

August 2007

The Leading Object: August 2007

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Perspectives

In June, members of the IANR Vice Chancellor's council had the opportunity to meet Duane Acker, first Vice Chancellor of the Institute of Agriculture and Natural Resources and President-Emeritus of the Kansas State Board, and hear him talk a bit about the book he has written titled, "Can State Universities Be Managed?"



John C. Owens
NU Vice President and
Harlan Vice Chancellor, IANR

Dr. Acker's illustrious career provides a positive "yes" response.

The subtitle of the book is "A Primer for Presidents and Management Teams." If you're interested in management in higher education, it's an interesting read with thoughtful, practical advice, such as communicate your vision; take stock of your constituencies; set goals; keep a sense of humor — and a whole lot more.

I recommend it.

"If there is a 'soapbox message' regarding the future of state universities advanced by the author in this work," Dr. Acker writes, "it is that every university must equip its students for their professions, their businesses, and their lives in a global society and economy."

He talks about the importance of getting to know people, listening, and keeping communications open. He talks about the importance of symbolism, and the valuable message Nebraska's J.B. Milliken sent the citizens of Nebraska when his first day as President of the University of Nebraska started in Scottsbluff.

In his very first chapter Dr. Acker talks about 15 state university features that are, in the 21st century, sharply more evident than many of us saw in our early faculty years. They are sobering features for us all, and deserving of thought on all our parts. I would like to share them here:

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The Leading *Object*

*The Morrill Act of 1862
established a Land Grant University
in each state where
The Leading Object
would be instruction
in agriculture and related fields.*



August 2007

NCTA-Frontier Partnership Brings Education, Industry Together

The plight of rural Nebraska and the passion of Nebraska College of Technical Agriculture Dean Weldon Sleight to improve it caught the attention of entrepreneur George Garlick, who was spurred to take action to support economic development.

Garlick, a former resident of Curtis, has established a partnership with NCTA and brought Frontier Technologies LLC to the western Nebraska town. Garlick sees the collaboration between Frontier and NCTA as key to advancing area growth and development. The alliance represents a unique union between higher education and industry as profits from the business will be used to support programs at NCTA, he said.

Frontier Technologies develops and manufactures scientifically-advanced holographic ultrasound technology for use as a diagnostic tool in veterinary medicine and to detect foreign bodies in food products.

The business was announced August 10 at NCTA in Curtis.

Garlick, a Richland, Washington,



Photo by Larry Cooper

George Garlick, left, and Weldon Sleight look over the holographic imaging machine that will be marketed by Frontier Technologies.

resident, invented and patented the concept of holographic ultrasound and is using it in medical imaging, specifically to diagnose breast cancer. Although entrenched in his Richland business, his history with Curtis and his penchant for rural America compelled him to give back to the community.

"I've been away for a long time and there are other places that have had my time, but Nebraska has my heart," Garlick said.

Garlick was born and raised on a Frontier County farm, which he still owns. When his father began to lose his eyesight, the family moved to Curtis. His father got a job as a janitor with

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1. Intense competition for state funds.
2. Higher employment costs.
3. More dependence upon student fees, donations, and grants and contracts, a consequence of the first two features.
4. A more diverse student population, faculty roster, and statewide clientele, in terms of race and ethnicity, than in earlier years.
5. Intense competition for students and the fees they pay, a consequence of the previous points, as well as the increased awareness of students to alternative colleges and the recruitment efforts of all colleges.
6. Student preferences for apartments or other independent living arrangements, outside the purview of residence hall policies, and with more amenities than in most university facilities.
7. A lower proportion of tenured and tenure-track faculty resulting from increased budget dependence on short-term grants and contracts.
8. More open and aggressive student recruitment and enticement beyond state lines, including in-state tuition for certain out-of-state students, perhaps those of high ability, enrolled in unique curricula, or from nearby counties of adjacent states.
9. Differential pricing of curricula or courses, with higher fees for the more costly or higher demand programs and lower fees for those where competition for students is stronger.
10. Finding a job for the spouse of a recruited faculty member or administrator.
11. More associated businesses than just housing, intercollegiate athletics, a museum and a student union.
12. Outsourcing of some management and service functions, such as food service, janitorial, or information systems.
13. More faculty and staff interrelationships with the private sector, including dual employment, and the potential conflicts of interest these interrelationships bring.
14. High technology costs in virtually every discipline and support unit.
15. Pressing needs in physical infrastructure.

Obviously, Dr. Acker elaborates more on these points than I've done. As you read through the list, I'm sure you see there, as I do, issues that will generate some thoughtful discussions on our campus, as well. I expect they will do so for some time.

It was wonderful having Dr. Acker and his wife Shirley with us. His willingness to share his wisdom, experiences, and practical advice is a gift to us all.



Extension Entomologist Calls it a Career

Jack Campbell spent 37 years researching insect control in livestock. Now retired, he's not giving it up completely.

Campbell has served at the University of Nebraska West Central Research and Extension Center as a research and extension entomologist.

His interest in entomology started while he was a student at the University of Wyoming, where he took a course from an "outstanding entomology professor."

"I really got interested in it," he said. "I was primarily interested in the animal side of it."

Campbell's specialty was studying how to prevent insects from harming livestock. Certain kinds of flies and grubs can prevent livestock from gaining weight and reduce their performance.

One accomplishment of Campbell and his team at WCREC was the discovery that Integrated Pest Management techniques could lessen the impact of insects on feedlot cattle, he said.

One challenge remaining, however, is lessening the damage to cattle on rangeland and pastures, he said. The IPM techniques effective in feedlots do not work on range and pastures.

"We're still working on that," he said. "I guess I'll stay busy."

Campbell's knowledge of entomology has attracted queries from neighbors and friends, who still bring insects to him for identification. They often think they have a problem in the yard or garden when they do not, he said. Although he admits to being stumped "once in a while," he usually is able to reassure his friends that they have nothing to worry about.

"Dr. Campbell has been the quintessential land-grant university professor with strong scientific and communicating skills, coupled with a close connection to the citizens of the state," said John Owens, NU Vice President and Harlan Vice Chancellor of IANR. "He has made a significant difference in Nebraska and beyond."



Jack Campbell

**Need to meet with the
Vice President/Vice Chancellor?
Drop-ins each Friday from 3-5 p.m.*
John C. Owens**

NU Vice President for
Agriculture and Natural Resources
and Harlan Vice Chancellor of IANR

202 Ag Hall • (402) 472-2871
*Occasionally Dr. Owens will be
called away on University business.

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Agronomy Department's Reputation attracted Lemme to UNL

Gary Lemme knew that the University of Nebraska–Lincoln's Department of Agronomy was one of the best, so deciding where to study was easy.

Lemme attended UNL as a doctoral student between 1976-79 and also served as an instructor in the department. He was attracted to UNL because he was given a 100 percent teaching position that allowed him to attend classes in soil science at night.

Lemme, a native of Kiester, Minnesota, arrived in Lincoln after earning his bachelor's and master's degrees from South Dakota State University. When time came to earn his Ph.D., he knew that UNL's Agronomy Department had a sterling reputation.

"Coming from a small university, it gave me confidence coming to a place at the top of the agronomic game and knowing that I could do this," he said.

Lemme now is Dean and Professor in the College of Agriculture and Biological Sciences at South Dakota State.

After leaving UNL, Lemme served in faculty positions at Michigan State and South Dakota State universities. He later became Assistant Dean for Academic Affairs at the University of Hawaii's College of Tropical Agriculture and Human Resources.

From there, Lemme went to the University of Minnesota, where he was Head of the West Central Research and Outreach Center, then returned to Michigan State as Associate Director of the Experiment Station.

Lemme attributes UNL for helping him develop critical thinking, technical, and problem-solving skills. That has been beneficial in his current position, where he says he works to create an environment

where others can be successful.

His job also is to stimulate communication with stakeholders and be an advocate for the university in public funding settings.

Lemme says he confidently refers his students to UNL for their Ph.D. studies.

"I recommend our graduate students come here," he said of UNL. "Nebraska really values education."

– Lori McGinnis



Gary Lemme

IANR Software Tool Aims to Help Biofuel Industry

A first-of-its-kind software tool developed by Institute of Agriculture and Natural Resources researchers is expected to help the biofuel industry and reduce greenhouse gas emissions.

The Biofuel Energy Systems Simulator, or BESS, provides a complete lifecycle analysis of all phases of the biofuel production process, said Ken Cassman, Director of the Nebraska Center for Energy Science Research and Heuermann Professor of Agronomy. It is available free at www.bess.unl.edu.

"The biofuel industry may soon become the biggest industry in Nebraska and yet there is a serious debate about the environmental benefits of biofuels – especially in the high population urban states," said Cassman, who led a broad interdisciplinary team in conducting the research.

Biofuel is ethanol made from corn or biodiesel made from soybeans. The federal government currently supports the biofuel industry with subsidies consisting of excise tax credits, which are essential to build the industry, Cassman said.

Biofuel can provide benefits such as lessening the dependence on imported oil and reducing greenhouse gas emissions, Cassman said. BESS was developed to provide a means for an ethanol plant to determine that it is contributing to net energy production and greenhouse gas mitigation. Researchers have been working on BESS for about two years.

Ethanol production requires extensive resources, such as fertilizing, irrigating, and harvesting corn and energy to run the ethanol plant. BESS will determine whether the net energy gain from ethanol is outweighing the energy input to produce it, Cassman said.

The software will allow an analysis of an individual ethanol plant as opposed to other software tools that are based on data averaged from multiple plants.

The biofuel industry continues to grow, particularly as states are implementing aggressive renewable fuel standards, Cassman said. For example, five western states and seven northeastern states are setting up systems that may require the certification of the "carbon costs" of imported biofuel to avoid importing

biofuels that do not contribute to greenhouse gas mitigation.

IANR researchers are hoping the BESS software framework can become an accepted standard for certifying carbon offset credits in the biofuel industry, Cassman said. It also could represent a substantial additional profit stream for the Nebraska biofuel industry if greenhouse gas emissions trading systems are expanded, such as the Chicago Climate Exchange, he said.

"We're ideally positioned to be a national leader in developing the framework for a standardized assessment tool that the scientific community can agree upon to validate that plants are meeting environmental goals," Cassman said.

The software was released in late July but was unveiled earlier at the Fuel Ethanol Workshop in St. Louis, the largest biofuel industry meeting in which more than 5,000 people attended. In addition, *Ethanol Producers Magazine* featured the software in its July issue.

The team's research was funded by the Nebraska Energy Office and the Western Governors' Association.

Beermann Receives New Appointment

Donald Beermann, Head of the Department of Animal Science for the last eight years, has a new appointment.

Beermann has been named Director of the Institutional Animal Care Program in the Office of the Vice Chancellor for Research and Coordinator of the One Health Initiative in the Agricultural Research Division. He assumed the duties August 1.

Beermann will be responsible for providing professional direction for the care and use of animals in research and teaching within University of Nebraska–Lincoln facilities. He also will administer the UNL program for laboratory animal care and housing.

Beermann as well will coordinate the

development of future research and educational opportunities for IANR and its collaborators in those areas that bridge human and animal health.

Sheila Scheideler will serve as Interim Department Head while a national search for a permanent replacement is conducted. Scheideler, a Professor and Extension Poultry Specialist, has held numerous campuswide leadership positions.

John Owens, NU Vice President and IANR Harlan Vice Chancellor, said the department made advancements on several fronts during Beermann's term as Department Head. The department initiated two new undergraduate options in equine science and companion animals, launched a joint degree in Food

Technology for Companion Animals, and was a key partner in the Professional Program in Veterinary Medicine offered by Iowa State University and UNL.



Donald Beermann

“These initiatives, and other initiatives such as research and education in the area of wet and dry distiller's grains, have positioned the department as important to the state and the nation,” Owens said.

NCTA-Frontier Partnership Brings Education, Industry Together (continued from page 1)

the college, which was then called the Nebraska School of Agriculture. At that time the school served as a high school from which Garlick graduated in 1954.

Garlick went to Hastings College for two years and then got his bachelor's degree in electrical engineering from the South Dakota School of Mines and Technology. He later earned a master's degree in electrical engineering from the University of Southern California and a doctorate in electrical engineering and solid state physics from Iowa State University.

He started Holographic Engineering in Richland, where he developed the concept of holographic ultrasound, which uses diffracted sound waves that pass through soft tissue to form a hologram, or three-dimensional image that is illuminated with a laser.

In addition to bringing new business to the area, Dr. Garlick donated more than \$1 million to the Nebraska Community Foundation in Lincoln and designated it for a community center in Curtis, which is expected to be completed by the end of the year.

During the process of working on the community center, Garlick met Sleight and realized his strong commitment to revitalizing rural Nebraska.

“I have never met anyone I was more inspired by and more impressed by than

Weldon Sleight,” Garlick said.

Sleight notes that 40 percent of Nebraska communities have 300 people or less and the population of Curtis has been declining as mechanization has eliminated jobs. That is one reason why he is emphasizing entrepreneurship at NCTA.

“We're teaching our students the principles of entrepreneurship to build small businesses in rural Nebraska,” Sleight said. “While we're building up Curtis, we want to revitalize all rural Nebraska communities.”

Frontier Technologies will offer technological jobs to Curtis residents, as well as NCTA students to earn money for college, Sleight said.

The aim of Frontier Technologies will be to market equipment that will help veterinarians diagnose ailments in large and small animals and help food manufacturers identify foreign objects such as bone fragments in food.

The equipment also will be used for educational purposes at NCTA, which has exclusive rights to the technology for veterinary medicine, Garlick said.

“NCTA is the only institution in the world to have this,” Garlick said.

Frontier Technologies has incorporated in Nebraska and has opened an office on the NCTA campus.

– Lori McGinnis

Haskell Agricultural Lab Marks 50th Anniversary

The Haskell Agricultural Laboratory near Concord celebrated its 50th anniversary August 14th.

The anniversary was marked by a public field day and open house that included tours, booths, exhibits, hands-on educational activities for youth and adults and remarks by NU President J.B. Milliken, Unicameral Speaker Mike Flood, Regent Chuck Hassebrook, and NU Vice President and IANR Harlan Vice Chancellor John Owens.

The lab started when local interest grew in agricultural research in the region. The Experimental Farm Association took donation of a 320-acre farm from the C.D. Haskell Family and turned it over to the University of Nebraska in 1957.

The site officially was renamed the Haskell Agricultural Laboratory 10 years ago. The facility continues to conduct research in beef cattle, swine, crop production and crop nutrition, crop pest management, and other agricultural and natural resources issues.