The 2018 growing season created many challenges for nitrogen (N) management plans for many farmers. Excess rainfall and saturated soils led to nitrogen deficiency and reduced corn grain yields in numerous northern Iowa corn fields.

The weather has already created challenges with N management for 2019 corn. The late fall and early soil freeze-up prevented planned application of anhydrous ammonia to many areas in Iowa. Price increases for all sources of N fertilizers have also created anxiety for many farmers who are already concerned about crop margins for 2019.

Farmers might want to visit the Corn Nitrogen Rate Calculator (CRNC) website (http://cnrc.agron.iastate.edu) to confirm N rates for 2019 corn production. The CRNC uses Iowa based research data, current N prices and anticipated grain prices to determine profitable N rates for Iowa corn farmers.

Farmers who did not get fall anhydrous ammonia applications completed will be faced with spring N applications for 2019. The obvious options are spring ammonia, spring urea or spring urea ammonia nitrogen (UAN) solutions. Recommended rates of these N products do not differ. It is recommended to incorporate the urea or UAN solutions within 24-48 hours of application to prevent volatilization losses from these products. Rainfall amounts of 0.25 to 0.50 inch within 24 hours of application will essentially eliminate N losses to volatilization.

Fall application of swine manure also presented a challenge to many swine operations during the fall of 2018. Liquid swine manure was often surface applied since frozen soil prevented soil injection. There will likely be some volatilization losses from this application — the exact amount is difficult to assess. However, a range of 10 to 25 percent loss of the nitrogen content of the liquid swine manure can be expected when liquid swine manure is not incorporated.

Some farmers experienced late soybean harvest in Iowa in 2018. Shattered soybean grain that is not harvested will provide nitrogen to the subsequent corn crop in 2019. The exact amount of N contribution from soybean will be difficult to assess since the exact number of bushels of soybean grain that is lost is difficult to estimate. However, a bushel per acre of soybean grain will contribute about 3.1 pounds of N and 50 to 60 percent of that will be available to the corn crop. Therefore, a 10 bu/a soybean grain loss in 2018 will result in about a 15 lb./a N contribution to a 2019 corn crop.

Some farmers may be using poultry manure for a nitrogen source for the first time in 2019. Poultry manure is a good source of N and other nutrients for a corn crop. However, not all of the N that is indicated by manure analysis is plant available. First year nutrient availability for N in poultry manure is 50-60 percent. Poultry manure that is not soil incorporated will have an additional 15 to 30 percent loss in N content. These are some factors that may impact N management on your farming operation in 2019.

*IOWA STATE UNIVERSITY EXTENSION AND OUTREACH—NORTHWEST REGION*

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**Websites for your Reference:**

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

Iowa Beef Center  
www.iowabeefcenter.org/

Manure Management  
www.agronext.iastate.edu/immag/

Iowa Pork Center  
www.ipic.iastate.edu/

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

**Nitrogen Management for 2019**

Paul Kassel, Field Agronomist  
kassel@iastate.edu  
712-262-2264

The 2018 growing season created many challenges for nitrogen (N) management plans for many farmers. Excess rainfall and saturated soils led to nitrogen deficiency and reduced corn grain yields in numerous northern Iowa corn fields.

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How Logical is Using Male Sexed Semen When Breeding Beef Bulls to Dairy Cows?

Fred Hall, Dairy Specialist
fredhall@iastate.edu
712-737-4230

I’ve been recommending using beef semen on the bottom half of the milking herd and sexed female semen on the top half of the heifers for quite awhile now. As I’ve watched the market for the resulting calves, I’ve become curious about the differential between the bulls and heifers and if it would pay to use male sexed semen to capture the premium on the steer calves.

Let’s consider breeding ten cows to a beef bull who has male sexed semen available. If it takes two services per conception and the semen cost $45 per breeding, my total cost would be $900 to get all ten cows pregnant.

Calving time rolls around and the ten cows have eight bulls and two heifers. I feed them up to 250 pounds and take them to Tri State Auction where the steers bring $115 cwt and the heifers bring $95 per cwt. My auction check would be $2775 but I would have to deduct the $900 semen cost so the net would be $1875.

Had I bred the cows with conventional semen, the semen cost would have been $25 per breeding. Fifty percent of the calves would have been heifers and the resulting check from auction would have been $2625. Deducting the semen cost, my net would have been $2125. So using the male sexed semen would have lost me $250.

However let’s change the percentage of bull calves to 90 percent. Using the same auction prices, we find that the lost revenue is down to $200, still in favor of the conventional semen.

Now let’s consider the same resulting male calves, but change the auction prices to $125/cwt for the steers and keep the heifers at $95/cwt. At 80 percent males, the figures still favor the conventional semen strategy. With 90 percent males, the conventional semen continues to make the most financial sense by $100.

It would take a scenario with a spread of over $35 for steers over heifers or the male sexed semen price reduced to $25, for it to make financial sense to use male sexed semen on dairy cows. Mike Koedam with Tristate Livestock Auction makes the point that each calf is different, “If it’s black with no spots, it sells for more over a calf with white spots.”

In today’s market the extra value of the crossbred calves will put extra revenue in the dairy enterprise. With the use of female sexed semen on the top heifers and conventional semen on the other heifers and top-end cows, dairymen would continue to have sufficient replacement heifers. However, in today’s market, foregoing male sexed semen and breeding dairy cows with conventional beef semen makes the most economic sense.

Step One in Recovering Flooded Pastures and Hay Ground

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

Flood waters are receding, but the challenges in recovery for farmers and livestock producers are just beginning. That's why producers should get out in their fields as soon as possible.

Beef producers should assess the damage to pastures and hay ground and then check out possible disaster assistance. When assessing, look for three things – debris, silt on the forage and thinned or dead forage plants.

Debris includes wire, metal and trash that may be injurious to animal health and is usually found along fence lines and in the corners of fields.

According to Iowa State Extension field agronomist Brian Lang, silt on forage is a big issue because It is unpalatable and could carry microbes affecting animal health.

“Ironically, we need rain to wash off the silt. This early in the season, it's likely more rain will come," he said. "Otherwise, if the forage was tall enough, chop silted forage back onto the field to encourage clean regrowth. By the time farmers are able to run equipment on a pasture or hay field, visual assessment of forage species survival can be conducted and should be rather obvious.”
Spring Towards the Growing Season!

Katelyn Brinkerhoff, Horticulture Educator
kbrink@iastate.edu
712-276-2157

Spring is in the air and it’s time to get our hands dirty! It might feel strange to start thinking about gardening with the amount of moisture we have received this month, and the chilly mornings. However, soil temperatures in Iowa are 32 degrees or higher. Both soil and air temperatures can affect plant life and germination of seeds. If too cold or too warm they can cause problems with seed germination and plant growth. It is important to check on temperatures throughout the season to ensure that you have a successful harvest!

With soil temperatures in the upper 30s and air temperatures in the mid-40s or higher it is safe to start planting your cool-season plants. Cool-season plants are able to withstand the cooler temperatures we have in early spring, or even late fall. As soon as you can work the soil, you can sow your cool-season seeds! Some cool-season crops that are common in many Iowa gardens would be: radish, lettuce, onions, peas, spinach, cabbage, broccoli, cauliflower, collards, kale, carrots, beets, chard, and Brussel sprouts.

Warm-season crops require a warmer soil and air temperature to be successful. You’ll want to wait until the air temperatures are in the 60s before planting. Warm-season crops that are common would be: corn, peppers, eggplant, zucchini, beans, melons, cucumbers, pumpkin, squash, and tomatoes.

Cool-season crops can be planted during spring and mid-summer. They can expand your harvest throughout the growing season. Warm-season crops are typically harvested once during a growing season. Gardeners like to harvest their cool-season crop with a warm-season crop when they are harvested to save space in their garden.

For more information about planting and harvesting times, view ISU Extension and Outreach’s publication called “Planting and Harvesting Times for Garden Vegetables.” This publication can be downloaded for free from the Extension Store: https://store.extension.iastate.edu/product/3960.

You can also learn more about cool-season versus warm-season crops in the Iowa Master Gardener program that will begin in the fall. For more information and registration visit: https://www.extension.iastate.edu/news/registration-open-fall-master-gardener-training-1.

Step One in Recovering Flooded Pastures and Hay Ground

Whether the forage plants survived depends on three factors — plant species, time under water and how much of the plant was submerged. Some species, such as Smooth bromegrass, orchardgrass, fescue and ryegrass, should grow through a moderate silt deposit (less than 2 inches) and can withstand several days of flooding without injury. Reed canarygrass can stand longer submersion than other perennial grasses; whereas, Meadow bromegrass cannot tolerate any flooding.

Time under water affects the amount oxygen available to the plant and is related to temperature, Lang said. Fortunately, during spring flooding, cooler temperatures allow plants to survive longer under water. Flash flooding — as opposed to standing water — increases survivability because the plants experience less oxygen depletion in moving water than still water conditions. Also, plants with more leaves above water are more likely to survive.

The USDA Farm Service Agency administers the Emergency Conservation Program which provides funding and technical assistance for farmers to rehabilitate farmland damaged by natural disasters. Pastureland and hay ground are considered eligible land under ECP (https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2017/emergency_conservation_program_oct2017.pdf). Eligible practices pertaining to pastures and hay fields include debris removal (cleanup of woody material, sand, rock and trash on pastureland and hay fields) and restoring fences (livestock cross fences, boundary fences, and livestock gates.)

Producers with pasture damage or hay field damage are encouraged to contact their local Farm Service Agency Office to report the damage and determine if they are eligible for assistance. If the requirements are met, a formal application will need to be completed.
April 15 - Private Pesticide Training at 9:00 a.m. • Buena Vista Extension Office
April 16 - Infant Feeding 101 at 6:00 p.m. • Ida County Extension Office
April 18 - Commercial Manure Applicator Training Reshow at 8:30 a.m. • Orange City
April 18 - Confinement Manure Applicator Training Reshow at 1:30 p.m. • Orange City
April 19 - Chamber Coffee at 9:30 a.m. • Cherokee County Extension Office
May 7 - Food Preservation 101 at 6:00 p.m. • Cherokee County Extension Office

Congratulations to Dan & Lynn Winterhoff, Iowa Master Farmer Award Recipients!

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https://www.extension.iastate.edu/countyservices/