



National Program 216 Agricultural System Competitiveness & Sustainability Workshop

February 22, 2012

Thank you to the following Area Directors for their continued support, time, and effort:

Dr. Joseph Spence, Beltsville Area
Dr. Edgar King, Mid South Area
Dr. Laurence Chandler, Mid West Area
Dr. Dariusz Swietlik, North Atlantic Area
Dr. Michael McGuire (Acting), Northern Plains Area
Dr. Andrew Hammond, Pacific West Area
Dr. Deborah Brennan, South Atlantic Area
Dr. Dan Upchurch, Southern Plains Area





United States Department of Agriculture
Research, Education, and Economics

National Program 216 Agricultural System Competitiveness & Sustainability Workshop

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Thank you to the following Workshop Coordinators for their hard work, time, and effort:

Dr. Michel Cavigelli, Beltsville Area
Dr. Allen Torbert, Mid South Area/South Atlantic Area
Dr. Jerry Hatfield, Mid West Area
Dr. Kathy Soder, North Atlantic Area
Dr. Michael McGuire, Northern Plains Area
Dr. Maureen Whalen, Pacific West Area
Dr. Dan Upchurch, Southern Plains Area





United States Department of Agriculture
Research, Education, and Economics

Agricultural Research Service



Research Planning, Implementation, and Review in USDA-ARS National Programs

Steven Shafer

Associate Administrator (Acting)

Deputy Administrator

Natural Resources and Sustainable Agricultural Systems

Office of National Programs

National Program 216 Workshop

February 22, 2012



Benefits of Agricultural Research

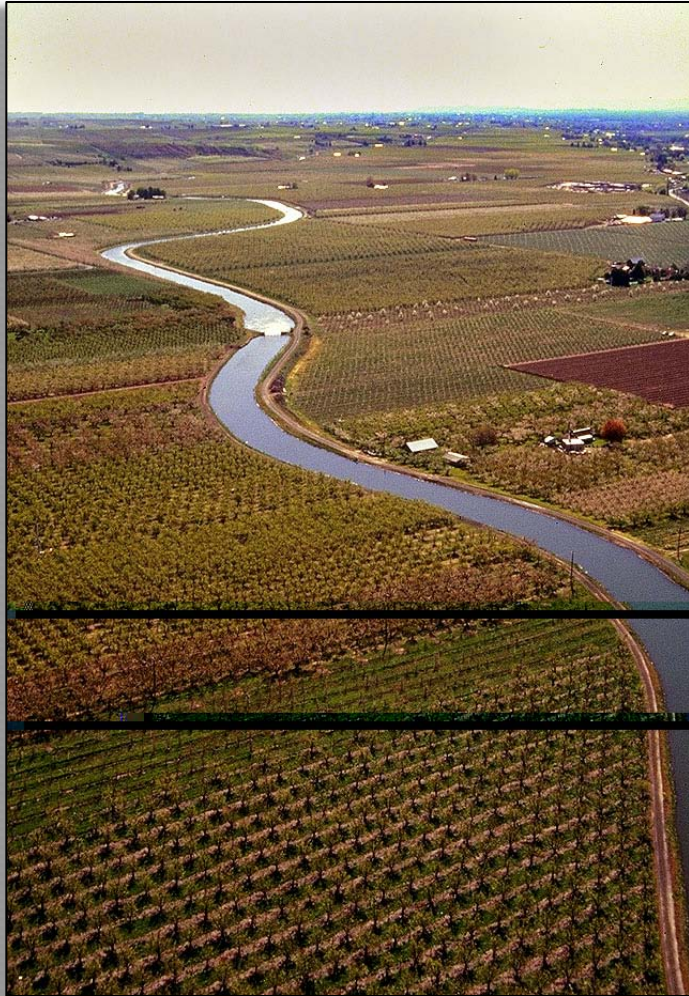
- Increased productivity
- Lower food prices
- Increased trade
- Improved quality of life



Research has also helped producers address:



- **Natural resource concerns.**
- **Changing market conditions.**
- **New technology introductions.**
- **Solving major problems.**



Success of Agricultural Research

- Feeds a population in excess of 6 billion
- Uses only 0.2 ha (0.5 ac) of land per person

Agricultural Concerns

- Intensive agriculture impacts the resource base.
- Reduces capacity and sustainability.

**Secretary
Deputy Secretary**

**Chief Financial
Officer**

**Inspector
General**

General Counsel

**Executive
Operations**

**Director of
Communications**

**Chief
Information
Officer**

**Under Secretary for
Natural Resources and
Environment**

Forest Service
Natural Resource
Conservation Service

**Under Secretary for
Farm and Foreign
Agricultural Services**

Farm Service Agency
Foreign Agricultural
Service
Risk Management
Agency

**Under Secretary for
Rural Development**

Rural Utilities Service
Rural Business-
Cooperative Service
Rural Housing Service

**Under Secretary for
Food, Nutrition, and
Consumer Services**

Food and Consumer
Service

**Under Secretary for
Food Safety**

Food Safety and
Inspection Service

**Under Secretary for
Research, Education
and Economics**

Agricultural Research
Service
National Institute of Food
and Agriculture
Economic Research
Service
National Agricultural
Statistics Service

**Assistant Secretary for
Congressional
Relations**

Office of Congressional
Relations
Office Intergovernmental
Relations

**Under Secretary for
Marketing and
Regulatory Programs**

Agricultural Marketing
Service
Animal and Plant Health
Inspection Service
Grain Inspection, Packers
and Stockyards
Administration

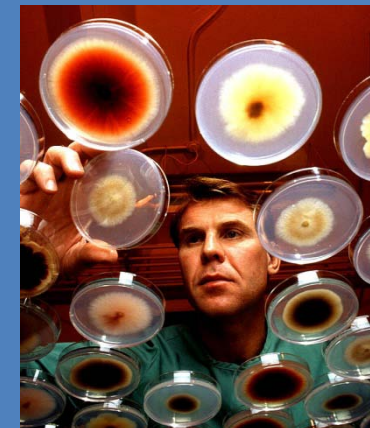
Assistant Secretary for Administration

Office of Civil Rights
Human Resources Management
Office of Operations
Administrative Law Judges
Judicial Officer
Board of Contract Appeals
Property and Procurement Management
OSDBU

Overview of the Agricultural Research Service

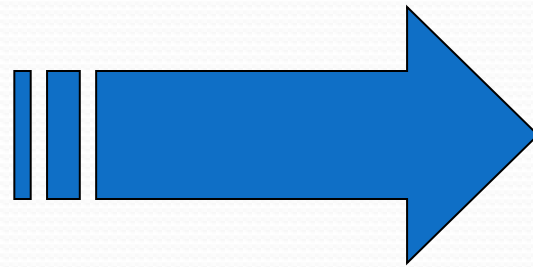


- In-house research arm of USDA
- Farm-to-table, molecules-to-watersheds research scope
- 20 National programs
- ~800 research projects
- Partnerships with universities and industry
- ~8,200 employees
- ~2,200 scientists and postdocs
- 90+ locations (4 overseas)
- \$1.1 billion annual budget
- Additional funds in competitive grants, CRADAs, other research agreements



Providing a *scientific foundation* for decision making in agriculture

“Our mission is to conduct research to develop and transfer solutions to agricultural problems of high national priority and provide information access and dissemination to . . .”



**Mission
Driven
Research**

Ensure high-quality, safe food and other products



Assess the nutritional needs of Americans

Sustain a competitive agricultural economy



Enhance the natural resource base and the environment

Provide economic opportunities for rural citizens, communities, and society as a whole



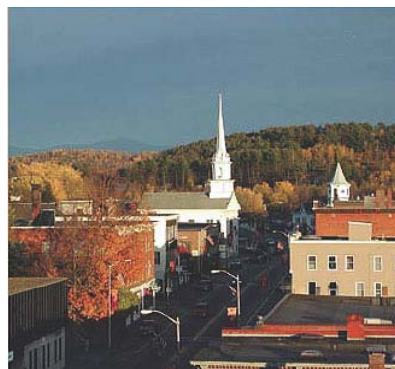
ARS Strategic Goals

- Adaptation of agriculture to climate change.
- Improve the safety of America's food supply.
- Ensure that all of America's children have access to safe, nutritious, and balanced meals.
- Increase global food security through improved systems for sustainable agricultural productivity.
- Contribute to US bioenergy needs through development of improved feed stocks, feed stock production systems, and improved conversion technologies.



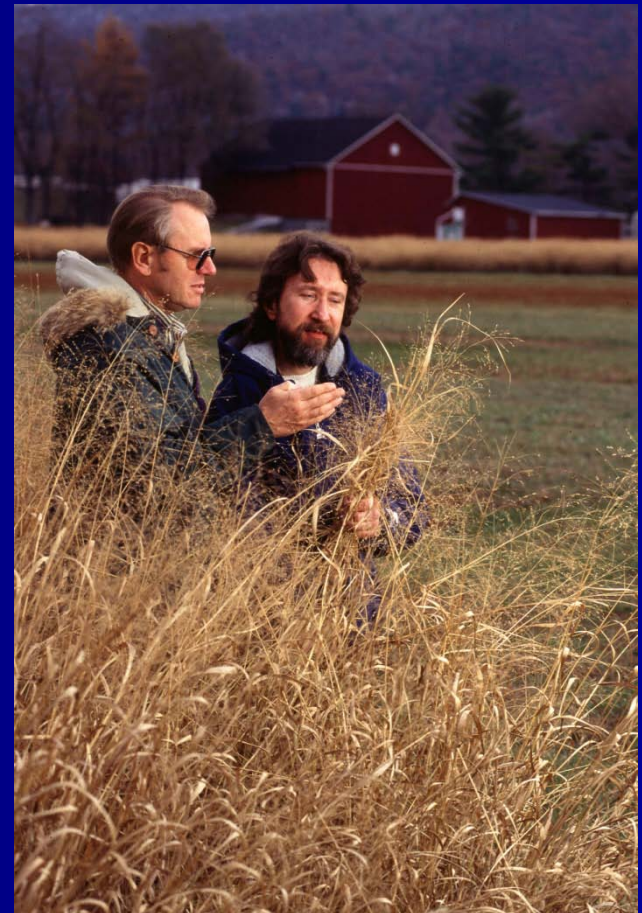
USDA Strategic Goals

- Assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving.
- Ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources.
- Help America promote sustainable agricultural production and biotechnology exports as America works to increase food security.
- Ensure that all of America's children have access to safe, nutritious, and balanced meals.

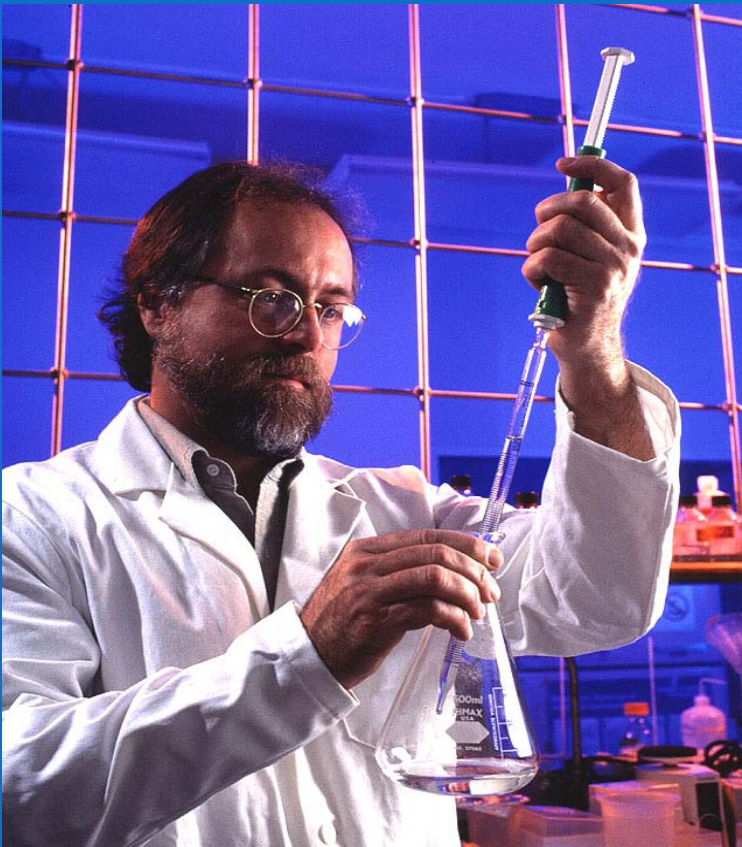


ARS Research Priorities

- Climate Change
- Food Safety
- Children's Nutrition/Health
- Global Food Security
- Bioenergy



Research Models



- **Investigator Driven**
 - ✓ Typical of Universities
 - ✓ Hired to work in research area
 - ✓ Relevance driven by the investigator
- **Mission Driven**
 - ✓ ARS
 - ✓ Hired to work in a mission area defined by the Agency, based on broad input
 - ✓ Relevance is driven by a complex process of congressional, stakeholder, and scientist input

Research that
Explains



How does ARS coordinate its research and avoid redundancy?

Through National Programs

- A National Program is a set of research projects directed toward **common goals** to solve agricultural problems of high **National priority**.
- National Programs are outcome driven, e.g., “A safer food supply”

ARS National Programs

Program Planning and Evaluation



Vacant
Associate
Administrator

Natural Resources & Sustain. Agric. Sys. (~20%)



Steven
Shafer

- Water Availability and Watershed Management
- Global Change, Soil and Emissions
- Bioenergy and Bioproducts
- Agricultural Waste and Byproduct Utilization
- Pasture, Forage and Range Land Systems
- Agricultural System Competitiveness and Sustainability

Crop Production & Protection (~35%)



Kay
Simmons

- Plant, Microbial & Insect Germplasm Conservation & Development
- Plant Biological & Molecular Processes
- Plant Diseases
- Crop Protection & Quarantine
- Crop Production
- Methyl Bromide Alternatives

Animal Production & Protection (~15%)



Steven
Kappes

- Food Animal Production
- Animal Health
- Arthropod Pests of Animals and Humans
- Aquaculture

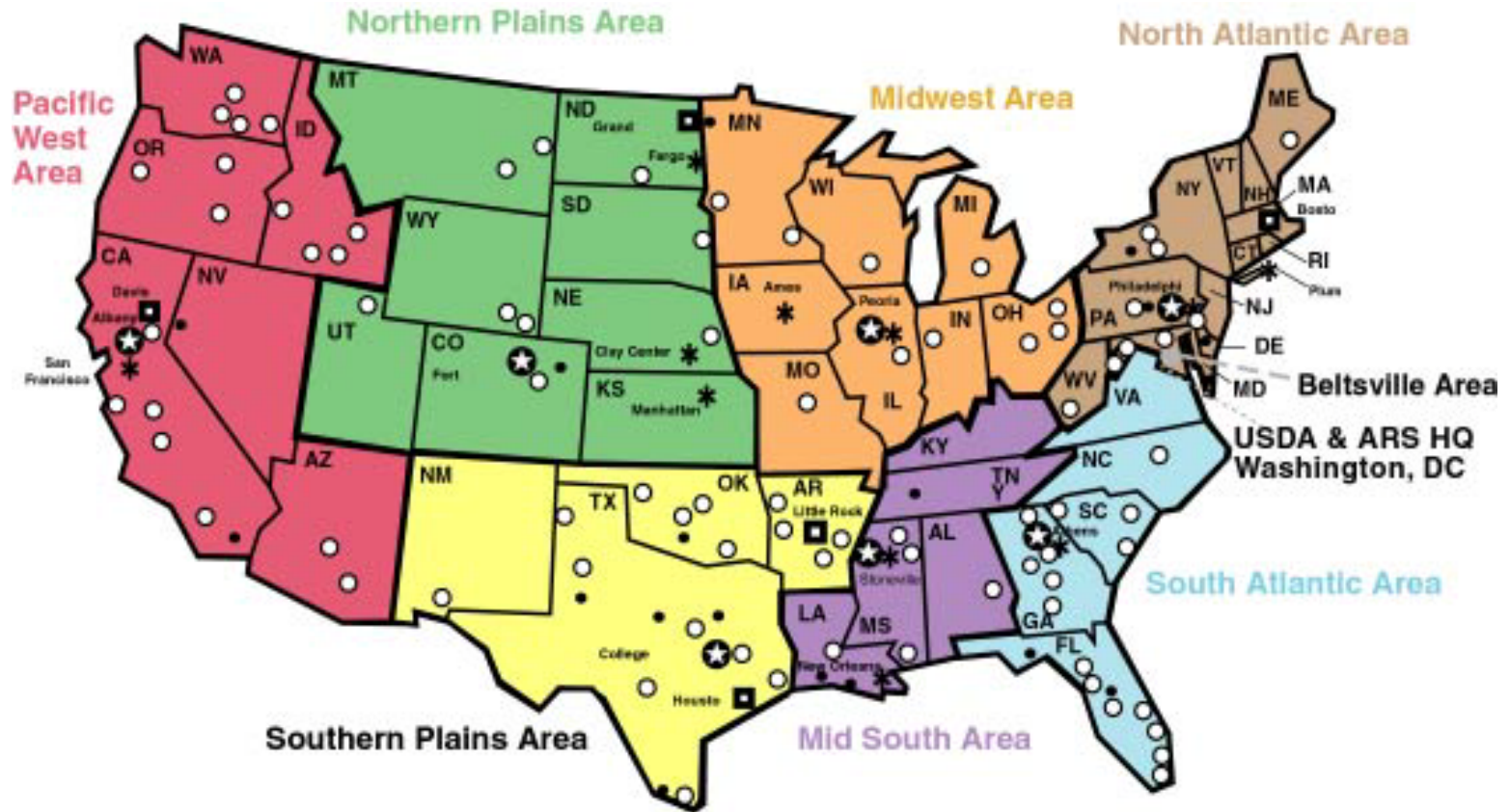
Nutrition, Food Safety & Quality (~30%)



Molly
Kretsch

- Human Nutrition
- Food Safety
- New Uses, Quality & Marketability of Plant & Animal Products

ARS Locations



- ⊛ Area
- * Research Centers
- Human Nutrition Centers
- Research Locations
- Research Worksites

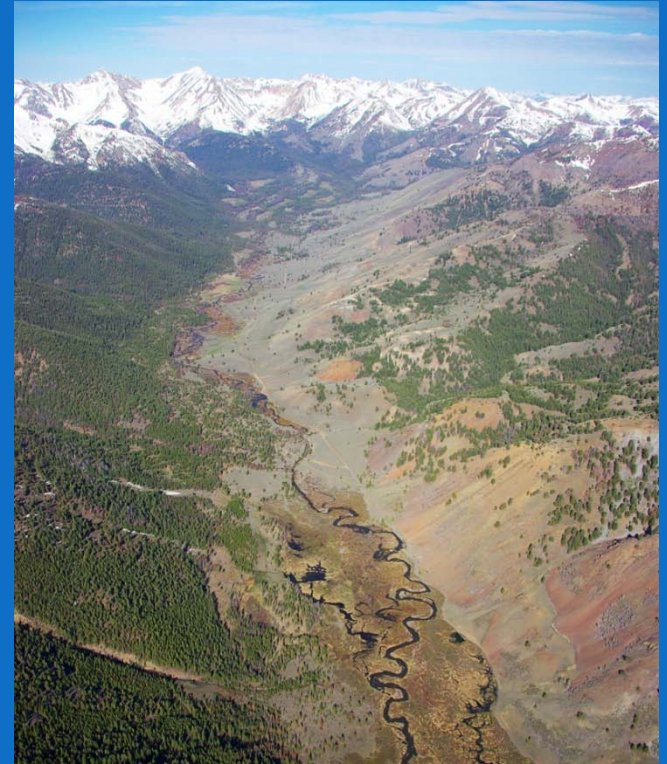
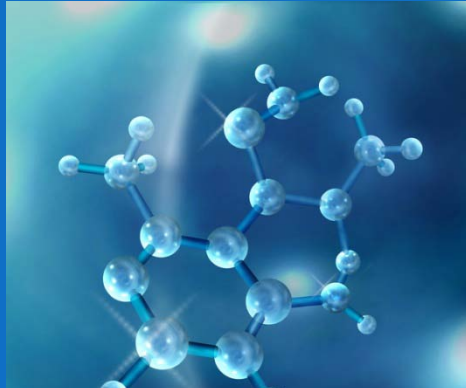


ARS Research Program Management

- Role of the Office of National Programs
 - Research relevance
 - Program coordination
 - Program impact
- Role of the Area Offices
 - Prospective quality assurance
 - Project and resource management

Comprehensive Research and Development Programs

- Apples to Zucchini
- Molecules to Watersheds



Benefits of National Programs



Coordination

Communication

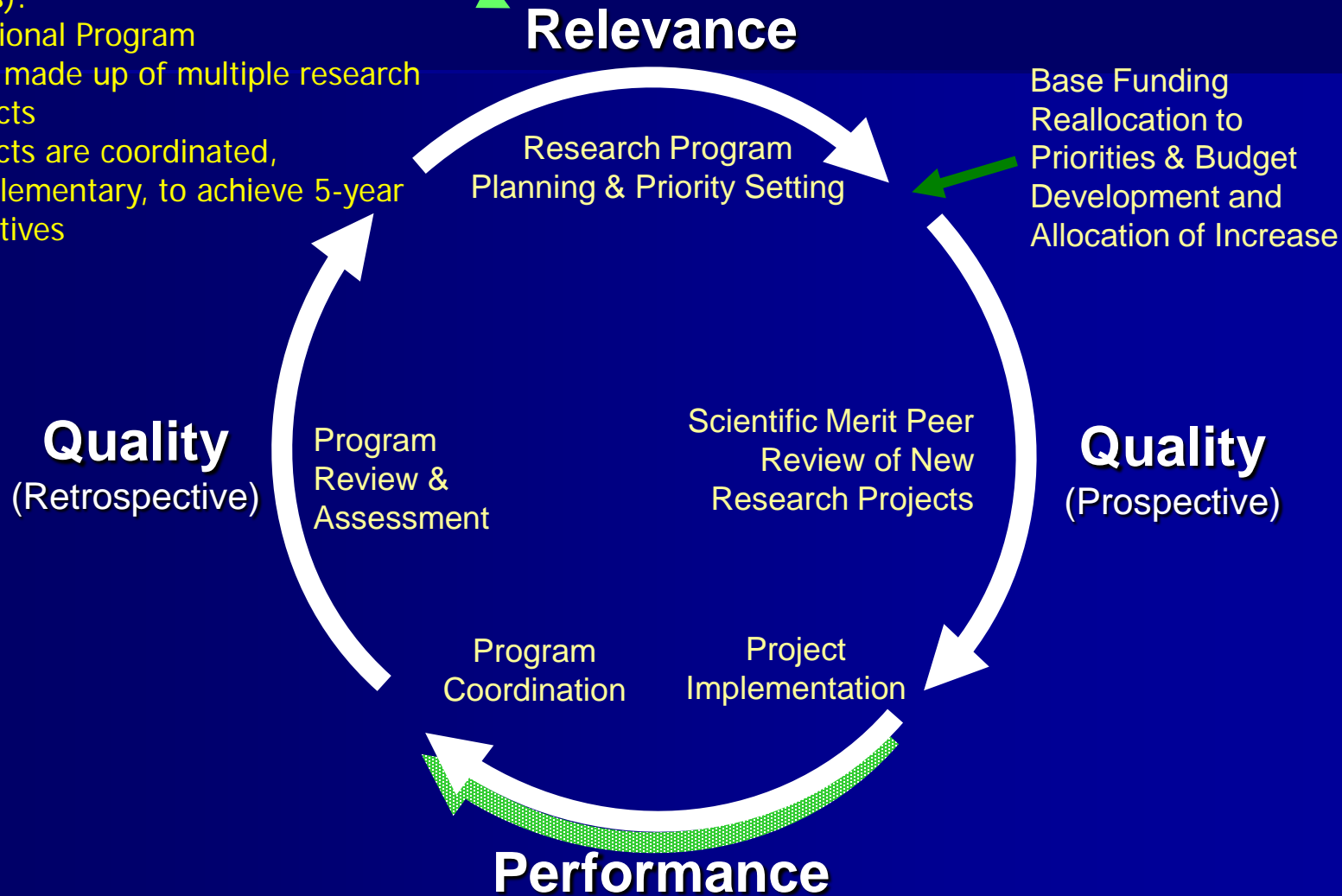
Efficient use of resources

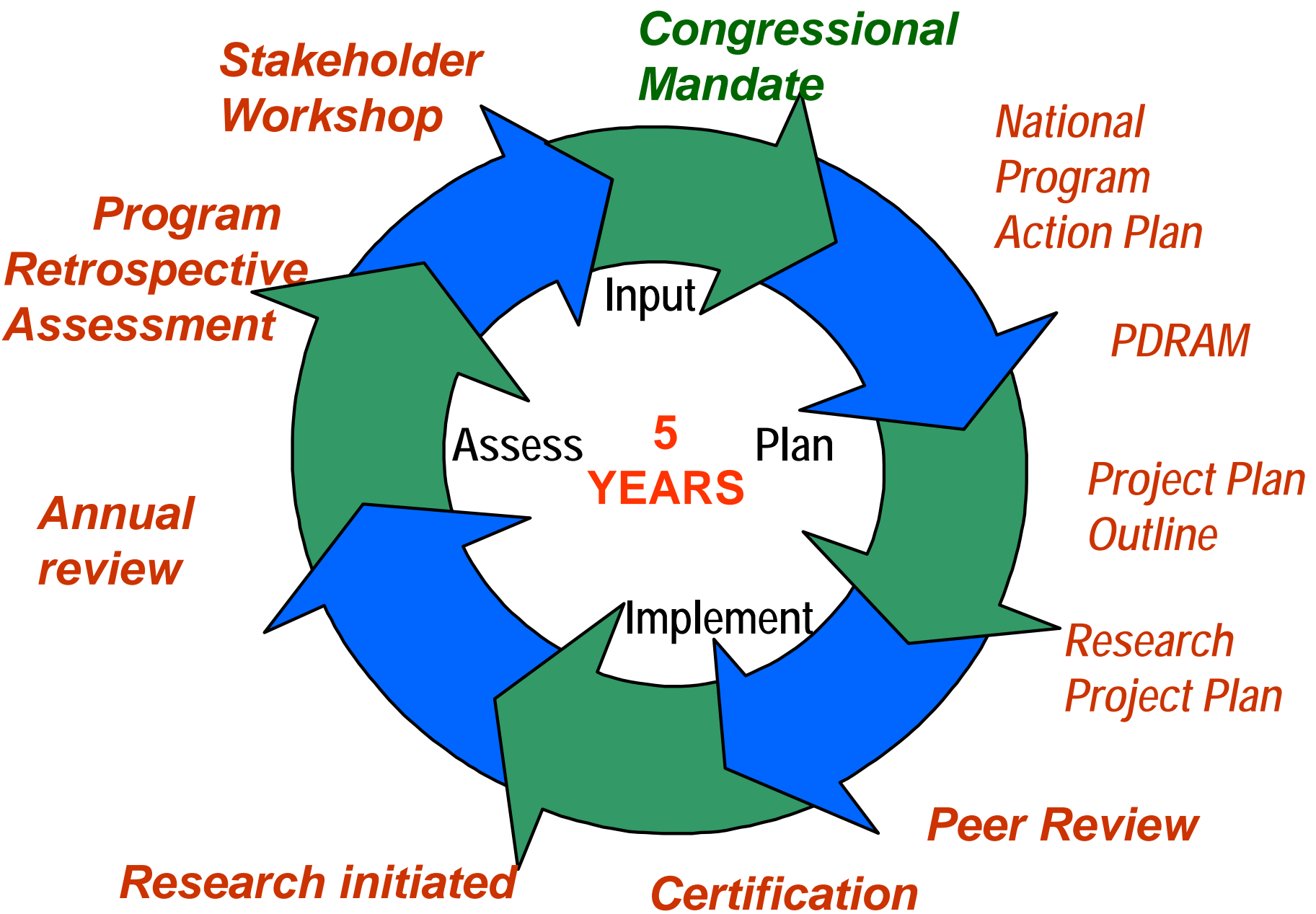
Results

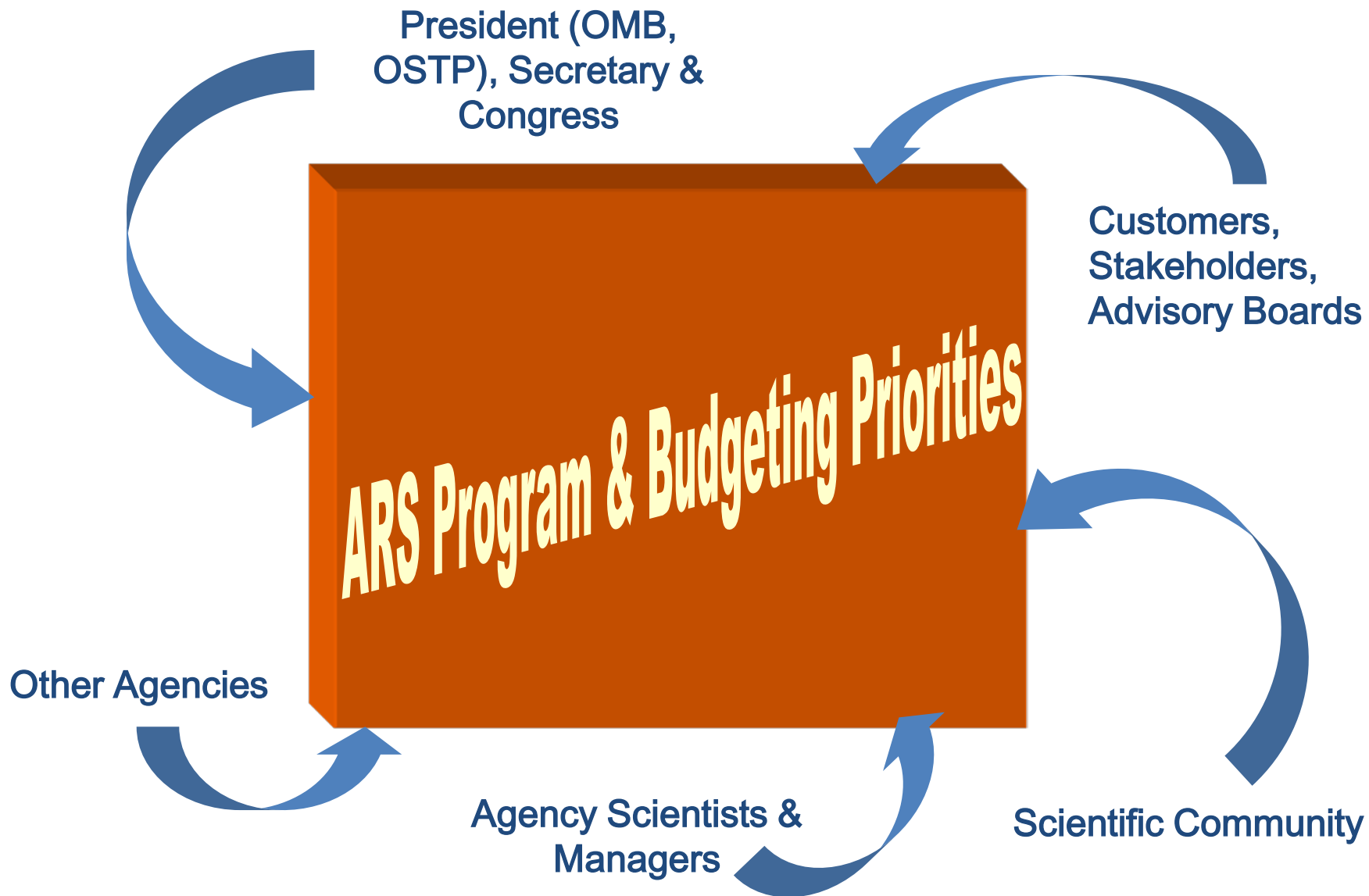
ARS National Program Cycle

Basic unit of Relevance planning (synthesis of inputs to determine priorities):

- a National Program
- NP is made up of multiple research projects
- Projects are coordinated, complementary, to achieve 5-year objectives







Drivers of Research Direction

- Congress
- Secretary of Agriculture
- Office of Management and Budget
- Office of Personnel Management
- Homeland Security
- Public Stakeholders
- Public perception
- Foreign affairs.....



...etc.



ARS Partners In Research

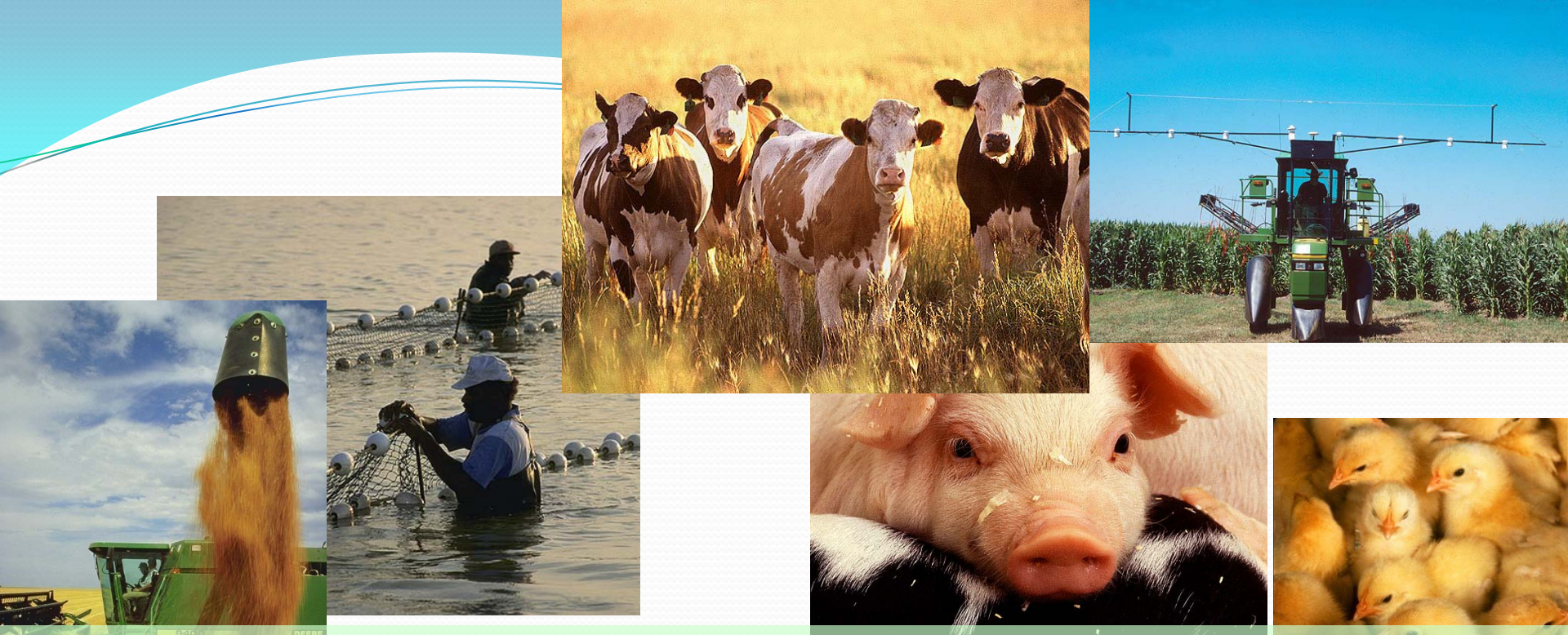
- USDA
- Other Government Agencies
- State Universities
- International Organizations
 - U.N. Food and Agriculture Organization
 - World Bank
 - Consultative Group of International Agricultural Research
 - Tropical Ag Research & Higher Ed Center
 - U.S./Israel BARD



ARS Customers & Stakeholders

- Action and Regulatory Agencies
- Producers—Farmers and Ranchers
- Industry
- Non-governmental Organizations (NGOs)
- State and Local Governments
- Consumers





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

