the approximately 3 million forms mailed and processed only once every five years, NASS contracts with NPC in Jeffersonville, Indiana, the same center responsible for the Census Bureau's handling of the Decennial Census. NPC has the specialized equipment and capacity to handle the questionnaire volume associated with the Census of Agriculture. Outsourcing this function saves significant money for NASS during the four non-production years of the five-year Census of Agriculture cycle.

National Agricultural Statistics Service

Included in the funding increase request are expenses for outgoing and return postage for the approximately 3 million potential farmers and ranchers on the CML. In order to achieve desired response rates while holding down costs, NASS conducts three separate mailings.

In order to achieve an acceptable level of response for every county, or county equivalent, in the United States, NASS will conduct extensive phone follow-up to mail and web non-respondents. Additionally, NASS will conduct personal interviews for a small group of farmers and ranchers. NASS limits these more expensive personal enumeration efforts to operations that are critical because of their size or type of specialized agriculture production. As part of the data collection efforts, NASS will use field enumeration to collect information from minority and disadvantaged populations such as American Indians, including Reservation level data, and Hispanic producers as those historically these producers have been hard to reach and under-represented in the census results. NASS will expand partnership building with community-based organizations in a grass roots effort to promote the importance of being represented by the COA. This funding is necessary to continue the progress made in the 2012 Census of Agriculture, when NASS produced key data products regarding race, ethnicity, and gender of farm operators.

When reaching out to over 3 million producers and ranchers, a critical piece of the process is providing excellent customer care. A portion of the funding is necessary for customer service and public relation activities. Hiring of contractors will be required to handle the growing Spanish speaking population. Additionally, during the three months prior to the initial mail out (December 2017), NASS will significantly increase the promotional efforts leading into data collection.

Funds will be used for salaries and benefits, travel and transportation, rental payments, communications and utilities, printing and reproduction, goods and services from non-Federal and Federal sources, research and development, operation and maintenance of equipment, supplies and materials, and equipment. NASS will collaborate with NASDA for data collection services.

c. An increase \$2,385,000 (of which \$200,000 is IT related) and 40 staff years for the Centralized Edit Unit

The Centralized Edit Unit will provide NASS with a streamlined and standardized edit and analysis unit. This new unit will hire temporary intermittent employees to handle the large volume of work associated with the data collection year. The unit will be led by four NASS staff serving on detail for the duration of the unit to train, guide, and provide quality control. In FY2013, NASS established a similar unit for the 2012 Census of Agriculture and it proved to be successful. It was a critical piece to publishing the 2012 Census of Agriculture in a timely manner. NASS will need to purchase equipment, supplies and workstations to set up the temporary unit at our National Operations Center in St. Louis, MO.

National Agricultural Statistics Service

Geographic Breakdown of Obligations and Staff Years
(Dollars in thousands)

State/Territory	2015 Actual		2016 Actual		2017 Estimate		2018 President's Budget	
	Amount	SYs	Amount	SYs	Amount	SYs	Amount	SYs
	Alabama.....	\$234	2	\$241	1	\$234	2	\$234
Alaska.....	147	1	158	1	147	1	147	1
Arizona.....	190	2	225	2	190	2	190	2
Arkansas.....	1,816	19	2,118	21	1,816	19	1,816	19
California.....	2,154	21	2,002	27	2,154	27	2,267	27
Colorado.....	2,676	23	3,382	33	2,676	23	2,903	23
Delaware.....	241	1	86	1	241	1	241	1
Florida.....	227	3	354	3	227	3	227	3
Georgia.....	2,525	24	2,527	24	2,525	26	2,632	26
Hawaii.....	170	2	280	2	170	2	170	2
Idaho.....	270	2	287	2	270	2	270	2
Illinois.....	266	2	269	2	266	2	266	2
Indiana.....	288	2	256	2	288	2	288	2
Iowa.....	2,000	18	2,520	18	2,000	18	2,097	18
Kansas.....	261	2	94	2	261	2	261	2
Kentucky.....	2,470	22	2,598	22	2,470	22	2,537	22
Louisiana.....	215	2	271	2	215	2	215	2
Maryland.....	16	2	124	2	151	2	151	2
Michigan.....	2,078	25	2,264	25	2,078	25	2,140	25
Minnesota.....	230	2	237	2	230	2	230	2
Mississippi.....	193	2	254	2	191	2	191	2
Missouri.....	10,627	79	2,302	24	10,627	79	11,039	119
Montana.....	230	2	249	2	230	5	230	5
Nebraska.....	2,163	23	2,975	23	2,163	23	2,273	23
Nevada.....	144	1	163	1	144	1	144	1
New Hampshire.....	276	2	297	2	276	2	276	2
New Jersey.....	274	2	297	2	274	2	274	2
New Mexico.....	236	2	244	2	236	2	236	2
New York.....	256	2	251	2	256	2	256	2
North Carolina.....	467	2	343	2	467	4	467	4
North Dakota.....	290	2	257	2	290	2	290	2
Ohio.....	230	2	229	2	230	2	230	2
Oklahoma.....	249	3	286	3	249	3	249	3
Oregon.....	238	2	250	2	238	2	238	2
Pennsylvania.....	2,530	23	2,756	23	2,530	23	2,569	23
South Carolina.....	270	2	263	2	270	2	270	2
South Dakota.....	645	2	218	2	645	2	645	2
Tennessee.....	212	2	237	2	212	2	212	2
Texas.....	2,681	26	2,696	26	2,681	26	2,686	26
Utah.....	242	2	254	2	242	2	242	2
Virginia.....	239	2	235	2	239	2	239	2
Washington.....	2,320	22	2,298	22	2,320	22	2,448	22
West Virginia.....	169	2	246	2	169	2	169	2
Wisconsin.....	289	2	250	2	289	2	289	2
Wyoming.....	247	2	255	2	247	2	247	2
District of Columbia.....	127,874	486	140,808	507	124,069	473	139,986	473
Obligations.....	176,505	876	179,472	859	168,393	876	185,677	916
Bal. Available, EOY.....	+356	-	+270	-	-	-	-	-
Total, Available.....	176,861	876	179,742	859	168,393	876	185,677	916

National Agricultural Statistics Service

Classification by Objects
(Dollars in thousands)

	2015	2016	2017	2018
	Actual	Actual	Estimate	President's Budget
Personnel Compensation:				
Washington D.C.....	\$38,000	\$38,500	\$39,400	\$40,200
Field.....	32,048	32,000	32,600	33,200
11 Total personnel compensation.....	70,047	70,500	72,000	73,400
12 Personal benefits.....	23,103	23,500	24,000	24,500
13.0 Benefits for former personnel.....	1,000	1,000	1,000	1,000
Total, personnel comp. and benefits.....	94,150	95,000	97,000	98,900
Other Objects:				
21.0 Travel & transportation of persons.....	2,065	2,000	2,000	2,000
22.0 Transportation of things.....	1,455	1,300	1,100	1,200
23.1 Rental payments to GSA.....	6,855	6,634	6,943	6,321
23.3 Communications, utilities, and misc. charges.....	780	800	800	800
24.0 Printing & reproduction.....	268	300	300	300
25.1 Other Goods & Services from Federal Sources.....	13,009	7,474	7,200	7,300
25.3 Other Purchases of goods and services from.....				
Federal sources.....	1,300	2,300	2,000	2,000
25.4 Contractual Services - Other Non-Federal.....	3,852	3,945	3,000	14,646
25.41 Contractual Services - Other Non-Federal-NASDA.....	32,021	41,086	30,040	34,000
25.5 Research and development contracts.....	9,249	9,000	9,000	9,000
25.6 IT Services & Supplies.....	5,476	4,000	4,000	4,000
26.0 Supplies & materials.....	1,225	1,221	1,000	1,000
31.0 Equipment.....	4,449	4,400	4,000	4,200
42.0 Insurance Claims & Indemnities.....	6	12	10	10
43.0 Interest & Dividends.....	-	0	0	0
Total, Other Objects.....	82,010	84,472	71,393	86,777
99.0 Total, new obligations.....	176,505	179,472	168,393	185,677
DHS Buiding Security (included above in 25.3).....	1,299	1,447	1,718	1,447
Position Data:				
Average Salary (dollars), ES Position.....	\$175,604	\$177,360	\$180,907	\$184,525
Average Salary (dollars), GS Position.....	\$82,363	\$84,953	\$86,652	\$88,385
Average Grade, GS Position (Grade.Step).....	11.5	11.5	11.5	11.5

National Agricultural Statistics Service

Shared Funding Projects
(Dollars in thousands)

	2015	2016	2017	2018
	<u>Actual</u>	<u>Actual</u>	<u>Estimate</u>	<u>President's Budget</u>
Working Capital Fund:				
Administration:				
Beltsville Service Center.....	\$119	\$148	\$165	\$149
HR Enterprise System Management.....		12	12	10
Integrated Procurement Systems.....	107	109	108	94
Mail and Reproduction Management.....	86	108	114	165
Procurement Operations.....	39	-	-	-
Subtotal.....	352	377	400	418
Communications:				
Creative Media and Broadcast Center.....	53	30	36	181
Correspondence Management:				
Correspondence Management.....	16	13	13	11
Finance and Management:				
Financial Management Services.....	763	780	662	625
National Finance Center.....	348	294	296	270
Subtotal.....	1,112	1,074	958	895
Information Technology:				
International Technology Services.....	1,611	600	1,290	1,181
National Information Technology Center.....	1,227	1,122	920	968
Telecommunications Services.....	132	231	1,662	1,745
Subtotal.....	2,970	1,953	3,871	3,893
Total, Working Capital Fund.....	4,503	3,447	5,278	5,399
Departmental Shared Cost Programs:				
1890 USDA Initiatives.....	\$28	\$33	\$36	\$32
Advisory Committee Liaison Services.....	2	2	2	2
Classified National Security Information.....	10	6	6	5
Continuity of Operations Planning.....	21	21	20	18
Emergency Operations Center.....	23	24	22	20
Facility and Infrastructure Review and Assessment.....	5	4	4	4
Faith-Based Initiatives.....	4	4	4	3
Federal Biobased Products Preferred Procurement Program.....	-	-	-	-
FITARA Administration and Operations.....	-	-	-	-
Hispanic-Serving Institutions National Program.....	18	18	19	17
Honor Awards.....	1	1	1	1
Human Resources Transformation (includes Diversity).....	17	16	17	15
Identity and Access Management (HSPD-12).....	68	70	64	58
Medical Services.....	32	33	37	33
People's Garden.....	7	7	6	6
Personnel and Document Security.....	10	8	8	7
Preauthorized Funding.....	38	39	35	32
Retirement Processor Web Application.....	6	6	6	5
Sign Language Interpreter.....	-	-	-	-
TARGET Center.....	14	15	14	12
USDA 1994 Program.....	7	7	7	7
Virtual University.....	20	21	19	17
Visitor Information Center.....	-	-	-	-
Total, Departmental Shared Cost Programs.....	332	334	328	295

National Agricultural Statistics Service

Shared Funding Projects
(Dollars in thousands)

	2015	2016	2017	2018
	<u>Actual</u>	<u>Actual</u>	<u>Estimate</u>	<u>President's Budget</u>
E-Gov:				
Budget Formulation and Execution Line of Business.....	1	1	1	1
Enterprise Human Resources Integration.....	21	20	19	19
E-Rulemaking.....	8	-	-	-
E-Training.....	28	29	-	-
Financial Management Line of Business.....	2	2	1	1
Geospatial Line of Business.....	-	8	13	13
Human Resources Mgmt Line of Business.....	3	3	3	3
Integrated Acquisition Environment - Loans and Grants.....	19	-	-	-
Integrated Acquisition Environment.....	7	13	-	-
Total, E-Gov.....	89	76	37	37
NASS Total.....	4,924	3,857	5,643	5,731

NATIONAL AGRICULTURAL STATISTICS SERVICE

Status of Programs

AGRICULTURAL ESTIMATES PROGRAM

Current Activities:

The National Agricultural Statistics Service (NASS) mission is to provide timely, accurate, and useful statistics in service to U.S. agriculture. To achieve this, NASS administers USDA's program of collecting and publishing current national, state, and county agricultural statistics, which consists of the Agricultural Estimates and the Census of Agriculture program. The NASS statistical data are essential to both the public and private sectors for making effective policy, production, and marketing decisions on a wide range of agricultural commodities. NASS conducts its work through 12 regional field offices (RFOs) and 33 state offices serving all 50 states.

The NASS Agricultural Estimates Program conducts scientifically designed surveys of farmers, ranchers, agribusinesses, and others provide the basis for developing estimates of production, supply, price, and many other aspects of the agricultural economy. These surveys are supplemented by field observations, objective yield counts and measurements, and other data to provide reliable information. Administrative data available from other USDA agencies and state departments of agriculture are also used to produce statistical reports, including monthly livestock and poultry slaughter, egg production, and dairy products reports.

Official USDA national and state reports are issued relating to:

- 1) the number of farms and land in farms;
- 2) acreage, yield, production, and stocks of grains;
- 3) production of
 - a) hay,
 - b) oilseeds,
 - c) cotton,
 - d) potatoes,
 - e) tobacco,
 - f) fruits & vegetables,
 - g) floriculture, and
 - h) selected specialty crops;
- 4) inventories and production of hogs, cattle, sheep and wool, goats and mohair, poultry, eggs, and dairy products;
- 5) prices received by farmers for products;
- 6) prices paid indexes for farm input commodity group;
- 7) cold storage inventories;
- 8) agricultural chemical use;
- 9) farm production expenditures;
- 10) land value;
- 11) cash rents;
- 12) grazing fees;
- 13) local foods;
- 14) organic production and income;
- 15) farm labor;
- 16) current agricultural industrial reports;
- 17) the census of agriculture; and
- 18) other related items that affect the agricultural economy.

The NASS regional offices forward the estimates to Headquarters in Washington, D.C., where they are combined, analyzed, and released at scheduled times to the media and public through free published statistical reports on the NASS web site, <http://www.nass.usda.gov/>. Annually, NASS publishes more than 450 national agricultural statistical reports, covering over 120 crop, 45 livestock items, and 12 major economic and environmental categories,

complemented by additional state agricultural statistical releases. These basic and objective data are critical to maintain an orderly association between the consumption, supply, marketing, expenses, income, and input sectors of agriculture.

NASS provides timely and accurate agricultural statistics that are used throughout the agriculture sector to evaluate supplies and determine competitive prices for world marketing of U.S. commodities. These statistics promote a level playing field in production agriculture with impartial information available to everyone at a predetermined and publicized date and time.

Statistical data are also provided on chemical use and biotechnology for use in monitoring and evaluating risk assessment to both food safety and food security. Data on agricultural practices, farm and ranch irrigation practice trends, and the geographic information system cropland data layer provide meaningful information on the nation's resource base and environment.

NASS continues to keep abreast of information needs through a variety of means, including hosting data user and advisory committees meetings, attending industry meetings, and sponsoring outreach activities. Even though most NASS reports consist of specific data series, improvements to reports and databases are constantly being made in terms of additional data breakouts, improved coverage, and improved timeliness. Special reports or additional categories within existing reports are added to best summarize the constantly changing character of agriculture.

Chemical Use Program

- ***Chemical Use Data are Useful to Federal Agencies and State and Local Governments.*** The NASS Chemical Use program provides chemical usage statistics to enable informed, science-based decisions. Through various programs and activities, NASS provides data that other Federal agencies, as well as state and local governments, rely on to protect the U.S. food supply, agricultural production and water quality. NASS' agricultural chemical use database is USDA's official source of statistics about on-farm and post-harvest fertilizer and pesticide use and pest management practices. It encompasses surveys looking at chemical use by producers of fruits, vegetables, field crops, livestock, and other animals and crops.
- ***Chemical Use Database.*** To create the database, NASS surveys producers to determine use of fertilizers, herbicides, insecticides and other pesticides; each chemical produced is classified by its active ingredient. The data collected includes acreage of the targeted commodities grown during the year and treated with chemical applications; the name, amount and method of application of all chemical products applied; and the operation's pest management practices.
- ***Chemical Use Program.*** The chemical and fertilizer use survey is coordinated in conjunction with the Agricultural Resource Management Survey (ARMS)-Phase 2. For FY 2016, NASS conducted the Vegetable Chemical Use Survey and results will be published in summer 2017.

Geospatial Program

- ***Remote Sensing for Enhanced Crop Acreage Estimates*** NASS has used remote sensing to enhance its crop acreage estimates since the 1970s, when satellite imagery was first used as a major input in constructing the nation's area sampling frame – the statistical foundation for collecting agricultural estimates with complete coverage of American agriculture. The Cropland Data Layer (CDL) is the agency's core remote sensing product; it provides crop-specific land cover information and serves as the basis of acreage and yield estimates. The CDL shows the type and location of crops planted in a particular season using low-cost and free mid-resolution satellite imagery, access to high-quality ground reference data, and efficient and robust classification software.

Selected Examples of Recent Progress:

- **Data Users Meeting – American Phytopathological Society (APS).** NASS conducts at least one data user meeting annually with a focus on chemical use statistics. NASS attended and presented at the July 30 – August 2, 2016 APS annual meeting in Tampa, Florida to share information about the chemical use program. Each year more than 1,550 of the world’s top plant scientists and researchers attend this meeting in order to participate in field trips, workshops, and scientific sessions that highlight the latest research and technological advances in plant pathology. As ongoing outreach, NASS continues working closely with industry groups to share the importance of responding to surveys and ask for feedback on their data needs. NASS receives ongoing feedback from data users through the website:

https://www.nass.usda.gov/Surveys/Ag_Chem_Use_Feedback_Request/index.php

- **Bee and Honey Program.** In January 2016, NASS began a new survey to collect data to measure the cost of honey bee pollination to crop producers. The January survey collected data for 2015, and a second survey in November collected data for 2016. A publication for both years was released on December 22, 2016.

In May 2016, the first Honey Bee Colonies report was released, which included colony loss information along with colony health stressors.

- **Cattle Program.** In June 2016, NASS published the Overview of the United States Cattle Industry a special report providing detailed historical information in text and graphics.

In February 2016, at the request of industry, three additional weight groups were added to the cattle-on-feed questionnaire. Information was collected during 2016 for 800-899 pounds, 900-999 pounds, and 1,000 pounds and over. Data will be evaluated and published in Cattle on Feed reports in 2017.

- **Floriculture Crops Summary.** In April 2016, NASS released the Floriculture Crops, 2015 Summary. This release contains production, price, and whole value information for the 2015 crop year and is posted to NASS Quick Stats.
- **Use of Microsoft Project Server Software.** In FY 2016, NASS continued advancing its use of Microsoft Project Server software. This software allows NASS to improve the administration of all projects across the agency. The software provides improved information on tracking staff resources who are involved with multiple projects, as well as a dashboard to allow supervisors and management an easier method to monitor the progress of all projects. In FY 2016, NASS used the tool to track the status of over 100 projects, and is now using it to track all survey and census program work.
- **Farms with High Impact on Survey Results.** In FY 2016, NASS began implementing planned customized data collection strategies to make survey reporting less burdensome for high impact farm operations that have a high impact on survey results. Regional and state field offices are responsible for ensuring that the data collection plans are carried out as agreed to with farm operators. In addition, in early FY 2016, NASS released a tool that allows State Statisticians and Regional Field Office staff to easily review the top contributors for all commodities with state-level estimates in their states. This tool has allowed staff to focus on developing rapport, improving response rates, coordinating surveys, etc., for the impact operations in their state and region. In late FY 2016, the tool was modified to help NASS headquarters staff identify “impact farms” at the national level by being able to focus on operations that have the greatest impact on our published estimates improves the quality of NASS’ data.
- **Sampling Frames and Web Scraping.** For each NASS survey, it is necessary to define the sampling population or frame of units to sample. The sampling frame must provide a complete and up-to-date list of agricultural operations, without omissions or duplications. Therefore, the quality of sampling frame has significant implications on the quality of survey data and the official estimates. NASS is examining the practice of web scraping or web crawling techniques to identify non-traditional agricultural farms to improve coverage of our list sampling frames. Web scraping is an automated process for harvesting large amounts of data from websites. In 2016, NASS partnered with a private company to develop software, integrate data sources, and

produce recommendations that will help USDA improve awareness and accountability of the local food market and urban farms. This company is a consortium of government agencies and contractors that focuses on developing and executing innovative methodologies to solving complex data problems for its partners and customers. The effort will evaluate and implement new technologies to harvest open source information to identify urban farms, farming entity providers to farmers markets, roadside stands, Community Supported Agriculture (CSA) initiatives and restaurants that in turn directly sells to consumers in local markets. NASS' overall goal is to develop in-house algorithms to automatically harvest data from these open sources to assist with list building efforts for all types of farms. In addition, the lists derived from this approach will result in an independent list of farm operators that can be used in a capture recapture estimation model. This estimation approach was used to adjust for coverage in the 2015 Local Foods Marketing Practice Survey conducted by NASS.

- **Competitive Grant Work Continues.** NASS and a university are collaborating on a National Aeronautics and Space Administration (NASA) competitive grant titled “Remote-Sensing-based Flood Crop Loss Assessment Service System (RF-CLASS) for Supporting USDA Crop Statistics and Insurance Decision Making.” NASS should benefit from the technology developed, which may improve the current web products.
- **Continued Competitive Grant Work.** In response to the NASA science grant titled “Fallowed Area Mapping for Drought Impact Reporting and Decision Making”, NASS, in cooperation with the US Geological Survey, NASA, and the California Dept. of Water Resources released geospatial products related to the ongoing California drought. The datasets map the extent of idle agricultural acreage in California since 2011. The datasets highlight steady increases in idle farmland as the drought has extended now into its fourth year. The results of this remote sensing project have provided better quantification of monitoring the drought condition, visualizing the impacts in near real-time during the growing season over a large geographic area.
- **Eighth National Cropland Data Layer (CDL) Completed.** NASS completed its 48-state Cropland Data Layer in 2016 for the 2015 crop year, making eight years of national CDL’s available. This layer provides information on the crops planted and is useful in land cover, animal habitat, and watershed monitoring; soils utilization analysis’ agribusiness planning; addressing biodiversity, crop intensity, and agricultural sustainability concerns; environmental research; and the remote sensing and GIS value-added industry.
- **VegScape.** NASS continued to provide its 48-state VegScape, which is a geospatial data service offering automated updates of vegetative condition at daily, weekly, and biweekly intervals.
- **Crop Frequency Layers.** The 48-state Crop Frequency Layers were released for the second time in 2016 for the 2015 crop season. The Crop Frequency Layers identify crop specific planting frequency are based on land cover information derived from the 2008 through 2015 CDL. Currently, these are produced for corn, soybeans, wheat, and cotton.

Research and Development

- **Model-Based Estimation.** NASS is examining model-based estimation techniques to improve the statistical reliability of published forecasts/estimates and to provide accurate error measures. Bayesian hierarchical models for corn, soybean, and wheat yields are now running in parallel with NASS operational processes, and the results were provided to the Ag Statistics Board for their consideration in producing reports. A Bayesian hierarchical model for cotton yield, which also incorporate multiple data sources, including current and historical data and administrative/auxiliary information, is being developed. Small area estimation models are being developed to improve the county-level estimates of acreage, yield, and production and to permit more counties to be published. Research to produce remote sensing, county-level estimates for more regions of the U.S. is also being conducted. A decision support application is also being developed. This should eventually lead to crop phenology being more explicitly accounted for in the yield models, which would result in more

precise estimates. Finally, an effort has been initiated to include the capacity to reflect a disruption in the system, such as a disease outbreak, to the livestock time series models, beginning with the model for hogs and pigs. NASS has worked collaboratively with outside consultants develop the methodology for some of these endeavors.

- **Area Frame Stratification.** 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 area frames for Nebraska and Wisconsin were created in FY16 using a hybrid stratification approach that uses automatic stratification with manual editing. The new frames have more uniform strata than those based on the traditional manual stratification, leading to more precise estimates at no additional cost.
- **Response Rates.** NASS has seen declining response rates, though NASS response rates tend to be higher than those for other Federal surveys. Efforts continue to maintain or increase response rates. A Response Rate Review Team has been formed. The team currently has 13 sub-teams actively working on methods that improve response rates. As an example, one sub-team has developed a model to identify records on the NASS list frame that potentially are no longer associated with farms, called “deadwood.” NASS field office staff visit the potential deadwood farms and either confirm they are indeed no longer farms or obtain current information on the operation. Initial tests indicate that a substantial amount of deadwood can be removed through this process. Other efforts include information on the response history of a farmer, a measure of the response burden, extension of the survey period, use of previously reported data, and revision of the sampling methods to more evenly distribute the burden. This will be a long-term endeavor with emphases changing as progress is made.

CENSUS OF AGRICULTURE PROGRAM

Current Activities:

The Census of Agriculture is conducted every five years and provides comprehensive data series at the national, state, and county level. It provides a snapshot of the agriculture economy including the number of farms, farm typology, characteristics of farm operators, land use, production expenses, value of land and buildings, farm size, market value of agricultural production, acreage of hundreds of crops, inventory of livestock and poultry, and extensive farming practices including irrigation, marketing and utilization of government sponsored programs. FY 2016 was a critical planning year for the 2017 Census of Agriculture.

- **Organic Certifiers Survey.** In 2014, and continuing through 2017, NASS developed plans to conduct a one-time data collection effort to fill a gap in a data series historically provided by the Economic Research Service. The project is aimed at collecting benchmark crop production and livestock inventory data for years 2014 and 2015 from USDA accredited organic certifying entities. Data collection and processing took place in FY 2016. Results are expected in FY 2017.
- **Organic Producers Survey.** In 2014, NASS developed plans to use the final portion of the appropriated funds in 2016 and 2017 to collect organic price data to assist other USDA agencies in formulating policy decisions for the organic community. Specifically, the organic producer surveys will provide data similar to data provided through a cooperative agreement with the USDA Risk Management Agency in 2011 and 2015. During FY 2016, NASS released the results of the 2015 Certified Organic Survey.
- **Local Foods Marketing Practices Survey.** NASS conducted a new marketing channel survey, Local Foods Marketing Practices, in 2016. Data items were established based on stakeholder feedback from across USDA.
- The public affairs office promoted Organic Producers, Organic Certifiers, and Local Foods Marketing Practices among other Census follow on surveys via news releases, advertising in industry publications, industry partnerships, Twitter and blogs. Resulting data was highly visible using the same tactics along with popular infographics, briefings for partners, webinars and 5 easy-reading Highlights documents, making NASS topical data more accessible to a wider variety of audiences.

Selected Examples of Recent Progress:

2012 Census of Agriculture

- ***Census of Agriculture Special Tabulations.*** As a compliment to the data provided from the Census of Agriculture, NASS receives requests from the public for a variety of reformulations of available data. Since the release of the last Census of Agriculture in February 2014, NASS has responded and made public over 129 special tabulations that included data on specialty crops, farm economics, farmer demographics, and geographic disbursements of livestock inventories.

2017 Census of Agriculture

2017 Census of Agriculture Preparations. NASS continues preparations for the 2017 Census of Agriculture. Planning and development for the 2017 Census of Agriculture was initiated with the formation of two teams: one responsible for the content (Content Team) and one responsible for development and testing of the forms and data collection (Data Collection Testing Team). Some highlights from planning activities in FY 2016 are:

- List Building for 2017 Census of Agriculture - Counting over 2.2 million farms takes a fully implemented and routinely performed list building effort. Beginning in reference year 2014, NASS began developing its Census mail list. Over the course of three years, NASS will process millions of potential agriculture operation identification report forms through the National Agricultural Classification Survey to determine whether those operations should be included in the 2017 Census of Agriculture.
- During FY 2016, NASS conducted the Census content test. A sample of approximately 30,000 records received the modified Census of Agriculture report form. This content test serves as a dry-run for all the processing steps and systems utilized during the production phase. Tremendous efforts were put into enhancing the online version of the questionnaire in hopes of soliciting more web responses.
- During FY 2016, work continued to improve the electronic data reporting (EDR) instrument used for capturing online Census of Agriculture responses. These efforts began in FY 2015 with the initiation of a new responsive web-design instrument. Responsive web designed instruments provide an optimal viewing and interactive experience while reducing burden for respondents. NASS successfully deployed the new instrument during the 2015 content test. Based on results from this test, NASS will continue to focus on enhancements through FY 2017.
- NASS completed the forms design and development process in FY 2016 for the preparations to mail packets in FY 2017. This includes a long form, short form, and customized forms for American Indians and Puerto Rico. Additional mail materials were developed, including all correspondence letters and instructions to assist respondents in completing their questionnaire.
- NASS began its marketing campaign with initial printed materials and social media to support list building efforts. NASS will implement a communications plan to encourage everyone involved in agriculture to be included in the 2017 Census of Agriculture. The plan includes partnering with agricultural organizations and sister agencies to leverage their reach across the country as well as paid and earned social, printed and broadcast media. Testimonial videos are also produced to promote the census. New testimonial videos will launch during the census campaign. As part of the overall strategy, NASS is focused on improving coverage of minority operations which includes partnering with community based organizations.
- During FY 2016, critical IT programming and infrastructure were enhanced and tested to improve and streamline statistical activities that include data coordination, data collection, data processing, data editing, data analysis, imputation, summarization and disclosure.

- During FY 2016, NASS finished compiling the maps generated from satellite imagery used to supplement area frame samples. These additional samples will be used by enumerators in all states to collect data designed to improve estimation of under-coverage, particularly for key demographic groups.
- NASS solicited input to the 2017 Census questionnaire via two press releases, social media, and materials to National Association of State Departments of Agriculture members at their annual meeting, Community Based Organization stakeholders at a NASS sponsored workshop, and to the Communications Officers of State Departments of Agriculture. In addition, NASS has promoted signing up to be counted in the 2017 Census of Agriculture via news releases, social media, blogs and personal contacts. We have also shared the communications plan with Communications Officers of State Departments of Agriculture, Community Based Organization representatives, and the Advisory Committee on Agriculture Statistics. Of particular interest is the promotion of the new web-based census questionnaire, which intends to make responding online more convenient than ever.

Research and Development

- ***Development of a Responsive Web Form for the 2017 Census of Agriculture.*** The agency's number one priority for improving the Census of Agriculture for 2017 has been the development of a modern, responsive web form. An early version of the form was used for the Content Test, which was conducted in early 2016. Cognitive and usability testing for the form as well as an external expert review are being conducted so that the web form can be further improved.
- ***Content Improvements for the 2017 Census of Agriculture Questionnaire.*** Based on feedback after the 2012 Census of Agriculture, NASS requested that the National Institute of Statistical Science convene an expert panel to review the information being gathered on women and new/beginning farmers. Based on the expert panel's recommendations, cognitive testing was conducted in FY 2016 that led to revisions in the draft demographics section. The new demographics section was included in the content tests for the 2017 Census of Agriculture, along with other proposed changes, leading to further revisions in the questions. Additional cognitive tests were conducted for the full census questionnaire. These efforts were reflected in the final version of the 2017 Census of Agriculture questionnaire.
- ***Improved Calibration Process.*** After the capture-recapture weights are associated with each Census of Agriculture record, the weights are calibrated to known commodity targets. During the 2012 Census of Agriculture, it became evident that the calibration process could be improved. In 2014 collaborative efforts were initiated with a university for that purpose. Improved methods for calibration and rounding (so that only whole numbers of farms are reported) have been developed. Valid measures of uncertainty have been derived. These new methods are now being integrated into NASS processes for use in the 2017 Census of Agriculture.
- ***Enumerating Hard-to-Identify Populations.*** Many of the emerging sectors of agriculture, such as local foods, organics, and urban agriculture, are hard to identify because they tend to be smaller, more transient, more diverse, and more dispersed than the traditional farms in rural areas. As a consequence, the NASS list frame, which is a list of all known farms and potential farms in the U.S. does not include a substantial portion of these types of farms. Capture-recapture models are being explored as a means to provide estimates for these hard-to-identify populations, such as local foods, organics, and urban agriculture. The possibility of using capture-recapture methods in conjunction with the NASS list frame and a list frame developed through web scraping is an active area of research.

ACTIVITIES COVERING BOTH AGRICULTURAL ESTIMATES & THE CENSUS OF AGRICULTURE

Selected Examples of Recent Progress:

Standardization.

NASS is recognized as USDA's statistical agency and works regularly with Office of Management and Budget (OMB) staff to ensure NASS is in compliance with the Paperwork Reduction Act, which requires OMB approval for

the censuses and surveys NASS conducts. For all censuses and surveys, NASS is required to submit Information Collection Requests (ICRs) to OMB, which justifies the need for each data collection, as well as provides details on the survey and statistical methodology used. In FY 2016 NASS concluded 36 ICRs.

NASS also assists other USDA agencies in the review of their ICRs. In most cases, this involves a thorough review of their survey methodology. In FY 2016 NASS reviewed 16 ICRs for the following agencies: Agricultural Marketing Service, Food and Nutrition Service, Forest Service, and Risk Management Agency.

Cyber and Physical Security

Current Activities:

- ***Emphasis on Security.*** NASS continues to elevate its users' awareness on the importance of sound security practices and procedures by means of mandatory information security awareness training, role-based security training for privileged users, as well as regular phishing campaigns.
- ***LincPass Technical Mandatory.*** NASS continues to place a high priority for all full-time staff to use their LincPass badges to log in to the NASS network as required by HSPD-12 and USDA mandates. NASS is currently on par with the USDA mandate by requiring LincPass use by 100 percent of its privileged users and 91 percent of all its employees.
- ***Continuous Diagnostics and Mitigation Compliance.*** NASS has successfully implemented phase 1 of the Department of Homeland Security Continuous Diagnostics and Mitigation (CDM) program. NASS is currently collaborating with the USDA Office of Information Security (OIS) CDM project team on implementing phase 2.

Selected Example of Recent Progress:

- ***USDA Cybersecurity Scorecard.*** NASS continues to maintain an overall green score on its biweekly cybersecurity scorecard. NASS is one of a few agencies/offices to achieve this feat. NASS continues to put effort in maintaining a high level of security around all its IT assets and data.
- ***USDA Office of Inspector General (OIG) Federal Information Security Modernizations Act (FISMA) Audit.*** The USDA OIG recently completed its FISMA review of the NASS operational environment. Though a number of findings were identified, there were no glaring weaknesses that could critically undermine the security of agency data. NASS has put a plan in place on mitigating all findings by established due dates.
- ***Security Awareness and Role-Based Security Training 100 percent Participation.*** In 2016 NASS once again garnered 100 percent completion rate for both Information Security Awareness, and Role-Based security training requirements. NASS continues to ensure all its employees and contractors complete this requirement.

Stakeholder Engagement/Information Technology Projects

Current Activities:

- ***Data Visualization.*** NASS has partnered with a company that specializes in data visualization products with a deep understanding of NASS data products. The primary goal of this project is to better communicate information clearly and efficiently to users via statistical graphics, plots, information graphics, tables, and charts. Our goal is to make complex data more accessible, understandable and usable for customers. Over the next few years NASS will continue to use this as a base to expand our data visualization products on the web.
- ***User-Friendly and Mobile Responsive Web Forms.*** NASS worked to develop a newly designed Census web form to test in 2017 for the 2017 Census of Agriculture. In conjunction with this effort we are also developing a new survey design tool to support this process not only for the Census of Agriculture, but also for all other

NASS agricultural estimate surveys. NASS expects the newly designed web forms to receive a triple A rating from the department and be 508 compliant as well. **In addition, in the past year, the [NASS](#) and [Census of Agriculture](#) websites have become responsive for mobile use.**

- ***Ag Business Survey Processing.*** NASS is in the process of expanding several different services for the development of a system to replace multiple stand-alone legacy survey processing systems. Agricultural business surveys have significantly different requirements than our other agriculture-operation-based surveys and therefore require a different solution. This effort will lead to sun setting multiple legacy systems that present security risks and are costly to maintain.
- ***Enterprise Active Directory.*** NASS is in the process of transitioning into the USDA OCIO Enterprise Active Directory (EAD) this is a department wide man-date and NASS is working to complete this project by November 2017.
- ***Buildout of NITC St. Louis Data Center and COOP Resources.*** NASS is in the process of building out the NITC St. Louis Data Center, presence at this data center will give us the ability to resume operations as normal in a minimal amount of time if there were ever to be a disaster at the NITC Kansas City site, in addition it will assist with supporting the failover of the NASS Lockup space, required for the release of sensitive NASS Reports.
- ***NASS Media Subscription Services.*** Using our media subscription services in FY2016 and FY2017 to date, NASS maintained media lists for states and key commodities and distributed 34 news releases and Agricultural Statistics Board (ASB) notices to hundreds of interested media outlets and to thousands of data users through subscription services.
- ***NASS Email Subscription Lists.*** NASS continues to use email subscription lists and social media tools such as Twitter, the USDA Blog, USDA Facebook page and USDA YouTube channel to notify the public about all data products available from NASS and to create two way conversation with our customers. Our e-mail subscribers to NASS national reports total nearly 19,000; Twitter followers 28,500; and national media distribution list, nearly 2,500.
- ***NASS Twitter Following.*** In FY2016 and early FY2017, NASS increased its Twitter following to more than 28,500 followers by sending 2,879 tweets on interesting and timely topics, including graph, chart and map data visualizations. NASS' tweets achieved a potential reach of more than 65 million Twitter users. NASS continued its monthly #StatChat series on Twitter, inviting Twitter users to ask questions directly to NASS representatives following major report releases.
- ***NASS USDA Blog Posts.*** NASS contributed 17 blog posts to USDA's blog, contributed to several other posts by Research, Education and Economics (REE) and Agricultural Marketing Service (AMS), and utilized USDA's YouTube channel to post public service announcements to promote NASS data and key surveys, such as the County Estimates program and testimonial videos about the value of NASS data. Most of the blogs in FY2016 and early FY2017 were submitted by NASS' regional offices as part of a new effort at the agency to display more local statistics.

OPERATIONAL TRANSFORMATIONS TO STREAMLINE BUSINESS PROCESSES

Over the last six years, NASS has completed several operational efficiency initiatives and has continued to build on what had been put in place for maximum efficiency. All of these changes moved NASS toward constant improvement for using the best practices of a Federal statistical agency and fully delivering on the principles and practices for a statistical organization.

The National Operations Center

The National Operations Center (NOC) facility is located in St. Louis, MO and houses four NASS groups: 1) the National Operations Division (NOD); 2) the Heartland Regional Office; 3) a detached group of the NASS's Information Technology Division; and 4) a member of NASS's International Program's Office.

Current Activities:

- **National Operations Division. Centralizing Telephone Interviewing, Frames Maintenance, Forms Processing, Training, and Survey Instrument Development.** The NOD operates independent of the NASS Field Office Division. The NOD provides increased telephone data collection capacity in a centralized environment, centralizes sampling frame activities, consistent training of telephone and field interviewers through focused and deliberate delivery of a standardized training protocol, incoming and outgoing processing of mail and paper questionnaires, and the development of the agency's telephone data collection instruments. Work at the NOD continues to reach full production capability.
- **Data Collection at the NOD.** The NOD is designed to complete a large portion of the agency's telephone data collection. The NOD call center includes 154 calling seats, 24 seats for coaches and supervisors, and a 12-station call monitoring room to enhance quality assurance. In FY2016, the call center placed more than 1.1 million out-bound telephone calls during the year, supporting nearly 100 different survey projects. Over 2,400 incoming telephone calls were received and handled from respondents and the general public. The NOD call center also attempted to contact more than 1,500 respondents for out-of-business clarification or because they returned blank forms. Lastly, the NOD call center completed the conversion from Federal to National Association of State Departments of Agriculture (NASDA) enumerators in March 2016.
- **Interviewer Training.** The agency's interviewer training program is developed at the NOD and enhanced training protocols have proved efficient in providing interviewers the skills, knowledge, and abilities they need to perform at a high level. In 2016, the NOD-Training Group (TG) produced NASDA field and telephone enumerator training materials for nearly 100 different surveys. These training materials leveraged a wide-range of technology and delivery methods to consistently disseminate the information to all enumerators. At the end of 2016, there were 6 supervisors, 15 coaches, and 130 telephone interviewers on board at the NOD. NASS will continue to select and train well-qualified telephone interviewers. The NOD-TG will continue to improve the training protocols to improve standards, efficiency, and data quality.
- **Frames Maintenance Group.** The agency's national list sampling frame defines a target population for drawing survey samples or conducting a census. This group's mission is to develop, maintain and allow for efficient sampling of U.S. agricultural operations. They complete record linkage for newly acquired list sources and add newly discovered farm and ranch operator names to increase farm coverage of all sizes. They also perform maintenance on a daily basis to keep the frame as up-to-date as possible. In FY2016, the group processed approximately 335,082 update requests to make sampling, mailing, data collection, and summarization efforts more efficient. The group also processed 2,318,808 records from outside list sources and identified 313,931 potential new operations from those lists. From Federal tax information 2,875,876 records were processed and 460,093 potential new operations were identified.
- **Forms Processing Group.** The Forms Processing Group (FPG) receives the paper-based survey questionnaires that are completed and returned by mail from farmers and ranchers. These respondent-completed forms are tracked and accounted for to ensure the respondents are not contacted by telephone. Completed forms are keyed and the data are loaded into a centralized database and then scanned for image retrieval for regional field offices to use in reviewing the data. In FY2016, the group completed these activities by keying over 431,000 forms, and scanning over 535,000 forms. The objective yield lab is a work unit within the FPG. As part of NASS's objective yield (OY) survey programs, NASDA field staff harvest crop samples from winter wheat, corn, soybean, and cotton field sample plots. All field samples for winter wheat, corn, soybeans and cotton are then sent to the NOD OY Lab for processing. During FY2016, the lab processed over 8,200 OY field samples. The OY Lab is also responsible for the procurement and distribution of objective yield supplies and coordination of the printing and distribution of over 70,000 OY survey forms to the RFOs.
- **Enumerative Surveys Development Group.** The Enumerative Surveys Development Group supports and develops computer-assisted telephone interviewing (CATI) programs used by the agency's call centers to conduct interviews over the telephone with farmers and ranchers. CATI is a complex process that requires survey sample management, call management, scheduling, reporting and call monitoring that requires careful coordination. Most surveys also include data editing functionality and some calculations later used in the

summary process. In FY2016, the group supported more than 130 CATI interviewing programs and developed seven new programs. Preparations and programming have begun for the upcoming Census of Agriculture data collection instruments and data capture. Additionally, the group is working to transition to a new version of the Blaise software with enhanced capabilities and more robust server processes.

- ***Print and Mail Facility.*** The print and mail facility managed by the NOD, which includes a print and mail facility located in the North Carolina Field Office, creates and mails questionnaires to farmers and ranchers selected for USDA surveys. During FY2016, the NOD continued to expand its operational footprint by applying new technology to serve the organization's needs. The print and mail facility is designed to gain greater efficiency in the NOD's operational and production practices. In FY2016, the mail facility printed and mailed 1,878 jobs with a total of nearly 1,915,000 forms, 104,000 door hangers, and 22,000 agency business cards.
- ***Training Workshops.*** In FY2016, the Training Group planned and administered seven training workshops. Using information gathered on a skills and training needs assessment conducted by the group, these workshops targeted approximately 300 agency staff members and included workshops for the ARMS III survey, basic data collection and estimation, RFO deputy directors, mid-year (June) surveys, Conservation Effects Assessment Program (CEAP)/ARMS II, and orientation to NASS.
- ***Cost Efficiency While Improving Data Quality.*** Standardization, training, and scale improvements will allow cost efficiencies while improving data quality for many years to come. While difficult to show specific savings, NASS' NOD was able to operate within budget during FY2016 to complete the data collection of the Census of Agriculture follow-on surveys and most of the planned surveys for the agency's Agricultural Estimates program.

Quality Management Program

Current Activities:

- ***Statistical Quality Standards.*** In FY 2016, NASS worked on the development of a comprehensive and cohesive quality assurance framework of standards and guidelines to help ensure the utility, objectivity, and integrity of the statistical information NASS provides its customers and stakeholders. These standards aid NASS in promoting quality in its information products and the processes that generate them. In addition, statistical standards provide a means to ensure consistent processes in NASS' program areas, from planning through dissemination. NASS focused on development of its data collection and dissemination standards in FY 2016. NASS has begun publishing these standards to its intranet site and will publish the full framework upon completion on its internet site to promote transparency to its data users. This framework of standards and guidelines will also reflect the requirements in OMB's *Standards and Guidelines for Statistical Surveys* in the context of NASS programs, products, and processes.
- ***Analysis of Call History Data.*** In FY 2016, the NASS Quality Management Office partnered with the Data Collection Center (DCC) staff in the Census and Survey Division and the managers in each of its DCCs to conduct analyses of call history data for several of its agricultural surveys. The Blaise computer-assisted telephone interviewing system outputs files that contain call history data for each DCC. These files contain various data on each dial or contact attempt to in-sample agricultural operators. NASS analyzed the call history data and produced quality metrics to help DCCs make informed decisions on where improvements in call efficiencies can be made. To allow the DCCs to easily obtain quality metrics for past surveys or for surveys in real-time, an automated system was also developed. Ultimately, in analyzing the call history data, NASS gained a better understanding of calling efforts and determined how best to optimize calling parameters and achieve greater efficiencies, while reducing respondent burden and costs.
- ***Computer Assisted Recorded Interviewing.*** In FY 2016, NASS began the process of implementing a new quality assurance system, called computer assisted recorded interviewing (CARI), for its telephone calling centers. Many survey organizations use CARI for quality control and evaluation efforts in their telephone and field data collection operations. CARI software creates audio recordings of interviews and video recordings of

automated instrument screens as the interviewer enters survey data. NASS developed a scorecard to be used by calling center coaches and monitors to document the results of interviews. The groundwork for implementation of the software began in NASS' largest calling center located at the National Operations Center with implementation to follow in the other data collection centers. CARI will provide substantial benefits to NASS including improved quality control and data quality as well as, cost savings by eliminating non-productive time during monitoring sessions. The CARI system will also provide NASS the ability to evaluate the performance of questionnaires and study the interaction between the respondent and interviewer.

- ***Quality Control Program for Data Collection in Calling Centers.*** In FY 2016, NASS modified its electronic quality control system to improve the data collection and report process. This system is used by the data collection centers during telephone monitoring of interviews conducted with agricultural operations to document and provide performance metrics that aid supervisors in evaluating and improving enumerator performance. Previously, a DCC would use paper to document the monitoring sessions. Having the electronic system, the supervisors can easily see the results of all monitoring sessions for each enumerator and identify enumerators needing additional training or coaching. In addition, NASS worked with the DCC to improve its standardized quality control procedures across all calling centers. Standardized monitoring procedures are essential to ensuring data quality and enumerators are evaluated in a consistent and equitable manner.

Computer Assisted Personal Interviewing

Current Activities:

The CAPI program supports a customer base of 3,000+ enumerators, over 800 NASS employees and accounts for approximately 30% of data collected from more than 300 surveys conducted on an annual basis as well as the Census of Agriculture. The CAPI solution plays an instrumental role in helping NASS to meet our mission of collecting timely, accurate, and useful statistics in service of United States Agriculture and is consistent with the Department goal of using technology to streamline business processes.

- ***Mobile Optimized Survey Tool:*** In 2015, customer feedback and new developments in technology indicated the original CAPI software solution, implemented in 2011, needed to be re-engineered to mitigate signal cellular coverage and allow enumerators to work completely offline. A new software solution, the Mobile Optimized Survey Tool (MOST), was developed and released in 2016 that incorporated the previous CAPI functionality but used new technical advancements to mitigate cellular signal coverage while adhering to the original terms for security requirements, no data will be stored on the hard drive of the mobile device. The resulting solution, MOST, downloads an enumerator's entire sample to the RAM of the mobile device and improves the customer experience by having all questionnaires available immediately with no lag time. This feature also reduces respondent burden by decreasing interview time which is very significant since several hundred thousands of respondents participate in NASS surveys each year. Once cellular or WiFi coverage becomes available, the data automatically transfers data to the NASS database and wipes the data from the mobile device. This feature opens the door for enumerators to collect data via a mobile device anywhere. Data is collected more efficiently and effectively, minimizing the need for paper questionnaires while improving the quality of the data through automated edit checks. The customer experience (both internal and external) is improved through utilization of the latest survey methodological procedures and features the addition of automated guides, sum fields and routing logic to answer questions pertinent to the respondent thus reducing interview time.
- ***Improved Remote Sample Management Features:*** The MOST solution incorporated five years of feedback from customers for new management tools to increase efficiency for remote sample management. These new tools benefit the enumerators as they determine their daily work routes, but also benefits external customers and NASS stakeholders through more efficient management of the survey sample.
- ***Best Route Mapping:*** A new mapping feature was added that automatically maps the best route to respondents selected for the day. This feature gives turn by turn directions to the enumerators decreasing driving time and mileage. Enumerators can manage their personal visits more effectively and efficiently with the best route feature.

- **Data Item level Comments:** Another feature of MOST allows the enumerator to add a comment to the appropriate item code allowing the enumerator to document issues effecting data collection more effectively. This feature provides untold benefits for NASS statisticians as they edit the data and set estimates based on the data collected by enumerators. Through use of the item level comment feature, data quality has increased significantly and estimates more accurately represent the indications derived from the data. Estimates and indications published from NASS directly impact the entire Agricultural community and any effort to improve data quality and more accurately represent the data provides immeasurable benefits to the US agriculture economy.
- **New Mobile Device Management Solution and contract:** With close to 2,700 devices deployed, the need for an automated mobile device management solution reached a critical level in 2017. Previous procedures based on manual tracking of the inventory were no longer viable. Current solutions offered, including the USDA MDM solution, did not meet the requirement for remote deployment. Through collaboration with MobileIron and AT&T, a new contract was negotiated for the CAPI program and a new version of MobileIron was developed for NASS to pilot and later put into production in 2017. The new MobileIron solution meets USDA, APOC and FISMA security regulations and report requirements for tracking inventory and having the ability to remotely wipe devices. The contract negotiated for NASS and put into place offers platinum service, cloud deployment, dashboards based on hierarchy, and is approximately a third of the cost of the mobile device solution offered by USDA. This contract is now the model for negotiations taking place at the USDA level which will impact all of USDA.
- **New Telecom Data Plan contract:** In the final quarter of 2016, CAPI staff negotiated a new telecom data plan for the 2700 CAPI devices that reduced the telecom data cost by approximately 30%. This new contract was approved through official channels and is now part of the USDA Telecom contract, potentially resulting in significant savings across all of USDA.
- **Objective Yield Surveys:** In 2016, all of the Objective Yield surveys for wheat, corn, cotton, and soybeans were developed and put into production for CAPI/mobile data collection. Automating these forms that were previously collected and submitted on paper garnered savings in data collection costs, improved data quality and reduced respondent burden through electronic coordination with other surveys collected during the same period.
- **Responsive Web Design:** NASS is focused on a new initiative to incorporate user feedback to improve the user experience while completing WEB based forms. This new initiative includes efficiencies to improve and update 508 compliance, encompass the ability to complete WEB forms on any device, including desktops, tablets and SmartPhones. This initiative is in the development and testing stage. The first form that will be completed with responsive web design focus is the Census of Agriculture Web form and this form will serve as a template for all WEB forms, thus standardizing the look and feel of all WEB forms issued by NASS.

Research and Development

Current Activities:

- **Prototype Data Collection Application Built.** NASS, working cooperatively with a university, built a prototype data collection application to collect data for the June Area survey. The Geographic Information System (GIS) tools initially gave the field enumerators the ability to delineate field maps and collect information on the utilization of the land in hand-held devices. Testing in the summer of 2014 found that field enumerators could not delineate the fields in a reasonable amount of time, resulting in too much of an increased burden for the respondent. Thus, for 2015 and 2016 testing, the fields were delineated in advance, and the enumerators were asked only to correct the boundaries. This new tool is now being integrated into existing NASS iPad applications used in data collection and should be field tested in 2017.

WORK PERFORMED FOR OTHERS – REIMBURSABLE PROGRAM

Current Activities:

- ***Reimbursable Work for Federal, State, and Private Organizations.*** NASS conducts surveys for and lends technical expertise to other Federal agencies, state governments, and private organizations on a reimbursable basis. Statistics generated meet special needs not covered by the NASS programs. In addition, statistical consultation by NASS staff members contributes to improvements in the overall quality and consistency of statistical information produced for the needs of other organizations. NASS provides support and assistance in the areas of questionnaire and sample design, data collection and editing, analysis of survey results, and training. NASS also provides technical consultation, support, and assistance to foreign countries desiring to enhance their statistical programs.
- ***International Technical Assistance on a Reimbursable Basis.*** NASS works with the U.S. Agency for International Development and other Federal agencies to provide technical assistance and training on a reimbursable basis in all aspects of statistical surveys and data systems to improve and expand a developing or transitioning country's capacity to produce agricultural statistics and information.
- ***Reimbursable Assistance Benefits the U.S.*** Providing such assistance benefits the United States as well by helping other countries improve their agricultural statistics systems, USDA improves its ability to assess world food and fiber production. In today's global economy, timely and accurate supply statistics for fair and efficient price discovery in the global market are critical. Establishing strong working relationships with other agricultural statisticians around the world allows NASS staff to gather and develop new ideas for improving the U.S. agricultural statistics system, while exposure to other cultures and work situations enhances NASS employees' abilities to solve problems.

Selected Examples of Recent Progress:

- ***External Project Agreements.*** NASS partners extensively with external state and Federal governmental organizations, universities, and agricultural commodity organizations to provide high quality, rigorous, and standardized statistical consultation. NASS provides statistical services on a fee-for-service basis and fully recovers all costs. Statistically accepted methods, practices, and processes are administered. These procedures have been streamlined and enhanced to provide maximum flexibility and design adaptability. A variety of agricultural community data needs are requested, which augment the on-going Federally funded statistical program. Whether economic, environmental, or opinion-based, external clients collaborate with NASS to effectively conduct longitudinal studies, grant-based research, and surveys. The external project agreement program places NASS in a position to be responsive to the changing needs of agricultural data users. NASS continues to strengthen its commitment to external stakeholders by maximizing resources, eliminating duplication, minimizing respondent burden, and leveraging resources that utilize consistent and sound statistical methodology. To date, NASS has worked on more than 690 projects since beginning this centralized process in 2012, which includes about 150 such projects in FY 2016.
- ***Data Flow Lean Six Sigma Process Improvement Project.*** In FY 2016, NASS completed the measurement and analysis phases of a Lean Six Sigma process improvement project to reduce defects within its database environment. Five improvement recommendations with a potential annual cost savings of \$40,000 were presented to NASS management as a result of this work. Sub-teams are currently being formed to carry the recommendations forward.
- ***Agricultural Marketing Service (AMS) Pesticide Data Program (PDP).*** NASS and AMS continued to cooperate in FY2016 on the AMS Pesticide Data Program. The PDP is the basis for a broad statistical analysis of pesticide contamination of food commodities intended for human consumption. Each quarter, samples of four groups of fresh commodities are collected from a random sample of distribution centers located in key states. These samples are sent to regional laboratories and tested for the presence and level of the most commonly used agricultural pesticides posing a potential risk for human health. The selection of distribution centers from which commodity samples are taken follows the basic systematic probability-proportional-to-size

sampling technique. The Sampling and Frame Development Section in the Methodology Division conducts the sample selection procedures for the AMS, in addition to investigating possible improvements to the current sampling and estimation methodology. The data produced by the PDP are reported in an annual summary by AMS.

- ***Agricultural Resources Management Survey (ARMS)***. ARMS is conducted annually in cooperation with the USDA's Economic Research Service (ERS). The survey provides data that enable NASS to publish chemical use statistics and provide ERS the ability to estimate farm income, conduct economic analysis relating to field crop chemical usage, estimate costs associated with producing agricultural commodities, and compile farm business and household financial data. Data collected support both agencies' estimation programs for farm production expenditures. The ARMS Phase I target commodity for the 2017 crop year will be wheat. Phase II target commodities for the 2016 crop year are corn for the production practices, cost, and return data (PPCR) and potatoes for the production practices and return data (PPR). The 2016 ARMS Phase III focuses on 2015 calendar year farm financial data for all types and sizes of farms with a special emphasis on corn, dairy and organic dairy production costs. In FY2016, a new iPad mapping application (GeoMap Live) was implemented for the ARMS Phase II survey. This new application was developed to assist enumerators in identifying the latitude and longitude coordinates of selected fields in the ARMS II survey. ERS uses the coordinates to cross-validate responses in ARMS. Comparisons between the ARMS Phase II crop history table and reported planting acreage from the Farm Service Agency data are made to see whether or not the two match and the observation can be used.
- ***Agricultural Labor Survey***. In 2014, Department of Labor Employment and Training Administration (DOLETA) and NASS renewed their agreement where NASS would collect data from producers on number of workers, hours worked, and wage rates. In FY2016, the Agricultural Labor Survey was conducted in April and October. NASS issued reports:
 - From the April data collection efforts on May 19, 2016, and
 - From the October data collection efforts on November 17, 2016
- ***County Cash Rents Survey***. Through the 2008 Farm Bill (and later amended by the Agricultural Act of 2014), NASS was directed to conduct a biennial Cash Rents survey to establish per acre estimates of county cash rental rates for dry and irrigated cropland and pastureland. Six annual and two biennial surveys have been conducted providing cash rental rate indications for 2008 through 2016. Data are published at the county and/or district level for cash rental rates for all counties with 20,000 plus acres of any combination of dry cropland, irrigated cropland or permanent pasture. Data collected supports the Farm Service Agency's administration of payments for the Conservation Reserve Program. Survey results can be viewed at:
[https://www.nass.usda.gov/Surveys/Guide to NASS Surveys/Cash Rents by County/](https://www.nass.usda.gov/Surveys/Guide%20to%20NASS%20Surveys/Cash%20Rents%20by%20County/).
- ***Natural Resource Environmental Indicators***. NASS received funding from the Natural Resources Conservation Service (NRCS) in FY2016 to continue the CEAP survey. CEAP 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. NASS continued collaboration with NRCS and a university in developing the sample utilizing the Natural Resources Inventory points. In FY2016, a national study was done with points being selected from various watersheds throughout the U.S. This is the second year of a nationwide data collection effort.
 - Croplands: Effects of Conservation Practice Adoption on Cultivated Cropland Acres in Western Lake Erie Basin, 2003-06 and 2012, published March 2016. For more information:
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd889806.pdf

- Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Delaware River Basin, published November 5, 2014. For more information: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1263627.pdf
- **Survey Marketing and Promotions.** During FY2016, NASS Public Affairs Office (PAO) supported collection of data through strategic communications promoting response to surveys including Conservation Effects Assessment Project surveys, Agriculture Resource Management Survey, the quarterly agricultural and livestock surveys and numerous Census follow on surveys. Preparation included distribution of national news releases, blogs, feature stories, talking points, e-mails, and tweets. NASS created and distributed production story packages with interviews for local radio around the country. NASS Public Affairs encouraged electronic reporting as quicker, easier, secure, and leading to less mail correspondent burden over response by mail. In regard to crops surveys, PAO is working with the national corn, soy, and wheat growers associations to promote the County Agricultural Production Survey (CAPS) and quarterly agricultural surveys initially. Measurement of results will follow the end of data collection of those surveys. For data release, NASS public affairs office produced a number of press releases, infographics for social media, website graphics and data visualizations, and 11 Highlights documents on topics ranging from the U.S. Hog Industry, 1994-2014 to Agricultural Chemical User, and Farm Expenditures. Promotion of the surveys and resulting data also occurs at tradeshow across the country with public affairs-produced printed materials and exhibit banners.
- **International Technical Assistance Provided.** NASS provided technical assistance and training to improve agricultural statistics programs in eleven countries. Short-term assignments in FY2016 supported work in Argentina, Armenia, Bangladesh, Brazil, Georgia, Haiti, Mexico, Paraguay, Rwanda, Tanzania, and Uruguay. The technical assistance ranged from basic survey concepts and procedures to complete national Census of Agriculture support. Three major accomplishments occurred in the countries of Armenia, Haiti, and Tanzania. With technical assistance from NASS, Armenia conducted the first Census of Agriculture in the country. Similarly, Haiti and Tanzania conducted and published crop data from their first Annual Agricultural Survey. In addition, NASS coordinated and/or conducted training programs in the U.S. for 219 visitors representing 31 countries. These assistance and training activities promote better quality data and improved access to data from other countries, which allows U.S. analysts to better understand the world supply and demand situation. Improved analysis supports trade and more efficient marketing of U.S. agricultural products.

The agricultural statistics programs in Armenia, Georgia, Haiti, Mexico, Rwanda, and Tanzania are expected to continue in FY2017, but are dependent upon NASS receiving reimbursable funds.

National Agricultural Statistics Service

Summary of Budget and Performance

The National Agricultural Statistics Service (NASS) was established by Secretary's Memorandum No. 1446, Supplement 1, of April 3, 1961, under Reorganization Plan No. 2 of 1953 and other authorities. The mission of the Agency is to provide timely, accurate, and useful statistics in service to U.S. agriculture. NASS is has two major programs (1) Agricultural Estimates and (2) Census of Agriculture.

The Department will be revising the USDA Strategic Plan later in the spring and expects to release it with the FY 2019 President's Budget.

Key Performance Measures

Actual Performance Goals, Indicators, and Trends	Actual				Target	Actual	Result	Target	Estimate/Target
	2012	2013	2014	2015	2016		2017	2018	
1 Usefulness	1.0%	1.0%	1.3%	1.3%	<1.5%	0.2%	Met	<1.5%	<1.5%
2 Timeliness	98.7%	98.8%	99.7%	99.7%	98.0%	99.6%	Met	98.0%	98.0%
3 Coverage For the Quinquennial Census of Agriculture	N/A	87.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 Response Rate for Census of Agriculture and Follow-on Surveys	N/A	N/A	84.0%	84.0%	>80.0%	84.0%	Met	>80.0%	>80.0%

Selected Past Accomplishments toward Achievement of the Key Outcome:

Examples of recent progress are listed in the section on Status of Programs. Past accomplishments toward achievement of the key outcome to ensure high quality statistics and data are relevant and useful to stakeholders; and released on time include:

Agricultural Estimates:

- Bee and Honey Program.** In January 2016, NASS began a new survey to collect data to measure the cost of honey bee pollination to crop producers. The January survey collected data for 2015, and a second survey in November collected data for 2016. A publication for both years was released on December 22, 2016. This was followed by the Cost of Pollination Methodology and Quality Measures report released on April 5, 2017. This release provides an overview of the survey methodology and quality metrics for the information provided in the initial release.

In March 2016, honey producing colonies, yield per colony, and production for operations with less than five colonies was added to the *Honey* report.

In May 2016, the first *Honey Bee Colonies* report was released, which included colony loss information along with colony health stressors.

- Cattle Program.** In June 2016, NASS published the *Overview of the United States Cattle Industry* a special report providing detailed historical information in text and graphics.

In February 2016, at the request of industry, three additional weight groups were added to the cattle-on-feed questionnaire. Information was collected during 2016 for 800-899 pounds, 900-999 pounds, and 1,000 pounds and over. Data collection continued into 2017. In February 2017, three additional weight groups, at the US level, were published in the *Cattle on Feed* report.

- **Chickens and Eggs Program.** In February 2016, Egg Production by Dozens was first published in the February monthly *Chickens and Eggs* report and made available in quick stats starting with January 2015. This change was made at the request of industry.
- **Slaughter Program.** In October 2016, NASS published an *Overview of the United States Slaughter Industry* a special report providing detailed historical information in text and graphics. The report covers industry over the past 25 years, a brief overview of survey and estimation procedures as well as terminology used in NASS slaughter publications.

Starting with the 2016 crop season, combined state totals for objective yield data are now included in the *Crop Production* reports and being published to QuickStats. Program changes were implemented beginning with the 2016 crop season. NASS thoroughly reviews all crop programs every 5 years (following the Census of Agriculture) to ensure that the appropriate combination of states are included in the annual estimating programs.

- Included states typically represent 90-95 percent of the total United States production.
- Canola estimates will now be split into winter and spring seasons.
- Market year average prices for canola are now published in the September *Agricultural Prices* report. Prior to this year they were not published until the November *Agricultural Prices* report.

Revisions for the previous year's sunflower and canola crops are now published in the October *Crop Production* report. Prior to this year they were not published until the *Annual Crop Production* report in January.

Census of Agriculture:

- A comprehensive summary of agricultural activity for the United States and for each state every five years. Includes the number of farms by size and type, inventory and values for crops and livestock, operator characteristic, and much more. See: <http://www.agcensus.usda.gov/Publications/2012/>
- Local Foods Survey. In December 2016, NASS published the results from the Local Foods Survey. This was the first publication of data looking into the marketing channels utilized by producers to market their products locally. Data provided insights into four marketing channels; direct to customer, direct to retailer, direct to institutions, and sales to intermediate markets.
- During FY 2016, the Census Content Test was conducted. A sample of approximately 30,000 records received the modified Census of Agriculture report form. This content test serves as a dry-run for all the processing steps and systems utilized during the production phase. Tremendous efforts were put into enhancing the online version of the questionnaire in hopes of soliciting more web responses.
- During FY 2016, work continued to improve the Electronic Data Reporting instrument used for capturing online census of agriculture responses. These efforts began in FY 2015 with the initiation of a new responsive web-design instrument. Responsive web designed instruments provide an optimal viewing and interactive experience while reducing burden for respondents. NASS successfully deployed the new instrument during the 2015 Content Test. Based on results from this test, NASS will continue to focus on enhancements through FY 2017.
- NASS completed the forms design and development process in FY 2016 for the preparations of mail packets in FY 2017. This includes a long form, short form, and customized forms for American Indians and Puerto Rico. Additional mail materials were developed which included all correspondence letters and instructions to assist respondents in completing their questionnaire.
- During FY 2016, critical IT programming and infrastructure were enhanced and tested to improve and streamline statistical activities that include data coordination, data collection, data processing, data editing, data analysis, imputation, summarization and disclosure.

- During FY 2016, NASS finished compiling the maps generated from satellite imagery used to supplement area frame samples. These additional samples will be used by enumerators in all states to collect data designed to improve estimation of under-coverage, particularly for key demographic groups.

Selected Accomplishments Expected at the 2018 Proposed Resource Level:

Agricultural Estimates:

- **Federal Principle Economic Indicators.** In 2017, NASS will conduct the vital Federal Principle Economic Indicators at the core level. NASS will continue to respond to stakeholders to provide critical market sensitive data needs as they arise. NASS will produce the following essential reports in 2017:
 - Crop Production,
 - Cattle, and Cattle on Feed,
 - Agricultural Prices,
 - Grain Stocks,
 - Hogs and Pigs,
 - Prospective Plantings,
 - Small Grain Summary, and
 - Winter Wheat Seedings and Acreage.

Census of Agriculture:

- During 2017, NASS finalized the mail list for the Census of Agriculture. The final agriculture screener survey was collected and processed from approximately 1.25 million operations. This successful effort resulted in the addition of over 300,000 potential farms to the census mail list. The improved quality of the census mail list will result in more efficient and timely data collection.
- During FY 2017, work continued to improve the Electronic Data Reporting instrument used for capturing online census of agriculture responses. These efforts began in FY 2015 with the initiation of a new responsive web-design instrument. The online reporting instrument was finalized through exhaustive internal testing along with a campaign to solicit and implement feedback from the public. This will improve data quality and reduce burden for online respondents. NASS is striving to realize cost savings by increasing the number of web responses.
- In FY 2017, NASS completed the forms design process and finalized print and mail out specifications. This included two generalized U.S. forms along with all correspondence letters and instructions to assist respondents in completing their questionnaire.
- NASS also completed work on a customized questionnaires for the American Indian population in the Southwestern United States and Puerto Rico. This a pilot project aimed at increasing coverage of this historically under-served demographic.
- During 2017, NASS completed data collection on over 14,000 area segments designed to improve estimation for farming operations not covered on the census of agriculture mail list. Data from these segments is also used to determine under-coverage for a wide range of commodity sectors and farmer demographics.
- NASS continued its marketing campaign which encourages producers to be represented in the 2017 Census of Agriculture. As part of the overall strategy, NASS is focused on improving coverage of minority operations which includes partnering with Community Based Organizations.
- Critical programming was enhanced and tested. Editing, analysis and imputation programs are being designed to automate and streamline the correction of omitted and erroneous data. The goal is to minimize analyst intervention.

- During FY 2017, NASS formalized plans to institute a centralized editing unit for processing the 2017 Census of Agriculture. The Census Editing Unit (CEU) will have the primary assignment of editing census of agriculture responses collected by mail, online, phone, or in person.

Key Performance Measures

Actual Performance Goals, Indicators, and Trends	Actual				Target	Actual	Result	Target	Estimate/Target
	2012	2013	2014	2015	2016			2017	2018
1 Usefulness	1.0%	1.0%	1.3%	1.3%	<1.5%	0.2%	Met	<1.5%	<1.5%
2 Timeliness	98.7%	98.8%	99.7%	99.7%	98.0%	99.6%	Met	98.0%	98.0%
3 Coverage For the Quinquennial Census of Agriculture	N/A	87.7%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 Response Rate for Census of Agriculture and Follow-on Surveys	N/A	80.3%	84.0%	80.0%	>80.0%	84%	Met	>80.0%	>80.0%

Selected Past Accomplishments toward Achievement of the Key Outcome:

Examples of recent progress are listed in the section on Status of Programs. Past accomplishments toward achievement of the key outcome to ensure high quality statistics and data are relevant and useful to stakeholders; and released on time include:

Agricultural Estimates

- **NASS Geospatial program.** NASS established the cropland data layer (CDL) as a baseline tool against which to measure climate change adaptation strategies. To track changes in crop production that may occur with future climate change NASS sought to improve the objectivity and detail of crop progress and condition estimates, soil moisture, and natural disasters by developing biophysical modeling with remote sensing techniques.

To aid economic and policy analysis a web-accessible geospatial tool was developed for these data. NASS CDL is disseminated via the web portal, CropScope enabling users to track changes in crop production that may occur with future climate change and aid economic and policy analysis. This state-of-the-art portal features a web-service based interactive map visualization, dissemination, and querying system readily available to anyone with an internet connection. The continuation of this conterminous National CDL and CropScope fills a data gap critical for research, to aid economic and policy analysis, and for decision support for conservation, climate change, and water resources.

- **Cropland Data Layer (CDL).** NASS went back, for historical reference, and processed the 2008 Cropland Data Layer, and adds a new CDL each year covering the contiguous 48 States.
- **CropScope** is a geospatial data service which offers advanced tools such as interactive visualization, web-based data dissemination and geospatial queries and automated data delivery to systems such as Google Earth. And can be queried from the NASS website: http://www.nass.usda.gov/Data_and_Statistics/index.asp
- While Quick Stats is the best source of county level data from NASS, acreage and yield maps of county crop estimates are also available. http://www.nass.usda.gov/Charts_and_Maps/Crops_County/index.asp

Census of Agriculture

- **Quick Stats 2.0.** Data users may query the Census of Agriculture database to retrieve customized tables with Census data at the national, state and county levels as far back as 1997.
<http://quickstats.nass.usda.gov/>
- **Ag Census Web Maps.** This Census of Agriculture application makes this information available at the county level through a few clicks. The maps and accompanying data help users visualize, download, and analyze Census of Agriculture data in a geospatial context. The Ag Census Web Maps give researchers, policymakers, planners, lenders, agriculture agencies, agribusinesses, and farmers' easy access to many factors that affect agriculture and farmers in more than 3,000 counties across the country. In collaboration with USDA's Economic Research Service, NASS makes the web maps and associated data available to:
 - Give those who provide services to farmers and rural communities' access to community-level data;
 - Give farmers, businesses, policymakers, and others the data to make informed decisions;
 - Give users the ability to interact with the maps;
 - Provide a spatial overview of various aspects of U.S. agriculture; and
 - Show spatial relationships and patterns across regions and topics.
- **Farm and Ranch Irrigation Survey (FRIS).** FRIS is a follow-on survey to the census of agriculture, occurring every five years in the year after the census, and provides detailed data relating to irrigation activities and water use on U.S. farms, ranches, and horticultural operations. The FRIS data are reported at national, State and watershed levels; and aid efforts to develop and promote efficient irrigation practices and ensure long-term sustainability of water resources. They are the only data complete, consistent and accurate enough to use in benchmarking on-farm irrigation measures over time. FRIS data contribute to water-related programs, economic models, legislative initiatives, market analyses, and feasibility studies. The information helps industry representatives, leaders, and planners chart the best course for future on-farm irrigation. There was tremendous demand for the Farm and Ranch Irrigation Survey data in 2013 especially because of the 2012 drought in the midsection of the country. These survey results are critical to the country and will affect policy decisions for the next five years. For more information on 2013 FRIS methodology and results, go to: http://bit.ly/2013Farm_RanchSurvey
- **Census of Horticulture Specialties.** This is a follow-on survey to the census of agriculture, occurring every five years a year or two after the census, and provides a comprehensive picture of the horticultural sector of the U.S. economy. It is the only source of detailed production and sales data for the U.S. floriculture, nursery, and specialty crop industries, including greenhouse food crops. The recent Census of Agriculture results showed the nursery and floriculture products alone are valued at \$14.5 billion in 2012. Additional information supplied in the 2014 Census of Horticulture is used to improve production, marketing tactics, and other industry developments within this agriculture sector. This effort collects data from any operation producing and selling at least \$10,000 in horticultural crops as reported on the Census of Agriculture. Data are collected in all 50 States.
- **Watershed Publication.** The Watershed publication provides data that supplements the Census of Agriculture. As a service to agricultural and environmental data users, the 2012 data for 38 individual land characteristics are published at the 6-digit Hydrologic Unit Code (HUC) level. For comparison, data from the 2007 Census of Agriculture will also be published in this report at the 6-digit HUC level.
- **Congressional District Profiles and Rankings.** Following each census, reporting farms and ranches are assigned to congressional districts and two products are prepared, district profiles and district rankings. Congressional district profiles provide data on selected farm, economic, and operator characteristics for the farms and ranches assigned to the district. The ranking of congressional districts presents the order of districts from largest to smallest for selected items from the Census of Agriculture. This allows the data

National Agricultural Statistics Service

user to understand the importance of agriculture activity as it relates to Congressional Districts across the Nation. Rankings are provided for farm and operator characteristics, selected value of agricultural products sold, selected livestock and poultry inventories, and selected crops area harvested.

http://www.agcensus.usda.gov/Publications/2012/Online_Resources/Congressional_District_Profiles/

- **Race, Ethnicity, and Gender Profiles Tabulation.** This product was new to the 2007 Census of Agriculture and came as a result of the Department’s focus on supporting socially disadvantaged farms. These profiles provide state and county level farm operator data for women, Hispanic, Native American Indian, Asian American, and Black farmers. The statistics provided in these profiles include number of farms, value of products sold, government payments received, operator and economic characteristics, along with production levels for selected crops and livestock commodities.
- **Specialty Crops Tabulation.** The Census of Agriculture Specialty Crop publication provides data that supplement the Census of Agriculture. This publication complies with Section 10103 of the Food, Conservation, and Energy Act of 2008. As a service to agricultural and economic data users, the 2007 data for specialty crops are published at the U.S. and state-level. A specialty crop is defined by Section 3 of the Specialty Crops Competitiveness Act of 2004 (7 U.S.C. 1621 note; Public Law 108-465) as fruits and vegetables, tree nuts, dried fruits, and nursery crops (including floriculture).

Selected Accomplishments Expected at the 2018 Proposed Resource Level:

Agricultural Estimates

- **Geospatial Improvement Initiative.** This geospatial 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), crop yields, and begin research and development to provide data associated with agriculture. This will leverage strategic cooperative partnerships with USDA Climate Hubs and the National Oceanic and Atmospheric Administration Regional Climatic Centers.

This program is meant to extend the monitoring capabilities of both CropScope and VegScope programs and provide new, objective information that supports both the production of agriculture statistics while extending these products to local levels. This basic statistical information is the foundational information for agricultural, environmental, and climate researchers to have local, factual information on U.S. croplands. Additionally, it is anticipated to be of significant benefit to agricultural researchers to have field level geo-referenced data.

Key Performance Measures

Actual Performance Goals, Indicators, and Trends	Actual				Target	Actual	Result	Target	Estimate/Target
	2012	2013	2014	2015	2016		2017	2018	
1 Usefulness	1.0%	1.0%	1.3%	1.3%	<1.5%	0.2%	Met	<1.5%	<1.5%
2 Timeliness	98.7%	98.8%	99.7%	99.7%	98.0%	99.6%	Met	98.0%	98.0%
3 Coverage For the Quinquennial Census of Agriculture	N/A	87.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 Response Rate for Census of Agriculture and Follow-on Surveys	N/A	80.3	84.0%	84.0%	>80.0%	84%	Met	>80.0%	>80.0%

Selected Past Accomplishments toward Achievement of the Key Outcome:

Examples of recent progress are listed in the section on Status of Programs. Past accomplishments toward achievement of the key outcome to ensure high quality statistics and data are relevant and useful to stakeholders; and released on time include:

Agricultural Estimates:

- **Annual Fruit and Vegetable Program.** NASS restored the annual Fruit and Vegetable program in 2014 fulfilling data users' requests and to provide acreage statistics necessary in order to conduct the chemical use program. The annual data is required to conduct the fruit and vegetable chemical use surveys.
- **In-Season Forecasts for Fruit and Nuts.** NASS continues the annual Fruit and Vegetable program by providing the in-season forecasts for fruits and nuts. These are needed by industry and include a variety of reports including the monthly *Crop Production* reports, annual *Cherry Production* report (issued in June), and the annual *Cranberries* report (issued in August). Additionally, NASS resumed publishing a preliminary Annual Summary for all noncitrus fruits and nuts in January. The annual data is required to conduct the fruit chemical use surveys.
- **Additional State Forecasts.** NASS Regional Offices continue to collaborate with outside entities in agreements to produce reports containing additional detail for specific crops. For vegetables, NASS resumed publishing in-season forecasts in the September *Vegetables* report. NASS will collect data for these forecasts from producers, processors, and others using a series of grower and processor surveys. NASS will also utilize administrative data whenever available to supplement the survey data. The annual data is required to conduct the vegetable chemical use surveys.
- **Agricultural Chemical Use.** NASS restored the remaining chemical use data series back to the original 2010 level, including data on fruit and vegetables, and major row crops on an alternating year basis. Appropriated funding is necessary for this initiative to ensure equal access to Federal statistics. Additionally, the Fruit and Vegetable survey series are required in order to conduct the chemical use data series. NASS conducts surveys to provide needed information concerning quantities of chemicals applied to agricultural commodities, livestock, and facilities. Further, NASS has developed requested agricultural chemical use queries from the Quick Stats database system for the user's convenience based on their timeliness and user feedback. See this website:
http://www.nass.usda.gov/Data_and_Statistics/Pre-Defined_Queries/index.asp

Census of Agriculture:

- **Organic Production Survey.** The 2008 Farm Bill provided funding for NASS to "develop surveys on organically produced agricultural products." The 2008 Organic Production Survey was conducted as a follow-on survey to the 2007 Census of Agriculture during 2009 in response to this mandate. The one-time funding provided by the Farm Bill allowed NASS to develop baseline statistics about this quickly expanding and vital sector of U.S. agriculture. This effort was USDA's first-ever, wide-scale survey of U.S. organic producers. Data were collected for certified organic producers, exempt producers, and those producers in transition to organic production. The overall response rate was 87 percent, 2 percentage points higher than the 2007 Census of Agriculture. Eight percent of the responses were received using Internet reporting.
- **Special Organic Tabulation.** Selected Census statistics of operator and farm characteristics by all farms and farms with organic sales was published by NASS as a special tabulation from the 2012 Census of Agriculture.

Selected Accomplishments Expected at the 2018 Proposed Resource Level:

Agricultural Estimates

- **Agricultural Chemical Use.** 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.