Enhancing Agricultural Research Through Partnerships

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ARS is the in-house science research arm of USDA
ARS MISSION

Conduct research to:

- 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 to rural citizens and society as a whole.
ARS Research Priorities

- Emerging Diseases and Invasive Species
- Homeland Security
- Biotechnology & Genomics
- Genetic Resources
- Biobased Products & Bioenergy
- Human Nutrition, Obesity

- Food Safety
- Natural Resources
- Nursery Crops, Floriculture, Aquaculture
- Electronic Information Dissemination
- Systems Integration
ARS Profile

- 2,500+ scientists and post docs
- 6,500+ other employees
- 100+ laboratories
- $1.1 billion annual budget
- Partnerships with universities and industry
- International collaborations

- In-house science research arm of USDA
- Farm-to-table research scope
- Information and technology transfer
- Administration and stakeholder priority setting process
- National Programs
- 1,200+ projects
ARS Partners In Research

- USDA
- Other Government Agencies
- State Universities
- Private Organizations
- 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
Cooperative Research and Development Agreement (CRADA) program

- The primary tool linking government and industry researchers
- Authorized under the Federal Technology Transfer Act of 1986
- Allows federal labs and businesses to form partnerships that help move new technologies to the marketplace
- ARS and companies work together to conduct research consistent with the agency's mission
- A CRADA allows the company the first right to negotiate a license to inventions emerging under the agreement.
- Cooperative research helps foster American businesses and enhances global and domestic competitiveness
- ARS has seven-geographically based Technology Transfer Coordinators who negotiate CRADA agreements
Material Transfer Agreements

- Used when ARS wants to provide material to someone outside of ARS, but maintain control and avoid public disclosure.

- Used to bring in material to ARS from outside parties for research purposes.

- States specifically what the material is, what it can be used for, restricts giving it to a third party without permission, and prohibits commercial use.
Confidentiality Agreements

- Used by ARS to share certain confidential information with a company to determine mutual interest to develop CRADA and/or patent license.
- To ensure that a company will not disclose or use the confidential information for any other purposes than determining mutual interest.
- In most cases, a confidentiality agreement can be entered into by the ARS scientist and the respective company official.
- Confidentiality Agreements between ARS and the private sector remains in effect for two years.
Memorandums of Understanding

- Broad agreements that require a mutual interest in objectives by both parties
- Do not require mutual contributions of personal or financial resources by either party
- Essentially an agreement to coordinate activities and outline mutually acceptable goals and procedures, leading to mutual decisions
- Transfer of resources (money, people etc.) is NOT done with an MOU
Trust Fund and Reimbursable Cooperative Agreements

- Both allow companies to directly support an ARS project or program.

- Trust Fund Cooperative Agreement
  - Involves cooperative research between ARS and another party where ARS is paid in advance to conduct research.
  - May also require the private sector partner to share in the cost of a research project conducted by ARS.
  - Can also be used to allow private sector partners the use of ARS laboratory facilities, which in some cases may require a formal lease.
Trust Fund Cooperative Agreement

- The relationship is with an individual or for-profit organization.
- ARS will hire a post-doc or temporary/term employee(s) or purchase major equipment or supplies necessary to conduct the research work.
- Under these circumstances, ARS requires all funds up front to pay salary costs before making a commitment to hire personnel or prior to incurring costs for purchasing equipment or supplies.
- ARS requires payment in advance for work to be performed. An annual advance payment schedule should be included in the agreement.
Reimbursable Cooperative Agreements

- A Reimbursable Cooperative Agreement is similar to a Trust Fund in arrears.
- The difference, however, requires the private sector partner to pay ARS.
- Representatives from the private sector partner and ARS should be actively engaged in the cooperative effort and mutually contribute resources to the research effort.
- Mutual interest in the objectives should also be specifically stated.
When Are Reimbursable Cooperative Agreements Used?

- ARS has an ongoing, long-term relationship with the cooperator, such as a specific State or non-profit organization.
- The working relationship provides a good idea that the organization is reliable and support will be forthcoming.
ARS International Research

- Office of International Research Programs (OIRP)
- ARS Overseas Laboratories:
  - Montpellier, France
  - Brisbane, Australia
  - Buenos Aires, Argentina
  - Panama City, Panama
  - Beijing, China
- Bilateral Research (e.g., S. Korea, Israel, Mexico, Brazil, South Africa, Japan, India, Europe, Canada, China, Australia)
- Cooperate with International Research Centers
- International Conferences and Meetings
How Do We Meet Our Mission?

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 have 110-130 projects
- About 22 different national programs
- National Programs are outcome driven, e.g., “A safer food supply”
### ARS National Programs

<table>
<thead>
<tr>
<th>Natural Resources &amp; Sustainable Agricultural Systems (~20%)</th>
<th>Crop Production &amp; Protection (~35%)</th>
<th>Animal Production &amp; Protection (~15%)</th>
<th>Nutrition, Food Safety &amp; Quality (~30%)</th>
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</thead>
<tbody>
<tr>
<td>• Water Quality &amp; Management</td>
<td>• Plant Genetic Resources, Genomics, and Genetic Improvement</td>
<td>• Food Animal Production</td>
<td>• Human Nutrition</td>
</tr>
<tr>
<td>• Soil Resource Management</td>
<td>• Plant Biological &amp; Molecular Processes</td>
<td>• Animal Health</td>
<td>• Food Safety</td>
</tr>
<tr>
<td>• Air Quality</td>
<td>• Plant Diseases</td>
<td>• Arthropod Pests of Animals and Humans</td>
<td>• New Uses, Quality &amp; Marketability of Plant &amp; Animal Products</td>
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<tr>
<td>• Global Change</td>
<td>• Crop Protection &amp; Quarantine</td>
<td>• Aquaculture</td>
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<td>• Rangeland, Pasture &amp; Forages</td>
<td>• Crop Production</td>
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<td>• Manure &amp; Byproduct Utilization</td>
<td>• Methyl Bromide Alternatives</td>
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<td>• Integrated Agricultural Systems</td>
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<td>• Bioenergy and Energy Alternatives</td>
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**Total Percentages:**
- Natural Resources & Sustainable Agricultural Systems: 20%
- Crop Production & Protection: 35%
- Animal Production & Protection: 15%
- Nutrition, Food Safety & Quality: 30%
Sources of Input to ARS Research Program Planning and Priority Setting Process*

Executive Branch (OMB, OSTP, USDA, other Federal agencies) → Congress → ARS Program & Budgeting Priorities → Agency Scientists & Managers → Scientific Community

Customers, Partners, Stakeholders, & Advisory Boards → ARS Program & Budgeting Priorities

* Basic Unit of relevance planning (synthesis of inputs to determine priorities) is a National Program each of which is made up of multiple research projects that contribute in a coordinated and complementary way to achievement of 5-year objectives.
Information & Technology Transfer

- Scientific publications, conferences, workshops, field days
- Public germplasm releases
- National Agricultural Library - Departmental resource for agricultural and related information.
- Office of Technology Transfer - CRADAs, patents, and licensing with industry and other partners.
- Information Staff - ARS public affairs, Ag Research Magazine, news releases, exhibits, web page.
Budget Issues

- Administration’s USDA/ARS FY09 budget proposes a total of $146 million adjustment
  - 7.5% reductions and 5.5% redirections
- Proposes an increase of $3.25 million for Agricultural Genomics, germplasm, and Collections
  - from redirection of existing research projects
- Senate already “marked-up” the Administration’s FY09 ARS budget and restored many of the reductions proposed
- House not yet completed its “mark-up” of the ARS budget
- FY09 budget currently continuing resolution authorizing spending at the FY08 level until early March 2009
- An “omnibus spending bill” will be introduced in January that would fund USDA for the remainder of FY09