The Critical Role of the Research Facilities Act in Maintaining the Profitability and Competitiveness of US Agriculture

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Thank you very much Representatives Eddie Day Pashinski and Dan Moul, and Senators Elder Vogel and Judith Schwank, for inviting me to participate in this joint informational session on the Federal Farm Bill.

In 1975, I took a course at University of California at Davis in Agricultural Politics and Administration, where I learned about the clear role of the land grant university system in making American agriculture the most productive and competitive in the world.

I could never have imagined then that I would one day be invited to contribute ideas and analysis of the Farm Bill and discuss it with the Chair of the House Agricultural Committee, now GT Thompson. I'm very grateful for these opportunities to participate in such an important venture.

The Farm Bill is composed of 12 "titles" that concern different aspects of food, fiber, forestry, rural development and more. I like to think of the titles as chapters. About 95% of the farm bill outlays go for the big four titles, including the **Supplemental Nutrition Assistance Program (SNAP)**, for about 80% of the total expenditures. It's understandable that some people like to think of the legislation as the "Farm and Food Bill."

However, also included are
Crop insurance (7%), dating back to the Depression,
Commodities (4%), which refers to price and income support for crops like corn, soybeans, wheat, and rice, and agricultural disaster assistance, and
Conservation (also 4%), for voluntary conservation of soil, water and wildlife habitat on private lands, including through the Natural Resources Conservation Service (NRCS***).***

At Penn State, atypical for most Land Grants, **both** the College of Agricultural Sciences and the College of Health and Human Development are involved in SNAP through administration and public education.

The College of Agricultural Sciences also collaborates with the NRCS on issues related to soil and water conservation and so on.

We also work on many other topics relevant to Farm Bill. such as **Title VI – Rural Development**, including job creation and rural broadband**,** where the College has been involved in projects that have helped bring more than $450 million into Pennsylvania in the last few years.

However, the part of the Farm Bill that most affects the College is the 2/10 of 1% of the budget that supports research, extension and higher education.

I want to focus on what is the most important issue for Penn State and the Land Grant University system nationwide in this 0.2% of the Farm Bill.

During the last 47 years, I have been employed at 5 Land Grant universities, including the University of California at multiple campuses and field stations; Texas A and M, Mississippi State, Cornell and now Penn State, and have visited at least 20 more Land Grant universities.

In that time, I have personally witnessed the gradual degradation of the nation's public sector research and teaching facilities.

Over the last several years, A *National Study of Capital Infrastructure at Colleges and Schools of Agriculture,* often called the Gordian report, has quantified this decay. Only buildings and supporting facilities at colleges and schools of agriculture that are authorized to receive funding from the USDA National Institute of Food and Agriculture were included in the study.

Summarized in 10 pages, the total deferred maintenance is over $11.5 billion. Between 2015 and 2020 alone, the problem grew by 37%. About 69% of the infrastructure at colleges and schools of agriculture is more than 25 years old.

Our primary greenhouses at Penn State were built in 1947. If you care to glance at them, they are more or less across the street from the Creamery. In those greenhouses, we're trying to do 21st century research on critically important topics such as plant resiliency to drought, soil health, and improved root function, in facilities that are mid 20th century and often invaded by pests.

As noted in the Gordian report, a nation that controls its food controls its destiny. However, investments by our competitors are growing rapidly. In 2000, the US spent about $5 billion in public funds on agricultural research, while China spent $2 billion. By 2015, the US still spent about $5 billion, but China led the world with more than $10 billion (https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=104237).

I have personally seen evidence of this. With assistance from a well-networked colleague who was born and raised in China, I visited eight of the leading agricultural universities in China in 2008-2014, during their rapid expansion, some universities on multiple occasions, and met with high-ranking leaders of the Chinese government, industry, scientific academies, and universities. This included the President of China Agricultural University, one of the highest ranking universities in China, who told me one day over lunch that China was never really worried about food security. I realized then that China was focused instead on increasing its share of the world food markets and sales of technology.

There's a huge investment in European and other countries as well.

COVID and the war in Ukraine have clearly demonstrated that even short term disruptions to food systems have a much broader impact than most people thought. It is one thing to have enough food for the global market, but we have learned the hard way that supply chains and logistics are crucial even if there is enough commodity to go around. Research and innovation in

infrastructure (including facilities to teach these techniques) are key to this. If the US will not do that, somebody else will, with multiple lost opportunities for jobs and income.

U.S. investment now is essential. A sustaining investment of approximately $550 million annually is needed just to keep deferred maintenance from growing. Most of this investment will be in rural America where the research facilities reside, stimulating job creation and economies.

Universities are already doing a lot of their own upgrades, but need some matching federal help. At Penn State, the university has put $138 million into new buildings for Agriculture in the last 6 years, and the state government is contributing $50 million to a new animal diagnostic lab.

Agricultural research investments result in $10-$20 in benefits for every $1 spent on research. Estimates are that such an investment will have long-term economic growth implications and provide 200,000 new jobs. There is no time to lose.

The last Farm Bill already included something called the Research Facilities Act.

Penn State and land-grant universities nationwide are urging reauthorization of the Research Facilities Act in the 2023 Farm Bill, with a foothold in mandatory funding language. Please support this quest!

Once again, thanks for this opportunity to address the Federal Farm Bill. It's extremely important across the nation, not least of which is Penn State.