Getting Back on Track Again
by Daniel J. Duncan, ARDC Director & IANR Ag Research Division Assistant Dean and Director

This edition of Extended Visions marks our return to a semi-normal publishing schedule. As you may remember our editor Deloris Pittman has been on maternity leave. This required us to go to a three-month schedule for two months rather than our normal two-month schedule. We hope you missed us!!

Deloris returned to work in March after giving birth to Brianna, a 6 lb. 6 oz. bundle of joy in December. Congratulations to Deloris and her husband, Daren!!

Dwight Hanson left us February 1 to pursue a personal business opportunity. I want to thank Dwight for his past contributions to the ARDC and wish him luck in his new endeavors. If you have seen Dwight around the ARDC, it is because he has agreed to work part time until we have a new Facilities Manager in place.

Speaking of the new Facilities Manager, I am thrilled to announce that Jeffrey Stuehmer filled this position on April 1. He grew up on a farm near Scribner and has a degree in Construction Management from UNL. Jeff comes to us from Kawasaki where he was a facilities engineer. Please stop by the Christenson Building and get to know Jeff when you have a chance.

Karna Dam Joins Extension Team

Karna Dam is the newest Extension Educator to join UNL Extension in Saunders County. Dam’s primary duties focus on the 4-H program and planning, developing and delivering educational livestock programs to youth.

No stranger to UNL Extension, or to 4-H, Dam lived on a farm near Hooper for 17 years where she was directly involved with coordinating the 4-H program, school enrichment and community youth education activities. She has a Bachelor of Science Degree from the University of Nebraska-Lincoln in Animal Science and a Masters Degree in Youth Development from UNL. Through her Extension experiences, she has developed a strong desire of working with youth and helping them to develop dynamic leadership skills.

Dam and her husband, Dwight, live on a farm near Hooper where they are involved with row crop, feedlot and a cow/calf operation. They have two sons, Derek, 15, and Dylan, 12. Both boys are involved with showing cattle in 4-H and FFA. They take great pride in showing family raised livestock. “Showing cattle is something we enjoy doing as a family” Dam said. “And it is a somewhat of a family tradition in the Dam household since both Dwight and I showed livestock when we were in 4-H and FFA.” The Dam’s also enjoy sports. Both boys are active in football and basketball.

2006 ARDC Employee of the Year - Marnie Cihal

Marnie Cihal has been selected as the recipient of the 2006 Employee of the Year Award at UNL’s Agricultural Research and Development Center.

The award is sponsored by the ARDC/UNL Extension in Saunders County Social Committee. Fellow employees nominate candidates and supervisors, employees and the social committee then submit scoring forms.

ARDC EMPLOYEE OF THE YEAR

ARDC Director’s Comments

Calendar of Events

* Karna Dam Joins Extension Team
* 2006 ARDC Employee of the Year - Marnie Cihal

Landscape Mulching Research at the ARDC

by Roch Gaussoin
Extension Turfgrass Specialist
UNL Department of Agronomy & Horticulture

You may be wondering why a turfgrass specialist is writing about landscape mulches. One of my responsibilities is turf weed control. In that capacity I have been contacted by companies who develop and market both turf and landscape herbicides. Since 1997, we have been evaluating not just herbicides, but also mulches for use in landscape beds. Following is a summary on mulch use with results incorporated from our research trials.

Mulches can be classified as either organic or inorganic. Organic mulches are materials that are derived by plants or animals. Organic mulches break down over time, add organic matter to the soil, and improve soil structure. In sandy soils they may increase water-holding capacity. In clay soils they can improve water drainage. Wood chips, bark, grass clippings, leaves, pine nee-
dles, straw, and sawdust are all considered organic mulches. Sawdust is readily available, but not encouraged as landscape mulch. It breaks down slowly and will pull nitrogen from the soil. This may result in nitrogen deficiencies of surrounding plants. Sawdust tends to cake together, causing water to be shed rather than soaking into the soil. Use sawdust that has been aged one year and do not apply more than one inch.

Grass clippings are typically used in perennial and vegetable gardens. Only clippings from a well-maintained yard should be used. Clippings from yards that contain a lot of weeds will have weed seeds and may cause future problems. Grass clippings should be dried before using. Fresh grass clippings are high in water and nitrogen and will readily ferment. The heat and ammonia that is released from fermentation can be damaging to plants. Grass clippings that have had a herbicide application should not be used immediately around plants. Most herbicide treated areas should be mowed three times before using clippings for mulch. Check with herbicide labels to get exact recommendations as some grass clippings need to be composted for longer periods. Grass clippings should be applied in thin layers. Thick layers of grass clippings will impede water and air movement in and out of the soil. No more than one inch of grass clippings should be used.

Leaves are readily available. Leaves should be shredded and partially decomposed before using them around plants. As with grass clippings, thick layers of leaves may mat down and interfere with water and air movement. No more than one inch of composted leaves should be used.

Our research has shown that there are no differences among mulches made from pine bark, recycled wood pallets, hardwood or cypress in regard to weed control and moisture retention. Inorganic mulches are materials that come from non-living sources that rarely break down or break down slowly. River and pink rock are the most common inorganic mulches used by homeowners. Other inorganic mulches include lava rock, gravel, and pebbles and recycled tires (i.e. crumb rubber). Although not recommended mulches, landscape fabric and plastics are used in conjunction with both organic and inorganic mulches and are themselves often inorganic materials. Since inorganic materials do not break down, they do not take nutrients from the soil or require replenishing as often.

Inorganic mulches can, however, increase reflective heat and cause plant damage. Reflective light can also make landscapes uncomfortable to look at or be in on sunny days. Inorganic mulches are difficult to remove when beds are renovated or eliminated and are difficult to plant into. Although many consumers prefer the use of inorganic materials because of their long lives, inorganic mulches are not recommended as mulch for use in landscape beds. They do have some benefits, albeit minimal, in certain locations of the landscape. Since organic mulches breakdown over time, they may need to be replenished once a year to every other year. The depth of the mulch depends on the type of soil, plants, and mulch used. During wet periods, heavy soils, such as clays and clay loams, do not need thick layers of mulch. Thick layers may cause reduction of soil oxygen and injure the plants. During wet periods, it is recommended to pull mulch away from plants to ensure good air

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**Turfgrass Research Thrives at ARDC**

*by Lamme Wir, Manager*

**John Seaton Anderson Turfgrass Research Area**

UNL Department of Agronomy & Horticulture

The John Seaton Anderson (JSA) Turfgrass Research Area at the ARDC has approximately 55 acres in turfgrass research plots. Most of the area has underground sprinklers. There are more than 2 acres of bentgrass for research that is treated like a putting green on a golf course. This area is mowed at 1/8” to 6 times per week.

The JSA Turfgrass area is a location for the National Turfgrass Evaluation Trials. These trials include numerous species, including Perennial Ryegrass, Tall Fescue, Fine Fescue, Kentucky Bluegrass, Creeping Bentgrass, and Buffalo grass. Each species has over 100 different cultivars in each study. There are over 2,500 plots in all. The data collected can be used by turfgrass professionals, when trying to determine which cultivar would be best suited to grow in this area. This may be a golf superintendent renovating a golf course, or a landscape person selecting grasses for a landscape project.

The JSA research area is used by several faculty at the University of Nebraska-Lincoln departments, including: Agronomy and Horticulture, Plant Pathology, and Entomology. The area is primarily utilized for screening turfgrass pesticides, including herbicides, insecticide, and fungicides.

Several research projects funded by the United States Golf Association, have been or being done at this time. One project was a comparison of root zone media in the construction of a golf green. Another ongoing project, is buffalo grass cultivar and management research. Several improved selections of buffalo grass have been developed at the ARDC and released into production.

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**FEATURE UNIT - JSA TURFGRASS RESEARCH AREA - Cont. from P. 1**

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**FEATURE UNIT - JSA TURFGRASS RESEARCH AREA - Cont. on P. 3**
Chihal is a Clerical Assistant at the ARDC. Also nominated were Bryon Chvatal, Allison Miller, Deloris Pittman, Cheryl Sheary, and Jon Swanson. Nominations for Chihal state that she brings out the best in others and goes above and beyond what is expected of her. She meets challenges head on and is often the “go to” person with special requests. She is very dependable and punctual with her work assignments. She cares about doing a good job and cares about the people she works with.

In addition to receiving a plaque, Chihal was also honored with prizes solicited and organized by the ARDC/UNL Extension in Saunders County Social Committee. This includes: $50 gift certificate to the UNL Dairy Store; $20 gift certificate to the Barn Door Restaurant and 18 holes of golf with cart for four people at the Hilltop Country Club and recognition on a plaque to be displayed indefinitely at the ARDC August N. Christenson Research and Education Building.

**FEATURE UNIT - JSA TURFGRASS RESEARCH AREA - from P. 2**

and water exchange. The recommended mulch depth for most plants is usually between two and three inches. Thinner layers may need to be replenished more often and may not give the desired effects. Thicker layers may reduce the amount of oxygen in the soil and encourage plants to root in the mulch layer rather than in the soil. Thick layers may also shed water and keep it from moving into the soil.

Our research has shown that an inch or less of mulch results in reduced weed control and increased water loss and potential plant desiccation or drought stress while more than three inches can decrease air in the plant rootzone and create excessive moisture conditions.

Organic mulches should never be applied against the tree trunk. This may encourage insect and disease problems to occur on thin barked (ie. maple) and wounded trees. Organic mulches should be pulled back about 3-6 inches away from tree trunks. Organic mulches are usually replenished in the spring. A quick raking of the existing mulch will help determine how much mulch should be added. Raking will also break up water-shedding mulch layers. Generally only light topdressing is needed. Dropping mulch through a manure or cob fork is an easy method of applying a light layer of mulch over the existing layer.

Most plants benefit from waiting until the soil temperatures warm up before applying new mulch or top dressing existing beds. Late season mulches are applied after at least two hard freezes. Applying mulches prior to cold temperatures that occur in Nebraska. Mulches that cover entire plant to protect them from temperature fluctuations. Our research has shown that a combination of organic mulches and preemergence herbicides offer better weed control than just herbicides or just organic mulches alone (Figure 1). Soils in landscape beds typically warm up faster than soil under turf. As a result, many warm-season annual weeds, such as crabgrass and spurge, will start to germinate 10-14 days earlier in landscape beds than turfgrass areas. Preemergence should be applied to landscape beds in mid-April in Eastern Nebraska, prior to adding more mulch, if needed. Preemergence herbicides can also be added to the non-mulched; mulched; mulch plus Dimension herbicide.

**FEATURE UNIT - JSA TURFGRASS RESEARCH AREA - Cont. on P. 4**

"SPRING" into Active Lifestyle!  By Casey Campbell, RD

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.

Most of us hear the words physical activity and thoughts of agony go through our heads. We imagine sweat, pain and hard work. The last thing that we typically think of is the idea of having fun.

It is important to realize, however, that being active does not need to be strenuous to be beneficial. In fact, an active lifestyle can actually be enjoyable! Many factors can hinder your family from getting enough physical activity. For example, sedentary activities such as the television, video games, computers and homework can all interfere with how active we are. With the growing rates of obesity, however, it is imperative that we find ways to fit activity into our lives. It is even more important that we find

**Calendar of Events**

| APRIL | 24 Corp of Engineers-RAB |
| MAY  | 2 4-H Council Meeting |
|      | 9 Unit Managers Meeting |
|      | 10 Quilt/Ouirt Leader Training |
|      | 14 Field Scout Training |
|      | 17 POA Training |
| JUNE | 4-6 Babysitting Basics |
|      | 11 Saunders County Extension Board Meeting |
|      | 12 Quality Assurance Training |
|      | 13 Unit Managers Meeting |
|      | 27 Fashion Revue Clinic |
| JULY | 11 Unit Managers Meeting |
|      | 11 4-H Council Meeting |
| 12-13 | Public Crop Management Diagnostic Clinics |

Don't Forget to register for FIELD SCOUT TRAINING and CROP MANAGEMENT DIAGNOSTIC CLINICS (see red listings above). Learn more at: http://ardc.unl.edu/training.htm or call 402-624-8030.

**SPRING INTO ACTIVE LIFESTYLE - Cont. on P. 4**

Our research has shown that an inch or less of mulch results in reduced weed control and increased water loss and potential plant desiccation or drought stress while more than three inches can decrease air in the plant rootzone and create excessive moisture conditions. Preemergence herbicides can also be added to the non-mulched; mulched; mulch plus Dimension herbicide.

**Figure 1. Weed Population (%) in Landscape Bed:**
- non-mulched
- mulched
- mulch plus Dimension herbicide
top of the mulch and then watered down past mulch into the soil where the majority of weed seeds are located.

Our research has shown that a minimum of 0.75 inches of rain or irrigation is necessary to move the herbicide and increase weed control. This should be done as soon after the herbicide application as possible because many of the preemergence landscape herbicides are prone to degradation form sunlight.

The consumer herbicide Preen is readily available at nurseries, garden centers and stores with garden departments. While this can be an effective addition to mulch for weed control, it is not very long-lived in the soil and will require multiple applications under Nebraska conditions. Commercial herbicides which have performed well in our research trials are Dimension, Snapshot, Ronstar, Pendulum, and Barricade. Be sure to check the herbicide label to determine whether a product can be applied to a landscape bed.

Landscape fabrics are typically a black, woven fabric that contains small holes in the surface to allow for air, water, and nutrient movement to and from the soil. They are not aesthetically pleasing by themselves and are typically used with organic mulches placed on top. Landscape fabrics may inhibit the growth of some rhizomatous and stoloniferous plants. The integrity of the liner is ruined immediately after cutting it to place plants within the bed. They are marketed under various names proclaiming their weed control potential. Any soil that is allowed to stay on top of the liner offers a place for weed seed germination to occur. In addition, perennial weeds, such as nutsedge and dandelions, often have enough energy to push through the fabric (see photo 1). Organic mulches used on top of the fabric often slide off into unwanted areas. They also offer a place for weed seed to germinate as the mulch breaks down into compost. Roots can become intertwined with the fabric causing difficulties in transplanting. For these reasons, we do not recommend the use of landscape fabrics in the landscape where plants are growing.

### About the People

Roch Gaussoin is a Professor and Extension Turfgrass Specialist in UNL’s Department of Agronomy and Horticulture. He earned his bachelor’s degree in Agronomy from New Mexico State, as well as a masters degree in Crop Science. He received his Ph.D. in Turfgrass Science from Michigan State University.

His research interests include developing a nationally recognized applied research effort in Integrated Turfgrass Management (ITM). The ITM effort will concentrate on development of cultural systems which identify input-limited, environmentally sound management programs for turfgrass maintenance. Major project activities in conjunction with this research include the development of limited input golf course management systems, as well as integrated weed management for turf and landscape systems.

In working with Extension, Gaussoin provides current cultural recommendations, product evaluations and other ITM information, as appropriate via in-service education, Master Gardener and professional turf manager training.

Lannie Wit is the Manager of the John Seaton Anderson (JSA) Turfgrass Research Area. Lannie lives on a acreage near Bennet, with his wife, Mary. Lannie has been with the turf program for 23 years. They have one son, Richard, who is a Golf Course Superintendent at the Golf Club of Red Rock in Rapid City, South Dakota and 2 granddaughters that they enjoy spending time with. Jeff Witkowski is an Ag Research Tech II at the research area and has been with the program for 16 years. Jeff loves living in his wife, Karen, and son, Ryan’s home and fishing. He is also involved with his son’s Boy Scout troop, thus, partakes in a great deal of camping.

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**PHOTO:** Mulch has been removed in this picture to show how easily a perennial weed like nutsedge can penetrate through landscape fabric.

**Photo 1: Mulch has been removed in this picture to show how easily a perennial weed like nutsedge can penetrate through landscape fabric.**

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Daniel J. Duncan, Director, University of Nebraska-Lincoln ARDC * Keith Glewen, University of Nebraska-Lincoln Extension Educator Unit Leader Turfgrass research stories by Roch Gaussoin, Extension Turfgrass Specialist and Lannie Wit, JSA Turfgrass Research Area Manager, UNL Department of Agronomy and Horticulture.