

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Extended Visions Newsletter of ARDC

Agricultural Research and Development Center

---

12-2007

## Extended Visions, November/December 2007

Follow this and additional works at: <https://digitalcommons.unl.edu/ardcextendedvisions>



Part of the [Agriculture Commons](#)

---

"Extended Visions, November/December 2007" (2007). *Extended Visions Newsletter of ARDC*. 21.  
<https://digitalcommons.unl.edu/ardcextendedvisions/21>

This Article is brought to you for free and open access by the Agricultural Research and Development Center at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Extended Visions Newsletter of ARDC by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

## In This Issue...

\* ARDC Director's Comments

\* ARDC FEATURE UNIT -  
Foundation Seed Division  
- About the People  
- About the Research  
- Introducing Husker Genetics  
- How a University of Nebraska  
HUSKER GENETICS  
Foundation Seed Variety  
Goes from the Lab to the  
Farmer

\* Annual Festival Teaches  
Youth About Ag

\* Bergman Recognized at  
Retirement Reception

\* Dec. 6 Workshop to Focus on  
Alternative Energy for Home,  
Farm, and Acreages

\* December Programs...  
Ethanol By-Product Use for  
Cow/Calf Producers and  
Farmer Feeders

\* How the Field Days Stack Up

\* MEAD MAGNET Update -  
Mead High School Agriculture  
Student Works at the Swine  
Unit

\* Nebraska Soybean Day and  
Machinery Expo

## ARDC Director's Comments

### Weather, Excavations and a Birthday

by Daniel J Duncan, ARDC Director

This has been a very interesting year from a weather perspective. Good spring moisture had us thinking the drought was behind us. We went into a dry spell in June, July and the first part of August that had us thinking the drought was back with a vengeance. Then Mother Nature turned on the spigot and we received record rainfall. For many parts of eastern Nebraska, we had the wettest October on record. Due to this rainfall, it appears that irrigated crops will do only slightly better than rain-fed crops.

All of this wet weather has made it difficult for plot and crop harvest as well as feedlot management. Lagoons are nearing capacity and will need pumped to get ready for winter. If you see irrigation systems running, we have not lost our minds. We are just trying to disperse lagoon water when it is warm enough and the soil is not saturated.

Many of you may be wondering why all of the heavy equipment has been moving around south of Load Lines 1 and 2. This activity is part of a UNL investigation into buried waste at the ARDC. By the time this article is published, Load Line 2 excavations will be finished and Load Line 1 will be close if not finished. Operations will then move to the former landfill area.

I would like to take this opportunity to wish August Christenson a happy birthday. Augie's birthday was October 11. If you have not been to the August N. Christenson Research and Education Building lately, you will notice that Augie's namesake has just received a new coat of paint. In my mind it does not seem possible that the Christenson Building needed a new coat of paint...can you believe we have been in this building for 12.5 years? ☐

## ARDC Feature Unit Foundation Seed Division



### Introducing Husker Genetics!

Quality seed and superior genetics - that's what today's crop producers are seeking. The University of Nebraska's Foundation Seed Division has been in the business of producing quality seed for many years.

Essentially, the Foundation Seed Division grows, increases and maintains cultivars developed by UNL researchers and plant breeders. UNL's research team has done an outstanding job of developing superior genetics and there has been a steady increase in the demand for this germplasm. A clear marketing identity was needed for the release of these seed lines. Thus, HUSKER GENETICS was established. Husker Genetics is the new name that is now associated with UNL's seed releases.

There is a great deal of research and propagation before a Husker Genetics line hits the market. The Foundation Seed Division (FSD) increases small amounts of new seed varieties to

ensure sufficient seed distribution to certified seed growers. FSD also maintains supplies of established varieties of Foundation Seed. The seed is further increased by certified seed growers to provide high quality seed for Nebraska farmers. These important steps bring seed-stock from the plant breed-

er's research plot to the farmer's field. (See the graph on page 2 for more details.)

The Foundation Seed Division is headquartered at the ARDC. Because of the FSD's research association, it is an integral part of the Agricultural Research Division within UNL's Institute of Agriculture and Natural Resources.

As a self-supporting, non-profit organization, operating funds are derived directly from sales of foundation seeds and services. Services provided by the Nebraska Crop Improvement Association are utilized for inspection of seed fields. And the expertise of agronomists, plant breeders, plant pathologists, entomologists, and extension specialists are also drawn upon.

The Foundation Seed Division currently has 1,000 acres in seed production. Species of seed grown in 2007 and the number of varieties included: hard red winter wheat (12), hard white winter

### December Programs...

### Ethanol By-Product Use for Cow/Calf Producers and Farmer Feeders

At the Saunders County Extension Office located at the  
ARDC August. N. Christenson Research & Education Building  
Both programs run from 7-9 p.m.

The expansion of the ethanol production industry in Nebraska has created opportunities for cattle producers to utilize the byproducts as a feed source in their operations. UNL researchers have conducted research for many years on utilizing ethanol byproducts - from feed rations to storage and it is ongoing. Is byproduct feeding a viable option for you? Come learn more about how byproducts could become an economical feed staple in your operation.



### Wednesday, December 5 Ethanol By-Product Use for Cow/Calf Producers

Presented by: Rick Rasby,  
Extension Beef Specialist, UNL  
Department of Animal Science

- \* Nutrient quality and differences between distillers grains and corn gluten feed
- \* Storage and handling issues for cow/calf producers
- \* Use in heifer development and backgrounding diets
- \* Using solubles in cattle diets
- \* Pricing distillers grains

### Wednesday, December 19 Ethanol By-Product Use for Farmer Feeders

Presented by: Galen Erickson, Extension Beef Feedlot  
Nutrition Specialist, UNL Department of Animal Science

- \* What are these byproducts
- \* How do they fit in feeding operations
- \* What can you expect in terms of cattle performance
- \* How much can be fed, and what does it change in the diet
- \* What are the challenges
- \* Pricing these wet byproducts
- \* How to manage inventory (storing wet byproducts)

Register one day in advance - contact UNL Extension at  
(800)529-8030 or via e-mail at [kglewen1@unl.edu](mailto:kglewen1@unl.edu). ☐



### Winter Wheat Varieties consistently rank in the TOP 5

variety trial averages  
across the entire state of  
Nebraska since 2002.

#### Current rankings...

Western Dryland Wheat	Top 3 or 5	2002-2006
Western Irrigated Wheat	Top 2 of 5	2002-2006
South Central Wheat	Top 3 of 5	2003-2007
West Central Wheat	Top 4 of 5	2002-2006
Southeast Region Wheat	Top 2 of 5	2003-2007
Panhandle Organic Wheat	Top 5 of 5	2005-2007
Holt County Irrigated Wheat	Top 3 of 5	2007

For more information on these and other  
variety trials, please visit  
<http://varietytest.unl.edu>

FEATURE UNIT - Foundation Seed Division Cont. on P. 2



How a University of Nebraska  
HUSKER GENETICS  
Foundation Seed Variety  
Goes from the Lab to the Farmer



**Step 1 - Faculty conduct research on seed varieties and develop “lines” that show promise and are worthy of further propagation.**

**Step 2 - The seed variety is then increased by the University of Nebraska HUSKER GENETICS Foundation Seed Division.**



**Step 3 - After the variety is increased, it must receive certification from the Nebraska Crop Improvement Association.**



**Step 4 - Certified Seed Growers or private companies further increase the variety.**



**Step 5 - After the variety is increased substantially while maintaining purity - the seed becomes available to farmers.**



Steps 3 and 4 above mention “certification.” And just how does seed become “certified” by the Nebraska Crop Improvement Association? Seed is purchased from University of Nebraska HUSKER GENETICS Foundation Seed Division and planted on clean fields. Fields are inspected by the Nebraska Crop Improvement Association and must meet Field Purity Standards. The variety is harvested with a clean combine and the identity of the variety is maintained at all times. The seed lot is conditioned by an NCIA inspected facility and sent to the NCIA Lab. It must pass mechanical standards for germ, purity, and weed seeds. Certified Seed Growers sell the producer a pure variety labeled with all required information. □

FEATURE UNIT - Foundation Seed Division - from P. 1



Foundation Seed Director, Jeff Noel stands next to one of the taller varieties of sorghum that the Foundation Seed Division produces.

wheat (2), winter triticale (3), spring oats (3), Roundup Ready soybeans (8), conventional and food grade soybeans (38), grasses (10), and millet (6). FSD also raises sorghum, edible beans, and alfalfa.

Harvesting foundation seed is much different than harvesting a grain crop. Each combine is thoroughly cleaned between harvest of varieties. So once the crop comes out of the field, there is much work that still must be done.

The seed conditioning equipment is also thoroughly cleaned between each variety to ensure purity and quality. The production facility includes two cleaning lines that operate at 55 bushels per hour capacity, a free standing cleaner and a seed treater. When the weather turns cold and snow is flying in the air, the Foundation Seed Division staff is busy cleaning, conditioning and bagging seed.

The extra cleaning throughout the production process is time-consuming, but necessary to ensure a high quality product. Husker Genetics is not sold directly to the general public. If you are interested in learning more about the varieties - contact your certified seed dealer! □

ARDC Feature Unit  
Foundation  
Seed Division



About the People

Jeff Noel is the FSD Director and started in January 2003. He is originally from Kentucky and graduated from Western Kentucky University with a bachelor’s degree in Ag & Business Administration. He grew up on a grain and live-stock farm and raised cattle and hogs, corn, soybeans, wheat, barley, and tobacco. He also managed a Co-op Agronomy Division and worked for WILFARM LLC and LOL. He moved to Lincoln from Badger, Iowa, with his wife, Tema.



Jeff Noel

William Barelman, Ag Research Technician II, processes seed, makes deliveries, and maintains the seed warehouse and inventories. He has been with the University since 1981 and has a bachelor’s degree in Ag Economics from UNL (1980). His hobbies include collecting tools and farm toys.



William Barelman

Mike Zoubek, Ag Research Technician II, performs various duties from planting to harvesting to cleaning seed. He has the longest history with the Foundation Seed Division as he has been on staff since 1969.



Mike Zoubek



Chad Lanik

Chad Lanik is an Ag Research Technician II and also works with Farm Operations at the ARDC. He is originally from Wahoo and before joining the ARDC, he worked as a crop consultant in Sublette, Kansas for five years. He lives in Wahoo.



Lisa Moravec

Lisa Moravec, Staff Assistant, performs office functions for the Foundation Seed Division, such as taking orders, accounting, and other duties. She started with the FSD in 2000 and possesses a bachelor’s degree in Agriculture with a major in Ag Education from UNL. She and her husband, Kent, live near Ithaca with their son and daughter. In her spare time, she enjoys attending her children’s activities and going to tractor pulls. □

About the Research

University of Nebraska faculty are on the cutting edge of seed development. In this issue, we feature George Graef, a Professor in UNL’s Department of Agronomy and Horticulture, who is extensively involved in soybean breeding and genetics.

Graef’s research focuses primarily on improving yield and stress resistance in soybeans adapted to Nebraska production areas. Some specific objectives include:

1. Development of soybean germplasm and cultivars with increased seed protein content
2. Development of soybean germplasm and cultivars with increased oil content
3. Identifying genes involved in protein and oil content in soybean seeds
4. Coordination of nationwide cooperative evaluation of soybean lines with improved quality traits from state and USDA soybean breeding programs
5. Development of soybean cultivars for specific food and end uses
6. Identification of resistance genes for Sclerotinia Stem Rot and Bean Pod Mottle Virus in soybeans
7. Use of genetic male sterility in soybean cultivar development and recurrent selection programs

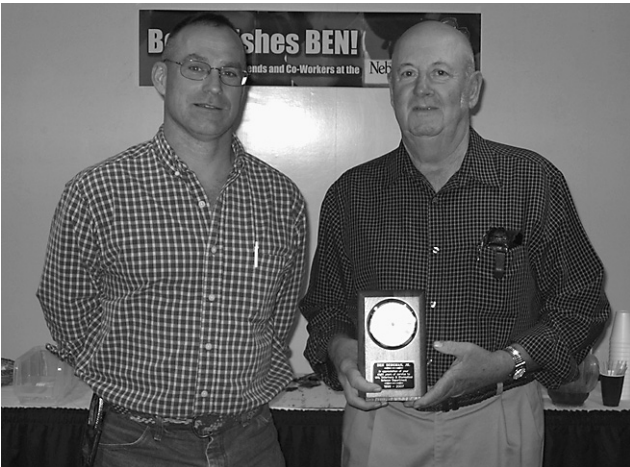
Graef teaches plant breeding courses and coordinates the Agronomy 295 Internship course. He has also published numerous articles about his research in scientific journals. Graef holds a B.S. degree in Environmental Horticulture from the University of Connecticut, and M.S. degree in Plant Breeding and Cytogenetics from Iowa State University, and a Ph.D. in Plant Breeding and Cytogenetics, Minor, Genetics from Iowa State University.



George Graef, PhD

Learn more about Dr. Graef and other researchers in the plant breeding program by visiting the “Plant Breeding, Genetics and Molecular Physiology” section of the Department of Agronomy and Horticulture’s website. Key in <http://agronomy.unl.edu>, select “Faculty/Staff”, then “Peer Groups” and “Plant Breeding”. □





Blaine Clowser, Unit Manager at the Veterinary & Biomedical Sciences research area at the ARDC presented an engraved clock to Ben Bergman in honor of his service to the department.

Mark Schroeder, ARDC Associate Director and Farm Operations Manager (right), presented Ben with a certificate of appreciation at the reception on behalf of the ARDC.

Bergman Recognized at Retirement Reception

Ben Bergman was recently honored at a reception held at the ARDC. Ben worked with UNL's Department of Veterinary and Biomedical Sciences research area at the ARDC from December 1999 to October 2007. He also has worked at various other areas at the ARDC over the years. We wish Ben the very best in his retirement! □



Calendar of Events

4-H Beef Weigh In  
Jan. 19 & Mar. 15  
1:00 - 3:00  
at the  
Wahoo Sale Barn

November

- 16 UNMC Agri Medicine Conference Tour-Biofuels Update 9:30-12:00
- 19 Saunders County Extension Board Meeting 7:00-10:00 pm

December

- 5 Ethanol By-Product Use for Cow/Calf Producers 7:00-9:00 p.m.
- 6 Energy Conference 8:00-5:00
- 10 Diamond Clover Recognition Program Training 10:00-1:00
- 12 Unit Managers Meeting 1:00-3:00
- 19 Ethanol By-Product Use for Farmer Feeders 7:00-9:00 p.m.
- 19 NSFGPP Consultations 8:00-5:00
- 20 NSFGPP Consultations 8:00-5:00
- 21 NSFGPP Consultations 8:00-12:00

January

- 9 Unit Managers Meeting 1:00-3:00
- 14 NSFGPP Consultations 8:00-5:00
- 15 NSFGPP Consultations 8:00-5:00

Dec. 6 Workshop to Focus on Alternative Energy for Home, Farm, and Acreages

December will be a busy month for workshops. An Alternative Energy for Home, Farm, and Acreages workshop will be held on Thursday, December 6, from 1-5 p.m. at the ARDC. Topics and presenters include:

- \* **Energy Conservation In Homes and Buildings**  
Shirley Niemeyer, UNL Housing and Environment Specialist
- \* **Small Wind, Solar, and Photovoltaics for Home or Business**  
John Dixon, Dixon Power Systems
- \* **Net Metering for Renewable Electricity**  
Rich Andrysik, Lincoln Electric Systems
- \* **Ethanol and Biodiesel Blends**  
Loren Isom, UNL Industrial Ag Products Center
- \* **Modern Methane Production**  
Crystal Powers, University of Nebraska-Lincoln

There is no charge for this UNL Extension-sponsored workshop. For more information, please contact John Hay at UNL's Department of Biological Systems Engineering at 402-472-0408. □



How the Field Days Stack Up

UNL Extension develops and delivers educational ag programs that provide research-based information to Nebraskans. The intent of this programming is to help Nebraskans be economically competitive in sustainable livestock, and crop production systems, and be good stewards of our natural resource systems.

UNL Extension Educator, Keith Glewen, coordinates or partners with other Extension personnel and organizations to coordinate field days, such as the Crop Management Diagnostic Clinics, Soybean Management Field Days, Solution Days, and the Irrigation and Energy Conservation Field Day. University and industry educators and specialists are instrumental in providing program content and presentations, while ARDC and Extension personnel play a key role in implementing the programs.

The Crop Management Diagnostic Clinics (CMDC) have been held at the ARDC since 1996 at a site located south of the August N. Christenson Research & Education Building specifically developed for the programs.

This was the 9th year for Soybean Management Field Days (SMFD). The event is held at four producer sites across the state, which vary from year to year. Producers obtain ideas and insight about the challenges they face in producing a quality crop at a profitable price in today's global economy. SMFD is sponsored by the Nebraska Soybean Board in partnership with Extension.

Solution Days 2007 provided producers with practical solutions to the changing agricultural landscape. The event is held annually at a site near York and is sponsored by NK®, Syngenta and the Nebraska Soybean Board in partnership with UNL Extension.

The Irrigation and Energy Conservation Field Day started in 2006 at the ARDC. This year, the program was held in North Platte. The Field Day is sponsored by the Nebraska Corn Board and the Nebraska Corn Growers Association in partnership with UNL Extension. Participants learn about best management practices for corn production, achieving water conservation in irrigated and dryland corn production, how to reduce energy use production costs, how to maintain and, in some cases, increase yield and profitability and learn to better manage surface and ground-water irrigation.

The information that participants provide on evaluations is essential for determining impact and program usefulness and viability. The following provides a synopsis of some of the impact results and participant comments from the field days described above:

\* Total acres managed or influenced by participants:

- CMDC - 7,183,989
- SMFD - 564,681
- Solution Days - 436,353
- Irrigation and Energy Conservation Field Day - 246,019

\* Estimated value of the knowledge gained and/or anticipated practice changes on a per acre basis:

- CMDC - \$8.64
- SMFD - \$11
- Solution Days - \$8.56
- Irrigation and Energy Conservation Field Day - \$13.08

\* Estimated total value of the program:

- CMDC - \$65,242,277
- SMFD - \$5,939,988
- Solution Days - \$3,735,177
- Irrigation and Energy Conservation Field Day - \$3,217,929

Conservatively, the CROP MANAGEMENT DIAGNOSTIC CLINICS held at the ARDC impacted 57% of Nebraska's row crop acres



Soybean Management Field Days participants took away useful advice.



Crop Management Diagnostic Clinic participants appreciated the hands-on approach and interaction with educators and specialists.

"Gained knowledge by seeing some real life issues I had only seen in a book."  
"I saw a new perspective and ways to diversify my cropping strategies."  
"Gives us a one up on what is going on in the industry."  
"Hearing information like this keeps my operation on the cutting edge of all the new technologies and thinking."  
To learn more about these programs and other educational opportunities, please contact UNL Extension at 402-624-8030 or 800-529-8030. □



NEBRASKA SOYBEAN DAY  
& MACHINERY EXPO

Friday, December 14  
8:30 a.m. - 2:30 p.m.  
with a break scheduled at 10:00 a.m.  
so you can view equipment  
and visit with exhibitors

Saunders County Fairgrounds - Wahoo, NE

8:30 a.m. View Commercial Exhibits

9:00 On-Farm Soybean Production Research Results From Area Growers  
Keith Glewen, UNL, Extension Educator

Most Common Mistakes Made in Storing Grain  
John Gnadke, Harvest Management Consultant, AGS, Inc. - Ankeny, Iowa  
Sponsored by Pioneer Hi-Bred International

10:00 Break - View Commercial Exhibits

New Bin Considerations - John Gnadke - Sponsored by Pioneer Hi-Bred Intl'

Nebraska Soybean Checkoff Update and Association Information  
Soybean Board and Soybean Association.

A Bump in the Road: How Transportation is a Growing Obstacle to Soybean Profitability  
Mike Steenhoek, Director,  
National Soybean  
Transportation Coalition

12 Noon Lunch

Ten Most Common Yield Limiting Factors In Soybean Production  
Dr. Palle Pedersen,  
Soybean Extension  
Agronomist, Iowa State  
University

Making Sense Out of the Grain Markets  
Roy Smith, Farmer, Educator,  
Broadcaster, Writer, & Student  
of Marketing, Soyroy, Inc.

2:30 p.m. Adjourn

Producers will be able to visit with representatives from seed, herbicide, fertilizer and equipment companies and view new farm equipment during a 30-minute break at 10 a.m.

Soy doughnuts will be cooked on site and the Pancake Man will serve a complimentary lunch.

This free program is sponsored by UNL Extension in the university's Institute of Agriculture and Natural Resources, the Nebraska Soybean Board, Saunders County Soybean Growers Organization and private industry. □



Left: John Kilpatrick, UNL Extension, taught the youth about grain production. Above: The students always enjoy taking the drivers seat in a tractor and learning about technology.

M.E.A.D  
Making Education in  
Agriculture Different

Mead High School  
Agriculture Student  
Works at  
the Swine Unit

by Cassie Parsons,  
Mead Public High School

Several former Mead students have had the pleasure of working at the ARDC, but none so far have had the satisfaction of working at the swine unit.

Tim Hickman, however, a junior at Mead High school and Mead FFA member, works at the ARDC where he takes care of the animals and does maintenance work. He helps clip tails, give shots, ear notch and install PIN tags to baby pigs. Being at the ARDC has taught Tim about working in a bio-secure area. He has to clean the pens, feed the hogs, mow the grass, and replace flooring. Tim learned of this job at his school and was recommended by Mrs. Kocian, the Ag teacher and FFA advisor at Mead High School.

"Working with the people is what I enjoy most about the job", says Tim. This

Tim Hickman helps other ARDC employees Trevor Gliden and Don McClure assembling a feed bin, one of his many duties at the ARDC swine unit.

Featured Speakers at the Soy Expo...

This year's Soy Expo will provide timely topics and presentations that soybean producers won't want to miss. The agenda is packed with ideas to consider for 2008. Two of the featured speakers are John Gnadke and Dr. Palle Pedersen. Learn more about their experience below.

\* John Gnadke is a Harvest Management Consultant with AGS, Inc. in Ankeny, Iowa. John's career & expertise spans 42 years of experience working with grain drying, storage, & harvest management and has co-authored a manual titled, Quality Grain Care, A Grower's Quick Reference Guide. John clients include farm and industry operations.

\* Dr. Palle Pedersen, Soybean Extension Agronomist, Iowa State University, coordinates and provides state leadership in soybean production and management. His work in extension and research focus on economical and environmentally sustainable soybean production systems to maximize yield. Emphasis is on soybean response to management systems and new technologies; genetic and management system interactions; crop rotation effects; and the effect of agronomic practices on soybean pathogens and pests.

Dr. Palle Pedersen

Annual Festival Teaches Youth About Ag

Fourth grade students, primarily from Omaha, took a close-up look at agriculture during a 4-day festival at the ARDC. This year's Ag Awareness Festival highlighted beef, dairy, grains, and swine. Production, technology, and products in agriculture are covered at this annual event that drew in 650 students.

Omaha schools and surrounding schools attending this year included: Good Shepherd Lutheran, Mary Our Queen, Edison, Oakdale (Westside District 66), Druid Hill, Wildwood, Meadows, Mt. View, Sunny Slope, Holy Name, Lothrop, Trinity Lutheran (Fremont), Yutan, Blumfield, Seymour, St. Bernard and St. Robert Bellamine.

The first Agricultural Awareness Festival was held at the ARDC in October 1996 with 200 Omaha Public School sixth grade students attending. Since that time, the festival has grown to multiple days and is now aimed at fourth-graders. The event educates approximately 650-900 students primarily from Douglas, Saunders, and Dodge Counties each year in the fall.

An additional Lincoln festival was added in 2001 at the Lancaster County Event Center. Lancaster County and York County youth have attended. To date, over 10,000 children have attended the festivals sponsored by the Ag Awareness Coalition.

The Ag Awareness Coalition consists of University of Nebraska-Lincoln Extension in Saunders, Lancaster and Douglas/Sarpy Counties; University of Nebraska Agricultural Research & Development Center; Agriculture in the Classroom; Gifford Farm Education Center; Dairy Council of Nebraska; Farmers National Company; and the Nebraska Beef Council.

For more information, please contact the University of Nebraska Agricultural Research and Development Center, 402-624-8000. □