FIELD & FEEDLOT

NORTHWEST AREA EXTENSION OCTOBER 2007 ISSUE

New Iowa State Dairy Farm Set to Open in October

By Chris Mondak, ISU Extension Dairy Specialist

The new ISU Dairy/Animal Science Education and Discovery Facility is scheduled for completion soon. Dairy cows and staff are expected to occupy the new site, located just south of the Ames campus, starting October 2007.

The new dairy farm is a complex of buildings that comprise all the components of a modern dairy facility, plus teaching and research components. The modern dairy components include: free stall barn, dry cow and heifer buildings, maternity and calf barn, special needs building, health care area, milking center, feed storage bunkers, compost facility, and manure storage tank.

The education area features a classroom, public viewing area to observe milking parlor activities, and offices. To accommodate research projects, some cow housing areas have been configured to set pen size and special feed bunks to allow for controlled studies that need to measure things like feed intake, cow comfort, and cow behavior.

The $14.7 million project will bring a much-needed resource to Iowa, a state that is interested in growing its dairy industry. Maynard Hogberg, chair of the animal science department, sees two impacts on dairying in Iowa: "It will help grow the number of students interested in the dairy industry, either as practitioners or those who want to do research in the area. And the research and outreach at the facility will address industry issues that should be an asset to increasing the industry in the state."

With its location only 3 miles from central campus in Ames, the dairy site will be easy for students to reach. The new facility also will be easier on the cows and the people at the operation, said Leo Timms, animal science professor and extension dairy specialist. The new facility will incorporate natural ventilation as much as possible with mechanical additions. A grid orientation of fans will allow multiple positions to increase cow comfort, which has proven effective in swine operations.

Another comfort issue is surfaces and stalls for the cows. Many surfaces, from mats to mattresses, will be tried to see if there are differences in milk production or disease prevention.

Timms said the challenge was to design a dairy that could be managed and operated to be profitable while efficiently integrating research, teaching and extension activities. The new facility will allow for individual feeding, which is an essential research tool. Improvements in cow-handling will increase farm efficiency when gathering livestock for classes or tasks like treating them for disorders.

Beef Topics

By Beth Doran, ISU Extension Beef Specialist

Is Frosted Alfalfa Toxic? Frost injured alfalfa, clovers and commonly used perennial cool-season forage grasses are NOT considered toxic and can be grazed or harvested for hay and silage following a frost if managed correctly. There is a slightly higher bloat risk for grazed alfalfa and white clover the first few days after a frost, until the forage dies and dries. Follow normal bloat-preventing grazing management when grazing alfalfa and clover (adapted from information received from Steve Barnhart, ISU Extension Forage Agronomist).

Preparing for Winter – May 2007 hay stocks in the U.S. were down almost 15 million tons (30%) from last year. In Iowa, hay stocks were down 684,000 tons (32%) compared to 2006. Most Iowa hay fields suffered production losses from a late spring frost, dry summer conditions and early rains that hampered harvest in August. All of this has supported higher hay prices. Livestock producers need to consider their winter rations and plan accordingly the kinds and amount of feed and bedding needed.

Managing Yearling Bulls after the Breeding Season – Yearling bulls may lose from 100 to 300 pounds during the first breeding season. The yearling bull needs to gain this weight back plus approximately 400 additional pounds so that he weighs 75% of his mature weight by the time he is 2 years old. For example, if a yearling bull's potential mature weight is 2200 pounds, he should weigh 1650 pounds at 2 years.

If he weighed 1250 pounds at turn-out as a yearling and lost 150 pounds during breeding, he would need to gain 2 pounds per day during a 9-month resting period. To gain 2 pounds per day, a coming 2-year-old bull will need 13 pounds of grain plus a full-feed of hay or a full-feed of corn silage plus 1 pound of protein supplement. A word of CAUTION: do not try to bring the bull back too fast with too much grain because of the risk of foundering him.

In the fall after the first breeding season, treat the bull for internal and external parasites. Next spring, when he is 2-years-old, de-worm him again and give annual booster vaccinations.

Consider Your Genetics – Now is a good time to evaluate the genetics and composition of the calf crop and start planning next year's breeding program. As you wean calves this fall, be sure to evaluate weaning weights and body condition score of the cows at weaning. Producers are still paid on pounds of calf weaned, but having thin cows with big calves is not the answer. Also, weaning time is a good time to evaluate udder quality, eyes, feet and legs, and temperament of the dams.

Majority of Swine Producers have Premises ID's

By Jerry Weiss, ISU Extension Swine Field Specialist

"Producers who participate in premises registration and swine ID plan, will help strengthen the swine health infrastructure by making trace backs faster, more efficient and more accurate," said Patrick Webb, veterinarian for the National Pork Board.

With the move forward towards a National Animal Identification System (NAIS), the swine industry has continued to step forward to make the system work. The most recent numbers received from USDA shows that an estimated 67,280 swine premises have been registered in the U.S. as of May 1. That is an estimation of about 60% of the swine operations.

"The purpose of the NAIS is about maintaining the national herd health and ensuring that we can quickly control and recover from disease outbreaks," says NPPC past president Joy Philippi. "Getting each producer's premises registered and entering the premises number in each state's database is the only way to create an effective and functional NAIS."

The ID system is not new to the pork industry. Since 1988, the pork industry has had an ID system, which was implemented as part of the successful pseudorabies eradication program. This species-specific approach is consistent with the USDA's current ID systems.

There are three key components to a successful animal ID system.

- Premises ID registration
- Animal identification
- Animal tracing

Dr. Webb says, premises ID registration is the critical component since the other two rely on having a premises ID.

Animal identification is the method pork producers will use to identify their animal by group/lot or individually. Animal tracing includes two main components. The first is recording the movement information by producer and the second is reporting the movement information when required by current law at the request of animal health authorities.

If you are a livestock producer and would like to receive a Premises Identification Number Application, please contact Jerry Weiss at (712) 335-3103 or contact your local Extension Office.

Winter Wheat Production

By Paul Kassel, Extension Field Agronomist

There has been a lot of interest in winter wheat production this fall. The following are some guidelines that may help make or confirm some decisions on this topic.

Winter wheat may have a place in fields where lighter soils can limit corn and soybean yields. Manure application needs may also justify a change to some wheat acres.

Yield potential. Winter wheat yield potential can be 10.0 to 80.0 bushels per acre. Yield levels will be determined by:

- The amount of tiller development in the fall. Potential wheat yields are influenced by seed heads per acre – not a lot different than corn yield potential where ears per acre influence yield. Wheat will produce one seed head per tiller – so with good stand establishment and good fall weather for tiller development – wheat yield potential is greater.
- Winter kill/winter survival will have a large effect on the success of winter wheat production. Winter kill potential is increased by a lack of snow cover and cold temperatures. Snow cover for the duration of the winter greatly reduces the chances of winterkill.
- Air temperatures during grain fill will have a large impact on final yields. However, that is one advantage that winter wheat has over spring seeded small grain crops – grain fill occurs earlier in the spring when temperatures are typically cooler.

Variety selection. Variety selection should be based on yield potential and disease resistance. Good data for varieties in northwest Iowa is nearly non-existent. Wheat scab, powdery mildew, tan spot and barley yellow dwarf are some the diseases that

may cause problems. See the following web sites for data on varieties in nearby states.

- http://varietytest.unl.edu/winterwheat/2007/wheatmap.htm
- http://www.croptesting.iastate.edu/smallgrains/reports/winterwheat07.pdf
- http://agbiopubs.sdstate.edu/articles/ExEx8136-07.pdf
- http://www.maes.umn.edu/vartrials/wwht/1997wwht.pdf

Seeding rates. Stand establishment of winter wheat is best accomplished by using a grain drill to seed about 30 seeds per square foot. Winter wheat seed will have about 12,000 to 16,000 seeds per pound – so adjust accordingly. This means that you will seed about 1.25 bushels per acre.

Seeding dates. Seed anytime after the Hessian fly free date – which is usually after September 15 in northern Iowa. Tiller development is favored by good growing conditions in the fall – which means earlier is better than later. Successful winter wheat stand establishment becomes more difficult after early October.

Crop rotation. Winter wheat will likely do better when seeded following a soybean crop as compared to a corn crop. It is best to avoid land that was in corn. Land that was in corn and harvested as corn silage is an option. The concern with land that was in corn is the corn stalk rot pathogen *fusarium*, the same pathogen that causes scab (head blight) in wheat. Wheat scab can be a serious leaf disease in wheat.

Fertilization. A wheat crop will remove 13.0 lbs/a of nitrogen, 6.3 lbs/a of phosphorus and 3.8 lbs/a of potassium per ten bushels of wheat grain. Fertilization suggestions for a 60 bu/a wheat yield would be to apply 20 to 30 lbs/a of nitrogen, 38 lbs/a of phosphorus and 23 lbs/a of potassium in the fall before tillage and seeding (or use soil test information). Apply another 35 – 50 lbs/a of nitrogen before the wheat greens up in the spring.

Stand evaluation. Guidelines are available that can be used to evaluate winter wheat stands and potential grain yield. These evaluations would be done around May 1 – plenty of time to switch winter wheat acres to other crops if needed.

More information. See http://www.agron.iastate.edu/faculty/lgibson/Wheat.htm for more info.

Beef Manure Testing and Calibration

By Kris Kohl, ISU Extension Ag Engineer

Fertilizer costs have escalated rapidly with the high cost of oil. Today the cost of fertilizing a corn field is between $100 and $120. The cost of applying manure instead of commercial fertilizer is cut about in half, if the field is within two and one half miles of the feedlot. In order to capture this value the farmer needs to know what the nutrient content is. In recent tests conducted in northwest Iowa, feedlot manure has exceeded book values by 50% making it more useable.

The Iowa State University Beef Center has sponsored a manure testing and calibration project to help producers utilize their cattle manure. The calibration is done using a 1/2000 of an acre piece of plastic on the field. The manure is then spread in the normal pattern. The manure on the plastic is collected for lab analysis. The procedure is fast, taking about 30 minutes to complete. This information is valuable in determining the available nitrogen, phosphorus and potash for next year's crops.

Participants will pay $25 per lab sample which is about ½ of the cost. Farmers who have received cost sharing money from the NRCS through the Equip Program are required to test the manure. This program would meet all of those testing and calibration requirements.

To participate, call Kris Kohl at 712-732-5056 to schedule the collection. Properly applied manure can save $50 an acre, avoiding a DNR fine -- Priceless.

Web Sites to Check-Out

By Jerry Weiss, ISU Extension Swine Field Specialist

The following is a list of internet web sites that you may want to bookmark on your computer. The first being the Iowa State University Extension Home Page. You may want to also include your county home page web site.

- **ISU Extension Home Page**
  http://www.extension.iastate.edu/
- **Ag Decision Maker**
  http://www.extension.iastate.edu/agdm/
- **Pork Center**
  http://www.ipic.iastate.edu/
- **Beef Center**
  http://www.iowabeefcenter.org/
- **Agronomy**
  http://www.agronext.iastate.edu/
- **ISU Dairy Team**
  http://www.extension.iastate.edu/dairyteam/homepage.html

1858 2008 150
IOWA STATE UNIVERSITY
www.iastate.edu/isu150