FAIR 2012

Retrospective and Projections

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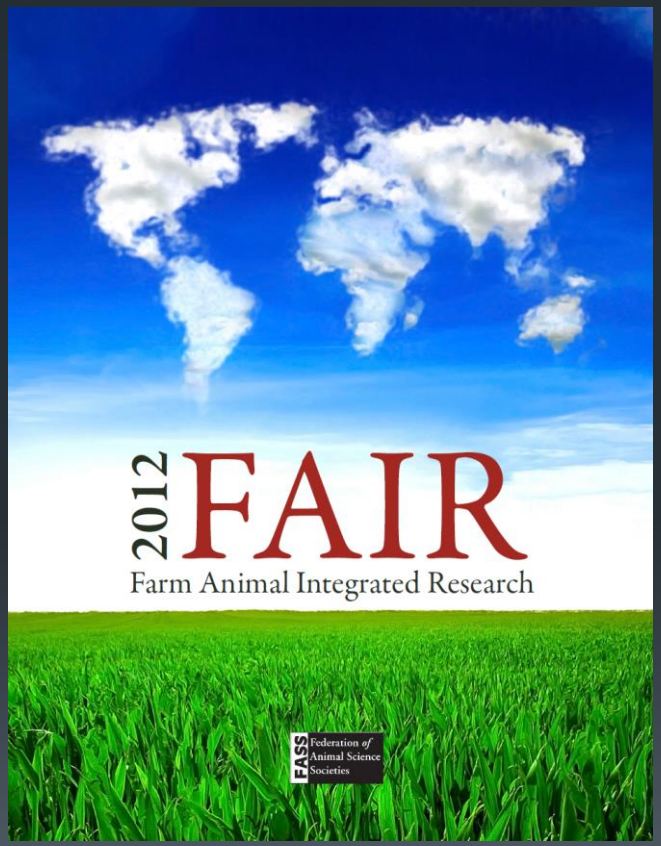

2012
FAIR
Farm Animal Integrated Research
FASS
Federation of Animal Science Societies


FAIR 2012
Sponsors
iFEEDER
Bio
BIOTECHNOLOGY INDUSTRY ORGANIZATION
NRA
NATIONAL RENDERERS ASSOCIATION
NIFA
AAC Animal Agriculture Coalition
A Forum for Animal Agriculture
11

FAIR 2012

- March 2012 – Conference in DC
  - 160 from industry, academia, government
- Identify animal research priorities
- Inform FARM BILL
- Inform policy makers

Context for FAIR 2012

- 9 billion population by 2050
- Need to double food production
- 70% of increases in food production – technology based

FAIR 2012 Results

- Report on FASS website: http://www.fass.org
- Focus Areas + Crosscutting Issues
  - Food Security
  - One Health
  - Stewardship

Three Focus Areas

- Food Security
  - Animal protein demand increasing: 73% in meat, 58% in dairy by 2050
- One Health
  - Zoonoses – 58% of currently recognized human pathogens
- Stewardship
  - Societal, climate, environmental issues; demand vs limited resources

Impact of FAIR 2012

FARM BILL – Agricultural Act of 2014

Title VII – Research

SUBTITLE A – NATIONAL AGRICULTURAL RESEARCH, EXTENSION, AND TEACHING POLICY ACT OF 1977

(7) Continuing animal health and disease research programs

- **The Managers appreciate the efforts brought forward by the Farm Animal Integrated Research 2012 (FAIR 2012) priority setting process which identified food security, one health and stewardship as key focal areas for future investments in animal science. The Managers encourage the Department to use these focal areas and the underlying priorities identified in FAIR 2012 as a starting point and to regularly consult with industry when developing requests for proposal under the new competitive component of Section 1433.**

United States Department of Agriculture

Workforce Projections -

http://www3.ag.purdue.edu/USDA/employment/Documents/USDA_Employ_Op_2010_8.pdf

PCAST Report

- Recognizes importance of human capital for future agricultural success.
- Cites shortage of graduate students in agriculture and difficulty of industry to find qualified workers.
- These findings are particularly true in animal science/animal agriculture

Stats & Predictions, USDA 2010-2015

- Need 5% increase in grads over 2005-2010 (Ag/food, Energy, Env)
- Shortfall expected in latter half
- 10% fewer grads in 2008 than 2002 (Ag, Forestry, NR, Vet Med)

Critical Positions in Animal Ag Production – 2010-2015

- Food animal veterinarian
- Herd manager
- Poultry production manager

United States Department of Agriculture

Disproportionate Funding History vs Economic Impacts

Economic Impact of Animal Agriculture

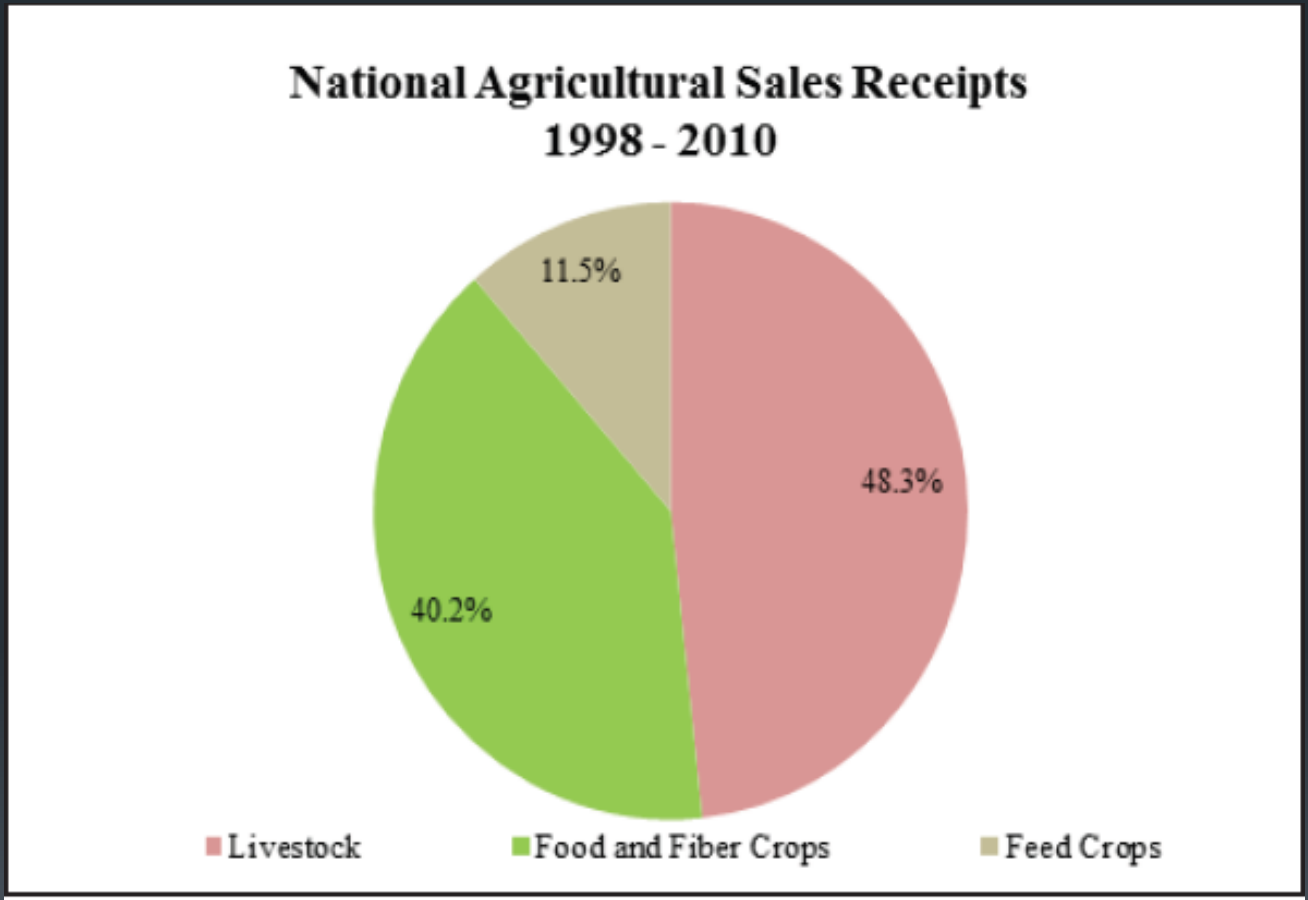


Figure 1. Total national cash receipts from 1998 – 2010 from crop and livestock commodities. Data obtained from United States Department of Agriculture Economic Research Service (http://www.ers.usda.gov/data/farmincome/finfidmu.htm; last accessed April 23, 2012).

Historic Funding Trends

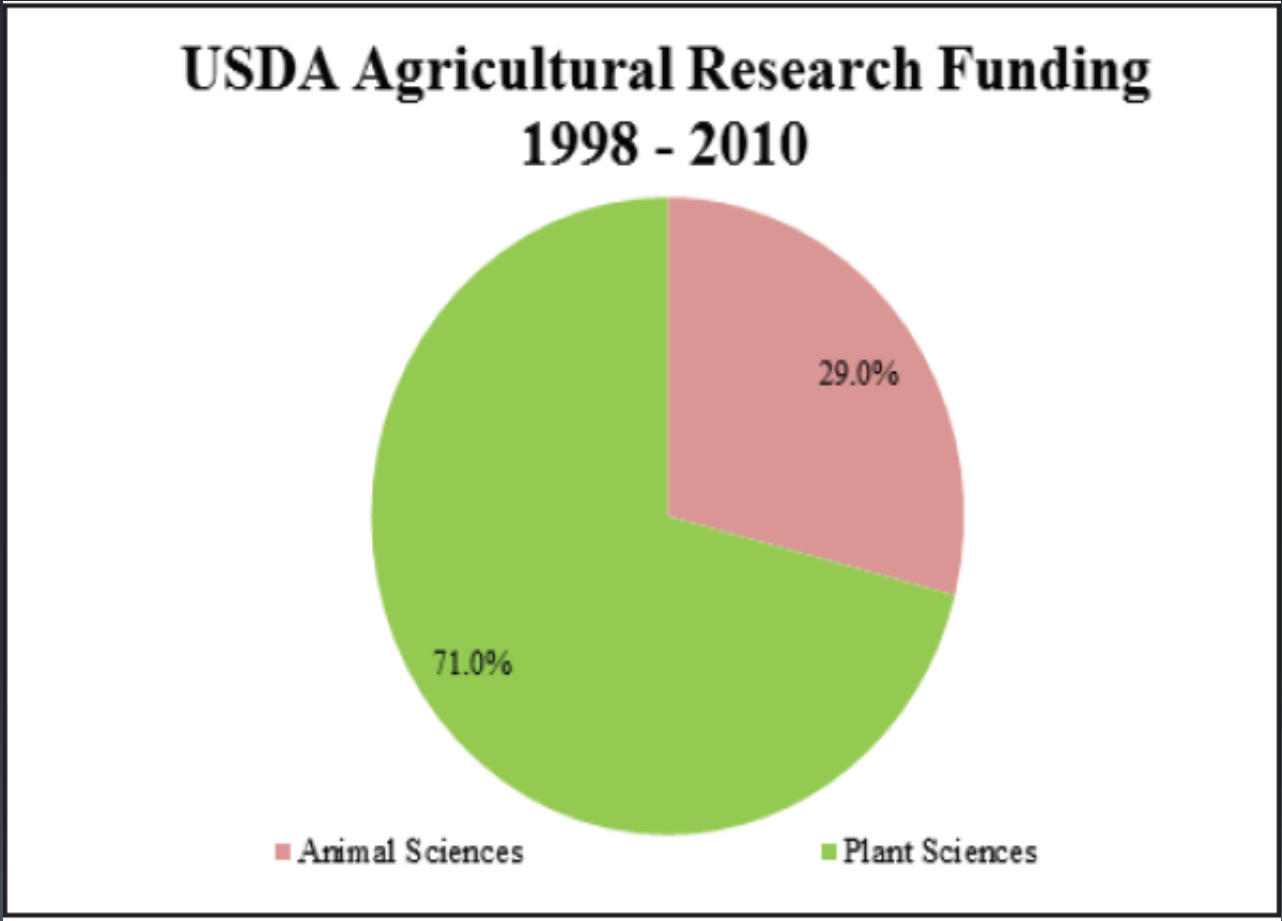
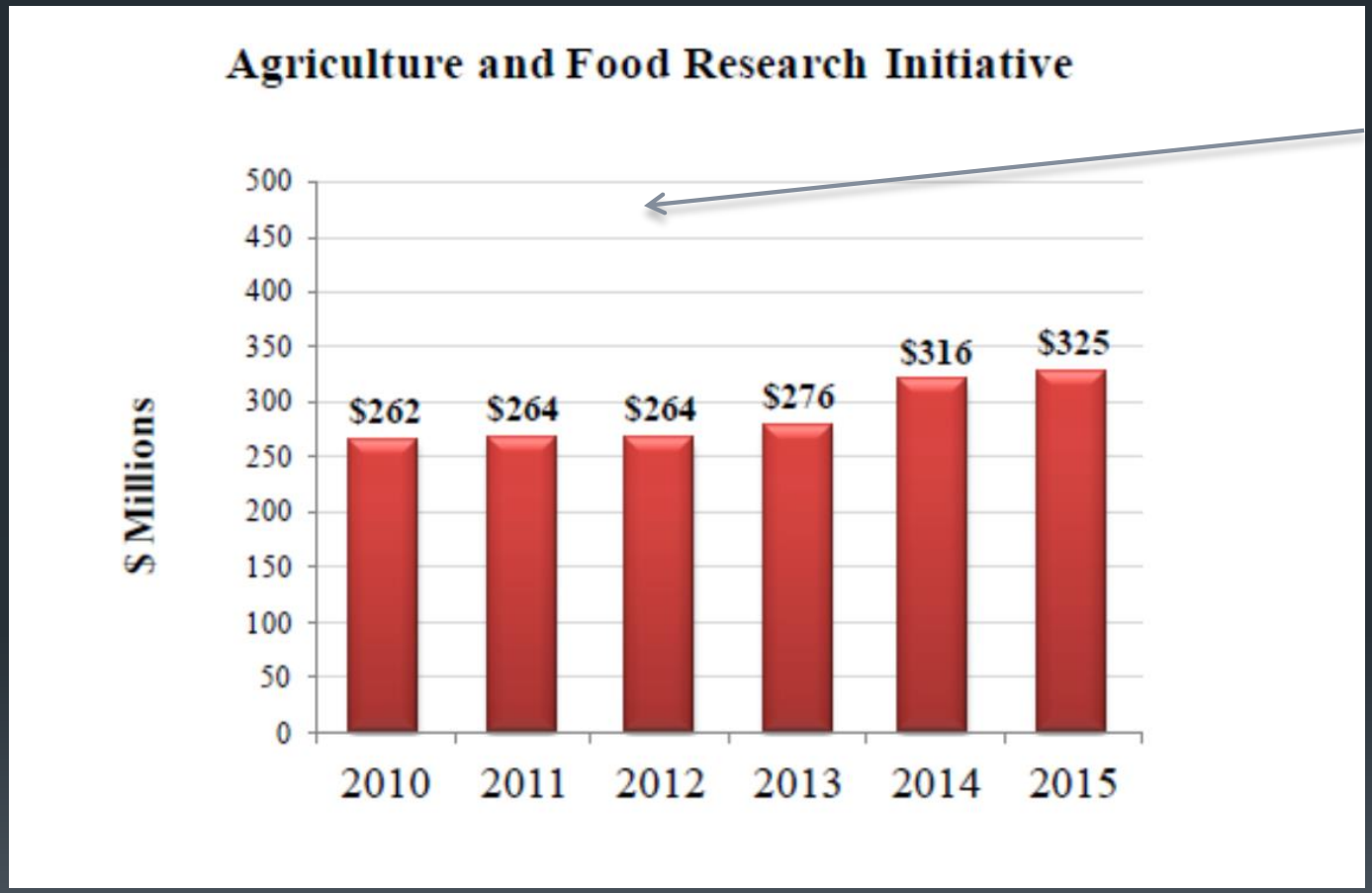


Figure 2. Cumulative USDA plant and animal sciences funding from 1998 – 2010 represented in Current Research Information System Annual Funding Reports. Data retrieved from http://cris.nifa.usda.gov/fsummaries.html; last accessed April 23, 2012.

AFRI Funding By Area FY07– FY11

	Fiscal Year				
	2007	2008	2009	2010	2011
Farm Bill AFRI / NRI Priority Area					
Plant Health and Production and Plant Products	$ 67,718,946	$ 62,612,429	$ 65,673,296	$ 55,571,712	$ 43,481,877
Animal Health and Production and Animal Products	$ 39,304,939	$ 38,627,315	$ 43,936,155	$ 31,911,859	$ 22,190,302
Food Safety, Nutrition, and Health	$ 32,780,956	$ 33,424,317	$ 33,335,540	$ 49,615,681	$ 94,287,666
Renewable Energy, Natural Resources, and Environment	$ 18,813,819	$ 22,221,151	$ 20,926,963	$ 71,981,753	$ 43,186,589
Agriculture Systems and Technology	$ 8,467,351	$ 9,681,290	$ 10,578,782	$ 13,712,318	$ 18,018,288
Agriculture Economics and Rural Communities	$ 7,982,932	$ 8,983,890	$ 9,604,420	$ 14,583,344	$ 15,411,752
Total Awarded	**$ 175,068,943**	**$ 175,550,392**	**$ 184,055,156**	**$ 237,376,668**	**$ 236,576,475**

AFRI Funding Total FY10 – FY15

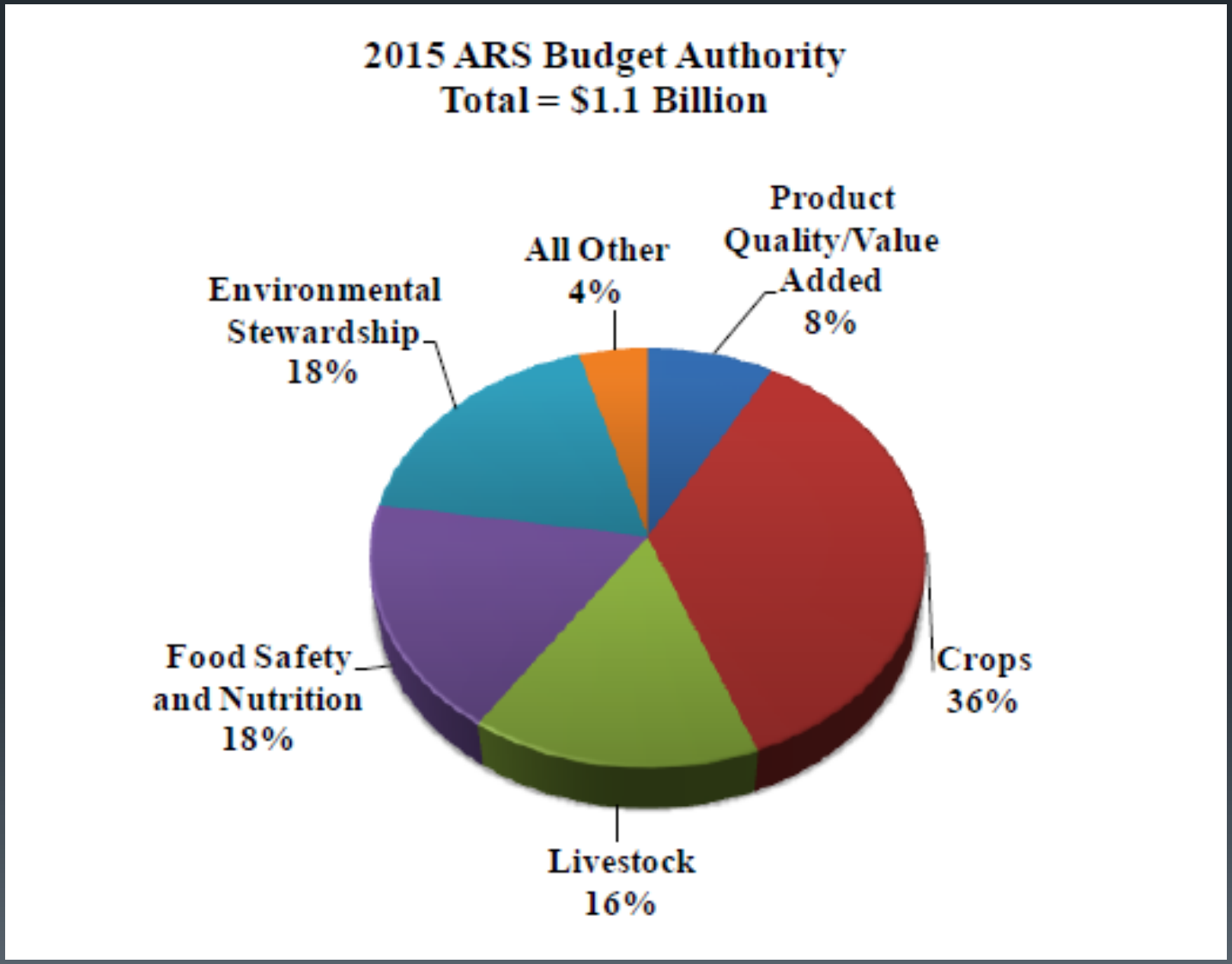


China 2012: Ag Research $475M
Ag programs $73B

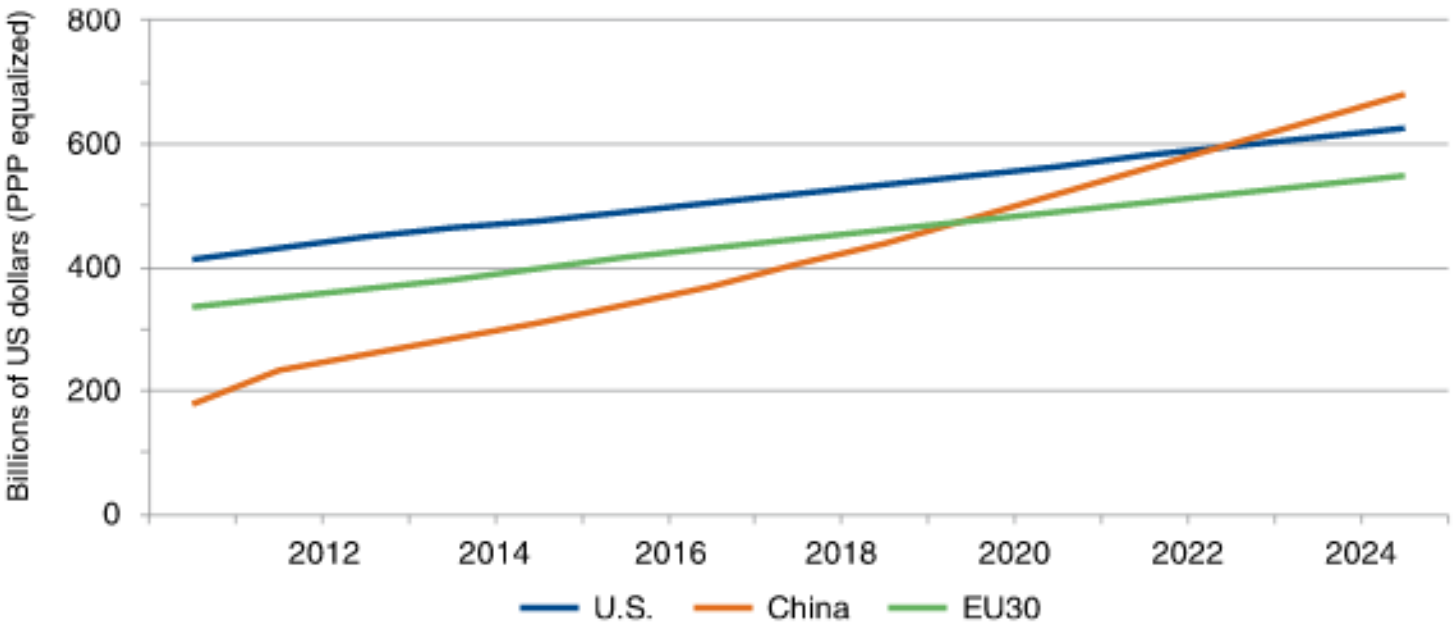
NOTE: FY15 reflects President's requested level

Source: President's FY 2015 Budget

ARS Proposed Funding by Area



Source: President's FY 2015 Budget



Long-Term Outlook for R&D Expenditures

Even if the historic stability of the U.S. and European commitment to research intensity (i.e., spending as a percent of GDP) continues, growth in China's economy is likely to propel it to the top position in absolute R&D spending by the early 2020s.

Source: Battelle and *R&D Magazine*

PCAST Recommendations

- Increase US investment in Ag research by $700 M per year
- Increase competitive grants and include incentives for innovation
- Increase basic science funding for Ag
- Increase funding for research infrastructure

Take Home Message

- FAIR 2012 – high priority objectives to address critical issues in 3 areas
- Current funding is insufficient to address issues, let alone sustain pipeline
- Imperative to increase support for animal sciences research
- Still have time to rectify situation IF budget initiative is undertaken
- If not, US will lose competitive edge globally and jeopardize food security at home and abroad