

# Sowing Seeds for Global Change

Association of 1890 Research Directors  
17<sup>th</sup> Biennial Research Symposium

Jacksonville, Florida  
April 8, 2013

**Dr. Donald McLellan**

Director,  
Outreach, Diversity and Equal Opportunity  
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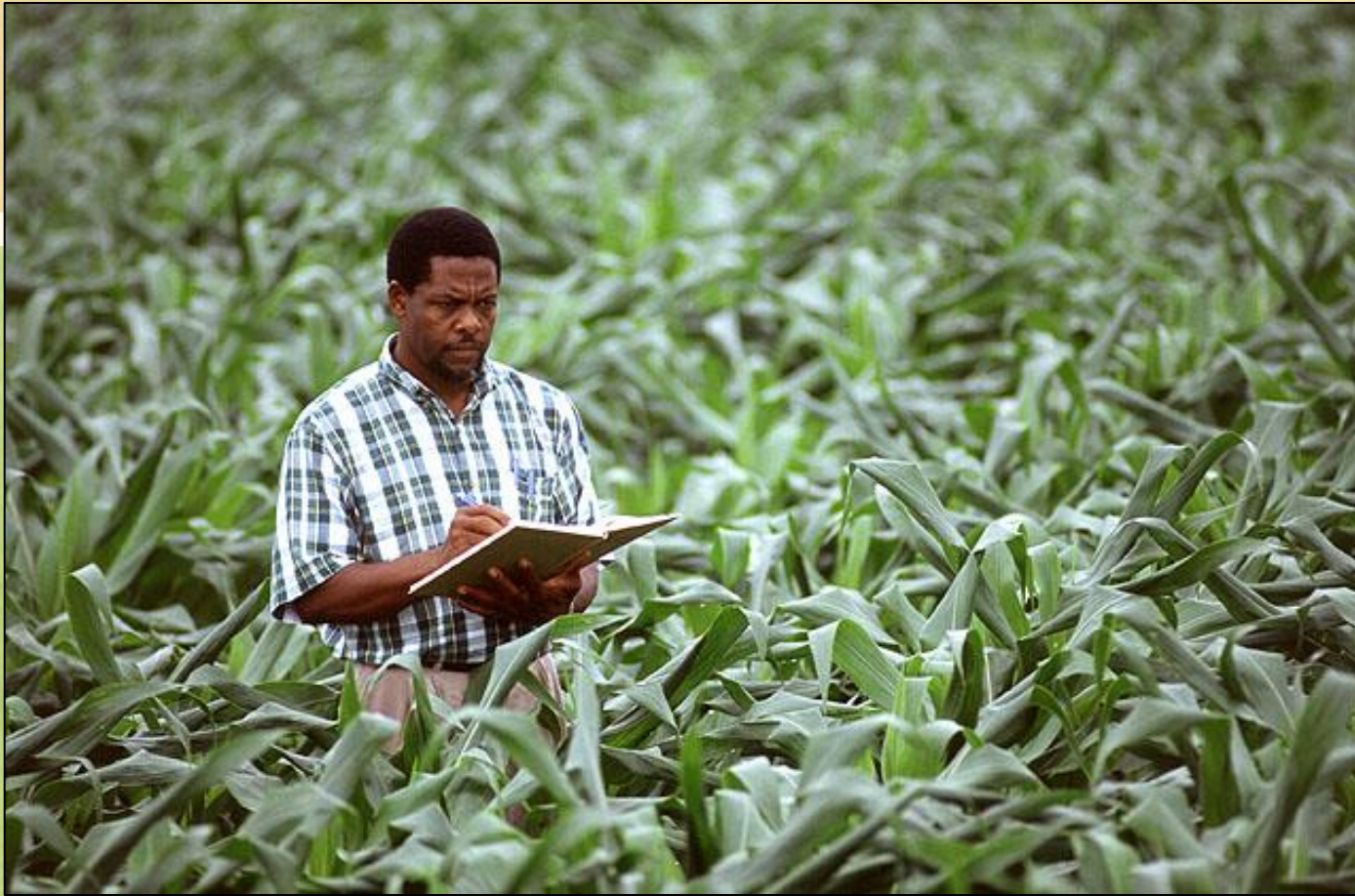




## Agribusiness graduates

The first class to receive master's degrees in agribusiness from South Carolina State College recently graduated. Members of the class include Shellie Davis of A'colu (seated), (standing, from left) Dorastus L. Glover of Orangeburg, Donald McLellan of Dillon, Nelson Brownlee Jr. of Orangeburg, and Michael Brown of Bennettsville (Photo special to The T&D)





Evaluating corn grown in soil treated with alum in Maryland.

# ARS

USDA's principal  
intramural scientific  
research agency

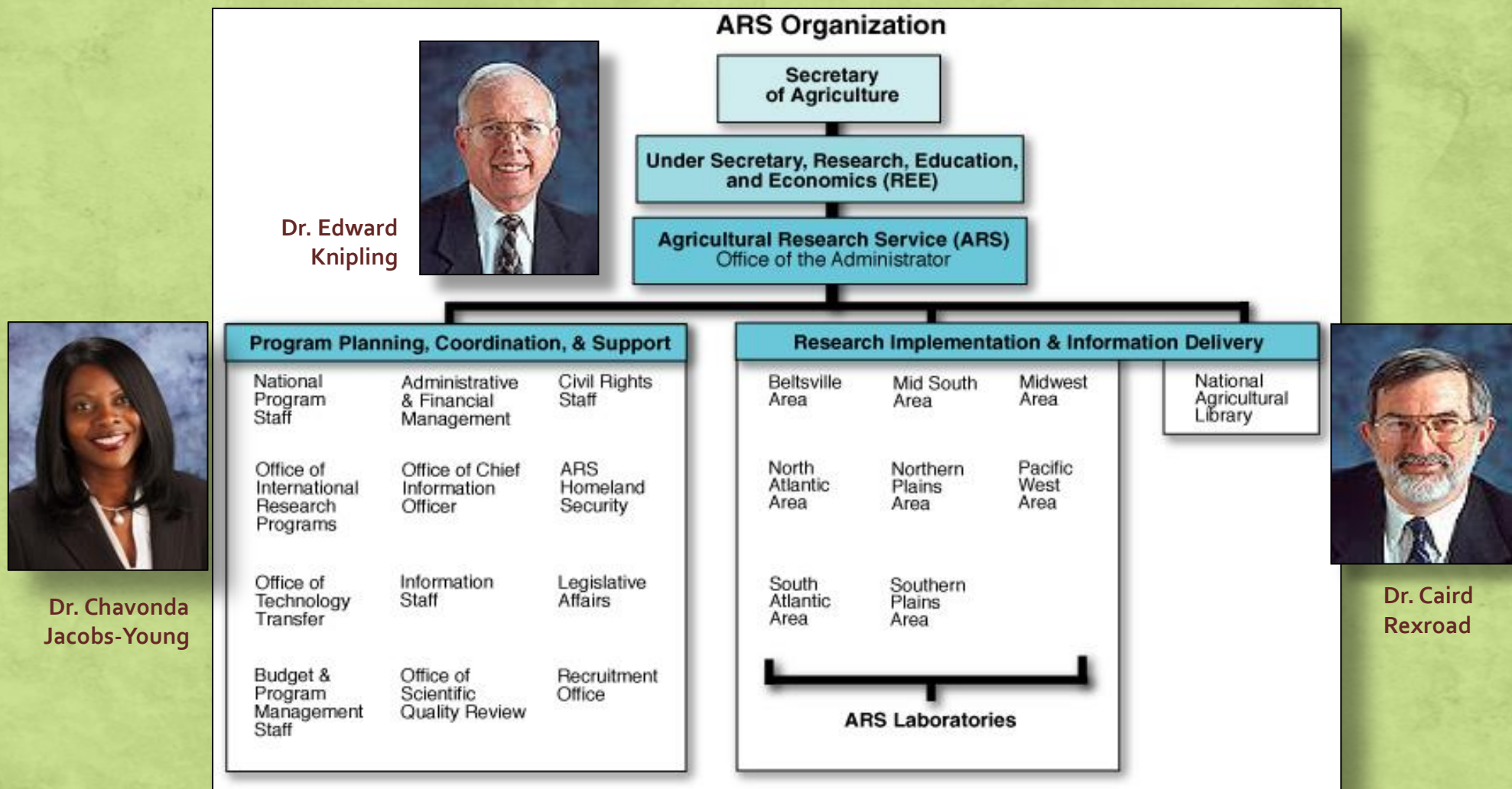
- 7,000 employees,  
1,800 Ph.D. scientists
- \$1.1 billion annual  
budget
- 1,000+ research projects

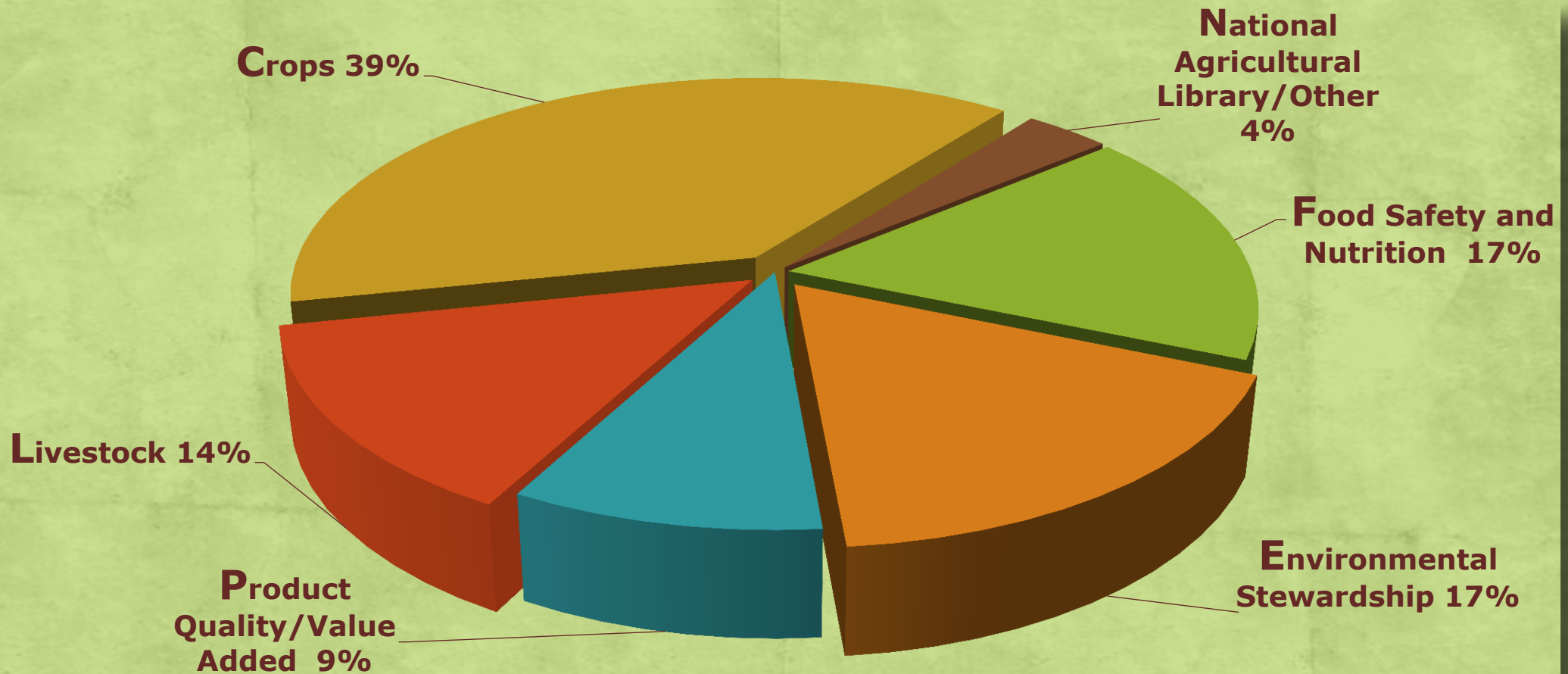


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# ARS Leadership





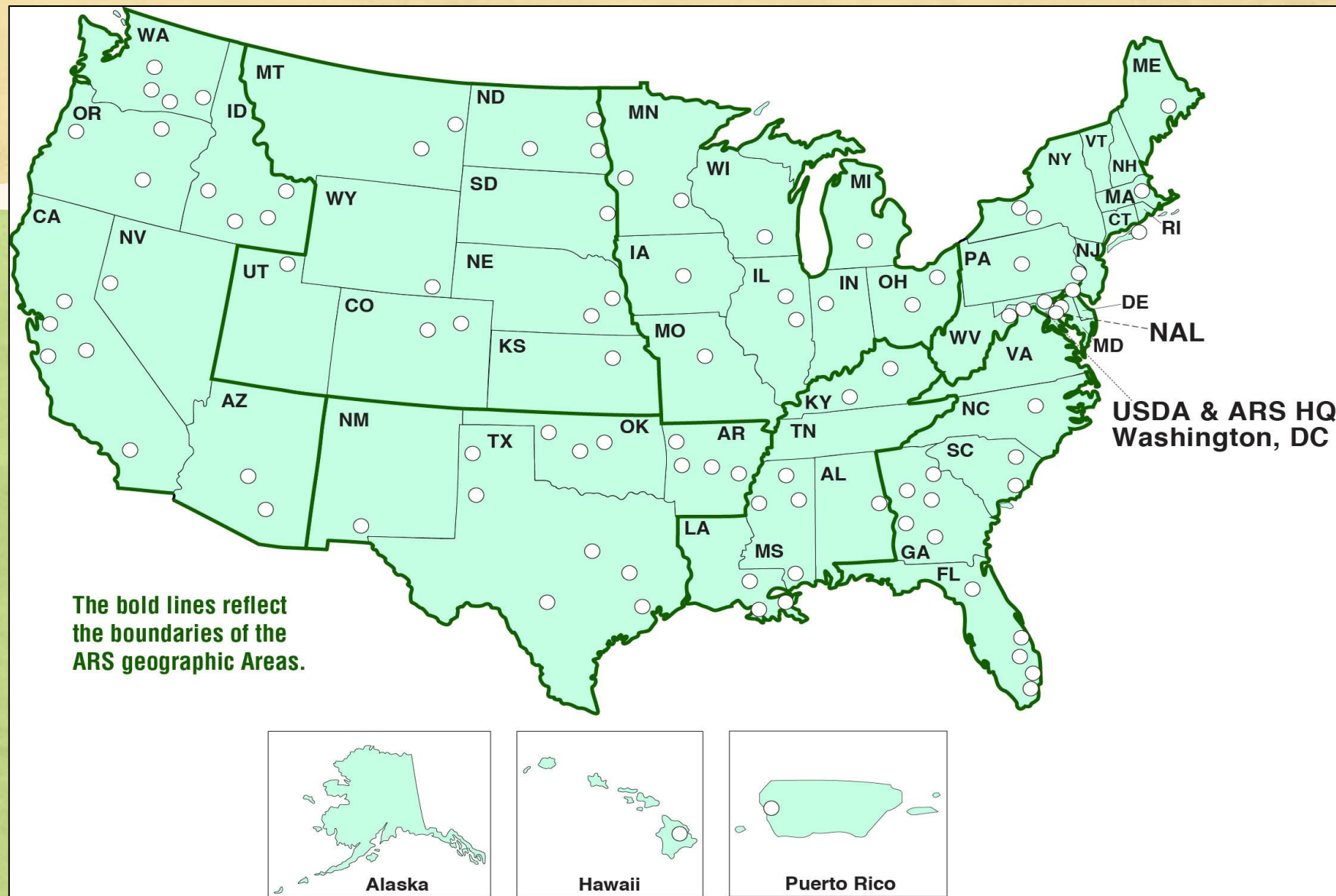
# ARS Program Distribution



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ARS research facilities are in about 90 U.S. locations and in Argentina, Australia, China, and France.



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# ARS National Programs

## Animal Production and Protection

- Food Animal Production [NP 101]
- Animal Health [NP 103]
- Veterinary, Medical, and Urban Entomology [NP 104]
- Aquaculture [NP 106]

## Nutrition, Food Safety, and Quality

- Human Nutrition [NP 107]
- Food Safety (animal and plant products) [NP 108]
- Quality and Utilization of Agricultural Products [NP 306]

## Natural Resources and Sustainable Agricultural Systems

- Water Availability and Watershed Management [NP 211]
- Climate Change, Soils, and Emissions [NP 212]
- Bioenergy [NP 213]
- Agricultural and Industrial Byproducts [NP 214]
- Pasture, Forage, and Rangeland Systems [NP 215]
- Agricultural System Competitiveness and Sustainability [NP 216]

## Crop Production and Protection

- Plant Genetic Resources, Genomics and Genetic Improvement [NP 301]
- Plant Diseases [NP 303]
- Crop Protection and Quarantine [NP 304]
- Crop Production [NP 305]
- Methyl Bromide Alternatives [NP 308]



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# ARS Research



Checking lesquerella for seed set in Arizona.

- Farm-to-table research scope
- Information and technology transfer
- Administration and stakeholder priority setting process
- International collaborations



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# ARS Customers and Research Partners

- USDA and other Federal Agencies
- State Agencies
- Universities
- Producers (farmers, growers, and ranchers)
- Commodity and Trade Organizations
- International Organizations
- Non-governmental Organizations (NGOs)
- Private Corporate and Entrepreneurial Sectors
- Consumers



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# The National Institute of Food and Agriculture (NIFA)

Agricultural science at NIFA integrates research, education, and extension to ensure that ground-breaking research discoveries go beyond the laboratory.

- \$1.3 billion annual budget.
- 109 partner universities and institutions.
- 350 employees.



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A farm near Klingerstown, Pennsylvania.





- Food Security and Hunger
- Sustainable Energy
- Food Safety
- Climate Change

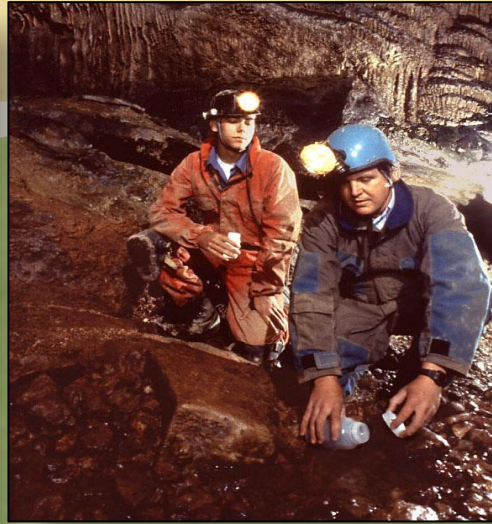
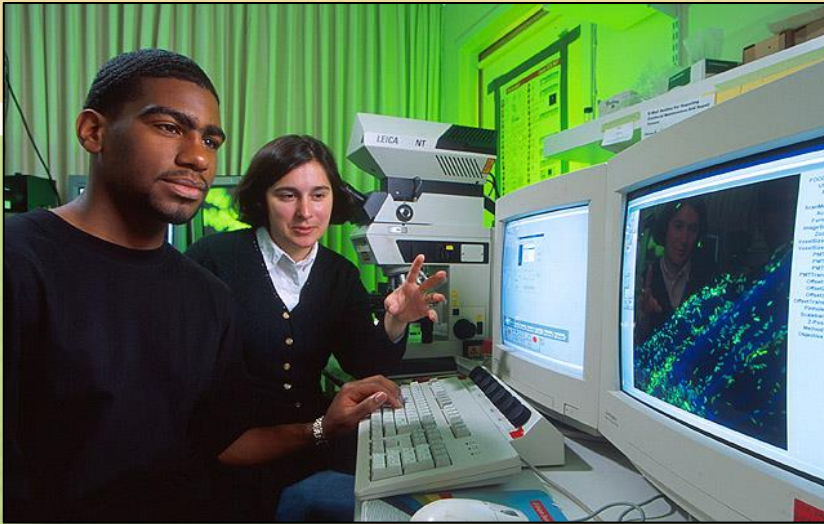
# Our Challenges for the Future



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# Meeting the Future Challenges at ARS



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# Training the Next Generation

## ARS involvement in training and mentoring – 2012

STEP/SCEP	1,093 (~41 SCEP)
Graduate Students	702
Undergraduate Students	1,002
Post-Docs	335
Adjunct Appointments	878
Scientists serving as Advisors	659



Sorting aquatic insects for biological monitoring of water quality In Florida.



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# ARS/1890 University Collaborations



Processing soil moisture samples in Alabama.

- Centers of Excellence
- Specific Cooperative Agreements
- Capacity Building Grants
- USDA/1890s Scholars Program
- Student Internships



# ARS and 1890 Research Cooperation

- Biologically based technologies for areawide control of thrips and migratory Lepidoptera (cactus moth)
- Developing new and improved ornamental trees and shrubs for the nursery industry
- Evaluating animal waste management strategies for reducing greenhouse gas emissions in conservation tillage systems



FAMU student identifies whiteflies, tiny insects that spread the silver-leaf disease.



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# ARS and 1890 Research Cooperation

[continued]



Students sample blood from hybrid striped bass grown on diets containing high levels of flax oil and probiotics.

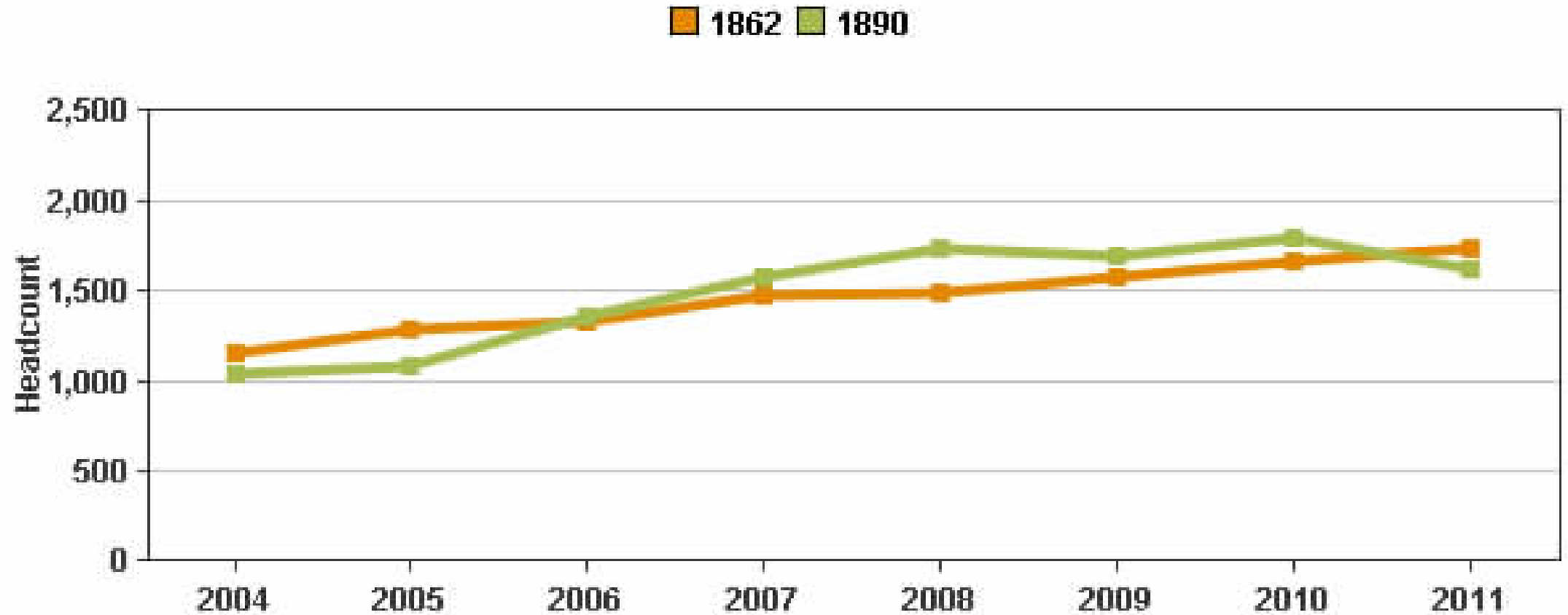
- Developing fish feeds that use alternative proteins and oils as replacements for fishmeal and fish oil
- Developing strategies for controlling insects problematic in nursery settings (e.g., fire ants, tree borers, Japanese beetles)
- Mentoring Masters degree students in topics related to food processing and food safety



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## African-American Undergraduate Enrollment in Agriculture Programs at Land-Grant Universities



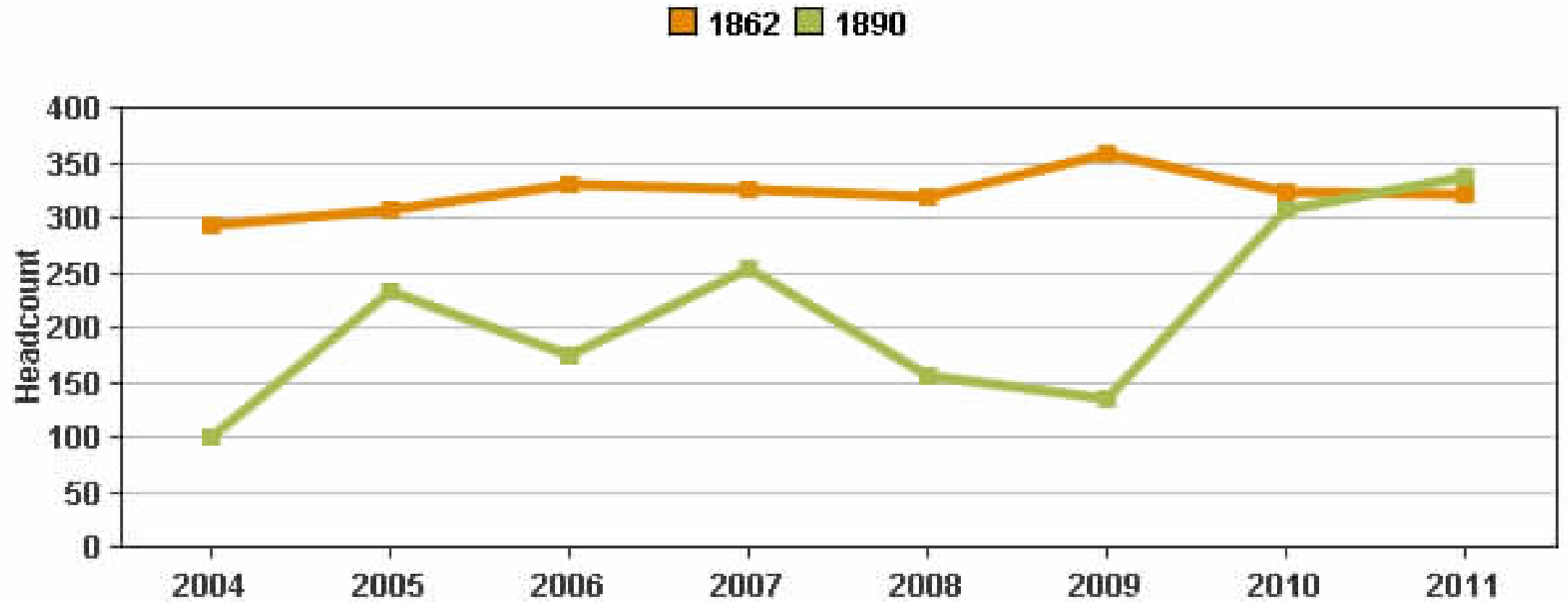
SOURCE: The USDA Food and Agricultural Education Information System (FAEIS)



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## African-American Graduate Enrollment in Agriculture Programs at Land-Grant Universities



SOURCE: The USDA Food and Agricultural Education Information System (FAEIS)



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# USDA Pathways Programs

The U.S. Department of Agriculture offers different pathway opportunities for students and recent graduates to work in the agricultural, science, technology, math, environmental, management, business and many other fields.

- USDA Internship Program
- USDA Recent Graduates Program
- USDA Presidential Management Fellows Program

*Questions regarding any of the three USDA Pathways Programs can be directed to:*

**Carol Scott**

USDA's Pathways Officer

Office of Human Resources Management

[Carol.Scott@dm.usda.gov](mailto:Carol.Scott@dm.usda.gov)



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# ARS Employment Opportunities

## Scientist Positions

Includes all managerial positions requiring a scientific background, research scientists and support scientists vacancies.

## Post-doc Research Associate Positions

Includes temporary, up to 2 years in duration, post doctoral research associate positions for Ph.D. graduates in the life, physical and engineering sciences.

## Administrative, Clerical, and Trades Positions

Includes all administrative, clerical support, trades and scientific technical positions.



Measuring arsenic levels in water samples from the eastern shore area of Maryland.



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# ***Leading America towards a better future through agricultural research and information.***



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