IOWA STATE UNIVERSITY
Extension and Outreach





FIELD&FEEDLOT a monthly agriculture publication for Northwest Iowa

January 2024

In this Issue:

Online References 1
Numbers to Know 1
Managing Corn During the Winter 1
Beef x Dairy: Part of January 16 Feedlot Forum 2
Understanding the Disease Triangle 3
Upcoming Events 2-3
Manure Applicator Reshows 4
Pesticide Applicator Reshows 4

Online References

Ag Decision Maker
www.extension.iastate.edu/agdm/

Iowa Beef Center
www.iowabeefcenter.org

Manure Management Action Group
www.agronext.iastate.edu

Iowa Pork Industry Center
www.ipic.iastate.edu/

ISU Extension Dairy Team
www.extension.iastate.edu/dairyteam

Locate a County Office
https://www.extension.iastate.edu/countyservices/

Numbers to Know

AnswerLine 800-262-3804

Beginning Farmer Center 877-BFC-1999

Iowa 2-1-1 211

Iowa Concern 800-447-1985

Iowa Healthy Families 800-369-2229

Teen Line 800-443-8336

Managing Corn During the Winter

Kris Kohl, Ag Engineering Specialist
712-732-5056 or kkohl1@iastate.edu

Managing corn during the winter is crucial to maintain its quality, prevent spoilage, and ensure it remains marketable. Here are six key considerations for managing harvested corn in the winter.

1. **Moisture Content**. The 2023 crop was dryer and higher test weight than normal which should mean that it will store well. If the corn is over 15 percent, it should be kept cold with a marketing date before April. If the moisture level is below 15 percent and cooled below 40 degrees Fahrenheit, there is little risk of it spoiling unless we find a spot with high levels. Use a moisture meter to monitor the moisture levels twice a month during the cold months.

2. **Aeration and Ventilation**. If the corn was not cooled and cored last fall aeration to cool the grain now and smell it to be sure no mold or hot spots are present. Proper ventilation helps prevent hot spots and reduces the risk of mold and insect infestations.

3. **Temperature Control**. Keep stored corn at a cool and consistent temperature to prevent the growth of fungi and bacteria. Super cooling the grain to zero will kill insect eggs but should only be done if there is infestation or you plan to store it for more than 1 year. Monitor and manage temperature fluctuations in the storage facility.

4. **Quality Checks**. Perform quality checks on stored corn for factors such as color, odor, and insect damage. Most of the problems are normally near the surface of the grain and can be spotted there. If you are going to walk the surface, make sure the unloading system cannot be turned on and that someone else on the farm knows where you are. Make it a two-person job with one on the ground turning on the fan while the one in the bin smells the first stale air. You should sink in at least 6 inches in dry corn. Address any quality issues immediately by taking out at least one or two loads while running the fans. New CO_2 monitors can spot problems before they get out of hand.

5. **Snow Management**. Inspect the storage facility for potential issues caused by snow, such as leaks or blockages. Keep access points clear to ensure easy monitoring and maintenance. Cover fans if snow blows in.

6. **Documentation**. Keep detailed records of the stored corn, including moisture levels, temperature readings, and any issues observed. Documentation helps to see an unusual rise in temperature that signals spoilage starting. The byproducts of spoilage are heat, water production and CO_2 production.

By implementing these practices, you can effectively manage harvested corn during the winter, protecting its quality and ensuring it remains viable for sale or future use. Regular monitoring, proper storage conditions, and preventative measures are essential components of successful corn storage management.

FIELD&FEEDLOT a monthly agriculture publication for Northwest Iowa

Beef x Dairy: Part of January 16 Feedlot Forum

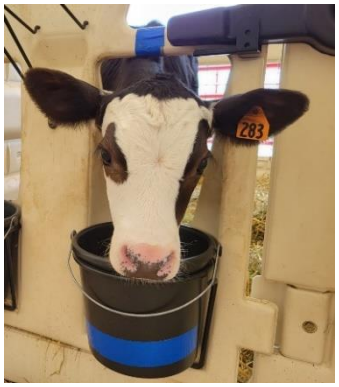
Beth Ellen Doran, Beef Specialist
712-737-4230 or doranb@iastate.edu

A shrinking cowherd has reduced the supply while increasing the cost of feeder cattle with beef genetics. To cope with these trends, some feedlot producers are switching to feeding cattle with beef x dairy breeding.

However, beef x dairy steers and heifers are different from straight beef cattle. An ISU survey of calf raisers and feedlot producers indicates beef x dairy animals offer opportunities but are not without challenges.

Beef x dairy feeder cattle have a lower purchase price, are more uniform in quality, and offer traceability because of electronic identification. But their biggest advantage is the ability to marble and quality grade. Surveyed producers indicated 87 percent of the cattle were choice or higher quality grade. Fifty-five percent of the producers marketed beef x dairy cattle to high-quality branded beef companies.

Respiratory, digestive, and liver health are major challenges. Surveyed producers report preweaning, postweaning and finishing death loss averaged 4.4 percent, 2.85 percent, and 4.0 percent, respectively. High-starch and low-fiber diets might be contributing factors to these percentages.



ISU is currently researching the effect of starter starch content on preweaning performance and two roughage levels in postweaning diets. Feedlot Forum will feature Taylor Klipp, ISU graduate assistant, who will share results from the preweaning stage. Data from the dietary roughage levels and carcass cutouts will not be available until all the cattle have been harvested (Dec. 2024).

Feedlot Forum 2024 will be January 16 at the Terrace View Event Center in Sioux Center and focuses on moving forward in a changing beef industry. The keynote speaker is Mike Murphy, market analyst for CattleFax. He will discuss the state of the industry and project when and how the industry might expand.

Other topics and speakers at the Forum include:

- Packer's perspective on beef x dairy carcasses – Garret Englin, JBS USA
- New industry leadership – Bryan Whaley, Iowa Cattlemen's Association; Mike Anderson, Iowa Beef Industry Council; and Beth Doran, Iowa Beef Center
- New implant regulations – Grant Dewell, ISU
- Farm Bill Update – Wesley Fopma, Liaison for Congressman Randy Feenstra
- Update on market transparency and price discovery issues – Brad Kooima, Kooima Kooima Varilek Trading

This year's Forum will begin at 8:45 a.m. with a trade show featuring 19 industry leading businesses. Be sure to check out the booths for the latest technology and research in feedlot production.

Prepaid registration ($25 per adult or $10 per student) is due Jan. 9 and may be made either online or via mail.

Visit https://www.extension.iastate.edu/sioux/feedlot-forum for more information and/or to register online, or if you would like a hard copy of the flyer mailed to you, email doranb@iastate.edu or call 712-737-4230.

Upcoming Events

Ag Business Programs

Farm Succession For You

Jan. 10 | 10:00 a.m. - 3:00 p.m.
Community Building, Primghar

Farm Transition Conference

Feb. 8-9 | Gateway Hotel & Conference Center, Ames or Online at go.iastate.edu/SICDHW

Agronomy Programs

Crop Advantage Series

9:55 a.m. – 4:35 p.m.

Jan. 3 | Northwest Iowa Community College, Building A, Sheldon

Jan. 4 | Buena Vista University Siebens Forum, Storm Lake

Jan. 23 | Arrowwood Resort and Conference Center, Okoboji

Jan. 30 | Le Mars Convention Center, Le Mars

Planter University

Feb. 5 | 9:00 a.m. – 2:30 p.m.
Northwest Research and Demonstration Farm, Sutherland

Extension Ag Coffees

Harvest & Growing Season Recap

Jan. 12 | 9:30-11:00 a.m.
City Hall, Moville

2024 Farm Income Predictions

Jan. 16 | 10:00-11:00 a.m.
Extension Office, Storm Lake

Swine Trends and Issues

Jan. 30 | 10:00-11:00 a.m.
Extension Office, Storm Lake

Climate Outlook for the 2024 Growing Season

Feb. 9 | 9:30-11:00 a.m.
City Hall, Moville

Livestock Programs

Beef Quality Assurance Training

Jan. 8 | 5:00-6:30 p.m.
Community Center, Armstrong

Feedlot Forum

Jan. 16 | 8:45 a.m. - 2:45 p.m.
Terrace View Event Center, Sioux Center

Dairy Day: Raising Your "Dairy Best" Heifers

Jan. 30 | 9:45 a.m. - 2:30 p.m.
Dordt University Ag Stewardship Center, Sioux Center

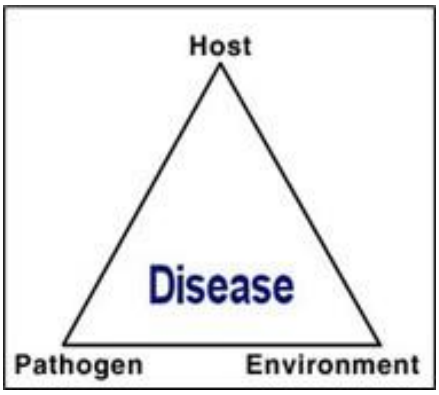
FIELD&FEEDLOT a monthly agriculture publication for Northwest Iowa

Understanding the Disease Triangle

Leah Ten Napel, Field Agronomist
712-541-3493 or lre@iastate.edu

I attended the Iowa State University Integrated Crop Management Conference and heard a great presentation by Alison Robertson. That presentation inspired this article on understanding the disease triangle.

This past summer we had many growers applying fungicides and insecticides on crops when the risk of disease was very low, and disease was not being seen out in the fields. Applying these products when disease is not present is a big cost to the grower with little to no yield advantage and favors conditions for fungicide resistance. While you might be evaluating your fungicide decision from the past year or thinking about the growing season to come, I thought it would be a perfect time to review the components of the disease triangle.



The occurrence of the disease requires all 3 sides of the triangle are present. The surface area of the triangle correlates to the severity of the disease. If all 3 components are fully present, disease will be very severe. If a portion of triangle is missing, disease will be less prevalent.

The first side of the disease triangle is the host. This may seem obvious, but without the host, the pathogen has nothing to infect. To avoid a particular disease a grower may choose to do crop rotation. While this will work short-term, it is not a long-term solution. Planting disease resistant hybrids is a good practice to utilize in addition to crop rotation.

The second side of the disease triangle is the pathogen. Along with the susceptible plant, there must be an organism present to cause the disease, and this organism is called the pathogen. Pathogens can originate from crop residue, soil, other hosts, or neighboring fields, counties, and states. Pathogens can be classified as fungi, bacteria, viruses, or nematodes. If the pathogen is anything besides a fungus, a fungicide will have no control on the disease.

The third and final side of the triangle is the environment. This is the key variable growers should be paying attention to. The environment must be conducive to the establishment of the disease. Different diseases favor different environments, but many fungi favor a warm, wet environment. Moisture must be present in order for fungi spores to produce and germinate. Factors like wind, light, soil fertility, and temperature can affect the productivity of the disease as well.

A few take home messages I hope growers utilize when making their fungicide decisions are:

- Evaluate all aspects of the disease triangle for that growing season before applying your fungicide.
- Scout fields before application to determine if disease is present, and scout after application to determine if disease was controlled with fungicide application.
- Rotate different modes of action of fungicide products. This will help delay or avoid development of fungicide resistance.
- Always include a test strip to determine level of disease present without treatment.

Upcoming Events

Manure Applicator Trainings

**** See last page for reshow dates. ****

Statewide Commercial Manure

*Jan. 4 | 9:00-11:30 a.m.
All Extension Offices
*Jan. 4 | 1:00-3:30 p.m.
All Extension Offices
** Check with your Extension office to ensure they are showing during this time.*

Commercial & Confinement

Jan. 16 | 1:30-4:30 p.m.
Willow Creek Recreation Area Classroom, Ocheyedan

Confinement Site Manure

Jan. 18 | 1:30-3:30 p.m.
Extension Office, Cherokee

Jan. 31 | 1:30-3:30 p.m.
Extension Office, Sac City

Feb. 6 | 1:30-3:30 p.m.
Forster Community Center, Rock Rapids

Feb. 6 | 6:30-8:30 p.m.
Northwest Iowa Community College, Sheldon

Feb. 7 | 9:30-11:30 a.m.
Extension Office, Orange City

Feb. 7 | 1:30-3:30 p.m.
Extension Office, Orange City

Office Closures

Jan. 1 | New Years Holiday
Jan. 15 | Martin Luther King Jr. Day

Pesticide Applicator Trainings

**** See last page for reshow dates. ****

Private Pesticide Applicator Training

Jan. 3 | 9:30-11:30 a.m.
Rockwell City

Jan. 17 | 6:30-8:30 p.m.
Extension Office, Orange City

Jan. 17 | 6:30-8:30 p.m.
Sac County Fairground, Sac City

Jan. 25 | 1:30-3:30 p.m.
Extension Office, Orange City

Feb. 2 | 9:30-11:30 a.m.
Community Center, Wall Lake

Women in Ag Programs

Annie's Project (Mondays)

Jan. 8-Feb. 12 | 1:00-4:00 p.m.
Cobblestone Inn, Holstein

Women Marketing Grain (Mondays)

Jan. 8-Feb. 5 | 6:00-9:00 p.m.
Cobblestone Inn, Holstein

FIELD&FEEDLOT a monthly agriculture publication for Northwest Iowa

Manure Applicator Reshows

Call your local Extension office to confirm reshow times and save your spot. Walk-ins are not guaranteed admittance.

- **Buena Vista County** | By appointment.
- **Calhoun County** | By appointment.
- **Cherokee County** | By appointment.
- **Clay County** | By appointment.
- **Emmet County** | By appointment.
- **Ida County** | By appointment.
- **Lyon County** | First Thursday of the Month
- **O'Brien County** | First Thursday of the Month
- **Osceola County** | Second Tuesday of the Month, Beginning in March
- **Pocahontas County**: Third Tuesday of the Month
- **Sac County |** By appointment.
- **Sioux County**: Third Thursday of the Month
- **Woodbury County** | By appointment.

Pesticide Applicator Reshows

Call your local Extension office to confirm reshow times and save your spot. Walk-ins are not guaranteed admittance.

- **Buena Vista County** | By appointment.
- **Calhoun County** | By appointment.
- **Cherokee County** | By appointment.
- **Clay County** | By appointment.
- **Emmet County** | By appointment.
- **Ida County** | By appointment.
- **Lyon County** | By appointment.
- **O'Brien County** | By appointment.
- **Osceola County** | By appointment.
- **Pocahontas County**: Third Thursday of the Month
- **Sac County |** By appointment.
- **Sioux County** | By appointment.
- **Woodbury County** | By appointment.

Field & Feedlot is published monthly by Iowa State University Extension and Outreach Agriculture and Natural Resources Field Specialists. Inquiries about the publication and/or how you can receive it in your inbox each month can be sent to Kiley Biedenfeld at kkaufman@iastate.edu or 712-957-5045.