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Extension and Outreach

ISU Extension and Outreach Information and Resources

FARM AND YARD

February 2020

ISU Extension Tama County

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- Acreage Living
- Ag Decision Maker
- Beef Center
- Corn Production and Nitrogen Usage
- Dairy Team
- Iowa Water Quality
- ISU Horticulture Extension
- ISU Natural Resources
- ISU Nutrient Reduction Strategies
- Manure Management
- Master Gardener Program-ISU
- Newsletters from ISU Extension
- Pesticide Management
- Plant and Insect Disease Lab
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- Soil Fertility

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FOR RURAL AND URBAN FAMILIES

Get a Head Start on Planting News at Northeast Research Farm Meeting

Terry Basol, Extension Field Agronomist; Brian Lang, Extension Field Agronomist;; Ken Pecinovsky, NE Iowa Research and Demonstration Farm

NASHUA, Iowa – The annual meeting of the Northeast Iowa Agricultural Experimental Association will feature timely topics related to spring planting, March 11 at the Borlaug Learning Center, on Iowa State University's Northeast Research and Demonstration Farm near Nashua.

Matt Darr, professor of agricultural and biosystems engineering at Iowa State University, and Charles Lynch, professor of epidemiology and medical director with the University of Iowa, will be the featured speakers.

The program starts with the board meeting at 9:30 a.m. Presentations will run from 10 a.m. to noon. Darr will discuss "Tillage and Planting Tips for a Successful Spring," and the following hour, Lynch will share information on "Glyphosate (Roundup) and Cancer."

Following lunch, Ken Pecinovsky, ag research station superintendent with Iowa State, will review 2019 research trial results conducted at the research farm.

Provided free at the meeting is the 2019 Research Farm Report. A Dutch treat lunch will be served by the Riverton Lucky Clovers 4-H Club. Following Pecinovsky's presentation, the NEIAEA board of directors will meet. The day's sessions qualify for three free CCA credits (2 CM, 1 PM).

The meeting is free and open to the public. The program will be held at the Borlaug Learning Center on the ISU Northeast Research Farm.

Directions: From Nashua at the junction of Highway 218 (Exit 220) and County Rd. B60, go west on B60 1.1 miles to Windfall Ave., then south 1 mile to 290th St., then east 0.2 miles to the farm. For more information, call Terry Basol at 641-426-6801.

Calving Process and Observation

Grant Dewell, ISU Beef Veterinarian; Renell Dewell, ISU Veterinary Specialist; Katy Lippoli, ISU Extension Cow-Calf Specialist

It is important to understand the calving process and stages of delivery because it can help you recognize normal progression as well as times when you should intervene. At the end of gestation a cow must successfully transition through the delivery process. To do this, cows must negotiate the three stages of delivery with the goal of delivering a live calf. Remember that calving is a strenuous event for cows and dams need to be consuming adequate pre-calving nutrition.

Stage 1

The first stage of labor begins with the dilation of the cervix. In this stage, the cervical plug has dissolved and uterine muscles begin to contract. In many cases, cows in stage 1 labor will go unnoticed as there are not any obvious visible signs of parturition. However, astute observers can identify changes in behavior that signal the beginning of parturition. Most cows will become restless or show some evidence of discomfort. Another key behavioral change is that cows will isolate themselves from the herd as they prepare for the upcoming birth.

Normally, stage 1 of labor lasts 2-6 hours but can take up to 8-12 hours for heifers. If a cow has not progressed through stage 1 labor in 6-8 hours, then that is an indication that something may not be right and assistance is warranted. However, good observation is required to know when stage 1 begins as it is often missed by casual observation.

Stage 2

The major event in the second stage of labor is the delivery of a newborn calf. Stage 2 begins when the cervix is completely dilated and the fetus enters the pelvis or birth canal. During this time fetal membranes such as the water bag will become visible followed by the calf itself. In addition to these in active labor for 30 minutes and not making progress, then help should be provided. Additionally, if the cow becomes exhausted, the calf is stressed or an abnormal presentation is evident then assistance should be provided. Calves that are being stressed during delivery may be difficult to detect; however one sign of a stressed calf is the presence of meconium (yellow) staining on the calf.

Stage 3

After the calf is delivered, the cow will expel the placenta. Usually this happens soon after delivery, but the process may take up to 8 to 12 hours after delivery. After 12 hours, the cow is considered to have retained fetal membranes or a retained placenta. However, treatment is usually not warranted and the membranes will usually be expelled on their own eventually (up to 4 days post-calving) without harm to the cow. To avoid injuring the cow's uterus or causing excessive bleeding, you should not attempt to pull the placenta. If a placenta is not passed within four days of calving, contact your veterinarian for assistance.

One way to improve observation is to feed cattle in a manner that promotes daytime calving, called the "Konefal feeding method." Although the physiology is still not well understood, multiple studies have shown that feeding cows in the evening leads to a significantly greater proportion of cows that calve during the day. Most studies have evaluated feeding cows either at dusk or 9 p.m., and in most cases the result has been approximately 82% cows calving between 6 a.m. and 10 p.m. Perhaps the best thing about nighttime feeding is that it takes almost no advanced planning to see results. Existing data indicate that cattle on a nighttime feeding regimen for as little as a week before calving have similar calving patterns as those fed in the evening for multiple weeks. In systems where cows are fed twice daily, feed the bulk of the ration in the evening to take advantage of this effect.

For complete article visit: http://www.iowabeefcenter.org/calving/processdelivery.html

Report Compares Costs of Crop Production in Iowa

Alejandro Plastina, Extension Economist/Assistant professor in Economics

Managing the cost of crop production will continue to be critical for farmer profitability this year, and farmers have some recent data to consider, found in Iowa State University Extension and Outreach's "Estimated Costs of Crop Production in Iowa" report. Included in the January edition of the Ag Decision Maker, the report "provides average cost estimates for Iowa farms in 2020, and provides guidelines to help farmers calculate their own costs of production," according to Alejandro Plastina, report author and assistant professor and extension economist at Iowa State University.

The report includes crop production prices for corn, corn silage, soybean, alfalfa and pasture maintenance, with data compiled from multiple state surveys.

On average, the total cost of corn and soybean production in Iowa is expected to decline by 4% from last year. However, producers will still need to be prudent to be profitable, as there is still substantial uncertainty regarding crop prices for the rest of 2020.

The estimated costs of production for continuous corn are $3.81, $3.78 and $3.76 per bushel, for expected yields of 164 bushels per acre, 182 bpa and 200 bpa, respectively. The estimated costs of production per bushel for corn following soybeans are $3.22, $3.23 and $3.23, assuming 179 bpa, 199 bpa and 219 bpa, respectively.

Cost of production estimates, per bushel, for herbicide-tolerant soybeans are $8.89, $8.72 and $8.57 assuming 50, 56 and 62 bushels per acre, respectively. The total cost per bushel of soybeans is projected at $8.72 for non-herbicide-tolerant beans at 56 bpa, according to the report.

The most recent United States Department of Agriculture projections for 2020-2021, published in October 2019, put the average U.S. farm prices for corn and soybean at $3.40 and $8.85. In this scenario, soybean production would only be profitable for operations with medium and high yields, but the profitability margins could be very tight. A continuous corn system would not be able to cover all costs, even with high yields, and corn production following soybean would generate $30-$40 per acre in profits. More optimistic price scenarios are found in futures prices, but uncertainty remains high.

"Producers need to have a strong grasp of their own production costs," Alejandro said. "Costs of production are not seeing the rapid fluctuations that were seen in recent years, but the trade war and other events create a lot of uncertainty when it comes to profitability on an individual operation."

For a more detailed crop production analysis, review the data found in the report and compare your own operation to these averages. Decision Tool spreadsheets for each budget are also available in this month's Ag Decision Maker updates.

Make Safety Your First Priority When Emptying Grain Bins

Charles Schwab, ISU Ag and Biosystems; Dirk Maier, Iowa Grain Quality Initiative

Following the wet and late harvest of 2019, several Midwest states are on the edge of a dangerous cliff when it comes to emptying their grain bins. Conditions are aligning to create the potential for tragic accidents and grain suffocation deaths to occur when grain bins start to be emptied.

It is common knowledge that quality harvested grain placed in storage, coupled with a best management practice of caring for grain, yields quality grain leaving storage for market. Inversely, either poor quality grain being placed in storage or poor management practices for caring for grain leads to spoiled grain leaving storage.

Getting spoiled grain out of storage always poses an increased safety risk for entrapment and suffocation to a farm operator and worker. There are years of documentation that illustrate the direct connection from spoiled grain leaving storage to a tragic grain entrapment and the resulting fatality.

“Grain’s tremendous force that holds victims in grain, and the speed that entrapment occurs are often misunderstood,” said Charles Schwab, professor of agricultural and biosystems engineering with Iowa State University Extension and Outreach.

Schwab says it’s important to shift attention once the operator determines that unloading the grain is becoming difficult. The priority of “getting the grain out” should switch to “keeping everyone involved safe.”

However, there is still time and a strong likelihood of acceptable weather to alter the grain storage conditions, before leading to more problematic conditions that put people at risk of entrapment and loss of life.

Dirk Maier, professor in agricultural and biosystems engineering at Iowa State, said that evaluating CO2 concentrations can be effective in monitoring stored grain quality and early detection of grain spoilage. A hand-held CO2 sensor, available from several retailers, can be used at exhaust vents or access ports for measuring concentrations.

“CO2 concentrations around 450-600 parts per million (ppm) are a safe range to continue storage, 600-1,500 ppm indicates onset of mold or moisture infiltration, and 1,500-4,000 ppm is a severe condition,” Maier said.

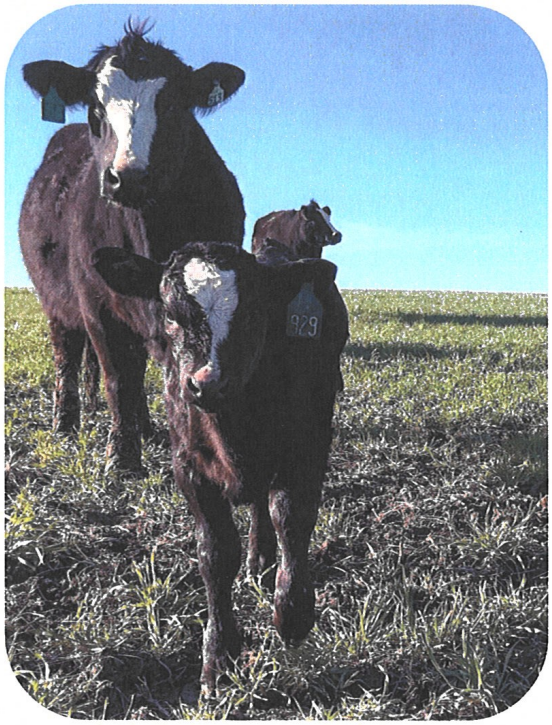
These measurements can assist farmers in identifying grain bins that need immediate attention.

Maier offers the management tip that when you locate a grain bin with a CO2 concentration range above 600 ppm and increasing from week to week, use the proper weather conditions and aeration fans to bring the condition back into acceptable range.

Iowa Beef Center
Winter Cow Webinar Series

Pasture and Forage Management

Tuesday, March 10: 6:00 - 8:00 p.m.



Topics

Spring Forage Management
Rebecca Vittetoe, East Central Iowa Field Agronomist

Changes to Grazing CRP
Jeff Mathias, NRCS State Grasslands Specialist

Wildlife Interactions When Grazing
Dr. Adam Janke, ISU Extension Wildlife Specialist

Join from home or one of these locations!

South central: Madison County Extension Office

Southeast: Marion County Extension Office

North central: Hancock County Extension Office

Northeast: Tama County Extension Office

Denise Schwab will lead a discussion at the Tama County Extension Office following the webinar!

Northwest: Emmet County Extension Office; O'Brien County Extension Office; Sac County Extension Office; ISU Western Research and Demonstration Farm

Ames: Hansen Ag Student Learning Center

Register and find more information:

http://www.iowabeefcenter.org/WinterCowWebinarSeries.html

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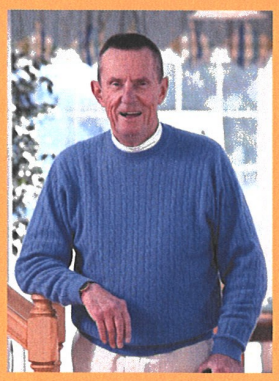
A Journey Through Parkinson's Disease

What you need to know!



Mondays
April 6, 13, 20, 2020

Traer Public Library | 531 2nd Street

1:00—2:00 pm

This interactive program is designed to help participants:

- recognize the symptoms of Parkinson's Disease (PD)
- understand what causes PD and how treatments work
- learn about therapeutic activities can be done in the home

Three 1-hour sessions will be led by Cindy Thompson, human sciences specialist in family life.

For more information or to register:

Cheryl Bruene
641-484-2703
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Trees and Shrubs for Wet Sites

by Richard Jauron, Department of Horticulture

Many ornamental trees and shrubs thrive in Iowa's fertile, well-drained soils. Most trees and shrubs, however, don't like wet soils. Fortunately, there are plants that survive wet soils better than others. Trees and shrubs that tolerate wet sites include the following:

TREES

Freeman Maple (*Acer freemanii*). A group of hybrid maples arising from crosses between red and silver maples. They possess some of the best characteristics of each parent. The hybrids grow rapidly, have excellent fall color, and grow in most soils. Their mature height is 45 to 50 feet. Suggested varieties include 'Armstrong', 'Autumn Blaze', and 'Celebration'.

River Birch (*Betula nigra*) tolerates heat and drought better than the white-barked birches. Also resistant to the bronze birch borer. The exfoliating bark varies from gray brown to reddish brown. The variety 'Heritage' has a salmon-white bark. Often planted as a multi-stemmed specimen or "clump." The river birch grows 50 to 60 feet tall.

American Hornbeam (*Carpinus caroliniana*) is native to woodlands in eastern Iowa. It is noted for its very hard, tough wood. Also called ironwood. The small, shrubby tree grows slowly to a height of 20 to 30 feet. The American hornbeam does well in heavy shade and wet soils, but will tolerate sunnier and drier sites. In the fall, the foliage turns yellow to orange-red.

Sycamore (*Platanus occidentalis*) is one of the largest native Iowa trees. It can reach a height of 75 to 100 feet. Definitely not a tree for a small yard. Best suited for parks and other large open areas. Has interesting exfoliating bark. Anthracnose (a fungal disease) is a problem in cool, wet springs. Symptoms of anthracnose include heavy leaf drop.

Swamp White Oak (*Quercus bicolor*) is a large-growing oak which may eventually attain a height and spread of 60 feet. While difficult to locate in nurseries, it is sturdy and adaptable.

SHRUBS

Red Chokeberry (*Aronia arbutifolia*) is an upright, suckering multi-stemmed shrub that grows 6 to 8 feet tall. Noted for its red fruit in late summer and fall. Leaves turn a reddish purple in fall. The variety 'Brilliantissima' produces the best fall color (scarlet) and a large crop of glossy red fruit.

Redosier Dogwood (*Cornus sericea*) is a native Iowa shrub that grows about 6 to 8 feet tall. Its bright red twigs are attractive in winter. Several varieties are available. 'Isanti' and 'Kelseyi' are compact, red-stemmed shrubs. 'Flaviramea' has yellow stems.

Purpleosier Willow (*Salix purpurea*) is an 8 to 10 foot tall shrub. 'Nana' is a compact form which grows only 4 to 5 feet tall. 'Streamco' is a Soil Conservation Service, USDA introduction which was developed to prevent soil erosion along stream banks. The purpleosier willow is only one of many willows that grow well in wet soils.

American Elder (*Sambucus canadensis*) is a native suckering shrub that produces large clusters of purple-black fruit in late summer. The ripened fruit are good for jellies, preserves and wines. The fruit are also attractive to birds. Its mature height is 6 to 10 feet. When selecting trees and shrubs for the home landscape, gardeners should select plants suitable for the site. Wet soils require plants that are adapted to these sites.

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Calendar of Events

Mar 3,10,17,24,31– Raising School Ready Readers, 6 pm, Kids' Corner, Toledo
Mar 4 – Ornamental & Turfgrass Training, 9 am, Extension Office
Mar 3-5– Hawkeye Farm Show, 9 am-4 pm, UNI Dome , Cedar Falls
Mar 5,12,19– Planear, Comprar, Ahorrar y Cocinar, 1 pm, Extension Office
Mar 10– Pasture Renovation & Forage Management webinar and discussion with Denise Schwab, 6 pm, Extension Office
Mar 11 – Certified Handlers Training, 9 am, Extension Office
Mar 12– Extension Council Meeting, 7 pm, Extension Office
Mar 13– VITA tax preparation assistance, 9am-3pm, Extension Office
Mar 18– Private Pesticide App Training, 1:30 pm, Tama Civic Center
Mar 25– Women, Land & Legacy Farm Accounting Software program, 6:30pm, Extension Office
Mar 26– Private Pesticide App Training, 6:30 pm, Traer Memorial Building
Apr 6,13,20– A Journey Through Parkinson's Disease, 1 pm, Traer library