

# Innovate 2012

**Funding Livestock Research  
and Outreach in the Future**



## The Value and Opportunity for Additional Investment in Animal Agriculture Research

Innovate 2012 was conducted in October to discuss novel funding models for animal agricultural research at land grant and other universities and to develop a framework for future efforts to influence industry partnerships and federal funding for animal research, education and extension activities. Federal funding for agricultural research has been stagnant for more than 30 years and has not kept pace with inflation. Because federal and state investments in agricultural research have historically generated a return on investment of at least 20 to 1, not maintaining or increasing investments in agricultural research wastes an opportunity. The lack of support for agricultural and animal research also represents a serious threat to national security given the looming increase in world population.

Participants at the Innovate 2012 conference recommend that public investments in agricultural research and development be reinvigorated and that land grant universities seek partnerships with the private sector to support research in animal agriculture. Joint ventures with the allied industries should leverage strengths of academic institutions with capital in the private sector. Partnerships with the allied animal industries must be structured so industry partners receive useful and relevant data while allowing academic scientists to conduct independent and unbiased research.

## Novel Ideas to Increase Investments in Animal Agriculture

Innovative revenue streams to support animal agricultural research, education and extension programs have recently been implemented at several land grant universities. Some institutions have organized faculty around societal challenges or local issues such as One Health, Foods for Health and Water for Food, rather than the traditional disciplines of animal science or agronomy. Cluster hires have been used to build critical mass and interdisciplinary teams. These approaches are important because agriculture sits at the nexus of food, energy, water, communities and natural resources. Providing

leadership development training for stakeholders and recent university graduates helps build a cadre of citizen advocates who are prepared to ask state legislatures to support university animal science programs.

## Examples of Success

University administrators have developed strategic value propositions to obtain large donations from the private sector. In this funding paradigm, the university leverages its state funding, facilities, faculty expertise and equipment to attract funding from industry. In turn, industry collects a fee from its producers to leverage these dollars with state dollars at the university. Industry support has funded undergraduate internship programs and graduate training programs that ensure a sufficient and qualified workforce for the industry. The \$27 million investment in Washington State University by the Washington Tree Fruit Research Commission demonstrates the effectiveness of a forward-thinking group of industry leaders. The vision and conviction to dramatically increase their self-levy resulted in the university matching their contribution with salary for positions and investment in infrastructure that will secure the fruit growers' long-term viability.

At the national level, a levy program in the form of the Pork Checkoff is strategically focused on production-level research and innovation in the Sow Lifetime Productivity Project. The National Pork Board assembled a consortium of scientists from academia and ARS to conduct applied research with 20,000 pigs in herds of independent producers. However, to apply this strategy to other species will require a willingness of commodity organizations to change the authorizing language in their national checkoff programs. There could also be additional state-level checkoff programs to fund production-level research.

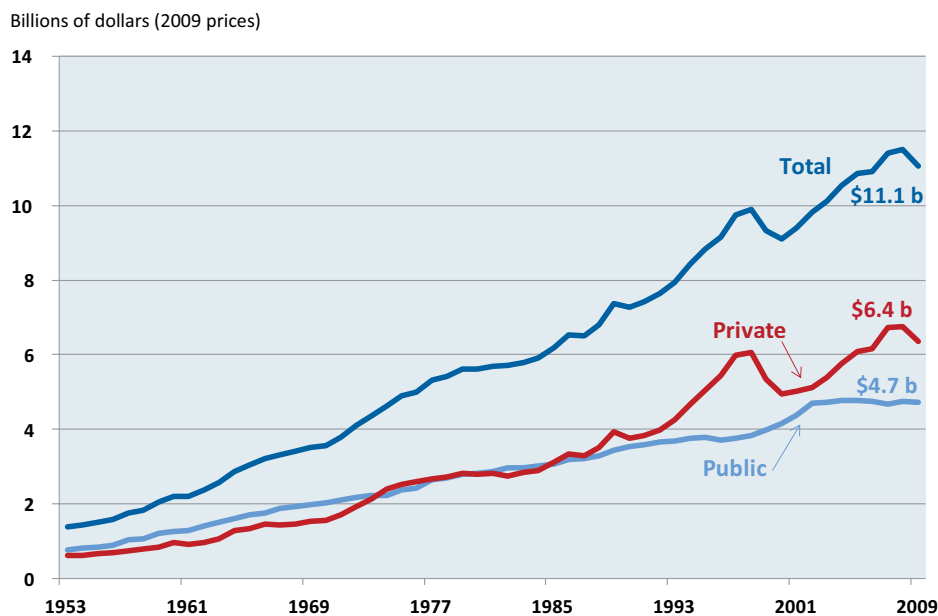
## An International Funding Model

In the United States, each academic research enterprise operates independently. This often leads to faculty spending much time writing grant applications that will not get funded, intense competition for limited federal funds and duplication of resources. In most federal funding programs, there is no requirement that research results lead to outcomes that benefit society, economic development, the environment or the private sector. This situation is not sustainable.

Based on the success of the Australian Cooperative Research Centres, a new funding paradigm should be established in the United States in

## U.S. Agricultural R&D, 1950–2009

**Note: Private sector emphasizes food vs agricultural R&D!**



**Multi-agency support and champions in Congress for scientific initiatives are critical. Initiatives must be relevant to the public and have public support.**

which academic research institutions are required to deliver products or services to society. There should also be a defined path for adopting these products or services. This model would include large grants with flexible funding over a long-term period. Investors would also expect research institutions to leverage funds with multiple sources, such as private companies, commodity groups and federal agencies. A stable source of funding would allow faculty to spend time conducting research rather than writing grant applications. Collaborators would include a mix of expertise in fundamental and applied research, education, extension, technology transfer and commercialization. Successful teams would have the best talent to achieve outcomes important to industry and society. Quantifiable benefits to all stakeholders, expectations for collaboration and issues associated with commercialization would be planned at initiation of the project. Success of the project would be measured by assessing impacts on research capacity, society, the environment, and the local, state or national economy.

**The Federal Perspective**

The role of the federal government in science and technology is to improve the nation’s ability to innovate, ensure national security, strengthen the economy, improve health, improve well-being and foster an educated society. Participants at the Innovate 2012 conference recommended reinvigoration of the federal investment in

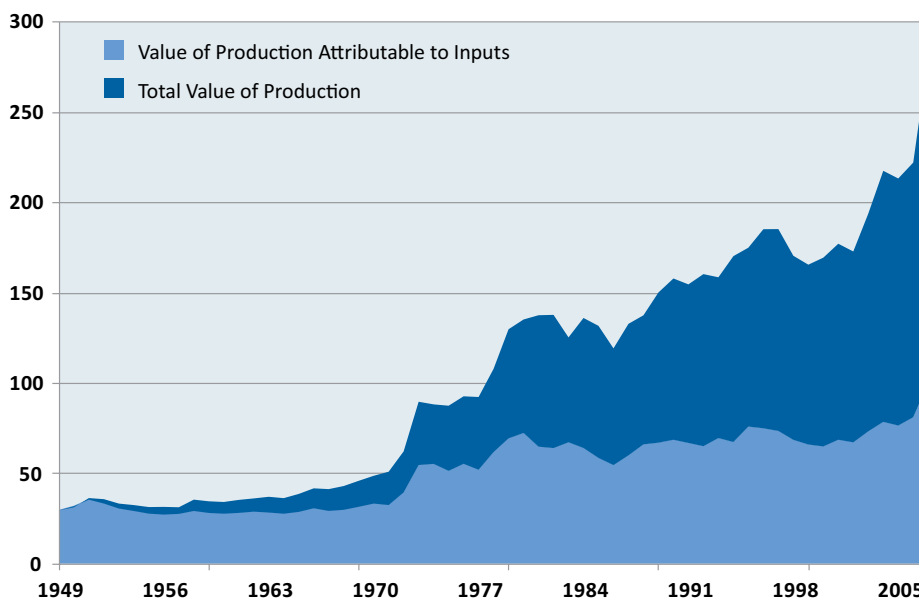
food and agricultural research to ensure a nutritious, affordable and safe supply of meat, milk and eggs. ASAS should play a leadership role in this process. Advocacy groups such as ASAS should work with scientists and stakeholders to develop a strategic vision document that includes: priorities; a justification for why investment is needed at this time; a road map for research, education and extension; expected outcomes; and evidence of community support from academia, industry and stakeholders. Scientists should hold briefings on Capitol Hill to inform Congress and gain their support. Groups should write articles for the popular press to inform a broad audience. Multi-agency support and champions in Congress for scientific initiatives are critical. Initiatives must be relevant to the public and have public support.

**Conclusion**

In 2012, we celebrate the 150<sup>th</sup> anniversary of the Homestead Act, the Morrill Act (which established land grant universities), and formation of the USDA. Now is the time to renew our national commitment to food and agricultural research. We must meet the growing global demand for safe, nutritious and affordable meat, milk and eggs. With the recent release of the ASAS Grand Challenges, reports from FAIR 2012 and completion of Innovate 2012, ASAS is poised to influence and lead new national initiatives for increased funding for animal, food and agricultural research, education and extension activities.

**Output Value Attributed to Productivity Growth since 1949**

Billions of dollars, nominal



**\$281.5 billion**

**\$219.6 billion**

**\$61.9 billion**

**Revert to 1949 productivity?**

2007 actual output would require:

- 78% more inputs than used
- 729.5 million additional acres
- 1.76 million additional full time employees



## **Innovate 2012 Program Committee**

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Debora Hamernik, University of Nebraska-Lincoln  
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University of Minnesota  
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USDA-NIFA  
Washington State University

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