

FIELD & FEEDLOT



IOWA STATE UNIVERSITY EXTENSION AND OUTREACH—NORTHWEST REGIONS SEPTEMBER 2014 ISSUE

Extension Web Sites

Ag Decision Maker

www.extension.iastate.edu/agdm/

Beef Center

www.iowabeefcenter.org/

Manure Management

www.agronext.iastate.edu/immag/

Pork Center

www.ipic.iastate.edu/

ISU Extension Dairy Team

www.extension.iastate.edu/DairyTeam/

Non-Construction Expansion of a Confinement Feeding Operation

Kris Kohl, Ag Engineer Program Specialist

Common practice in the swine industry is overstocking buildings. For example, 2,100 pigs could be delivered to a 2,000 head capacity building. This could be a problem if the number stocked is larger than the numbers used for the operation's manure plan. Fees for the manure plan are supposed to be based on maximum stocking potential.

Overstocking could be considered a violation. Changes in the production of swine over the last few years have led to overstocked buildings. Death loss, culls, and topping out the biggest two to three pigs per pen will reduce the final number of pigs in the building and allows utilization to full capacity. Thus, some producers have mistakenly used the final capacity for manure plan head number instead of the placement number of 55 pound pigs (Note: Over 55 lb. pig are 0.4 animal units and under 55 lbs. are 0.1 animal units). To solve this non-compliance issue, the operation may do a non-construction expansion plan.

A complicating factor in animal units was a switch from animal weight capacity to number of head to calculate animal units. Facilities built before March 1, 2003, use average animal weight to calculate animal units and after that date number of head is used to calculate head units.

The Iowa Department of Natural Resources (IDNR) allows for non-construction expansion to keep producers in compliance with the law. There are three main sizes of operations and because it often refers to swine, I will concentrate on swine in this article.

Operations built prior to March 1, 2003 and have not built any new buildings

Add the additional capacity up to 625,000 lbs. (4,133 finishing pigs)

1. Add the additional animals to manure management plan
2. Pay additional unit capacity of \$.10 per animal unit (.04 per finishing pig)
3. Pay additional annual compliance fee of \$0.15 per animal unit (\$0.06 per finishing pigs) on all future annual manure plan updates.

Operations built or expanded after March 1, 2003. The four size options are:

- Option A.** Less than 500 animal units - No restrictions (finishing swine less than 1,250 head) - small animal feeding operations
- Option B.** Expanding just beyond 500 animal units (1,251 head)
- Option C.** 500 – 1,000 animal units finishing (1,250 head to 2,500 head)
- Option D.** Over 1,000 animal units – more than 2,500 head finishing swine

Option A - has no restrictions.

Option B - small expansions are regulated. Pay \$250 manure management plan filling fee. Must meet current separation distances from neighbors and other entities.

1. Must pay additional \$.10 indemnity fee on the expansion with the annual compliance fee of \$.15 per animal unit on the subsequent years.
2. Update the Manure Management Plan to reflect the higher capacity demonstrating that there is adequate land for the manure produced by the higher capacity.
3. File all paperwork with the county and IDNR.

Option C - Non-Construction Expansion: Over 500 animal units, but less than 1,000 animal units between 1,251 and less than 2,500 head finishing swine

1. Pay \$250 Manure management plan filling fee

2. Plus \$.10 an animal unit indemnity fee and \$.15 annual compliance fee thereafter.
3. Update the Manure Management Plan to reflect the expansion providing enough land to apply the manure at appropriate rates.

Option D - Non-Construction expansion to over 1,000 animal units – greater than 2,500 head finishing swine

1. Check separation distances for final maximum head count based on first livestock building construction date. If separation distance requirements are met.
2. Pay \$500 Construction permit fee
3. Additional indemnity fee of \$.15 per animal unit, and annual compliance fee of \$.15 annually after that.
4. Write a new Manure Management Plan and file with county and IDNR.

Corn Maturity 2014

Joel DeJong, Crops Field Agronomist

Recently I have had some questions about the potential for yield loss due to an early frost. According to ISU's "Corn Growth and Development" publication, the typical number of days to reach R6 (physiological maturity) after pollination is 64 to 66 days. I usually assume 55 to 60. This year it looks like the bigger number might be closer to correct. My notes say that the 9 counties I serve along the NW edge of the state had about 50% of the fields silked on July 22. The R-4, or the "dough" stage, normally begins about 24 to 26 days after silking. The "dent" stage (R-5), typically begins about 31 to 33 days after silking. This stage lasts about 33 days until the plants are "mature," sometimes called "black layer" for the little black layer that forms at the base of the kernel, but will still be about 30% grain moisture at that time. Corn in early dent (R5) has about 60 percent grain moisture, accumulated about 45 percent of its dry matter, and typically needs another 33 days to mature. When the kernels reach the half milk line stage we now have about 90% of the total dry matter accumulated in the kernel, and at three-quarter milk line 97 percent of the dry matter is accumulated and is about two weeks from maturity. I think that we should get almost all cornfields in NW Iowa to maturity, or very close, if frost occurs at a normal time period. However, these numbers don't add up so well for the later pollinating fields.

Due to cooler than normal temperatures we seem to be moving our crop maturity along a little slower than normal. But, history shows us that filling kernels with slightly cooler than normal temperatures seems to favor high yields. A later than normal frost would be appreciated this year for those who had to replant. To find what the normal frost date is for a weather station location near you, do an internet search for "IEM Climodat Reports." On that page you can pick a weather station, then select for "First Fall Freeze Probabilities," and see what the chances are for different temperatures on different dates. For example, if you select Rock Rapids, and assume a 29 degree temperature as the temperature when we might cause significant frost injury, the 50% chance date for that temperature is on October 7. The date when we have about a 10% chance of having that occur (or early risk date) is September 27. For those who are "doom and gloomers" and think the worst can

happen, the 1 in 100 chance of the earliest frost is September 16 in Rock Rapids.

Remember, when corn hits the "mature" stage, it is still about 30% moisture. Grain usually dries at a linear rate that varies depending on weather and other factors. For example, wet and cool weather slows drying. We've seen dry-down rates less than 0.3 percent per day. On the other hand, warm, dry weather speeds drying; kernels can lose up to 1.0 percent moisture per day with excellent drying weather. Considering that corn at maturity has about 30 percent moisture content it could easily take two or more weeks for grain moisture to drop to 20 percent. And the later it matures, the cooler each day is expected to be.

Getting Ready for Feedyard Inspections

Beth Ellen Doran, Beef Program Specialist

Beef feedlot producers could possibly have two inspections in the near future, and there are a number of resources to help prepare for the specific on-site visits.

Iowa Department of Natural Resources (IDNR) Inspections –

In the next five years, IDNR will review approximately 8600 large and medium-sized livestock facilities. Not all operations will have an on-site inspection; some may have only a desk-top assessment conducted. However, larger facilities, those near a water of the U.S. or ones with past runoff events will likely be inspected.

If the facility is to be inspected, the IDNR will provide a one-to-three day notice of the inspection and will follow the facility's biosecurity protocols. IDNR may ask to see some records, such as nutrient or manure management plans, manure application and animal inventory for the past five years.

An on-site inspector will look at the facility for signs of runoff and will be reviewing berms, freeboard and the potential for erosion. Additional items they will look at include:

- Number of pens, manure control and storage structures
- Application equipment
- Areas downhill of the operation – looking for runoff to the ground, wells, sinkholes and waters of the U.S.
- Manure handling and control, such as the solids settling system, pen scraping, stockpiles and de-watering
- Chemical storage (only applies to NPDES permitted facilities)
- Feed storage and mortality handling

There are two special things to note. If there is another livestock enterprise at the site such as finishing swine which is a large CAFO (1000 animal units), then all animals - regardless of species - are considered to be of large CAFO status and would need the minimum runoff controls holding the 25-year, 24-hour rainfall event.

The other thing to note is processed waste water. Processed waste water includes any runoff from feeding or feed storage areas, such as silage bunkers and open piles of feed. Producers need to take measures to prevent runoff from these areas.

(The above information is adapted from the IDNR publication “What to Expect When DNR Inspects.” For the full article or more information, access the IDNR at www.iowadnr.gov/afo)

Changing Packer Requirements – Changes in packer requirements may affect the information that a producer must provide to market cattle. Recently, one packer shared information concerning what they plan to implement with feedlot producers from which they purchase cattle.

One of the requirements is that the feedlot manager or owner must be Beef Quality Assurance (BQA) certified. A series of recent meetings in NW Iowa offered this training. If you were unable to attend, you may complete the on-line training curriculum located at www.BIVI-BQA.com. You may obtain the free access code by contacting either Beth Doran or Doug Bear listed below.

The feedlot producer must also complete a self-assessment of their feedlot prior to the visit of the third-party auditor. This form (pages 1-8) is located in the BQA Feedyard Assessment manual, which may be accessed at www.iabeef.org/beefqualityassurance.aspx

There are 15 standard operating procedures (SOP) listed in back of the manual. However, the producer does not have to complete all of them initially. There are two SOP forms – Humane Euthanasia of Cattle and Handling Non-Ambulatory Cattle – which the producer will want to have completed prior to the on-farm audit. On the website containing the manual, both SOP forms are listed and contain example information that may be replaced with your own feedyard information.

The feedyard will have a third-party, on-farm audit, and the packer has engaged an independent firm to conduct this at no charge to the feedlot. During the audit, the auditor will look at three things:

- Feedlot employee training
- Cattle handling (including processing)
- General well-being of the cattle in the feedlot

For more information, you may contact Beth Doran, ISU Beef Program Specialist, at 712-737-4230 or doranb@iastate.edu or Doug Bear, Director of Industry Relations for the Iowa Beef Industry Council, at 515-296-2305 or doug@iabeef.org

County Fair Swine Exhibitions and PEDv

Matt Swantek, Swine Program Specialist

For many, county fair and state fair season has come to a close. Now begins the reflection on challenges and outcomes from the devastating Porcine Epidemic Diarrhea virus (PEDv) and the efforts made to reduce the exposure risk during the swine shows.

The potential for the PEDv exposure was a concern this spring for 4-H spring weigh-ins, and therefore county youth coordinators experienced a barrage of information on biosecurity measures and procedures to support the swine shows this summer. The expectations of an outbreak became less as the number of positive cases from the ISU Vet lab decreased as summer approached. Since the virus does not survive long in dry and hot

conditions, the risk level was projected to very low (if at all) for the exhibition pigs.

A survey of Western Iowa counties (45 responses) was conducted the first week of August on any swine health concerns during the county fairs, primarily PEDv symptoms. The response was 100% “nothing observed” for sick pigs. A few added the comment: “numbers were lower this year” assuming this to be the potential exposure risk and taking the virus back home after the fair. One county reported it had the most pigs in ten years. Very few pigs were reported to have returned home which is the norm as these pigs are at market weight. The average was just under 100 pigs for the 4-H swine shows. Great job everyone on a successful swine show for exhibitors and families.

Recent observational data was reported by Dr. “Butch” Baker at the IPPA July conferences held in Plymouth and Carroll counties. Dr. Baker has been instrumental in ISU efforts to keep Iowa producers current on the progress made in understanding PEDv and biosecurity needs to protect farms against the virus. This was an important session for sow herd and managers. A key point was sows affected by the virus during farrowing may experience reproductive problems or failure the following gestation period. This could lead to another “production hole” in the pig flows. Those sow units having experienced PEDv may have to begin additional management strategies if this becomes more than just an observation but rather an outcome from a PEDv outbreak.

Currently Iowa’s summer averages for the number of positive samples versus the number of samples submitted has been just over 15% compared to the 49.3% average during January through March 2014.

If farms experience the PEDv, there is mandatory reporting that must be completed. Through the efforts of ISU veterinarians the reporting forms and procedures have been made simple and easy to complete. Follow the link for reporting and veterinarians’ responsibilities <http://aasv.org/pedv/regulation/HerdMgmtSECD.pdf>
Mandatory Report Link: http://aasv.org/aasv%20website/Resources/Diseases/PorcineEpidemicDiarrhea.php/html_links.htm#REGULATION

Federal Order -- USDA Secretary Tom Vilsack issued a Federal Order on June 5, 2014 requiring the reporting of swine enteric coronavirus diseases including PED and PDCoV. For more information and a link to the actual Federal Order, follow this link on the USDA website: www.aphis.usda.gov/animal-health/secd

The Federal Order requires that operations reporting these viruses must work with a veterinarian – either their herd veterinarian or USDA or State animal health officials – to develop and implement a Herd Management Plan to address the detected virus and prevent its spread. The USDA website includes an approved checklist defining the issues that must be addressed according to the Federal Order. Submission of this checklist is all that is necessary to comply with the Federal Order

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PLYMOUTH COUNTY

2014 Farm Bill Resources

Ag Decision Maker—Farm Program Decision Tools, Newsletters, Publications,
Voiced Media, Monthly e-Newsletter, New Farm Program
<http://www.extension.iastate.edu/agdm/info/farbill.html>

There is still so much we do not know regarding how the farm bill will work.
Meetings will be scheduled in the future when more information is known.