A Generational Opportunity for Enhancing Economic Development and Quality of Life

The Role of R&D in Agriculture
Midwestern Agriculture

Midwest is the heart of agriculture:

- Over 1/3 of all farms and acreage
- 8 of top 15 states - total receipts
- Major contributors to several commodities (David Oppedahl’s comments)
Midwestern Natural Resources

- Water
- Tourism
- Forestry
- Bio-economy
- Many other land-based industries
Midwestern Natural Resources

- Water
- Tourism
- Forestry
- Bio-economy

- Think about Communities, Agriculture and Natural Resources
What is at stake?

- Economic development
- Quality of life
Higher Education

- Great return on investment
- Major portion of state budgets
- Recognition of link
  - Research-intensive universities and economic development
  - Michigan and research universities
- Land grant mission
- World grant mission
What is the Land Grant Mission?

- Economic development
- Quality of life
Key Opportunities / Threats

- Bio-based economy (fuel and value-added products)
- Healthy farm economy consistent with sustainable ecosystems
- Avian influenza
- Food, fitness, and health (food for health not just sustenance)
- Sustainable rural economies
Reasons for Enactment

Help food, agriculture, and natural resource producers secure the benefits of:

• improved animal, crop, and forest quantities, qualities, and production efficiencies;

• new/expanded markets;

• new bioproducts and new/improved technologies; and

• sustainable production systems.
Reasons for Enactment

Increase environmental stewardship through:

- improved farm and forest production methods;
- decreased dependence upon chemicals with harmful effects on people and the environment; and
- finding alternative uses for agriculture wastes.
Social Responsibility
Reasons for Enactment

Provide consumers and families with food and fuel cost savings and health improvements through:

- increased food and nutritional value;
- a safe, secure, and affordable food supply;
- new biofuels/bioproducts; and
- the best quality information to enable healthy food choices.
Reasons for Enactment

Boost the economic vitality of rural and urban communities by:

• greatly expanded leadership programs; and

• increased efforts to stimulate entrepreneurship and business development.
Situational Analysis

Between 1970 and 2005:

- U.S. population grew 100 million
- U.S. GDP increased 293%
- Funding at NIH rose by $22.6 billion
- But USDA research funding grew by only $650 million (≈ 1.85% per year)
NIH, NSF, and USDA R&D Funding
F.Y. 1970-2005

(Constant 2000 Dollars, Billions)
CSREES Funding Trends Since F.Y. 1991

Major Research and Extension Programs

(Constant 2000 Dollars, Millions)

- Smith-Lever
- Hatch
- NRI

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<th>Hatch</th>
<th>NRI</th>
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September 2007
Situational Analysis

And, in the last 15 years:

• USDA (Hatch) funding for State Agriculture Experiment Stations **dropped** by $27 million

• USDA (Smith-Lever) funding for Extension **declined** by $45 million

• Even National Research Initiative had less funding ($180 m) than 25 states each received from NIH
Funding Differences!

- Three DOE Bioenergy Centers funded:
  - $75 million per year for 5 years
  - $375 million total
  - Almost 40% of total competitive USDA grants for ALL areas
CREATE-21: Background

• Summer 2005 – Land Grant System
  ▪ Design a new USDA-university partnership “as if we were building it today”
  ▪ Create a partnership more responsive to 21st Century realities
CREATE-21: Key Elements

- Combine USDA’s research, extension, and teaching functions into a unified organization more responsive to stakeholder concerns and better able to address national and emerging problems

- Double funding from ≈ $2.7 billion to ≈ $5.3 billion per year over a seven-year period
NIFA: A Unified Organization

• **National Institutes for Food and Agriculture** (NIFA) incorporating current USDA research, education, and extension agencies and programs, including ARS, CSREES, ERS, and Forest Service R&D

• An **integrated** organization with **enhanced** intramural, university-based, and **competitive** programs
New Structure Will:

- Increase organizational flexibility
- Improve budgetary efficiency
- Enhance program integration
- Boost stakeholder involvement
- Be authorized to receive enhanced competitive grant funding (and continued capacity funding)
Organizational Structure

National Institutes for Food and Agriculture

- Director
- Council of Advisors
- National Institute for Economic Opportunities in Agriculture and Natural Resources
- National Institute for Rural and Urban Community Development
- National Institute for Food Safety and Agricultural Security
- National Institute for Nutrition and Health
- National Institute for Natural Resources and Environment
- National Institute for Families, Youth, and Communities
Enhanced Funding

- Annual appropriations now ≈ $2.7 B
- Authorization would grow over seven years to $5.3 B
- Three-legged stool approach
  - Take away one leg – no longer sustainable!

Competitive - Fundamenta(l (Danforth Proposal)

Competitive - Integrated / Translational
Enhanced Funding

• Annual appropriations now $2.7 B
• Authorization would grow over seven years to $5.4 B
• $1.0 B in new fundamental research funds (competitively awarded)
• $843 M in new integrated funding (including Extension and teaching)
• $803 M in new capacity (intramural and land-grant “base” funds)
Status

• Bills introduced in Senate & House
  • S. 1094 & H.R. 2398
• Compromise is the normal way of doing business
  • Senate versus House Bills
• Farm Bill has passed the house
  ▪ Integration and coordination
• Senate Agriculture Committee mark-up expected before next recess
House Version

• Creates Agricultural Research Institute
  ▪ Six institutes cutting across all REE
  ▪ National program directors
  ▪ ARS, ERS & Forest Service left intact

• Creates National Institute for Food and Agriculture within CSREES
  ▪ Manages competitive programs
  ▪ IFAFS funds (200 m) transferred to NRI
    • 30% integrated (IFAFS language)

• Bioenergy & biobased products initiative (50 m)

• Specialty crop initiative (100 m)
Conclusion

- Integrated organization will be more flexible, relevant, and responsive to the needs of stakeholders.

- Enhanced funding will permit expanded research in critical areas, improved dissemination of knowledge through Extension, and better education of future scientists, farmers, etc.
Questions

www.create-21.org