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"Iowa and Nebraska Views on Federal Agriculture and Rural Policies: the 2007 Farm Bill,"

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Thank you for this opportunity to speak at this important hearing. In July 2005, the College of Agriculture at Iowa State University held a summit on "New Directions in Federal Farm Policy: Issues for the 2007 Farm Bill" to solicit input from Iowans on what should be included in the 2007 Farm Bill. The summit was an important opportunity for listening to a wide range of perspectives and values on Farm Bill issues. Every single American should care about what goes into the new bill. It is policy affecting food, feed, fiber, fuel, health and nutrition, the environment and the economy.

In that light, I want to speak today on an issue that should inform every aspect of the Farm Bill: investment in research.

Next week, Iowa State University and the College of Agriculture will kick off a yearlong celebration of its 150th anniversary and our proud history of agricultural excellence in research and education. Iowa State graduates like George Washington Carver, Henry A. Wallace, Raymond Baker, Roswell Garst and others used their agricultural education to feed a hungry world and transform society.

A distinguished professor in economics at Iowa State University, Wallace Huffman, working with his colleagues in economics at Yale University, found that, over the last 30 years, the rate of return to society from publicly funded agricultural research is about 50 percent -- that's a 50 percent real rate of return annually. Dr. Huffman's latest studies continue to show that this rate of return for the benefit of society remains very high.

Funding for agricultural research generates a rich dividend to the American public: Affordable and healthy food, new technologies to enhance conservation efforts and the sustainability of agriculture, a globally competitive food production system and economic growth in many industries and rural communities.

Yet serious and long-standing challenges exist. The growing global population taxes our land resources for both food and fuel. There are concerns about the potential risks of climate change to our agricultural systems. There is a tremendous need to increase energy production through the production of biomass. There are environmental quality issues that must be addressed through new technologies and innovations. There are risks from new plant and animal diseases and insect pests.

I strongly urge Congress to consider the need for much greater funding for agricultural science, including basic and applied research, extension and education, over the life of the Farm Bill to ensure our nation's competitiveness in agriculture and the ability to meet society's needs.

The USDA research, extension and education programs receive $2.676 billion per year in funding. This is the single largest source of support for agricultural research. Unfortunately, this funding has been flat for almost 35 years. During the same time, federal research support

for the National Institutes of Health and related medical research funding increased by almost 882 percent, to a budget of almost $30 billion. It's significant to note that scientists in the nation's colleges of agriculture are addressing many of these human health-related issues, such as the connection between health and food and using animals as models to investigate the alleviation of chronic human diseases. Clearly, the issues addressed through agricultural research funding have greatly expanded while the funding has flat-lined.

Recent evidence shows that the rate of growth in agricultural productivity may be declining, relative to previous decades. The last thing we want is a situation that threatens the competitive edge of U.S. agriculture in a global economy. Science is the lifeblood of agriculture. It's what will keep us at the forefront in this increasingly flat world of ours.

As part of increased funding, coordination must be strengthened and improved among the USDA's agencies, the states and their multi-state collaborations in research, education and extension programs, stakeholder groups and other federal or state science agencies. Is it possible to enhance these partnerships through new public/private partnerships that establish research centers of excellence on our important agricultural commodities and issues? For example, can we build on the innovative model demonstrated by the U.S. Pork Centers of Excellence at Iowa State University that brings together 25 land-grant universities to address the research, education and extension needs of the U.S. swine industry? Can we do the same to address the critical needs in corn, soybean and egg production? Should a national center on advanced renewable fuels and biobased products center be established to develop integrated approaches to utilization of biorenewable resources -- via both biochemical and thermochemical platforms? Is it possible to establish centers that address environmental issues? Could an Upper Mississippi Basin Nutrient Management Environmental Center be establish to coordinate research and information on water quality -- and be a national center of expertise on Midwestern agricultural nutrient management, providing an objective and scientific resource for policy-makers, commodity groups, and individual producers alike? Could we establish a national center focused on translating the enormous advances in biotechnology and genomics into crop and animal improvement -- to apply powerful biotechnological tools to develop important economic traits in plants and animals and to discover new uses of agricultural products for food, feed, health and energy?

I further urge that the Farm Bill strengthen the "formula funds" at the highest level possible. Formula funds are allocated among the states by a legislated formula, but the choices of research projects and scientists to support are made locally to address local and regional issues.

This is so important. With federal formula funds, the research agenda is set by the states. Federal formula funds and state funds provide secure resources to scientists across a broad set of disciplines in agriculture for undertaking projects that require sustained focus and multiple years of diligent effort to achieve major goals. When our federal partners step forward with funding, the state and local partners step forward, too, and do an incredible job of leveraging. Each year the formula funds generate more than the original investment. With this kind of leverage, we greatly extend the mileage of progress back home.

The result can yield very large payoffs. As we think about Iowa State University's 150th anniversary, one of the landmark efforts we never neglect to talk about is Iowa State's great

pride in its role in the long partnership with federal scientists in developing hybrid corn. That genetic lineage from Iowa State research can be seen in virtually every important corn hybrid today. We are beginning to see similar kinds of payoffs from livestock genetic research today, from research that stretches back decades. We are beginning to see payoffs from decades of research in soybean breeding that have yielded beans that end up as oil with no trans fats. The success of that work, led by distinguished professor Dr. Walt Fehr, has resulted in recent headlines in the Wall Street Journal and The New York Times.

In summary, the Farm Bill should focus on agricultural research and the global need for agriculture as it seeks to meet the coming challenges of population growth, climate change and resource depletion. Thomas Jefferson, in a letter he wrote in 1803, said: "[Agriculture] is the first in utility, and ought to be the first in respect. It is a science of the very first order." That is an opinion I wholeheartedly agree with because it is truer today than it was then.

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