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University of Nebraska Lincoln | EXTENDED VISIONS

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Beef Cow/Calf Herd Essential for UNL Mission

Cow/Calf Research article provided by Andrea Cupp, Associate Professor, Reproductive Physiology, UNL Department of Animal Science

The Animal Science department is fortunate to have a great resource in the Cow/Calf Unit at the ARDC. The unit maintains approximately 440 beef cows on three and one-half sections of pastureland. Revenue to support the cow herd and carry out improvements to working facilities is generated from the sale of animals produced at the unit. The majority of the pastures are cool-season grasses, primarily smooth bromegrass. Warm-season pastures including little and big bluestem, indiangrass, and switchgrass make up the balance of the grassland. During the winter months, extensive use of crop residues in and around the ARDC provide a vital feed source for the cow herd and are supplemented with hay grown on the ARDC. Supplemental mineral and protein are fed to complement the forage resources and these supplements are processed at the ARDC feed mill. An established rotational grazing plan and limited but strategic use of fertilizer and herbicides insure the sustainability and productivity of the pastures.

Recent improvements at the Cow/Calf unit include the renovation of three of our main working facilities and the purchase of a new hydraulic squeeze chute at our bull development facility. These facilities have been update to facilitate safer and easier handling of cattle that are utilized in our research and teaching programs.

The unit maintains two separate cow herds, a Teaching herd and a Beef Physiology Research herd. Karl Moline manages the unit and is assisted by Jeff Bergman. Karl and Jeff are both valued long-time employees at ARDC and integral members of the Teaching and Physiology Research teams. They are responsible for not only the day-to-day operations at the Cow/Calf unit, but also do a great job of juggling the responsibilities of providing animals for educational activities and assisting the research team with data collection and management.

Cow/calf Teaching Herd

Teaching Herd

Dr. Matt Spangler, University of Nebraska-Lincoln Extension Beef Genetics Specialist, supervises the Teaching herd. Dr. Spangler assumed this role when he began his employment with UNL in January of 2008. A native of Kansas, Dr. Spangler received his Bachelors degree in animal science from Kansas State University, Master's in animal breeding and genetics from Iowa State and a Ph.D. in animal breeding and genetics from the University of Georgia.

The teaching herd consists of 220 heifers and mature cows, approximately 100 are purebred Angus. The remaining cows are Husker Red and Husker Black composites. The Husker composites blend Red or Black Angus genetics with Simmental or Gelbvieh to produce seedstock that meet the needs of commercial producers. Cattle

COW/CALF RESEARCH - Cont. on P. 2

Sara Ellicott Joins Extension Team

Sara Ellicott is the newest Extension Educator to join UNL Extension in Saunders County. She is working with livestock-based programs aimed at adults. Additionally, she is responsible for livestock programs focused in diversified livestock issues, acreage owners, value-added opportunities and the agro-environmental trail at ARDC. Sara will also have some youth development duties.

Sara Ellicott

Sara previously worked with camp programming and development coordination in the state 4-H office where she served as the 4-H Youth Development Outreach Program Associate. She assisted in the management of the State's three 4-H camps.

Sara earned her Bachelor of Science degree in Animal Science from Colorado State University, Fort Collins, Colorado, in 2001. She then earned her Master of Agriculture, Beef Industry Leadership from Colorado State University in 2003. In addition to working at the State 4-H office, her previous work experience also includes working with Kansas State Research-Extension, Ridgefield Farms Premium Hereford Beef, and Kansas Cattlemen's Association. Sara grew up in agriculture, being raised on a family cow-calf and farming operation in Colorado. She is eager to meet producers in Saunders County and begin Extension programming.

She and her husband, Matt, live near Waverly. Her husband is also involved with UNL Extension in the Animal Science Department where he serves as an Extension Educator and is the UNL Livestock Judging Coach.

Sara assumed her new position in July and is located at the Saunders County Extension office at UNL's ARDC August N. Christenson Research and Education Building near Mead. You can contact her at 402-624-8030 or sellicott2@unl.edu. ❑

We Need YOUR INPUT!!

We are seeking our readers' input in regard to the *Extended Visions* newsletter. The questions are short and simple...

1. How do you receive your newsletter - via the *Wahoo Newspaper, Market Weekly*, or mailed directly to you with a label addressed to you? Do you receive more than one copy?

2. Do you prefer to receive a hard copy or electronic copy?

3. We would also appreciate any comments you might have on what you would like to see in the newsletter or how to make it better.

You can provide your response online at http://ardc.unl.edu/newslettersurvey.shtml, via e-mail to dpittman1@unl.edu, or send them to UNL ARDC, 209 Mussehl Hall, Lincoln, NE 68583-0718. ❑

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Shopping Right When Money's Tight

by Casey Campbell, RD, LMNT

Everyone has to shop for groceries, some more than others. However, with rising gas prices the grocery store may be one of the prime spots that we are feeling the pinch. Remember ten years ago when a gallon of milk was slightly over two dollars? It is hard, and sometimes frustrating, to acknowledge today we pay almost twice that amount! Many people are beginning to worry about feeding their families, and are beginning to believe the myth that eating healthy is not possible on a budget.

I had to laugh the other night while watching an episode of Jay Leno. He was reading an ad about how people planned to save money at the grocery store during this time of economic hardship. The women interviewed all claimed they would cut out extras like cookies, crackers and potato chips. The men, on the other hand, planned to cut out expensive items like fresh fruit! As a dietitian, I first laughed, and then panicked! I realized then, that my job of teaching people how to eat right when money is tight is now more important than ever.

As hard as it may seem, it is possible to eat a nutritious diet on a tight budget. Below are a few suggestions that may help you to stretch your food dollar.

Before Shopping: One of the easiest ways to save money at the grocery store is by planning your meals ahead of time and writing out a grocery list. Menu planning is an excellent way to save money for a number of reasons. For one, you are able to plan meals using items that you already have at home, therefore decreasing chance of waste. Your shopping list will also help you to not forget food items. If items are forgotten, you will waste time and money by constantly having to run to the store throughout the week. Finally, if your meals are planned, you are less likely to hit the drive-thru on your way home from work which will save your waist and your pocket book.

At my home, I begin with a meal planner like the one seen below. I then fill in what we plan to eat for breakfast, lunch, dinner and snacks throughout the entire week. If you're anything like me, you tend to have the same things for breakfast such as cereal, milk and coffee. However, I still fill in my meal plan, so that I make sure I have enough for the week, or I add them to my grocery list. Most of us also, have at least one evening that we eat out, so, I immediately cross off one dinner when I am meal planning. Once my meal plan is complete, I take the time to examine my refrigerator and kitchen cabinets. This allows me to see which items I have on hand and which I need to add to my shopping list.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Coffee Bran Cereal Skim Milk	Coffee Bran Cereal Skim Milk	Coffee Bran Cereal Skim Milk	Coffee Bran Cereal Skim Milk	Coffee Bran Cereal Skim Milk	Eggs Wheat Toast Fruit	Pancakes Blueberries Skim Milk
Lunch	Sandwich Yogurt Fruit	Left Over's Yogurt Fruit	Salad Yogurt Fruit	Sandwich Yogurt Fruit	Salad Yogurt Fruit	Quesadillas Fruit	Sandwich Yogurt Fruit
Dinner	Spaghetti Side Salad	Bean Tacos Fruit	Hamburgers Side Salad	Left Over's	Out To Eat	Stir Fry Brown Rice	Lentil Soup Wheat Rolls
Snacks	Fruit Cheese	Granola Bar	Granola Bar	Fruit Cheese	Granola Bar	Fruit Cheese	Fruit Cheese

***Please note, this is only a sample menu and is not intending to meet your dietary needs. To find out how much you need to eat everyday for optimal health, please visit MyPyramid at http://mypyramid.gov/.*

SHOPPING RIGHT - Cont. on P. 3

Acreage Programs Available 24/7

Acreage owners have a valuable resource available at the click on a mouse. Recorded programs are available on UNL's Acreage and Small Farms Insights website. Each program lasts approximately 2 hours and are presented by educators and specialists . The programs are available for viewing anytime. Handouts can be downloaded in PDF format, as well.

Programs include:

* Acreage Landscape Design Basics
* Fire on the Acreage
* Growing for Farmers Markets and Other Direct Markets
* In the Vegetable Gardens- Melons, Squash & Gourds
* Management of Small Ponds
* Organic Production for Acreages
* Trees for Acreages

Visit the website at: http://acreage.unl.edu/clinic/clinic.htm.

Cow/calf Research Herd

COW/CALF RESEARCH - Cont. from P. 1

from the teaching herd are transported to East Campus for use in a number of classes, including Animal Management, Animal Production Skills, Livestock Evaluation, Cow-Calf Management, Beef Cattle Merchandising and Reproductive Physiology courses. Students in these classes gain experience in animal handling, artificial insemination, pregnancy diagnosis, evaluation of cattle and performance records for breeding purposes, semen collection, live animal evaluation to estimate carcass traits, and gain hands on experience managing a cow-calf operation. Cattle from this herd are also utilized in various extension programs and youth judging contests throughout the year.

Matt Spangler, Assistant Professor, Extension Beef Specialist

The Teaching herd calves from about February 20th until March 31st each year and utilizes artificial insemination (AI) from proven sires to produce about 70% of the calf crop. Sires are chosen based on Expected Progeny Differences (EPDs) calculated by the breed associations which are used to rank the genetic potential of sires for numerous traits. Following the AI period, clean-up bulls, some of which are produced within the program, service the remainder of the cows. The Beef Cattle Merchandising class, under the direction of Dr. Spangler, markets around 40 bulls through an annual bull sale held in April on East Campus. ***The fifteenth annual "Bulls Worth Waiting For" sale is scheduled for April 11, 2009.*** The teaching herd also supplies breeding bulls and semen for the other cow-calf operations within the university system, including the Physiology herd at ARDC and herds at Whitman (Gudmonson Ranch) and Virginia (Dalby-Halleck), Nebraska. The teaching herd has never been static and strives to be progressive in adopting new nutritional, reproductive, and genetic research in order to stay current and better serve the seedstock customers and students alike.

Research Herd

The research herd is used to conduct basic and applied research in beef cattle reproductive physiology and contains 220 cows. Dr. Andrea Cupp, an associate professor in beef reproductive physiology, supervises the research herd. Dr. Cupp is currently conducting research on reproductive development and management in both bulls and females. Her research includes collaborative projects with Dr. Rick Funston, beef reproductive extension specialist at North Platte, Dr. Jennifer Wood, reproductive physiologist at Lincoln, Dr. Rick Rasby, beef extension specialist for southeast Nebraska at Lincoln, and Dr. Robert Cushman, beef reproductive research scientist at the US Meat Animal Research Center at Clay Center.

Andrea Cupp, Associate Professor, Beef Physiology

Dr. Cupp's laboratory is interested in molecular signals that affect egg quality and sperm production. Her lab has demonstrated that a gene, Vascular endothelial growth factor (VEGF) can produce proteins that stimulate spermatogenesis and follicle development (the follicle contains the egg and allows for maturation of the egg). In addition, this same gene can produce antagonistic proteins that inhibit spermatogenesis and development of the ovarian follicle.

COW/CALF RESEARCH - Cont. on P. 3

COW/CALF RESEARCH - Cont. from P. 2

Thus, manipulation of how this gene is regulated could enhance or inhibit fertility in cows and bulls. Therefore, the long term goals of Dr.Cupp's lab are to figure out how to regulate this gene to enhance fertility in both bulls and cows.

A collaborative research project, with Dr. Jennifer Wood and Dr. Robert Cushman, is to determine genes that are involved in oocyte (egg) quality. These scientists are treating cows with different levels of progesterone to develop abnormal follicles (persistent follicles) that will have an altered gene profile. Their intent is to compare this altered profile with follicles developed under "normal conditions" to obtain genes which may be good markers for competent and non-competent eggs. Additionally, this group of scientists is also trying to determine if cows with larger ovarian reserve (born with more follicles on their ovary and measured by counting number of antral follicles) also have better oocytes (eggs) and remain in the herd for a longer period of time. They are hopeful that using predictors such as number of antral follicles (counted by using ultrasound technology) may aid producers in determining which heifers should remain in the herd and may have greater longevity.

Collaborative research with Dr. Funston and Dr. Rasby is being conducted to evaluate the effects of feeding dried distillers grains to replacement heifers. Heifers from both ARDC and Dalbey-Halleck farm in Virginia, Nebraska are being utilized for this research. Results from this research have demonstrated increased conception rates to heifers developed with dried distillers grain. Thus, these scientists are trying to determine what components of heifer development may be altered to increase conception rates.

The faculty and staff of the Cow/Calf unit at ARDC continue to be committed to providing UNL students and Nebraska producers with opportunities for education, research-based management alternatives, and innovative ideas to sustain Nebraska's cattle industry. ❑

Management of the Cow/Calf Research Unit

The Cow/Calf Unit has two full time employees. Karl Moline, the Manager, has been with University since 1981. Karl and his wife Kathy live in Lincoln and have two sons, Mike and Craig. Jeff Bergman, Ag Technician II, has worked for the University since 1980. Jeff and his wife Trish live near Ithaca have two children Dustin and Chelsea.

In addition, students from the University are also hired to assist as needed according to the various seasonal demands associated with a cow/calf operation ❑

Karl Moline

Jeff Bergman

Calendar of Events

September

15 Saunders County Extension Board

October

1 Ag Awareness Festival
2 Ag Awareness Festival
6 Ag Awareness Festival
7 Wahoo High School ASSET Testing
8 Ag Awareness Festival
8 Unit Managers Meeting
9 Nebraska Cattlemen Board Meeting
15 Wahoo High School PSAT Testing Day

SHOPPING RIGHT - Cont. from P. 2

During Shopping: The most important point I can make is that once you make a shopping list, you HAVE to stick to it. Grocery stores do an amazing job of marketing. Keep in mind, just because the product looks like it is on special, does not mean you are going to be saving money. Furthermore, additional tips for saving include, not shopping when you are hungry, shopping without children when possible, comparing name brands to store brands and stocking up on high priced items when they are on sale.

As I stated in the beginning, most people think that they have to forego good nutrition in order to save money. However, that is certainly not true. For example, healthy, inexpensive choices can be found in every food group.

The Grain Group: Grain foods tend to be one of the least expensive products you can buy. Keep in mind, convenience products like flavored rice and packaged pasta mixes cost a lot more than the alterative. By stocking up on low cost grain products like whole wheat noodles, brown rice, store brand cereals and oatmeal you will not only save money, but you will also save added calories and sodium.

The Fruit and Vegetable Groups: A common myth is that fruits and vegetables are too expensive. While that can be true, one easy way to overcome this is to purchase these items when they are in season and cost less. Also, again, try and forego convenience. A bag of precut salad can cost as much as three heads of lettuce! Furthermore, when these foods are not in season, you can look for frozen, dried and canned fruits and vegetables.

The Milk Group: You can save money in this group a number of ways. First, look for the store brand or generic brand when possible. Secondly, buy the largest container possible that can be used before it reaches the expiration date. The smaller containers tend to cost more. Keep in mind both milk and cheese can be put in the freezer if necessary. Finally, check the container for expiration dates and search for the longest date possible.

The Meat and Beans Group: This group tends to be a large portion of our grocery bill, but it doesn't have to be. Buying meat in bulk helps to save money. Divide and freeze portions as soon as you get home to help save money and prevent waste. Also, beans, lentils and eggs are extremely inexpensive protein sources that can be substituted for meat in many meals. Finally, if a tough piece of meat is less expensive, purchase it and tenderize it yourself by marinating or using a meat tenderizer.

After Shopping: The best thing you can do is to go home immediately after grocery shopping and put the foods away to prevent spoilage. This would also be the time to divide and freeze portions of meats and cheeses to save for later use. Finally, use foods with the earliest expiration dates first to prevent waste.

With grocery prices continuing to rise, it is crucial that we find ways to save money, while still providing nutritious meals for our families. It is imperative that you begin with a meal plan and that you stick to it. In the beginning this may seem like it takes a lot of time, but just like anything, it gets easier with practice. Also, by utilizing the tips above you can choose nutritious foods and still get the best bang for your buck. For more information on how your family can eat healthy while spending your food dollar wisely, please visit the Food Stamp Nutrition Connection at http://foodstamp.nal.usda.gov. ❑

References: USDA's Nutrition Assistance Programs: Eat Right When Money's Tight. Available at: http://www.nal.usda.gov/foodstamp/pdf/eatrighwhenmoneystight.pdf. Accessed July 7, 2008.

Casey Campbell is a Registered Dietitian with the Nutrition Education Program in Dodge, Saunders and Washington Counties. The Nutrition Education Program (NEP) is sponsored by the University of Nebraska, Extension and the Nebraska Department of Health and Human Services. NEP is a program designed to teach nutrition education to those on food stamps or those who qualify. If you think you or your family may qualify for NEP and are interested in free nutrition education, please call Casey at (402) 624-8022.

University of Nebraska Lincoln

Why Choose UNL? Check Out U.S. News & World Report's Ratings

Office of University Communications, UNL

For the fifth-straight year, the University of Nebraska-Lincoln has made U.S. News and World Report's annual evaluation of America's Best Colleges' Top 50 list of Public National Universities. UNL is ranked near the top third of all national universities both public and private, (89th out of 264), and is tied with four other universities, including the University of Kansas and Iowa State University, as 40th out of 164 public universities in the "Top 50" list for public national universities. This places UNL among the top one-fourth of all public universities.

In the past five years, UNL has moved from 107th to 89th in the "Best National Universities" list and from 52nd to 40th in the "Public National" universities.

In each U.S. News category, data on up to 15 indicators of academic quality are gathered from each school and tabulated according to the magazine's methodology. Schools are ranked within categories by their total weighted score. UNL continues to show improvement in factors directly related to student success, including retention and graduation rates as well as the academic credentials of the entering class. ❑

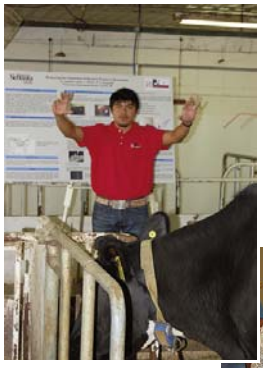
Attention 4th Grade Teacher...HURRY!!!

Ag Festival Deadline - Sept. 12

If you are a 4th grade teacher and haven't applied to attend the Ag Awareness Festival - please do so as soon as possible. The deadline for submitting online registrations at **http://ardc.unl.edu/aafform.shtml** is Friday, September 12. Dates for this year's festival are October 1, 2, 6 and 8. ❑

Scenes from the Dairy Open House

The Nebraska State Dairy Association (NSDA) and UNL Dairy Research Faculty, Staff and Graduate Students hosted an educational day and open house at the ARDC Dairy Research Unit in August. The day's activities included self-guided tours of Dairy Research Unit and a presentation by Dr. Paul Fricke, Associate Professor & Extension Specialist in Dairy Reproduction, University of Wisconsin-Madison on "Methods to improve reproductive success of your dairy facility." ❑



Graduate students play a vital role in dairy research at UNL. Graduate student, Ezequias Lopez was on hand at the open house to explain ongoing research at the dairy unit.

Those attending the Dairy Research Unit Open House learned about reproductive success in dairy operations from Dr. Paul Fricke of the University of Wisconsin.

Canadian Producers Visit ARDC

A group of Canadian farmers visited the ARDC recently. While the Innovative Farmers Association of Ontario was primarily interested in no-till cropping systems, as the group's name would suggest - they were interested in anything "innovative". And since many of the members have diversified operations including livestock - the group was interested in learning about byproducts feeding during a stop at the ARDC.

During their trip to Nebraska, the group stopped at various farms, businesses and met with UNL extension educators and faculty. Galen Erickson, Beef Feedlot Extension Specialist, provided the group with a tour and presentation on byproducts feeding systems at the ARDC feedlot. They also learned about byproducts feeding in cow/calf research from Dan Larson, a graduate student in UNL's Department of Animal Science. ❑

Galen Erickson, UNL Beef Feedlot Extension Specialist, visited with the Innovative Farmers group about byproduct feeding systems. Josh Benton, Feedlot Unit Manager, (below) also fielded questions from the group.

M.E.A.D.

Making Education in Agriculture Different

Jensen is New Ag Educator at Mead School

Kori Jensen is the new Agricultural Education Instructor and FFA Advisor at Mead Public School. She is a 2002 graduate of Logan View and a 2006 Graduate of UNL. The past two years she worked as the Agricultural Educator at Prague High School. This year she hopes to continue Mead's tradition of offering students educational opportunities in the classroom. Kori hopes to increase involvement in the FFA, and encourages students to participate in a variety of contests and activities. This year she wants students to focus on their Supervised Agricultural Experience Programs and keeping accurate records of their project. She is excited to work with the students and teachers at Mead and is looking forward to working with the community. ❑

Watch for updates on what's going on at MPS's ag program in future issues!

Field Days Wrap Up for 2008

By the time you receive this issue of *Extended Visions*, our field day season will have officially concluded for 2008. As we go to press, the Crop Management Diagnostic Clinics and Soybean Management Field Days have wrapped up and we are making final preparations for Solution Days at York and the Irrigation and Energy Conservation Field Day at Clay Center.

This year's Crop Management Diagnostic Clinics also included a Wheat Production and Pest Management In-Field Clinic. Stephen Baenziger, UNL Eugene W. Price Distinguished Professor and wheat breeder, discussed variety selection with participants.

The off-site field days mentioned above are programs that UNL Extension Educator, Keith Glewen, is extensively involved in coordinating and ARDC/Extension staff assist with support functions. Presenters include UNL faculty and private industry agronomists. While sponsorship varies from program to program, the field days are partnerships of UNL Extension, the Nebraska Soybean Board, the Nebraska Corn Board, the Nebraska Corn Growers Association, Syngenta, and NK.

Loren Giesler, UNL Extension Plant Pathologist, assisted Soybean Management Field Days attendees during the disease and pest management session.

More details on the results and impact of these programs will be included in the next *Extended Visions*. ❑

This issue of *Extended Visions* was produced and edited by Deloris Pittman, Marketing & Promotions Manager. Extended Visions is published bimonthly by the University of Nebraska-Lincoln ARDC & University of Nebraska-Lincoln Extension in Saunders County, 1071 County Road G, Room A, Ithaca, Nebraska, 68033-2234. For more information, call 402-624-8000 or 1-800-529-8030. Check out our web site at http://ardc.unl.edu. E-mail dpittman1@unl.edu.
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Mark Schroeder, Director, University of Nebraska-Lincoln ARDC * Keith Glewen, University of Nebraska-Lincoln Extension Educator Unit Leader
Cow/Calf Research article provided by Andrea Cupp, Associate Professor, Reproductive Physiology, UNL Department of Animal Science