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A Generational Opportunity for  
Enhancing Economic  
Development and Quality of Life

The Role of R&D in Agriculture

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# 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)

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# Midwestern Natural Resources

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- Water
- Tourism
- Forestry
- Bio-economy
- Many other land-based industries

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# Midwestern Natural Resources

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- Water
- Tourism
- Forestry
- Bio-economy
  
- Think about Communities,  
Agriculture and Natural Resources

# What is at stake?

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- Economic development
- Quality of life

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# Higher Education

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- 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

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# What is the Land Grant Mission?

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- Economic development
- Quality of life

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# 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



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# 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.

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# Social Responsibility

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# 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/bioproductions; and
- the best quality information to enable healthy food choices.

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# 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

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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 ( $\approx 1.85\%$  per year)

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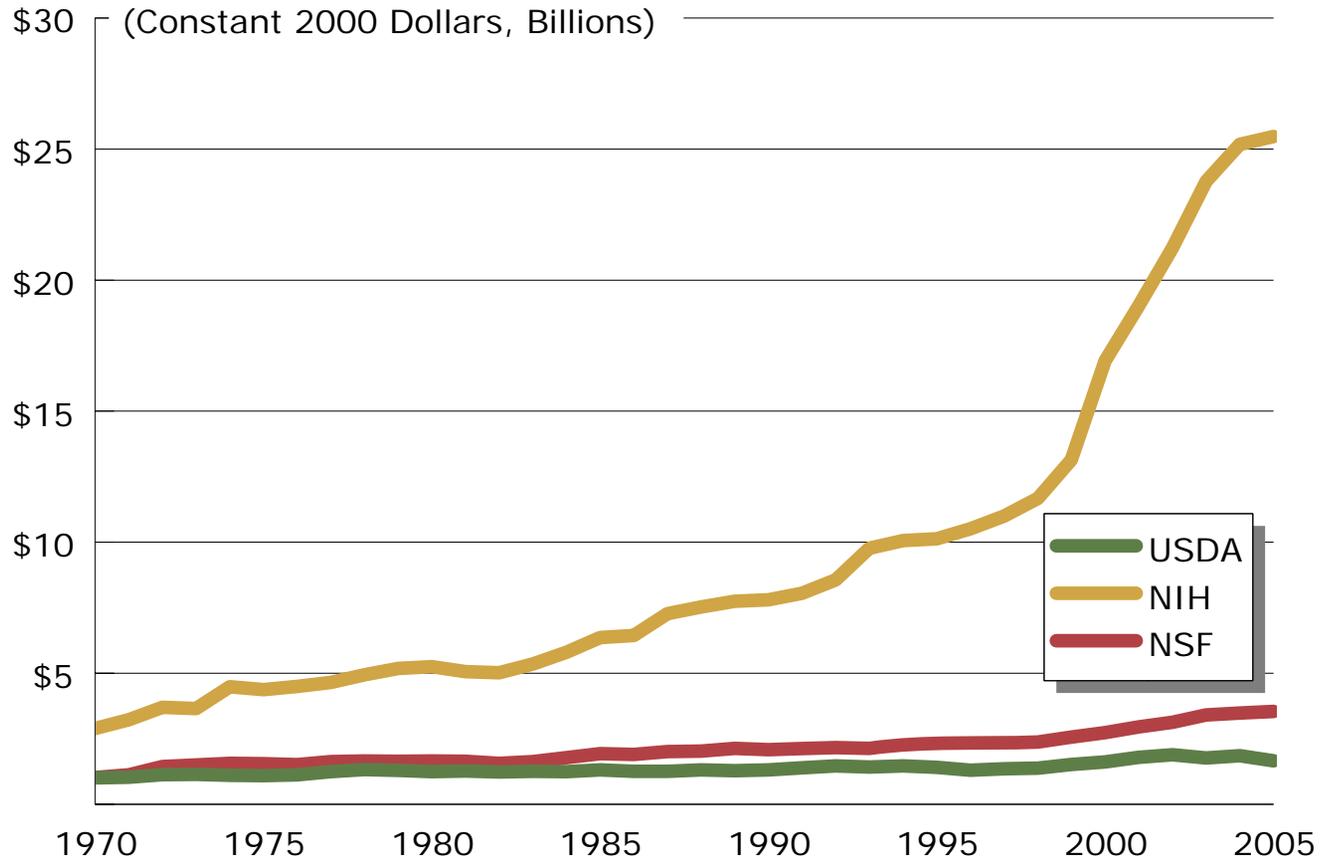
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## NIH, NSF, and USDA R&D Funding F.Y. 1970-2005



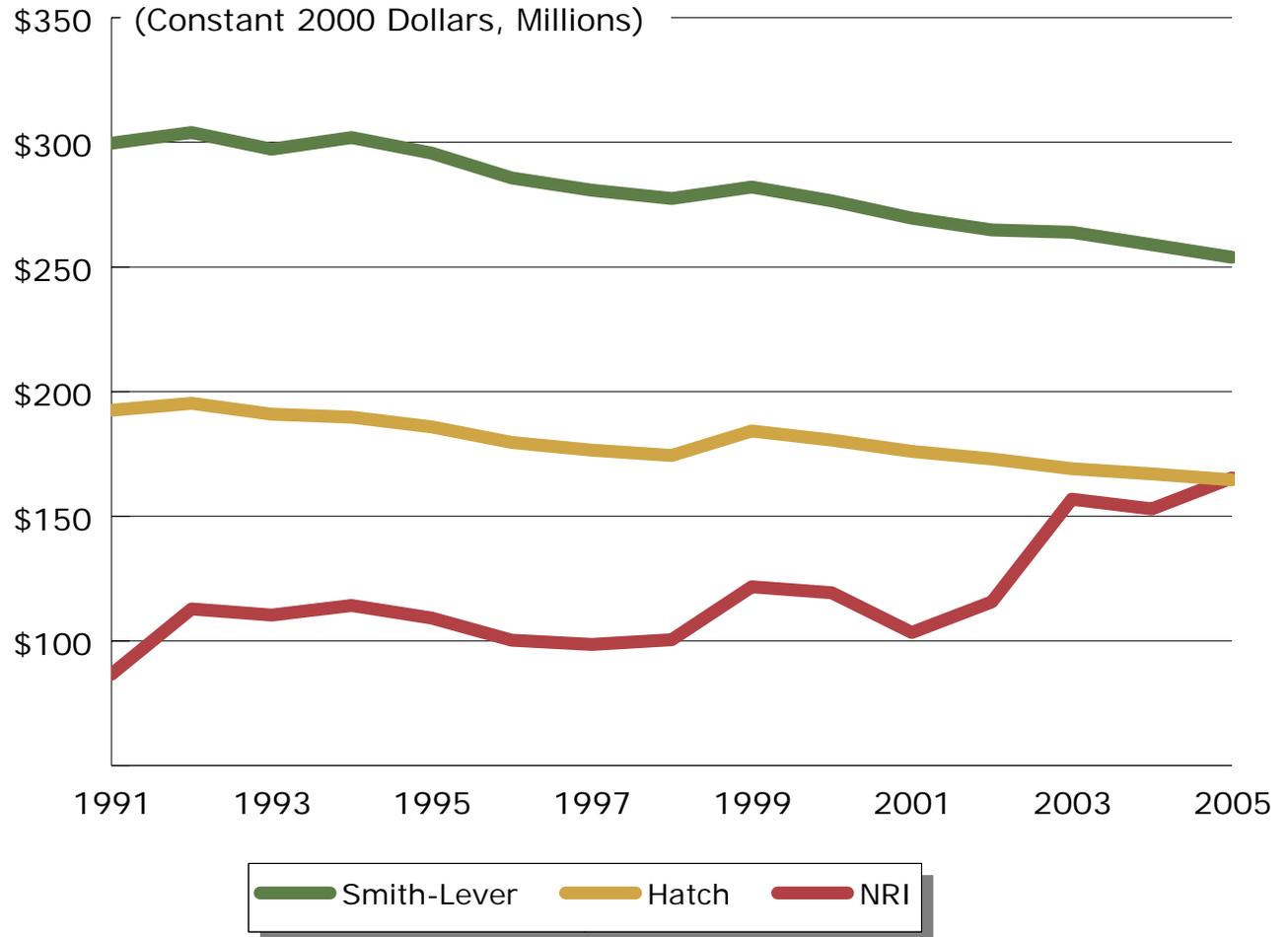
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## CSREES Funding Trends Since F.Y. 1991 Major Research and Extension Programs



# Situational Analysis

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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!

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- 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

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# 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

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# CREATE-21: Key Elements

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- 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  $\approx$  \$2.7 billion to  $\approx$  \$5.3 billion per year over a seven-year period



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# 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



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# New Structure Will:

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- 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

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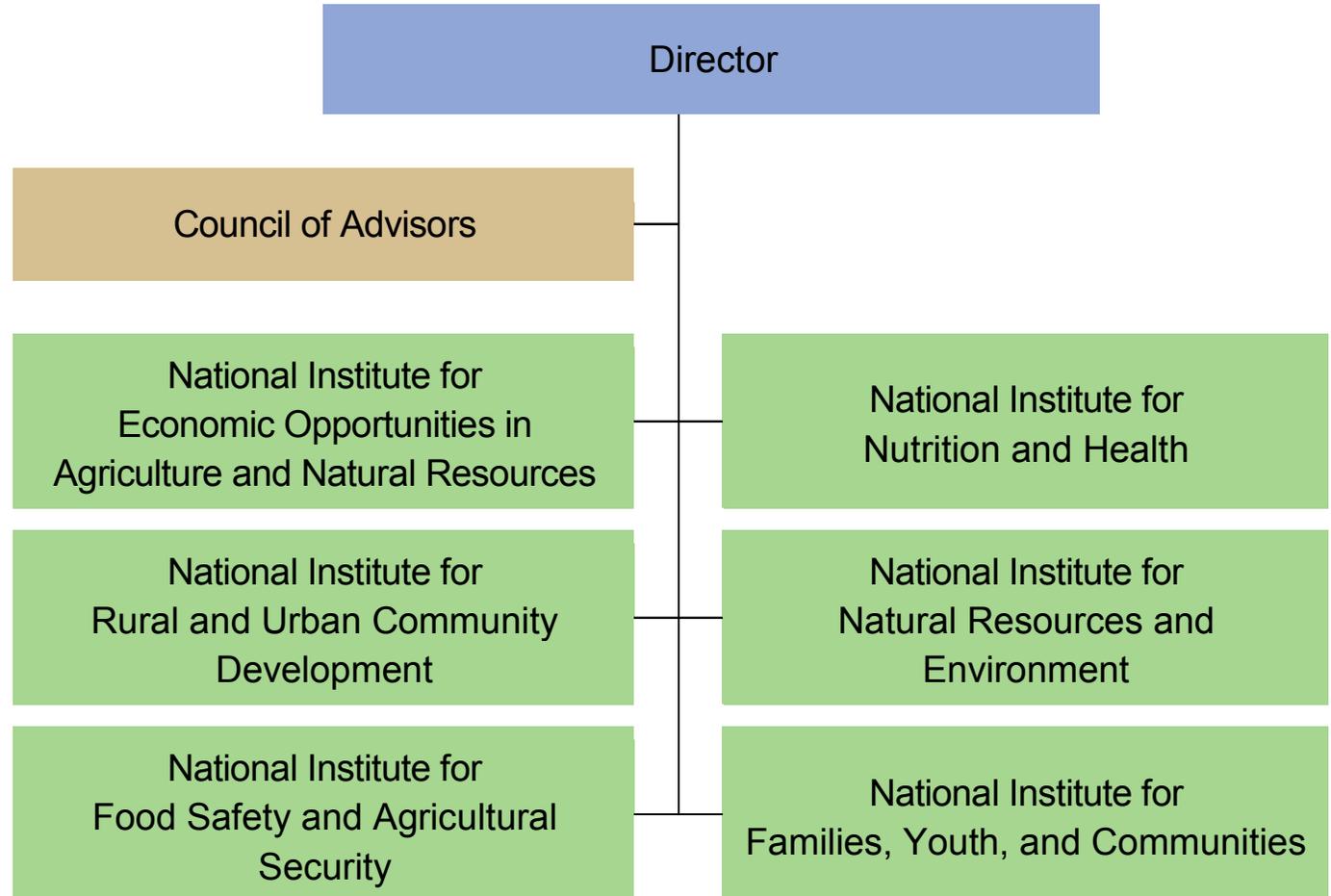
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## National Institutes for Food and Agriculture



# Enhanced Funding

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



Capacity

Competitive -

Fundamental

(Danforth Proposal)

Competitive -

Integrated /

Translational



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# Enhanced Funding

- Annual appropriations now  $\approx$  \$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)

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# 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

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# 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

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- 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.

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# Questions

[www.create-21.org](http://www.create-21.org)