



## FIELD&FEEDLOT a monthly agriculture publication for Northwest Iowa

May 2023

### In this Issue:

Online References.....	1
Numbers to Know.....	1
Evaluation of Crop Stand after Emergence.....	1
Expected High Forage Prices Support Pasture Management	2
In Season Manure Application	3
Agronomy in the Field Workshop for Women.....	3

### Online References

#### Ag Decision Maker

[www.extension.iastate.edu/agdm/](http://www.extension.iastate.edu/agdm/)

#### Iowa Beef Center

[www.iowabeefcenter.org](http://www.iowabeefcenter.org)

#### Manure Management Action Group

[www.agronext.iastate.edu](http://www.agronext.iastate.edu)

#### Iowa Pork Industry Center

[www.ipic.iastate.edu/](http://www.ipic.iastate.edu/)

#### ISU Extension Dairy Team

[www.extension.iastate.edu/dairyteam](http://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

## Evaluation of Crop Stand after Emergence

Gentry Sorenson, Crop Field Agronomist

515-295-2469 or [gentrys@iastate.edu](mailto:gentrys@iastate.edu)

Evaluations of crop stands are important to help understand how effective planting was and to recognize changes that can be made next planting season. Evaluation shortly after corn or soybeans have emerged will help to determine if replanting is necessary and if any changes need to be made to the planter next planting season. A goal is even emergence at about the same time, this is especially the case with corn. Causes of uneven emergence can be soil moisture that is irregular, poor seed to soil contact, soil crusting, cold soil temperature, and compaction.

When making stand evaluations evaluate reasons for the poor stand and use those observations to amend next year's planting. Also, understanding where areas of soil compaction are present in your field allow you to adjust scouting during in season scouting trips. If soil compaction is located just below the pre plant tillage area the soil may have been too wet during the tillage operation. Another check is to dig plants to understand if sidewall compaction is present.

The first step to stand evaluation is to measure 1/1000th of an acre, which varies based on the row spacing. For growers using 30-inch row spacing, the length of 1/1000th of an acre is 17 feet, 5 inches. For growers that plant in 15-inch row spacing, 1/1000th of an acre is 34 feet, 10 inches. Tables online for other row lengths are available in IPM1 Corn and Soybean Field Guide (<https://store.extension.iastate.edu/product/14743>) through Iowa State University Extension and Outreach for reference. When the row length has been measured representing 1/1000th of an acre, count the live plants present in the single row and multiply the number of plants counted by 1000 to obtain the plant population per acre. Using field flags to mark the distance of 1/1000th of an acre is helpful in the field. Repeat your counts across different areas of the field and average the counts that you have taken to gather the average plant population per acre. Take counts in random areas to eliminate bias in the sampling process.

Guides can help with stand decisions, Soybean Replant Decisions, PM 1851, (<https://store.extension.iastate.edu/product/5422>) from ISU Extension and Outreach is available as a free download. The guide can assist by providing tables regarding replant and stand evaluations. Helpful publications for corn stand evaluation include Table 2 included in the Guide to Iowa Corn Planting, CROPR 3161 (<https://store.extension.iastate.edu/product/5475>) available from ISU Extension and Outreach. Table 2 can assist in understanding the yield potential of corn compared to the planting date and final stand. In the case of uneven emergence of corn, the publication titled Dealing with Uneven Emergence in Corn (<https://store.extension.iastate.edu/product/3081>) is helpful to review.

## Expected High Forage Prices Support Pasture Management

Beth Ellen Doran, Beef Specialist  
712-737-4230 or [doranb@iastate.edu](mailto:doranb@iastate.edu)

Livestock producers should plan for high forage prices this summer and fall. The December 2022 hay stocks report ranked the lowest on record. Drought, increased fuel prices, and high-priced fertilizer reduced the number of cuttings and yield.

ISU Extension and Outreach field agronomists - Gentry Sorenson and Leah Ten Napel - indicate subsoil moisture levels in NW Iowa were at historic low levels last fall, ranging from .36 inches in Lawton to 2.96 inches in Estherville. Spring subsoil moisture measurements are forthcoming.

USDA National Agricultural Statistics Service reported Iowa farmers expect to harvest 1.07 million acres of all dry hay for the 2023 crop year – 130,000 acres below 2022. “Diverted” hay acres will more than likely be planted to corn and oats.

What about pasture rental rates? Iowa pasture rental rates for 2022 averaged \$59.50, \$1.50 per acre higher than 2021. Pasture rental rates in NW Iowa were as follows:

County	2021 Price (\$/acre)	2022 Price (\$/acre)	County	2021 Price (\$/acre)	2022 Price (\$/acre)
Buena Vista	49.50	48.50	O’Brien	43.00	56.00
Calhoun	60.50	51.50	Osceola	-----	-----
Cherokee	48.50	51.00	Palo Alto	-----	45.50
Clay	54.50	57.50	Plymouth	75.50	76.00
Dickinson	47.50	50.50	Pocahontas	38.00	30.50
Emmet	46.00	52.00	Sac	58.00	-----
Ida	67.50	80.50	Sioux	88.00	83.00*
Lyon	57.50	54.50	Woodbury	74.00	52.50
Monona	43.00	56.00	* Highest published pasture cash rent in Iowa		

[https://www.nass.usda.gov/Statistics\\_by\\_State/Iowa/Publications/County\\_Estimates/2022/IA-CtyEst-Cash-Rent-08-22.pdf](https://www.nass.usda.gov/Statistics_by_State/Iowa/Publications/County_Estimates/2022/IA-CtyEst-Cash-Rent-08-22.pdf)

Current market rates (averages) are one way to determine a pasture rental rate, but other methods exist (return on investment, forage value, rent per head per month, carrying capacity, and rent per pound of gain). Descriptions of these methods are explained in the Ag Decision Maker fact sheet, “Computing a Pasture Rental Rate,” available at <https://www.extension.iastate.edu/agdm/wholefarm/html/c2-23.html>. At this site, there is a downloadable Excel spreadsheet that will calculate a value specific to the type of pasture and animals.

Given high-priced forages are expected, good management will be key to increase pasture productivity. Consider the following best management practices:

- Timely application of herbicides will reduce weed pressure in the pastures and prevent weeds from scavenging moisture and soil nutrients.
- Boost grass production with a split application of nitrogen (N) in the spring followed by a fall application if there is adequate moisture.
- Delay pasture turnout until cool-season grasses are 8” tall and graze no lower than 4” to protect the growing point of the plant.
- Reduce stocking density (number of animals per paddock) to protect the plants. Excess leaf removal inhibits forage growth.
- Allow the pastures to rest and recover. Implement some level of rotational grazing (dividing the pastures into smaller paddocks).
- If pasture conditions are poor, dedicate one area as a “sacrifice” pasture and provide supplemental feed to the cattle. Protect the better pastures.

## In Season Manure Application

Kris Kohl, Ag Engineering Specialist  
712-957-5045 or [kkohl1@iastate.edu](mailto:kkohl1@iastate.edu)

In 2023, ISU Extension will be conducting research on a new manure application method from a company Rain 360. The manure application equipment is a robot that uses a GIS (Global Information System) to drive down between the growing corn rows to apply the manure when the crop is needing it.

The goal will be to apply the manure in several applications from planting to tassel. The application should prevent the loss of nitrogen to drainage tile from applying in the fall and having a long window to leach out of the root zone. The application will be placed right at the base of each plant with an application rate of 8000 gallons per acre.

If the manure quality is higher, water will be added to dilute the application and with our dry soils this year that might also help. Ultimately, the system should deliver higher yields, higher water quality and lower application cost.



The robot is a hose reel that unwinds the hose as it makes its application down the field with a width of 60 feet. When it gets to the end, it reverses direction and rolls up the hose. During the entire time it is applying manure and slowly rolling through the field at 1.5 miles per hour. It should be able to work both day and night covering about 30 acres a day. There will be some labor to make sure the feeder hose is where it should be and gas for the engine.

This is new technology and will need to have some research to work out issues that will arise. ISU Extension plans to

hold a demonstration in mid-summer and conduct the research to determine if it meets the expectations we hope for.

Look for an invitation in the June Field and Feedlot issue for the field day time and location.

## Agronomy in the Field Workshop for Women

Leah Ten Napel, Crop Field Agronomist  
712-541-3493 or [lre@iastate.edu](mailto:lre@iastate.edu)

Agronomy in the Field is a multi-session hands-on workshop for women designed to provide opportunities to learn more about forage and crop production practices, conservation practices and water quality impacts to help strengthen decision-making on the farm and to increase the comfort level when talking to landowners, tenants, ag retailers, and farming partners.

The workshops start May 24 and continue to June 21, July 19, August 16, September 13 from 5:30 to 7:00 p.m. They will be held at the Northwest Iowa Research Farm- 6320 500th St, Sutherland, IA 51058.

Thanks to the support of the ISU Extension and Outreach Office in O'Brien County the cost of the multi-session workshop has been reduced to \$25, which includes all materials and resources.

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### Agronomy in the Field Registration

To register and pay online use link below or QR Code

<https://form.jotform.com/231076155840958>

Or contact Marsha Rehder at the

O'Brien County Office at 712-957-5045 or Email [mrehder@iastate.edu](mailto:mrehder@iastate.edu)

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