IOWA STATE UNIVERSITY
Extension and Outreach





FIELD&FEEDLOT a monthly agriculture publication for Northwest Iowa

JULY 2022

In this Issue:

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

Buying & Selling Manure Workshop August 1st

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Iowa State University Extension and Outreach will be holding a workshop on August 1 for farmers and landowners who are considering buying or selling manure.

The workshop will be held from 1:00 to 3:00 p.m. at the ISU Extension and Outreach Buena Vista County office located at 824 Flint Drive in Storm Lake. The cost to attend is only $25 and includes refreshments and all reference materials.

Fertilizer costs have doubled in the past two years and follow the energy market due to transportation and the high need for energy in manufacturing and refining of fertilizer.

Still, proper fertility is essential for the high crop yields that Northwest Iowa is famous for. Livestock manure is almost a perfect match for corn and soybean soil nutrient needs. But manures are also heavy and contain a lot of water, so transportation is an issue again, just like with fertilizer.

This workshop will provide:

- a spreadsheet on how to convert fertilizer prices to manure test equivalent so that buyers and sellers have a good starting point on what the value is now and where it might be in the future
- information on what to test for when selling manure and typical agreements that are required if the manure comes from a site that requires a manure management plan
- information on soil compaction and application timing to protect the soil and maintain optimal yields
- information on composting of dry manures and what advantages this provides for the buyers and sellers

This program is designed to provide timely topics for farmers looking to find fair ways to work together utilizing manure as a resource.

IOWA CONCERN hotline
800-447-1985
- call or text -
stress counseling
legal education
financial concerns
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The Basics Can Improve Feed Efficiency

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Improving feed efficiency is one way to reduce feed cost. Don't forget that the basics - such as nutrition, the animal, and technology - are key in improving feed efficiency.

Nutrition. Start with a balanced diet that meets the nutritional requirements of the animal for a given level of gain. The Iowa Beef Center (www.iowabeefcenter.org) has a computer software program called BRANDS that allows the user to formulate diets based on available feedstuffs, characteristics of the animal, and the environment.

BRANDS can determine if the level of protein in the diet will optimize the use of the energy in the grain. High growth (lean) cattle require higher levels of crude protein (13-14 percent CP) while growing and gaining, but the crude protein requirement decreases as growth slows and the animals approach finished weight.

As the proportion of grain in the feedlot diet is increased, feed efficiency is improved. Cattle grow faster, finish sooner, and produce heavier and fatter carcasses, but some forage is required to keep the rumen healthy. BRANDS can determine the level of effective fiber in the diet and predict ruminal pH.

As grain is more extensively processed, starch digestion is increased with steam flaked grain > ensiled high moisture grain > dry rolled grain > whole shelled grain. However, overprocessing can create fines leading to acidosis.

Feed efficiency can also be enhanced with limit feeding. Research indicates that cattle slightly restricted (up to 4 percent of full feed intake) are more efficient.

Finally, remember that bunk scoring is critical to maintain consistent intakes, decrease acidosis and gauge when to step up the ration. Bunk scoring is a valuable tool to enhance feed efficiency.

Animal. The animal should be marketed when it reaches its finished weight. At this weight, protein deposition ceases, and fat deposition increases. Because twice as much energy is required to produce a pound of fat versus a pound protein, feeding beyond the finished weight reduces feed efficiency and is costly. However, marketing cattle before reaching their finished weight (to improve feed efficiency) may increase the number of cattle grading Select and carcass discounts. The Choice/Select spread, which is greater in the summer months, is currently $20-$25/cwt of carcass.
Sex, breed, and temperament influence feed efficiency. Bulls are more efficient than steers and steers are more efficient than heifers, which can be attributed to the lean-to-fat ratio of their carcasses. Dairy breeds and cattle with poorer dispositions (wilder) are less efficient.

Technology. MGA (melengesterol acetate) is commonly fed to suppress estrus in female cattle, thereby improving both gain and feed efficiency (2.4 percent). Implants may increase feed efficiency 8-12 percent when matched to cattle type and maturity. They work to increase protein deposition in the animal and delay fat deposition. Ionophores included in the ration can increase feed efficiency 4-10 percent and reduce methane production, acidosis, and bloat. Beta-agonists are a class of feed additives fed at the end of the feeding period when muscle growth is slowing, and fat deposition is speeding up. Because they enhance protein deposition, feed efficiency may be improved 10-15 percent.

Soybean Gall Midge, Iowa Pest Alert Network & Upcoming Field Days

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Soybean Gall Midge Emergence. The first soybean gall midge adults were found near Wall Lake in Sac County on June 16. The first soybean gall midge emergence of the year was located near Davey, Nebraska on June 7. Larvae can begin to be scouted for if soybean plants are at least V2. Scout fields that had a presence of gall midge in the past. If there were no known infestations in the past, scout near the edge of last year's soybean acres. Look for a black lesion and then analyze for larvae. Soybean gall midge larvae are white or orange in color as they feed on the soybean stems. If plants are wilted, check those plant by splitting the stem with your knife or fingernail to check for larvae. No known management strategies are available to suppress the larvae currently. To learn more about soybean gall midge, a website has been developed along with an alert system to provide updates. The website can be found at https://soybeangallmidge.org/. The website contains videos about scouting for this pest and it also has information on counties that currently have this pest.

Iowa Pest Alert Network. An alert system has been developed for notification about insect pests by text messages to your phone. The alert system is called the Iowa Pest Alert Network. This network provides timely text messages to farmers, advisors, and agribusiness personnel. Enrollment for the pest alert network can be done through the following website https://pestalerts.extension.iastate.edu/. There is a red box on this page where you are able to sign up for the free service, and you have the ability to select the pest that you are interested in receiving alerts on and the region that you would like to receive pest alerts from. The alert service has been helpful to those that have received the messages.

Upcoming Field Days, *continued*

Upcoming Research Farm & Corn Rootworm Field Days. The Annual Northwest Iowa Research Farm Field Day will be held Wednesday, July 13 from 9:30 a.m. to noon at the farm. There will also be a Corn Rootworm Field Day at 1 p.m. the same day. The morning program will begin with ISU Extension and Outreach Marketing Specialist Chad Hart discussing "Outlooks: Ag, Carbon and Renewable Energy." In-field learning will address "Tar Spot," led by Alison Robertson, ISU plant pathologist; "Nitrogen Management," with Antonio Mallarino, ISU soil fertility specialist; and "Timely Agronomic Topics," led by Gentry Sorenson and Joel DeJong, field agronomists. At the completion of the morning field day, a complimentary noon lunch will be served. Following lunch, the Corn Rootworm Field Day will begin at 1 p.m. ISU Entomologists Erin Hodgson and Ashley Dean will provide in-field education using a corn-on-corn demonstration plot. The demonstration plot has non-Bt rootworm corn, SmartStax corn and SmartStax Pro corn with the new RNA-I trait, all with and without insecticides. Roots will be dug and rated for injury, and management options will be discussed. Attendance at the morning and/or afternoon field day is free and open to the public. Registration is not needed.

Now is the Time to Start Planning Monarch Habitat Establishment

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The eastern monarch butterfly population has experienced a significant decline over the past three decades. Causes for the population decline include loss of milkweed habitat in the spring and summer breeding ranges in the Midwest, loss of overwintering habitat in Mexico, and extreme weather events. Therefore, establishing monarch breeding habitats in Iowa and neighboring Midwestern states is critical to sustaining the butterfly's continental population. If you are interested in establishing habitat this fall or next season, the Iowa Monarch Conservation Consortium (https://monarch.ent.iastate.edu/) is here to help with planning. Below are some steps and resources that may help with planning efforts.

Top Photo: Prior to establishing Monarch habitat.
Bottom Photo: Five years after habitat was established.

1. **Find local support.** Connecting with a knowledgeable local conservation contact in your county will be invaluable in implementing your project. A local conservation contact who has experience establishing diverse native prairie will be able to guide you through the process of establishment and maintenance. It's a common misconception that monarch habitat plots need to be big and in agricultural settings. Check out the Gardening for Butterflies and Pollinators (https://store.extension.iastate.edu/product/5736) and Blank Park Zoo's Plant.Grow.Fly program (https://www.blankparkzoo.com/conservation/plantgrowfly) to learn more about installing habitat as a garden.
2. **Site selection and preparation.** Sites can include areas previously cropped or areas that are grass dominated. Site preparation, which will vary based on the site's history, is essential to reduce the weed population prior to planting native seeds. Successful plantings in agricultural settings typically follow herbicide tolerant corn/soybean rotations because these sites usually have low weed pressure. Monarch habitats can also be established in grass-dominated sites; however, these sites require more intensive weed management prior to planting. USDA NRCS (https://www.nrcs.usda.gov/wps/portal/nrcs/ia/technical/ecoscience/bio/) website provides helpful guides, including Planting Native Prairie into Corn or Soybean Stubble, Planting Native Prairie into Cool Season Sod, Establishing and Managing Native Prairie and BMPs for Monarchs.
3. **Planting.** A high diversity seed mix that includes two or three milkweed species and a wide variety of native plant species is essential. Milkweed are the only plants that monarch caterpillars eat, and adults need nectar resources from early spring through early fall. These seed mixes also provide nectar resources for native bees. Resources for seed mixes and programs included: Iowa Pheasants Forever Native Seed Program (http://www.iowapf.net/native-seed-program/), Iowa State University Monarch Seed Mix (https://store.extension.iastate.edu/product/15139-pdf), and Plant Iowa Native (http://plantiowanative.com/resources/#services). We recommend dormant season (mid-November through mid-February) planting. It is essential that the seed not be planted deeper than ¼ inch.
4. **Site Management.** Management is essential to ensure long-term success. Mowing three or more times during the first full growing season, and perhaps once or twice during the second year, prevents weeds from shading out native plant seedlings and prevents weeds from going to seed. With successful preparation, planting, and proper care the first two years, future years require less care. Long-term maintenance steps include a residue removal practice every 3 to 5 years, such as prescribed fire or haying, to limit grass dominance and prevent tree establishment.
5. **Record.** Enter your habitat into HabiTally (https://www.nrcs.usda.gov/wps/portal/nrcs/ia/technical/ecoscience/bio/) or MCD (https://ecos.fws.gov/mcd).