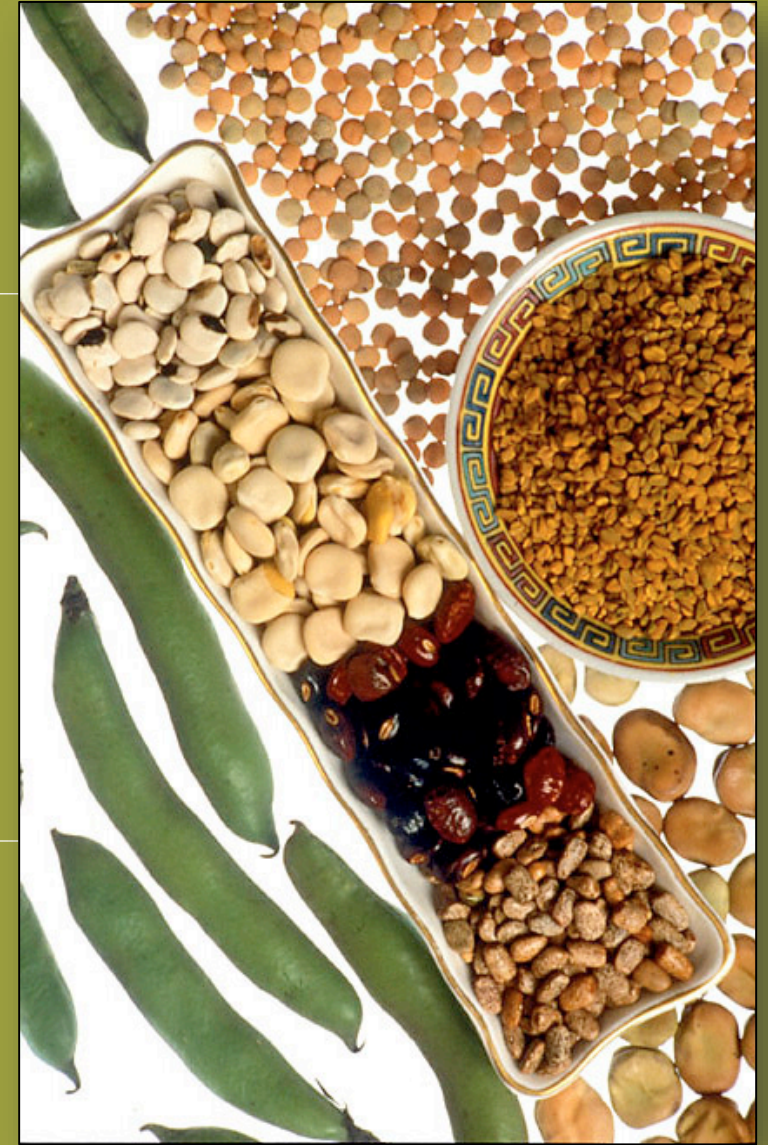
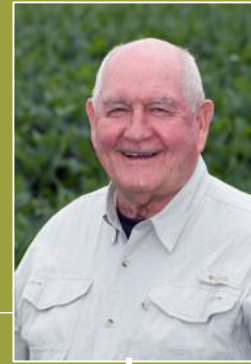

ARS Research

FOUNDATION FOR A GROWING FUTURE



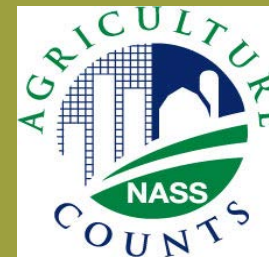
USDA Research, Education, and Economics (REE) Mission Area



Dr. Sonny Perdue
USDA Secretary



Dr. Scott Hutchins
REE Deputy Under Secretary



Agricultural Research Service

Dr. Chavonda Jacobs-Young
Acting Chief Scientist, USDA
Administrator, Agricultural Research
Service

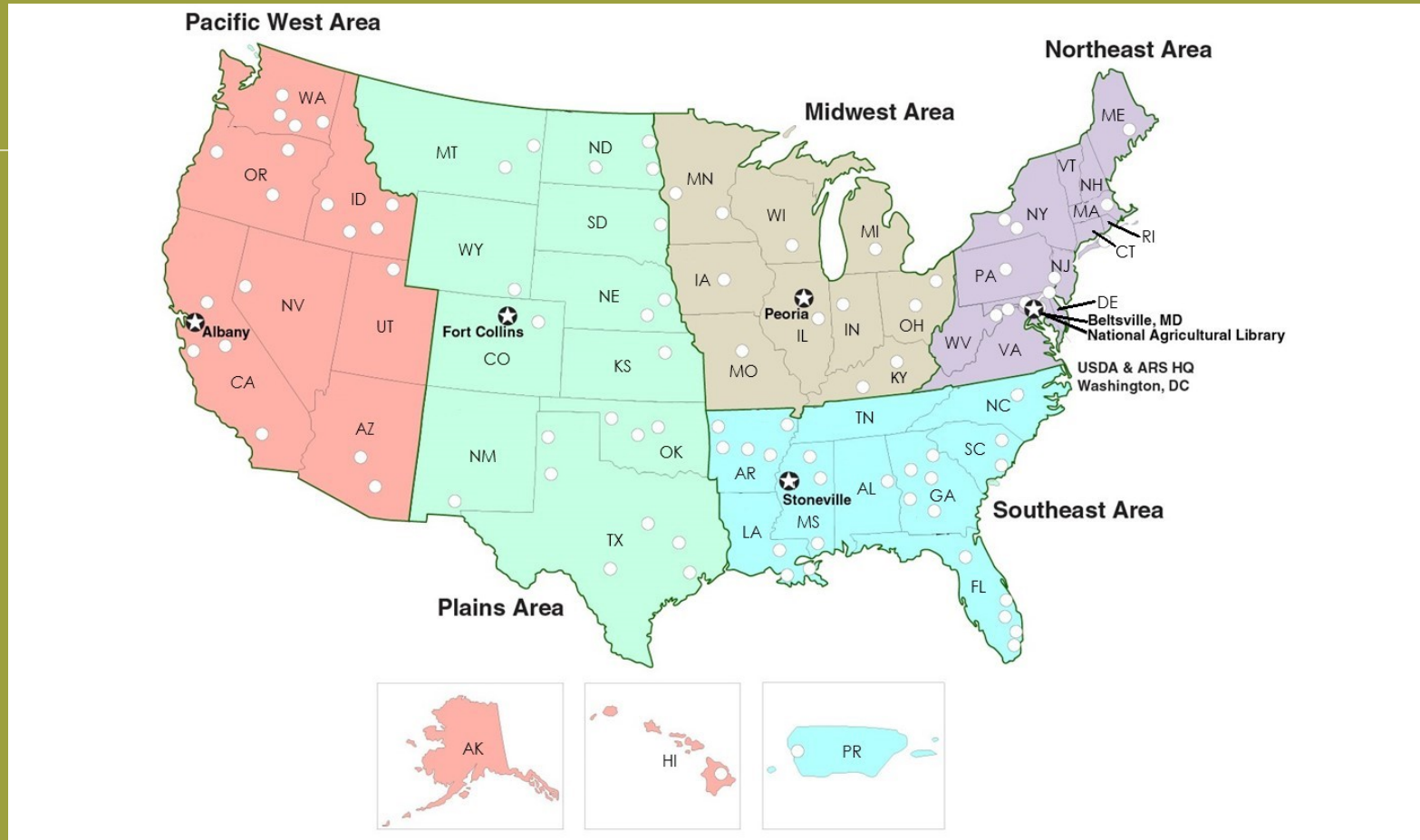


Dr. Simon Liu
Associate Administrator
Research Operations

Dr. Steven Kappes
Associate Administrator
National Programs

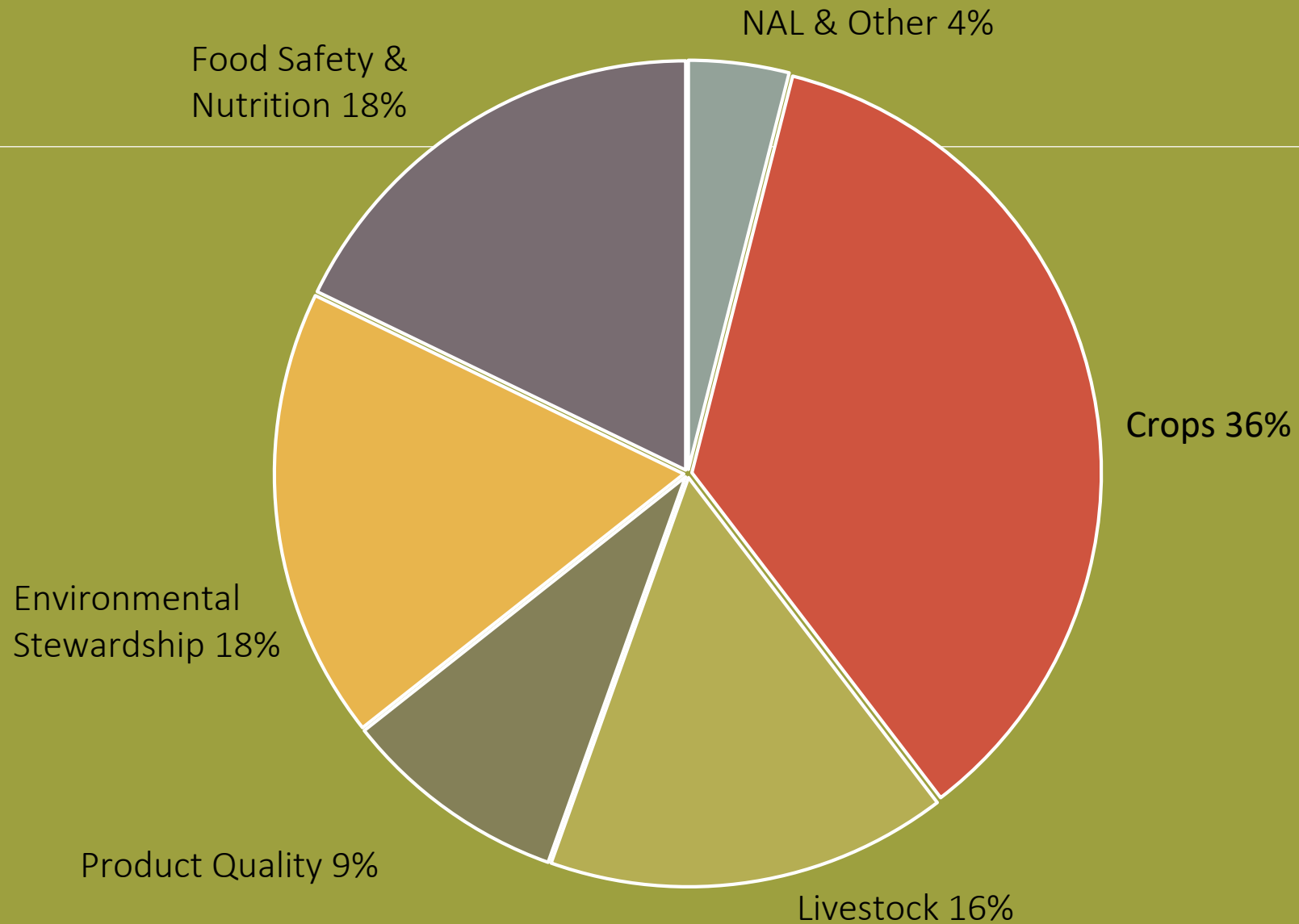


USDA's Principal Intramural Scientific Research Agency



- 90 locations and 4 overseas laboratories
- Around 700 research projects
- 2,000 Ph.D. scientists
- 8,000 employees

ARS Program Distribution



ARS National Programs

Animal Production and Protection	Nutrition, Food Safety and Quality	Crop Production and Protection	Natural Resources and Sustainable Agricultural Systems
Food Animal Production	Human Nutrition	Plant Genetic Resources, Genomics and Genetic Improvement	Soil and Air
Animal Health	Food Safety (animal and plant products)	Plant Diseases	Water Availability and Watershed Management
Aquaculture	Product Quality and New Uses	Crop Protection and Quarantine	Grass, Forage, and Rangeland Agroecosystems
Veterinary, Medical, and Urban Entomology		Crop Production	Sustainable Agricultural Systems Research

FY 2019 ARS Budget



- φ \$1.3 billion for salaries and expenses
- φ \$100.5 million increase
- φ \$381 million for facilities in
Pullman, Washington
Raleigh, North Carolina
Geneva, New York
Auburn, Alabama
Madison, Wisconsin
Tifton, Georgia; and
University Park, Pennsylvania

Research Budget Increases for FY 2019

- φ Alfalfa
- φ Chronic wasting disease
- φ Citrus germplasm
- φ Coffee germplasm
- φ Cotton ginning
- φ Cranberry and blueberry
- φ Feed enhancement
- φ Food systems
- φ Fruit fly and exotic pest control
- φ Greenhouse technology
- φ High-performance computing
- φ Hops
- φ Human nutrition
- φ Industrial hemp
- φ LTAR
- φ Marine aquaculture seedstock
- φ Oats
- φ Postharvest dairy
- φ Poultry
- φ Pulse Crop Initiative
- φ Resilient drylands
- φ Salmonella
- φ Shellfish genetics
- φ Small grains genomics
- φ Sudden oak death
- φ Sugar beets
- φ Sugarcane
- φ The Pollinator Center
- φ Warmwater aquaculture
- φ Wheat and sorghum
- φ Whitefly



Farm-to-table research scope

INNOVATION:

New, fundamental knowledge for solutions to the problems facing American agriculture

ARS and Data



Combine linked with GPS to track soil samples and crop yields

ARS and the National Agricultural Library



A screenshot of the USDA Ag Data Commons homepage. The header includes the USDA logo, "Ag Data Commons", and "U.S. DEPARTMENT OF AGRICULTURE". A navigation bar contains "Datasets", "Software & Tools", "About", "News", and "Contact Us". A search bar is on the right. The main content area features a "Census of Agriculture" section with a drone image, a "3-2-1... Relaunch!" announcement, and a "UAS User Log" section. Below these are eight category icons: Agricultural Economics, Bioenergy, Animals & Livestock, Food & Nutrition, Genomics & Genetics, Agroecosystems & Environment, Plants & Crops, and Agricultural Products.

A screenshot of the USDA Ag Data Commons "computer software" page. The header is identical to the previous screenshot. The page content includes a breadcrumb "Home / computer software" and three software entries: "AgBase" (a curated, open-source resource for functional analysis of agricultural plant and animal gene products), "GOSSYM" (a dynamic, process-level simulation model of cotton growth and yield), and "2DLEAF" (a 2D mechanistic model of CO2 and water vapor movement in a leaf and photosynthesis).

ARS and Germplasm Banks



National Center for Genetic Resources Preservation cold storage vault, Fort Collins, Colorado

ARS at Work



white-eye fruit fly mutants created by ARS using CRISPR

ARS and Climate Change



2018 Information and Technology Transfer

- Peer-reviewed articles published **4571**
- New Patents Filed **108**
- New Germplasm Releases **57**
- Total Active CRADAs **189**



Testing the ability of poultry litter-based activated chars to adsorb metals from water.

2018 Student and Outreach Data

- Students working with ARS **~2400**
- Postdocs working with ARS **over 500**
- ARS Scientists serving as Student Advisors **580**
- ARS Scientists serving as Adjunct Professors or in other appointments **465**
- Students participating in Outreach Event **over 93,000**



UMES students measure arsenic levels in water samples from Princess Anne, Maryland

Global leadership in agricultural discoveries through scientific excellence.

