University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

John Owens: Speeches & Appearances

Agriculture and Natural Resources, Institute of (IANR)

1-1-2007

Welcome: Fourth Annual Water Law, Policy and Science Conference

John Owens
University of Nebraska - Lincoln, jowens2@unl.edu

Follow this and additional works at: http://digitalcommons.unl.edu/owenspeech

Part of the Agriculture Commons

Owens, John, "Welcome: Fourth Annual Water Law, Policy and Science Conference" (2007). *John Owens: Speeches & Appearances.* Paper 163.
http://digitalcommons.unl.edu/owenspeech/163

This Article is brought to you for free and open access by the Agriculture and Natural Resources, Institute of (IANR) at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in John Owens: Speeches & Appearances by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Welcome
Fourth Annual Water Law, Policy and Science Conference
Monday, March 26, 2007
John C. Owens
NU Vice President and IANR Harlan Vice chancellor

It was Mark Twain who, in 1884, penned the words, and I quote, "Whiskey is for drinking; water is for fighting over."

While I won't touch Twain's commentary on whiskey, his comment on water remains on target 123 years later.

President John F. Kennedy put it another way when he said, and again I quote, "Anyone who can solve the problems of water will be worthy of two Nobel prizes – one for peace and one for science."

As I welcome you to this fourth annual Water Law, Policy and Science Conference, I'll offer one more quote, and it is this: "I have little need to remind you that water has become one of our major national concerns." U.S. Secretary of Agriculture Ezra Taft Benson wrote that in the opening sentence of a USDA Yearbook of Agriculture foreword dedicated entirely to water. If you can't quickly place Benson as the Secretary of Agriculture, it's because the yearbook I'm quoting was 1955's. Over 50 years later, water remains a national and international concern. And the concern is growing.

That's why conferences such as this, and topics such as "The Future of Water Use in Agriculture" are so important to us all. It is my very great pleasure, on behalf of the university, to welcome each and every one of you to this conference, and to Lincoln. We are glad you are here. We look forward to your participation in this exciting and informative conference. We also look forward to your participation in the lively discussions I expect will arise because of the excellent speakers and topics offered today and tomorrow.

Certainly the "Future of Water Use in Agriculture" is a critical topic in Nebraska, our powerhouse agricultural state. Agriculture is Nebraska's leading industry, and one in three Nebraskans's jobs depends upon it in some way. Back in 1990 that number was one in four. Despite the fact that we see many small towns losing population and larger towns growing in our state, the importance of agriculture for Nebraska actually has increased significantly in the past 17 years.

Water is vital for us, and of key importance to our citizens. Each year, we in the Institute of Agriculture and Natural Resources hold listening sessions across Nebraska. It doesn't matter where we are – north, south, east, or west; in small towns or Omaha or Lincoln – water, both quality and quantity, is a topic citizens raise wherever our listening sessions are held.

The University of Nebraska-Lincoln launched our Water Resources Research Initiative in 2003 because we recognize the vital role water plays in our state and world. This annual conference is an outgrowth of that Initiative.

Here in Nebraska we are fortunate to sit over a majority of the largest underground aquifer in the Western Hemisphere, and perhaps the world. Nebraska ranks 10th in the nation in numbers of streams and river miles, and has approximately 2,000 natural lakes, mainly in the Sandhills. We're stewards of over 800 sandpits and barrowpits, primarily in the Platte Valley, and over 1,800 reservoirs. Nebraska ranks 16th in the nation in total wetland acreage.

With these wonderful water resources comes a tremendous responsibility to see these resources are sustained and protected for those generations that follow us. At the University of Nebraska-Lincoln we take that responsibility very seriously. We work together, across disciplines, to meet today's needs and answer tomorrow's questions regarding the best use, sustainability, and management practices for our precious resources.

Irrigation has been a part of how we grow things in Nebraska since the 1800s. The earliest record of surface irrigation in our state is in 1879,

when an irrigation ditch company was formed near North Platte. Irrigation from surface water developed first in the major river valleys.

The advent of center pivot irrigation coupled with an abundant groundwater supply caused the next major irrigation development in Nebraska after the 1960s. Today, about 1/4 of Nebraska's irrigated acres are surface-irrigated, and 3/4 irrigated by center pivot.

The 2007 Nebraska Agriculture Fact Card will tell you Nebraska has 90,534 registered, active irrigation wells supplying water to 7.6 million acres of harvested cropland and pasture. Of the total cropland harvested in our state during 2002, 43 percent was irrigated. Nebraska ranks second only to California in the absolute number of irrigated acres!

I am very pleased to report that at the University of Nebraska-Lincoln we have a solid base of past research and education programs that provide the firm foundation on which we build as we seek answers for today's and tomorrow's water use and issues. We have an extremely strong commitment to water research and education in Nebraska. Certainly part of my vision for our state is that the recognition and stewardship of Nebraska's abundant and highly precious natural resources only will grow. I envision a state of thoughtful citizens passionate about sustaining and preserving

these resources because they understand it is Nebraska's natural resources that are the base of our state's wealth. That vision takes research and education, and that is the role of our land-grant university. We accept it with enthusiasm and a deep sense of responsibility, because we recognize its importance to our state and, indeed, the world.

The more we all – and when I say all, I mean people from many different walks of life – know about the complexities, as well as the nuts and bolts of our water situation, the better. We need to know, understand, and, I would hope, appreciate the interdependence we share in the ways each of us relies on this life-giving resource. We have tremendous opportunities to partner – with local, with state, with federal agencies, and with the private sector – on all aspects of water resources. We must grasp those opportunities and make the most of them.

We are about – we must be about – using water most efficiently. That takes both research and education. Here at the University of Nebraska-Lincoln our scientists provide both of these requirements to enable agricultural producers to use water in ways that maximize water use efficiency and profitability, protect water quality, and meet regulatory requirements. We evaluate alternative crops that require less applied

irrigation water, or alternative crops adapted to dryland production that fit into Nebraska's cropping systems, and for which markets exist. We evaluate opportunities for shifting from irrigated to non-irrigated production or other enterprises that will maintain economic viability and sustainability for producers and communities. We work hard to help Nebraska and Nebraskans with the research and education needed to meet the water management issues facing us all. Here are just a few examples of the many, many excellent water projects we have under way here at the university.

Our Water Optimizer, a decision-support computer program developed by our researchers, became available in 2005 to help farmers make more informed choices for conserving water and enhancing profits. Nearly 700 producers downloaded or purchased the tool that year. It lets users enter individualized information and calculate what crops will be most profitable with the given costs and available water. By running "what if" scenarios, growers can evaluate the best options for farming with limited water whether it be growing different crops, irrigating fewer acres, applying less water to existing crops, or going to dryland farming.

A recent $885,000 grant from USDA now is allowing our researchers to conduct field research to refine and improve the Water Optimizer to make it more versatile and more widely applicable.

We have an extension project in the Republican River Basin that focuses on teaching producers to achieve nearly full yields with less water. The project showed a water miser strategy used 31 percent less water while reducing corn yields only 3 percent. Pumping cost-savings usually more than offset yield loss. Overall value of knowledge gained in 2006 was $2.4 million, according to 130 producer participants, who also said they saved at least two inches of water per acre.

One of our stream ecologists is tracking the effects of ecosystem changes on a species and the subsequent effects of its evolution on the local ecosystem by studying a rapidly-evolving fish in Trinidad in a model ecosystem. This research, which also looks at human effects on the environment and subsequent changes in evolution, is part of a project involving several universities, funded by a five-year, $5 million National Science Foundation grant.

Our water scientists are teaming with USDA's Risk Management Agency to provide current groundwater levels across Nebraska via the

Internet. For more than 75 years, the university has recorded levels in groundwater wells statewide and reported findings annually in publications to aid decisions about groundwater use, management, and policy. Those color maps are available online.

Through this new partnership, satellite uplink and computer equipment is being installed in 52 of the 5,800 wells monitored statewide to compile groundwater data. This will allow information about current levels to be shared immediately via the Web, and of course, the better the data we have, the better the decisions we can make. Recent drought, coupled with recent water policy and legal decisions, has increased the need for more timely groundwater information. This new rapid monitoring program, which we expect will be available on the Internet by spring 2008, will provide a powerful snapshot of groundwater status.

And, of course, our campus is the home of the National Drought Mitigation Center, which helps people and institutions develop and implement measures to reduce society's vulnerability to drought, stressing preparedness and risk management rather than crisis-management.

Drought haunts us all. The legacy of the terrible drought of the 1930s in this country was building dams and developing irrigation. The

legacy of today's drought – we are in our eighth year of drought in the western part of our state – may very well be sustainability and quality of life. We can't make more water, but we can take every opportunity to learn all we can to make the most of the water we have.

Ben Franklin once said, "When the well is dry, we know the worth of water."

People at this conference know that value even before the well is dry, and I applaud you for that. We who know water's worth know we must do all we can to preserve, sustain, and use it wisely.

Again, everyone, welcome to this conference. I hope you'll look around Lincoln while you're here, visit our city campus just north of this hotel, and our East Campus, with its lovely arboretum, Dairy Store, and new natural resources building, Hardin Hall, just 2 ½ miles to the east, down Holdrege Street. I know you have a great conference ahead of you. Enjoy!

And now, it is my very great pleasure to introduce your plenary session speaker, Dr. Gale Buchanan, Under Secretary for Research, Education and Economics in the U.S. Department of Agriculture.

Dr. Buchanan was born and raised on a farm in Madison County,

Florida, where he grew up to milk cows, shell corn, hoe tobacco, chop cotton, and hoe or pull crabgrass from peanut rows he once said seemed as if they "would never end."

He holds B.S. and M.S. degrees in agronomy from the University of Florida. His Ph.D. in plant physiology, with minors in botany and agronomy, is from Iowa State University. ROTC - at Florida U.S. Army - Full Colonel } more after The Talk!

The first 21 years of his professional career Dr. Buchanan spent with Auburn University in the Department of Agronomy and Soils. His primary teaching and research responsibilities were in "weed science".

Dr. Buchanan served as an administrator of the Alabama Agricultural Experiment Station. He was appointed Associate Director of the Georgia Agricultural Experiment Stations and Resident Director of the Coastal Plain Experiment Station in 1986. He became Dean and Director of the College of Agricultural and Environmental Sciences in 1995, a position he held until just before he "retired" from the University of Georgia in 2005.

He is a past chair of the Board of Agriculture of the National Association of State Universities and Land Grant Colleges and is a past president of the Council for Agricultural Science and Technology.

Today he is USDA Under Secretary for Research, Education and Economics, where, among other responsibilities, he provides the leadership for the Agricultural Research Service, the Economic Research Service, The National Agricultural Statistics Service, the National Agriculture Library, and the Cooperative States Research, Education, and Extension Service.

We are very glad he is here with us as the plenary speaker for our Fourth Annual Water Law, Policy, and Science Conference. Please welcome my old friend and associate, Dr. Gale Buchanan.