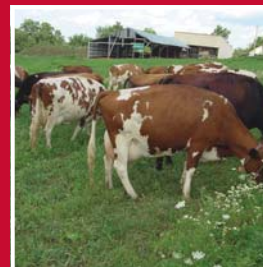


FIELD & FEEDLOT



ISU EXTENSION—NORTHWEST REGIONS

JULY 2010 ISSUE

Extension Web Sites

Ag Decision Maker

<http://www.extension.iastate.edu/agdm/>

Beef Center

<http://www.iowabeefcenter.org/>

Manure Management

<http://www.agronext.iastate.edu/immag/>

Pork Center

<http://www.ipic.iastate.edu/>

ISU Extension Dairy Team

<http://www.extension.iastate.edu/DairyTeam/>

Manure Field Day for Small Dairies and Open Feedlots

By Chris Mondak, ISU Extension Dairy Program Specialist, and Beth Doran, ISU Extension Beef Program Specialist

Currently, there is increased attention on small- to medium-sized dairies and open feedlots to determine if they are in compliance with water quality regulations. To help address some of these important regulations and issues, there will be a manure field day on Friday, July 23 from 1-3 p.m. at Fick Swiss Farm near Boyden.

One major goal of the field day is to assist producers in understanding what are the issues and regulatory requirements. A second goal is to help them find technical assistance and cost-share opportunities to employ best management practices to meet these requirements.

For many years, small- and medium-sized farms have been “off the radar” so to speak when it comes to manure management issues. Recent state and federal inspections in Iowa have increased the awareness of manure run-off issues and led to actions against livestock producers regarding how the manure is managed.

At the field day, agency staff will explain regulatory requirement that impact the small- and medium-sized dairies and open feedlots. ISU Extension staff will discuss and demonstrate best management practices for nutrient management, including manure storage, manure sample analysis and how to calibrate manure application equipment. Local companies will showcase manure application equipment so that producers can see the latest technology in manure application.

The field day will be at Fick Swiss Farm, 2817 Jackson Ave, north of Boyden. From Boyden, take L14 north 3 miles; turn left on B14 (280th St) and go 3 miles west; and turn left on K64 (Jackson Ave) for 0.2 miles.

The manure field day is sponsored by the Iowa Manure Management Action Group (IMMAG), Fick Swiss Farm, Iowa State University Extension and Van’s Implement, Ltd. at Hull, IA.

For more information or a flyer on the manure field day, please contact Chris Mondak or Beth Doran at the Sioux County Extension Office. You may call 712-737-4230 or e-mail cmondak@iastate.edu or doranb@iastate.edu.

Manure Information

By Beth Doran, ISU Extension Beef Program Specialist

Six Current Issues – A recent meeting addressing environmental issues was held in NW Iowa on May 20 in Sioux Center. Angie Rieck-Hinz, coordinator for the Iowa Manure Management Action Group at Iowa State University, has an excellent publication summarizing six key issues that surfaced that evening.

The six issues in the article are:

- Combined livestock operations and the need for an NPDES permit
- How to determine if you have one animal feeding operation or multiple operations
- Mixed species and the need for an NPDES permit
- Medium-sized CAFO’s
- Man-made ditch criteria and road ditches
- Stockpiles, feed storage, chemical storage and mortalities

Two EPA Publications – Having EPA show up at your facility for an inspection can sometimes be a daunting experience. Inspections are very comprehensive and typically cover all aspects of a facility’s operation. EPA inspectors routinely perform walk-throughs of production and land application areas, review records and collect samples. To assist producers in preparing for inspections, EPA has published a fact sheet with 10 tips to help ensure operations are in compliance. The fact sheet may be accessed at http://www.epa.gov/region07/factsheets/2010/ten_tips_cafo_inspection.htm

The second publication is a guidance document to assist with implementation of the 2008 revisions to the NPDES regulations for CAFO's. In 2008, revised EPA regulations require that CAFO's that discharge or propose to discharge must seek coverage under an NPDES permit. The rule also clarifies that a CAFO proposes to discharge if it is designed, constructed, operated or maintained such that a discharge will occur. The guidance document will assist EPA and states with program implementation and assist CAFO's in evaluating whether they discharge or propose to discharge. The guidance document is available at www.epa.gov/npdes/caforule.

The US Pork Center of Excellence has Summarized the Highpoint of New Computer Software Available for Pork Producers

By Dave Stender, ISU Extension Swine Program Specialist

The National Swine Nutrition Guide (NSNG) Diet Formulation & Evaluation Software was developed to allow direct application of the components of the NSNG to practical feeding situations. The NSNG Diet Formulator & Evaluation Software will perform two distinct functions. You can use it to formulate swine diets on a least-cost basis or evaluate the nutritional adequacy of existing diets. These functions can be applied to diets for sows, breeding boars, nursery pigs, growing-finishing pigs and replacement gilts and boars.

Evaluating the nutritional adequacy of existing diets involves entering diet formulas manually. The nutrient recommendations and ingredient composition and use rate guidelines given by this software are derived from the NSNG. Those are published in a booklet titled "National Swine Nutrition Guide Tables on Nutrient Recommendations, Ingredient Composition, and Use Rates.

Although there are some built-in signals to warn that a diet may not be nutritionally adequate, some degree of nutritional expertise is necessary to effectively utilize the software. Refer to the "Tips" areas on each page of the program to learn more details of program operation. Also, consult the flagged captions to learn more regarding the meaning of given inputs and outputs. This program requires MS Excel with Visual Basic and macro operation access to operate.

National Swine Nutrition Guide Software Training Workshop

For pork producers and their advisors who want to learn how to use a new swine diet formulation and evaluation program, a hands-on workshop will be held from 1:00 to 5:00 pm on July 8, 2010 at Northwest Iowa Community College in Sheldon, Iowa.

Swine nutrition and feeding management is a complex process. Feed is the largest single item among the costs of producing pork, historically accounting for about 60% of all costs in farrow-to-finish systems. Pork producers are encouraged to employ a comprehensive feeding program based on sound principles and

tailored to the operation. The newly developed National Swine Nutrition Guide, which includes diet formulation and evaluation software to allow direct application of its contents to practical feeding situations, provides the basis for the development and management of such swine feeding programs.

By participating in the Swine Nutrition Guide Software Training Workshop you will be able to obtain hands-on instruction on how to use the software. We will have case studies that involve nursery pig, growing-finishing pig and sow nutrition for you to work through. Also, if you want advice regarding your current feeding program, we can provide that. Just bring your diet formulas and ingredient costs.

Duane Reese, Extension Swine Specialist, University Nebraska-Lincoln and Dave Stender, Iowa State University Swine Field Specialist will serve as instructors.

Registration fee is \$15 per person. Questions? Contact Dave Stender at 712-225- 6196 (dstender@iastate.edu).

Concrete Slab Summer Projects

By Kris Kohl, ISU Extension Ag Engineer Program Specialist

The summer will soon be here and many people will be pouring concrete for driveways, cattle yards and sidewalks. Here are a few tips to make sure the projects go as planned.

The sub grade needs to be uniform and provide some drainage so that water does not wick under it in the winter, leading to greater frost heave. Sand or gravel 2 to 3 inches deep is adequate to provide a good base that will drain and allow the workers to step on the sub grade during the pour without bringing up mud balls that can weaken the concrete and make an unacceptable finish.

For most applications, 5 ½ to 6 inches is recommended which will allow for heavier loads such as heavy tractors and occasional semi-tractor trailers. Because equipment seems to get bigger over time, try to think where the size of your equipment will be in 30 to 50 years when the concrete should still be serviceable. For sidewalks, 4 inches is acceptable. A depth of 6 inches has twice the strength of 4 inches and 8 inches deep is almost 4 times the strength of 4.

Normal strength of 3500 to 4500 psi would be recommended as the final strength. Every 3 gallons of water that is added per yard reduces the strength by 500 psi. The warranty on the strength of the concrete is also voided when the first gallon of water is added on the job site. Unfortunately most people will add water to improve the ease with which the concrete will pour, compromising its strength forever.

The final strength of the concrete is determined by the strength of the cement and the stones or aggregate used. We blend sand to larger aggregate to end up with a strong, reasonably priced



product. In most of Northwest Iowa we have two choices of aggregate: river rock or crushed limestone. Because the major cost of aggregate is transportation, limestone is normally the most expensive. Due to the jagged edges resulting from the crushing process of the limestone, it is less likely to have pop-outs from freeze-thaw cycles during our winters.

Concrete curing is one of the most critical and least understood processes. Air dried concrete is ½ the final strength of concrete that is properly cured. Because the air drying happens at the surface of the concrete, it opens the surface to moisture that freezes and then erodes off quickly. The curing process is a chemical reaction between the water and the cement. There are 2 normal ways of curing concrete. The first is to spray a curing compound on the concrete as soon as it is set up. It acts like a paint that prevents the water from drying out. The curing compound costs about 1-2 cents a square foot and is easy to put on. The second curing method is to keep the slab continuously wet as soon as it has set.

Often straw or similar mulch is spread over the slab then soaked down and covered with plastic to prevent it from drying out. A garden sprinkler spraying the slab continuously can also do the job but it must be continuous for the curing time of the first 7 to 10 days.

To achieve good strength in both compression and tension strength, steel rebar needs to be added. Minimum steel is ½ rebar on 18 inch centers. With this amount we will also transfer the point load from a tire to most of the slab, making it much less likely to break up. The additional cost of the rebar is 3% to 5% of a normal project but doubles the overall performance. It is very important that the rebar be at least 2 inches from the bottom of the slab. Plastic chairs snap onto the rebar and hold it in place. They are cheap, 7 to 20 cents each, and need to be placed every 3 feet or so to hold up the rebar during the pour. An alternative to this is half brick which is 2 ½ inches high. While bricks are normally free, the area right where they are located is a little weaker and the steel may slide off them during the pour. If at least ½ inch re-bars are placed on 4 ft centers they will provide some crack suppression. This will prevent the slab from displacing up and down when it expands and contracts with temperature. Adding a second ½ inch re-bar near the edge of the slab and making it a couple of inches deeper will help reduce cracking and double its strength in this critical area.

Fiberglass mesh is sometimes added to the concrete and I have been told that it will act as a substitute for rebar. It will not! One down side to adding the rebar is that it will be very difficult to destroy if you decide later to remove it. Properly poured, cured and reinforced slabs will last a lifetime.

The U.S. Dairy Industry—Summer 2010: No Shortage of Topic & Issues

By Chris Mondak, ISU Extension Dairy Program Specialist

At this point in time there are several “big picture” dairy industry issues circulating that demand the attention of dairy owners and the dairy industry at the local level.

International Market Access

The EU(European Union) has announced a new standard for all dairy products exported to EU countries: All dairy farms who sell milk to processors that then export milk to the EU must show a 3-month SCC average (Somatic Cell Count) of 400,000 cells/ml. SCC is a measure of quality and not of food safety. The current US standard is 750,000 herd average SCC. Milk processors prefer lower SCC for optimum shelf-life and cheese -making characteristics. To keep a presence in the export market, US milk processors will pass this requirement to the US dairy farms by Oct 1 or Jan 1. Most US dairy farms routinely producer milk that on average is well below the 400,000 cell/ml limit. US dairy farmers know that lower herd SCC brings production and economic advantage to them: More milk producer per cow means more milk to sell, and lower herd SCC adds quality premiums to the their milk check.

Public Perception and Animal welfare

While current best management practices for dairy cow care have steadily become part of day-to-day dairy farm management, increasing consumer concern about their food supply motivates response from the industry. Leaders in the dairy industry have prepared a proactive update of dairy cow care practices, called National F.A.R.M – or Farmers Assuring Responsible Management. It will encourage self-audits that dairy owners can do to assess and fine-tune management practices. The program gives an opportunity for the industry to self-improve, plus convey information to consumers.

Meeting Workforce Needs

Many dairy farms in the US have expanded to a size larger than family labor can manage. Immigrant workers have been attracted to the on-farm positions. Like all other US employers, dairy owners have a need for a legally documented workforce. Dairy employers and other US business owners have much at stake while the nation’s policy-makers consider options for immigration law reform. The situation calls for discussion between the dairy/ag sector and Congress, and it will be interesting to see how dairy leaders navigate this complex issue.

Balancing Supply and Demand

A solution is needed to correct the over-supply of milk which has been at the bottom of holding milk prices paid to dairy farms at unprofitable levels for 18 months. Although product sales are improving with the improving economy, milk supply still exceeds demand. Several options are being discussed nationally including extension of voluntary herd reductions and price stabilization plans. House Bill 5288 has been proposed to amend dairy price stabilization act of 1983. Lawmakers seek input on bills like this, and it will be interesting to see if dairy producers & organizations can work out agreements in order to provide a degree of unified position statements to proposed measures.

This is an interesting period of time for the dairy industry, and a time for dairy producers to be involved in discussions and decision-making that affects their current & future situation.