The Land Grant University Movement and the Future of IANR UAAD

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Good afternoon. It is a real pleasure for me to be here with you today, and I thank you for inviting me. I also, as I begin my remarks today, want to thank each of you for the work you do, everyday, to help make this a better university. Please know that work is both valued and appreciated.

I'd like to talk with you about a couple of topics today, and after that I'm going to open the floor for questions and comments. I look forward to hearing what you have to say, too.

The first topic I'm going to talk about in the next few minutes is our land grant mission. People who know me at all can tell you I am passionate about land grants because I believe being part of a land grant university and helping to advance the land grant mission is one of the great privileges and responsibilities of our times.

The second topic I'm going to cover are some examples of the work we do in the Institute of Agriculture and Natural Resources, work done across our statewide campus that includes research and extension centers, county extension offices, the
most far-sighted and far-reaching pieces of legislation ever pass by the United States Congress. I believe the land grant universities the Morrill Act created in the 1800s were vital then, and I am convinced they are just as vital – perhaps even more so – today.

I often quote the Morrill Act, and am particularly fond of the phrase "the Leading Object." Each time I see that phrase it reminds me of the importance of our land grant mission. It also reminds me of all those people who have carried out that mission before you and I ever got here, and of those who will come after us, building on what we have done in our lives. I think it important that we have a sense of the historical continuum in which we move, realizing we are the bridge from past to future, and there are many who preceded us to whom we owe a great debt for getting us this far.

I'd like to share a quote with you from the Morrill Act today that begins with the words "the leading object," and I quote: "the leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial-classes in the several pursuits and professions in life."
What an elegant vision those few lines contain! Looking back on it now, we can almost see the Morrill Act as a quiet education revolution, when we consider the times in which it occurred.

Prior to the passage of the Morrill Act in 1862, higher education in America was predominantly available to the rich and well-born. The Morrill Act put into motion a system "to promote the liberal and practical education of the industrial classes" – young people who previously couldn't afford and didn't have access to higher education.

Someone once asked the late historian James Michener what he believed were the most important pieces of legislation ever enacted by Congress, and he cited the Morrill Act and the GI Bill – both of which put higher education into the hands of those to whom it might otherwise have been out of reach.

OK, you may say, that was then. But why do I think land grant universities are so important today?

I think it because of the land grant mission. Land grants were created specifically to meet the needs of the residents of each state, to take the resources of the university to the people of that state, and to do the research and provide the knowledge, through classroom teaching and through extension, that those in the state could use to better make the decisions important in their lives.
The need for that has not decreased; in fact, I would argue it only increases as the issues people face seem to grow more and more complex – issues that affect those both in rural and urban areas. These are issues and concerns people look to their land grant universities to address; issues that deal with a number of diverse needs.

One of the beauties of the land grant system is that there is at least one land grant institution in every state, and because we are public institutions with a mission to develop and disseminate information people can use in their lives, we have a nationwide network of research results and education being shared. We are a public institution, we are of service to the public, and we believe the leading object of the work we do is to advance knowledge through discovery. Then we add that new knowledge we've discovered to the knowledge and skills already being taught in our classrooms, and we extend that new knowledge to those who can use it across our state.

In the Institute of Agriculture and Natural Resources we like to say we are partners with Nebraska. I believe those partnerships are important, and as a firm believer in the land grant university mission, I am totally convinced that any land grant university that disenfranchises its local partners is on the road to a meaningless, irrelevant existence. I believe it is important that we always include
our constituents in the process of helping set the direction of our research and extension programs, and I think any land grant university that pursues prestige or exclusivity to the detriment of service to every day, ordinary people is in big trouble.

Service is a big part of any land grant mission, and I'd like to talk now about just a few of the many examples we can provide of the Institute's role in service to this state.

There is so much work done within the Institute that enhances individual lives, communities and the economy, and both the volume and diversity of what we do can make it difficult for anyone to be familiar with it all. That's why it's always a pleasure for me to have opportunities like this to talk about our contributions to Nebraska and its residents, as well as to the nation and, indeed, the world.

For example, we know Americans eat half of all meals away from home, so assuring food safety in places like restaurants, schools and nursing homes is a big job. It's also the goal of ServSafe, a program University of Nebraska Cooperative Extension conducts in cooperation with state agencies and the Nebraska Restaurant Association.

Over 6,000 restaurant managers have learned safe food handling procedures through the program since 1994, and it's estimated that each trained manager, in turn, teaches food safety information to another 15 people, extending extension's
efforts. Preventing food-borne illness is important to us all.

Another example – some of today's most interesting maps chart the molecular world of genes, DNA and chromosomes. An Institute soybean geneticist and his colleagues created the first comprehensive genetic map of all 20 soybean chromosomes. The Institute team developed one of the three populations used to construct the soybean map, which contains more than 1,800 genetic markers identifying critical chromosome segments. The genetic map speeds the plant breeding process by enabling scientists to target and harness specific genes responsible for important traits such as yield, disease resistance or high protein content. The map also is helping scientists better understand which genes govern specific traits.

Our Cooperative Extension nutrition programs reach a broad spectrum of Nebraska residents, from refugee families in Lincoln to long-time Nebraskans in rural areas. Extension helps low-resource clients improve how they budget, shop, and what they eat, which boosts their self-sufficiency.

In the fiscal year ending Sept. 30, 2000, over 7,300 families, 7,200 youth, and 1,100 older adults participated in these programs. The state's program was one of three nationwide to receive a National Food Stamp Program/USDA Excellence in Nutrition Education Award in 2000.
Our food scientists have developed rapid, accurate tests that are helping the food industry protect people with food allergies. An IANR team devised fast, accurate tests food processors can use in their plants to detect even minute traces of allergenic foods in processed foods or on equipment. Tests for egg, peanut, and milk have been commercialized by a Michigan company that markets the tests to the food industry under a university license agreement. Tests for other food allergens to help protect allergic consumers are in the works.

Every year head lice infestations force children to miss school and parents to miss work while the condition is treated. If an ineffective treatment is used, the problem persists. NU Cooperative Extension in Lancaster County teamed with Lincoln Public Schools, the Nebraska Department of Health and Human Services, and the Lincoln/Lancaster County Health Department to provide education on effective head lice treatments.

In 2000, just one year after implementing changes based on this effort, Lincoln Public Schools reported a 70 percent decrease in head lice cases. The Lincoln/Lancaster County Health Department had nearly 60 percent fewer cases reported, and public health nurses made 60 percent fewer home visits.

Out in the fields, wheat varieties developed by our own wheat breeders provide Nebraska growers with improved wheats that perform well and offer the
quality characteristics millers and bakers demand. Nebraska-developed hard red winter wheat varieties are planted on roughly three-fourths of the state's wheat acres. These varieties have increased Nebraska's annual yields by 19 percent compared with the 1960s. These improved varieties are worth roughly $31 million to $37 million annually to Nebraska producers based on increased yield alone. Consumers benefit, too. Yield improvement in these varieties means Nebraska wheat growers can feed nearly 5 million more Americans a year than they did on the same acreage in the 1960s.

Another way our work economically aids the state—and also helps some people reach their dreams—is through our Food Processing Center. The Center offers technical, marketing, and business development assistance to entrepreneurs, as well as to established food processing firms. This has helped Nebraska's food processing industry grow from 220 food processing businesses when the center opened in 1983 to nearly 400 today. Center officials estimate its programs and services add about $12.5 million of economic value to Nebraska's economy annually. One company manager said the center's expertise helped his company increase sales by $250,000, reduce operating costs by 7 percent, create 12 new jobs, and invest $100,000 in new capital projects.

On the natural resources front, we know that excessive algae growth can ruin
sandpit lakes for recreation, contribute to fish kills, and leave the lakes unattractive and foul-smelling. Our researchers have developed a non-toxic aluminum sulfate treatment that reduces algae growth by nearly two-thirds. The solution binds with phosphorus, a key nutrient for algae, pulls it to the lake bottom and forms a barrier against more nutrients coming into the lake. The process is easy to apply and doesn't kill fish or other organisms. While it's initially more expensive than the traditional treatment of copper sulfate, which can kill fish and other aquatic organisms along with algae, one application of aluminum sulfate can be as effective as five to seven conventional copper sulfate treatments.

I think these examples give you a glimpse of the diversity of the work we do in the Institute; I'd be delighted to share more of what we do to enhance lives and enrich the economy all across the state, did time permit.

I said at the beginning of my talk today that land grant universities have a responsibility to respond to the needs of the people of the state and to take the resources of the university to people. We are strongly committed to that in the Institute of Agriculture and Natural Resources, and we will remain committed to it in the future. It is our vision to be "the premier provider of educational, research and outreach programs essential for shaping Nebraska's future as a leader in the 21st century in the areas of food, agriculture and agribusiness systems, natural resources
and human resources." We are "dedicated to providing the highest quality programs that are ecologically sound, economically viable, socially responsible and scientifically appropriate."

As we do today, we will continue in the future to work to meet the needs of Nebraska and its residents. Thank you for inviting me to be with you today. It is a pleasure.

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