Agricultural Research Programs

The mission of Purdue Agricultural Programs is to serve the citizens of Indiana, the United States, and the world through:

Discovery that expands the realm of knowledge and develops solutions to problems relevant to the agriculture, food, health, and natural resources sectors.
Vision

Purdue University will be the preeminent institution, leading the world in discovery to advance agriculture, food and natural resources

ARP Funding

- State: 34%
- Federal Appropriations: 9%
- Federal Grants: 32%
- State/local Grants: 5%
- Industry/Foundations: 9%
- Gifts: 9%
- Sales: 2%
ARP Research Expenditures

Constraints and Challenges

- Accountability
- Scholarship
- Integration
- Capital Resources
  - Equipment
  - Infrastructure/Renovations
- Basic versus Applied
  - NRC/Mission/Translational
- Technology Transfer
- Disciplinary Balance
- Retirements

- Recruitment/Retention
- Startups
- Faculty Development
- Diversity
- Relevance
- Federal Budget
- Training Relevance
- Support Personnel
- Monetary Resources
- Technology Training
National Funding Trends

- NIH, NSF, and USDA funding is flat or increasing at a rate barely approaching inflation
- Agencies seek to fund large, interdisciplinary projects
- Increased focus on development of human capital as well as problem solving (broader impacts)

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<tr>
<th>Agency</th>
<th>2006 Budget</th>
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<tbody>
<tr>
<td>HL Security</td>
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<td>NASA</td>
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Conundrum

Increasing Demands

Budget Cuts
• Ensure food safety and health
• Provide information and knowledge to improve environmental stewardship
• Improve economic return to agricultural producers
• Strengthen our communities and families
• Develop new and more competitive crop production practices and products and new uses for diverse crops and novel plant species
• Lessen the risks of local and global climatic change on food, fiber, and fuel production.
• Develop new and more competitive animal production practices, products, and uses

Planned programs for Indiana:
• Natural resources and environment
• Plants and their systems
• Animals and their systems
• Agricultural, natural resources, and biological engineering
• Food/non-food products
  • Development, processing, quality, and delivery
• Economics, markets and policy
• Human nutrition, food safety, human health and well being
• Family well being
• Youth development
• Economic, community development
ISDA Strategic Plan

- Hardwoods sector
- Agriculturally-derived energy
- Livestock production and local economic development
  - Sound production practices
  - Public understanding
  - Appropriate land use
  - Double pork production
- Science-based regulatory standards
- Diversified farming and value-added opportunities
- Food processing
- Agricultural/trade policy and foreign market opportunities

Opportunities

Strategic Goals for Discovery

- Develop basic knowledge and applied science for Indiana’s agriculture, food, and natural resource industries
- Develop strong fundamental research programs
- Spur economic development by commercializing discoveries
Opportunities

Strategic Goals for Discovery

- Expand interdisciplinary and collaborative efforts in discovery
- Improve capacity to excel in discovery by increasing funding and other resources

- Integrate
  - Multi-state/Multi-institution
- Reinvigorate Tripartite Mission
  - Multi-disciplinary
  - Competitive
- Broaden goals beyond production and efficiency
- Increase inclusiveness
  - Food and fiber production
  - Human and animal health
  - Social and economic health
  - Environmental resource stewardship
  - Positive economic, social, and environmental force
  - Social acceptance of agricultural systems
  - Pharmaceutical, nutritional, and biobased products
Opportunities

University Initiatives

- Discovery Park
  - Nanotechnology
  - Biosciences
  - E-Enterprise
  - Regenstrief
  - Learning
- Energy
- Environment
- Oncology
- Cyber
- Entrepreneurship

Big Science/New Paradigms

- Environmental, economic, and social impact of agricultural innovations
- Fundamental knowledge
- Scale/location of evaluations
- Examples:
  - Cropping systems and greenhouse gases
  - Nutrient leaching/water contamination
  - Traits
  - Nutrition/Obesity/Comparative Medicine
  - Food safety
  - Interactomes, and -omics
  - DHS initiatives
  - Site remediation
  - Animal waste/odor management
  - Bioproducts
  - Economics of environmental cost-benefit
Purdue University is an Equal Opportunity/Equal Access institution.

Environmental Security

Food Security

Energy Security

Health Security

Outreach

Research

Food, Feed, Fiber, Fuel, Refuge

Where are we headed?

PLAN OF WORK

MISSION ORIENTED GRANTS

RAPID RESPONSE TEAMS

COMMON INTEREST GROUPS