

## A Look Back at 2020 - A Look Forward to Spring

*Jay Van Woerkom, Agronomy Sales Manager*

It's that time of the year when we're all preparing and looking forward to spring planting. After the year we experienced, we also endured a long, cold winter. While I am ready for the warmer days ahead, the cold months offered much time to reflect on the past year.

We had a great fall for anhydrous and fertilizer applications. The weather was mild compared to the early winter weather we experienced in 2019. Ever since the low prices we had this past fall, nitrogen and dry fertilizer prices have shot up considerably.

As we headed into December, we experienced more difficulties applying fertilizer. Snow came mid-December and never left. While the ground may have been covered, we never got a good winter freeze of our soils. Due to this, we expect a higher disease and insect presence in the fields in 2021.

Now that spring has sprung, we have a lot of fertilizer to apply. However, this wet and cold weather is not cooperating with our plans. While we have everyone in place and ready to go for our chemical and fertilizer application team, it never seems to be enough if the

weather starts to cooperate and everything needs to get done at once. Please show patience to our team as we will do the best we can to get as much work done each day as possible.

We can still deliver seed in this weather, though! Our department has been very busy delivering your seed products. We are seeing this start to wrap up as most of our seed has left the warehouse. If you have chemicals ordered, please give us a call and we can have them ready to be picked up at your convenience.

Looking forward, I am optimistic about the soil moisture we have going into the planting season. We are also excited to have Zach Arkema working with us this summer as an Agronomy Intern.

Have a safe and efficient planting season, everyone! As always, the Agronomy Department is here to help. Never hesitate to pick up the phone and call 641-780-0886, or email me at [jvw@tworiverscoop.net](mailto:jvw@tworiverscoop.net).

## Greener Pastures: Maintaining Pasture & Cow/Calf Health

*Ashley Warren, Ruminant Nutrition Specialist*

I, like many of you, am cautiously celebrating the end of winter. I am excited for baby calves running laps in the pasture and the green grass starting to emerge. As pleasant as these early spring days are, we're already thinking ahead to summer to ensure that our cows have enough pasture to stretch into fall.

The importance of a cow's nutritional status through rebreeding and pregnancy cannot be overstated. With a growing calf in utero and the little one already at her side also depending on her, good cow nutrition is of the utmost importance. Stockpiling grasses is the preferred choice, but we do need to be mindful of what the cows' needs are during these times in addition to the heat stress that can be caused by the summer months. Avoiding the summer pasture slump is something that requires planning and consideration as warmer months approach.

Forages below 7% protein, which is typical for late summer grass stands, will leave cows short of the nutrition they require to maintain themselves in addition to their little dependents. If pastures are not adequately managed, protein deficiency may become a herd health challenge. Protein deficiency symptoms include reduced intake and forage digestibility, reduced growth rate (of both fetus and calf), loss of weight, inadequate intake of other nutrients, delayed estrus, irregular estrus, poor conception rate, and reduced milk production.

Evaluating grass stands and rotating pastures when possible are standard best practices that we at Two Rivers are happy to help you with. Not only are we looking at the number of grasses and forages in pastures but also at the types of grasses and forages. Think of it like a pie: the more pieces, the happier the

consumer—the cow! Different grasses and cover crops strengthen forage availability, quality, and soil health. We also recommend soil sampling; this is a highly underrated tool in pasture settings. Growers are great at soil sampling row crop ground to ensure it has all the nutrients needed to get optimal production out of every acre. Let's not forget to do the same for our pastures! Healthy pastures can be a great tool for keeping up with the needs of every cow during one of the most stressful times of the year.

A beef cow in lactation consumes approximately three to four percent of her body weight daily in forages. For example, a 1,300 lb. mature cow consumes about 45 lbs. of forage per day. We suggest grazing until the forage reaches three to four inches, then it's time for a pasture rotation in order to maintain the integrity of your grass stand and allow it to rebound. Grazing your forage too low can cause more harm than good. Compare it to mowing the lawn: when we cut the grass too short in the yard, then direct sunlight and extreme heat hits, what happens? We have a brown lawn that never quite looks right. This is exactly what we do not want in the pasture.

Taking the time to evaluate our pastures helps us make informed decisions on how to protect our investment (e.g.: cows carrying calves and grass stands). Let's work together to develop the plan that best suits your needs for supplementation in order to ensure our cows' reproductive health and that pastures produce to their potential.

To learn more about how Two Rivers Cooperative can help you evaluate your pastures, contact me at [awarren@tworiverscoop.net](mailto:awarren@tworiverscoop.net) or call me at 641-204-2526.

## TRC's Guide to Planting Alfalfa

*Brent Van Kooten, Agronomy Sales*

It should come as no surprise that alfalfa is considered a jack-of-all-trades. From being used as a cover crop to baling it for livestock, growers find many uses for this legume. Make sure your alfalfa is performing at its best this year with this alfalfa planting guide.

### Planting Season

Spring seeding is preferred over late summer seeding in northern states due to a greater chance of successful stand establishment. Better growing conditions, such as a longer growing season, adequate soil moisture, and cool temperatures, enhance seed germination and establishment.

### Temperature

Spring seeding of alfalfa can begin as soon as the potential for damage from spring frosts has passed. At emergence, alfalfa is extremely cold tolerant. At the second trifoliate leaf stage, seedlings become more susceptible to cold injury and may be killed in four or more hours at 26°F or lower. Alfalfa seeded with a companion crop survives lower temperatures and longer exposure times before showing frost damage. Frost damage is usually not a problem by the time fields are tilled and ready to seed. Spring seedings have less weed competition and less moisture stress during germination than late-summer seedings because of cooler temperatures.

If seeded in the fall, alfalfa needs at least six weeks growth after germination to survive the winter. The plant will generally survive if it develops a crown before a killing frost. The crown allows the plant to store root reserves for winter survival and spring regrowth. Fields with less seedling development before a killing frost may have a greater problem with winter annual weeds.

### Chemistry

Field preparation should begin the year before seeding to make sure there is good soil moisture present. A pre-plant herbicide is usually not needed for light weed infestations because annual weeds will be killed by frost. Post emergence herbicides can be used if severe weed pressure or volunteer grain problems develop. In the late-summer, the use of a companion crop is not recommended, especially if seeding before August 15, because it will compete with alfalfa for moisture. In many regions, Sclerotinia crown rot may be prevalent in late-summer seeding.

Perennial weeds can be particularly competitive both during the seeding year and in subsequent years. Controlling weeds before seeding will help ensure a long-lasting, productive stand. Scout fields for perennial weeds and use appropriate control measures in the preceding crop. Be sure to follow herbicide replant restriction time intervals before seeding alfalfa to prevent herbicide carryover injury.

### Tillage Practices

Alfalfa tillage practices vary from farm to farm but should consist of a primary tillage. The final tillage should be some type of smoothing operation. On level ground, primary tillage is best done in the fall as winter freeze-thaw cycles help break up clods. It also reduces field operations in the spring. On erosive soils, fall tillage may not be an option. Ideal soil conditions for conventional alfalfa seeding is smooth, firm, clod free soil. This allows for optimum seed placement by drills or cultipacker seeders. Avoid overworking the soil as a rainfall following seeding may crust the surface, preventing seedling emergence.

*Continued on next page...*

*...continued from previous page.*

## **Planting Depth and Rate**

Alfalfa is a small-seeded crop so correct seeding depth is very important. Seed should be covered with enough soil to provide moist conditions for germination while allowing the small shoot to reach the surface. Optimum seeding depths vary depending on soil types. Plant seed 1/4- to 1/2-inch deep on medium and heavy textured soils, and 1/2- to 1-inch deep on sandy soils. Shallower seedings may be used when moisture is adequate while deeper seedings should be used in drier soils.

Seeding rates should be between 12 and 20 pounds per acre with good soil conditions and seeding equipment. Keep in mind, higher seeding rates do not produce higher yields. While these rates may be higher than needed for good stands under ideal conditions, the wide range of field conditions and environmental conditions experienced at seeding make this necessary to obtain consistently good stands.

## **Companion Crops**

Companion crops, such as annual oats, help control erosion, reduce seedling damage, and minimize weed competition during establishment. Companion crops

also provide additional forage when harvested as oatlage or grain. For good alfalfa stands with companion seedings, manage the field to the advantage of the alfalfa rather than for the companion crop. Select companion crop varieties that are short, stiff-strawed, and early maturing to avoid lodging and smothering the alfalfa. Seed companion oats at 1 to 1 1/2 bushels/acre on heavy soils and 1 bushel/acre on sandy soils to reduce competition for light and moisture with the alfalfa seedlings.

Harvest the companion crop at the boot stage rather than leaving it for grain. Harvesting at the boot stage reduces competition with alfalfa and minimizes the chance for lodging and smothering the alfalfa crop. This harvest stage also provides optimum forage quality and yield of the companion crop.

If you do harvest the companion crop for grain, cut it as early as possible to minimize lodging damage. Remove straw quickly to avoid smothering the alfalfa stand. Harvesting companion crops for grain is not recommended for good alfalfa stand establishment. If you plan to harvest the companion crop for grain, consider seeding an early variety in the spring and no-till seeding alfalfa into the grain stubble after harvest.

## A Two Rivers First-Time Farmer

One year ago this month, Brian Zahnle and his wife Allie purchased 40 acres of land and began their journey as farmers - grass farmers.

Brian works in the Grain Department at Two Rivers Cooperative. Due to his new venture into farming this past year, he now works closely with the Agronomy Department as a customer.

"Farming was something I've always wanted to do, and I always liked baling hay with my grandparents as a kid," says Brian. "So, rather than buying a bunch of equipment to row-crop our ground, we bought a tractor, baler, mower and rake and mowed a lot of grass hay last year."

The 40 acre field was split into 20 acres of pasture and 15 acres of tillable. "The owner before us had already applied anhydrous, so we decided to try planting teff grass on those 15 acres. As you can imagine, with five inches of rain two days after seeding, we did not have very good luck with this section," laughs Brian.

Brian's goodhearted nature was not dampened by this outcome. He understands that farming is all about living, and learning. He gave another example, "We bought a 1967 Oliver tractor in March of 2020 to start out. We got rid of it in June. The carburetor was bad, the

alternator was bad, and the battery was bad... basically the whole deal was bad." He couldn't help but chuckle at the memory. Every farmer can relate to those first-year woes!

The Zahnle's are taking their agronomic decisions very seriously, with the help of the TRC Agronomy Department. "Talking to the agronomy guys, especially Brent and Jay, has helped us make good decisions for the coming year. They've advised the best alfalfa varieties and interpreted our soil tests. Since we are just starting out, they took the time to go over every detail with us," says Brian. Every supply for their farm has come from Two Rivers - alfalfa seed, dry fertilizer, lime, and even last year's teff grass seed.

While Brian has learned many lessons as a beginning farmer, he says the most valuable has been to ask questions. "Nobody wants to sound stupid," Brian puts it bluntly. "Nobody wants to ask questions they're uncertain about, but they are the most important tool you can use to find the right direction and best advice."

When asked what his plans are for this year, Brian jokingly says the couple has decided to stay away from teff grass. "We're planting those 15 acres into alfalfa, and keeping the rest as pasture for the grass."

## New Seed Hybrids for 2021

*Brian Maxwell, Seed Sales Specialist*

New product developments in agriculture are always exciting. From the latest innovations in equipment to improve efficiency to new fertilizer or micronutrients that help you get the most from your soils, we're always on the lookout for the next new and improved product. At Two Rivers Cooperative, we're excited to bring you new seed hybrids and varieties for 2021 to increase your bushels per acre.

### CORN

**DK62-89Tricepta:** This high-yielding, very adaptive hybrid can be planted in almost any soil condition. It comes with amazing earworm and western bean cutworm control. Best if planted at 34,000 ppa or greater for top performance.

**Brevant 12C01AM/Q:** This very productive hybrid brings exciting new genetics to the industry. Equipped with the AquaMax® trait for amazing drought tolerance, excellent stalks and roots make this product stand out. Also available in Qrome® version for optimal below ground rootworm control.

### SOYBEANS

**B300EE:** This high-yielding Enlist® soybean variety won most of our local plots in 2020. It comes packed with very wide soil application to soil types and carries an excellent SDS package.

**NK S25-E3:** This offensive Enlist® early maturity soybean brings amazing yields with great emergence, giving you an early planting option. It is very adaptive to most soil types with very high standability and phytophthora field tolerance.

If you didn't get a chance to plant any of these new products, watch them closely in our local plots. We think you'll be excited by what you see. Don't forget to keep us in mind for your in-season needs. We will have a good supply of excellent corn hybrids and soybean varieties readily available.

The great part about working with Two Rivers Cooperative is that you've got our whole team helping you find the perfect seed for your acres. Let's talk about which hybrid is best for your needs. Contact me at [bmaxwell@tworiverscoop.net](mailto:bmaxwell@tworiverscoop.net) or call 641-780-1969.

## Private & Commercial Applicator Deadlines Loom

Used properly, pesticides and weed control products are important tools for farmers and others engaged in property management. But used without adequate training, these same products can present considerable risk. Whether it's worker injury, drift damage to adjacent property or environmental damage from spills, anyone handling farm chemicals is required to complete the training needed for safe handling and usage.

April 15 is the deadline for both commercial and private pesticide applicators in Iowa to complete certification training or re-test to renew existing certifications.

[Iowa State University Extension's Pesticide Safety Education Program \(PSEP\)](#) is provided to educate Iowans on the safe and effective use of pesticides and is responsible for the Pesticide Applicator Continuing Instruction Courses (CICs) in cooperation with the Iowa Department of Agriculture and Land Stewardship (IDALS). PSEP is also involved in programs covering integrated pest management, worker protection, environmental quality and agricultural health.

Visit the PSEP website to find all the resources you need to decide which type of training you need along

with study guides and links to sign-up for exams. There are even links to mobile apps that will help you identify and treat pests or weeds in the field.

IDALS is also responsible for investigation of complaints about potential farm chemical misuse.

A pesticide investigator gathers information by providing notification of inspection, conducting interviews, obtaining statements, reviewing application records and pesticide labels, taking photographs and making on-site assessments. The information gathered helps document whether a violation of state and/or federal pesticide law occurred.

For more information about how investigations work, you can download this brochure, [Pesticide Investigation and Enforcement](#).

### REMEMBER

Two Rivers Cooperative is your expert in the field, with certified agronomists who can help you decide which products are best for your specific crop challenges. Call today for more information on how to use pesticides and other ag chemicals safely and effectively.

## Welcome Zach Arkema, our Agronomy Summer Intern!

Zach is a Pella native through and through, and we're lucky to have him on board as our Agronomy Intern this summer. He graduated from Pella Christian High School in 2014 and then joined the army where he served for five years. Zach is currently in his second year as an Agronomy major at Iowa State University, and his two favorite hobbies are hunting and fishing.

During the summer, Zach will work alongside Brian Maxwell, one of our seed sales leaders by helping him scout fields and other operations as needed. Duties may include:

- Monitoring farms and fields of customers under our scouting program for designated concerns such as weeds, insects, plant populations, diseases, and deficiencies
- Taking tissue samples of corn, soybeans, and alfalfa as directed by the agronomist to send to the lab as needed
- Placing fields signs for customers

We're excited to have him on board the Two Rivers Cooperative Agronomy Team!



## Farm Fatalities: Let the Headlines Tell the Tale

There are thousands of articles and safety tips published each year on how to stay safe when operating farm machinery. Farmers know they need to take precautions and keep safety top-of-mind when doing any of a hundred different things that happen on the farm every day. Yet accidents still happen. Year after year, season after season. Life-altering injuries. Loved ones lost. Families and communities forever changed.

A moment's distraction is all it takes for the unthinkable to happen. Taking your eyes off the road to check a text. Forgetting to tuck in your shirttail when you use the PTO. Letting your grandchild ride on your lap while you mow.

You don't need the details to see the devastation. The headlines in the Center for Disease Control and Prevention's list of farm accident reports tell the tale of ordinary moments that have left Iowa farm families and communities changed forever:

- "Farmer fatally injured in tractor post-hole auger entanglement"
- "Farmer dies after being injured while attempting to pull a machine from a wet field"
- "6-Year-old dies when he is run over by a skid-steer loader driven by 9-year-old brother"
- "Anhydrous ammonia nurse tank rupture kills agricultural cooperative worker"

- "Overturn of a tractor with ROPS folded down kills operator"
- "Farmer dies when grain in bin engulfs him"
- "Farmer dies after being pinned by bucket of skid loader"
- "Farm youth dies when he became entangled in an unguarded PTO shaft"
- "Farm owner crushed underneath rotary mower while changing blades and untangling wire wrapped on cutting blades"
- "Teenager dies in tractor overturn when homemade roll-bar fails"

Sadly, the list goes on.

With these sobering thoughts in mind, we ask you to think about how you can prevent headlines like these from being written. Here are a couple of online guides on our website that may help refresh your safety awareness and keep you out of the headlines.

[Tractor Safety Guide](#)

[ROPS FAQ's](#)

Please, join us in recognizing that mental clarity and vigilance are more important than ever during stressful farming seasons. Keep your mind in the game this spring and throughout the year, and we here at Two Rivers Cooperative pledge to do the same.

## CLIMATE FIELDVIEW™:

# Tying Your Farm Data with Local Weather

*Carson Dugger, Agronomy Sales & Seed Specialist*

Tracking as many facets of a farming operation as possible is important for not only analysis purposes, but also for making sure farmers are optimizing inputs for higher yields. With Climate FieldView™, farmers are able to do that while also taking into account a very important factor: the weather. However, the online farm management program by Bayer can do more than just give you rainfall reports.

While weather-tracking was the company's initial goal, Monsanto (acquired by Bayer in 2018) grew the startup into a full-farm suite in an attempt to tie field-specific weather data to fieldwork maps and imagery. Climate FieldView™ uses an easy-to-install sensor to read your equipment's data, while displaying it on a tablet in real time. Planting, application, harvest, and weather data is all stored on the program in an easy-to-access app. Having everything in one place allows for quick and accurate analysis on a field-by-field or whole farm level.

Although it may sound complicated, introducing Climate FieldView™ into your operation may not be as hard as you think. One of the Two Rivers agronomist will come out to your farm with a Climate Activation Specialist to get you started. We'll install a sensor in your tractor and connect it to your tablet through your Climate account. During planting, the Climate sensor will read your tractor's monitor and display hybrid/variety, population, and planter speed. All of this data will be available to look back on throughout the season.

You can access the Climate app during the season on your phone and tablet to check rainfall and growing degree units, and look at in-season field health imagery. If you spray your own chemicals, the same Climate sensor can be installed in your sprayer, tracking tank mixtures and weather conditions. You can also place GPS pins while scouting your fields to revisit later in the season while using the Climate app.

Once harvest rolls around, we'll station your Climate sensor in your combine, where it displays yield, moisture, and combine speed all while building user-friendly maps in real time.

Collecting data throughout the season allows Two Rivers Cooperative to sit down and analyze your operation in the off-season. Through a pre-loaded soil and drainage map, you can evaluate field performance by zones to answer questions like:

- What hybrid performed best for you?
- What parts of your farm are underperforming?
- How did your side-by-side or strip-trial perform?
- How did your planting date ultimately affect your yield?

Climate FieldView™ is designed to store all your farm data in one place, making it easier to make farm decisions. Add in the experience of Two Rivers Cooperative, and you're bound to have a great year!

## KEY REMINDERS:

## Maximizing Your Nitrogen Application this Spring

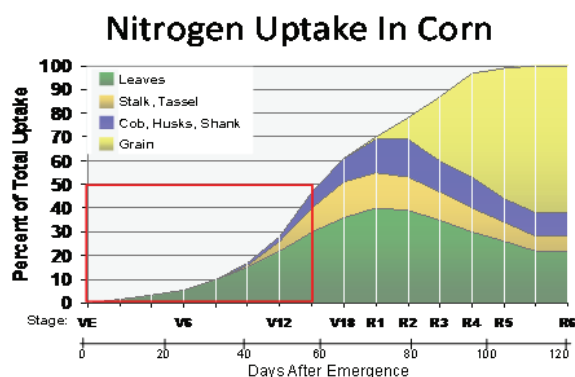
We all know that nitrogen is a key component to a healthy crop. It is a puzzle piece that, when applied correctly, can utilize your dollars to their full extent. 2021's window for spring nitrogen application looks like it will start in early April. Compared to other winters, most of the area isn't seeing as much frost in the ground which means we could see soil temperatures rise faster. With these warmer soil temps, nitrogen will be more susceptible to loss. Keep the following reminders in mind when applying nitrogen this spring:

- Even with late applications of nitrogen, the soil can rapidly convert it to nitrate because of the large amount of subsoil moisture and increase in soil temp. In other words, even if some fields did not get an application of nitrogen until late April or early May, you can still lose a large amount of nitrogen due to rapid conversion depending on the soil conditions.
- The months with the highest average rainfall are May, June, and July.
- Statistically, April, May, and June are the most notorious months for the loss of nitrogen within the soil. Note, however, that it does not matter when you apply the nitrogen; you can still lose it.
- The largest uptake of nitrogen by the corn plant is 100 days after planting.
- Newer hybrids use more nitrogen later in the season for grain fill.
- New hybrids are producing more yield. With more potential yield, your corn needs to utilize its nitrogen more efficiently.
- No matter the rate of nitrogen you apply, the most important factor is to keep it in the soil where the corn plant needs it most.
- Remember that it is not all about yield. N-Serve

and Instinct NXTGEN can help with dry down, yield preservation, stock lodging and shrink.

- N-Serve and Instinct NXTGEN can help with your environmental footprint as well.

With the recent March 2022 future prices of corn being \$4.88/bushel, there will be an opportunity this season to improve our ROI with increased yields. As we have seen in yield results from spring-applied N-Serve and Instinct, we are pushing the yields to even greater heights than we thought we could. We know your goal will be to gain every bushel possible; it will be important to get the most use out of your nitrogen in 2021. N-Serve and Instinct NXTGEN can help maximize your yield by keeping the nitrogen where the corn plant can utilize it best.



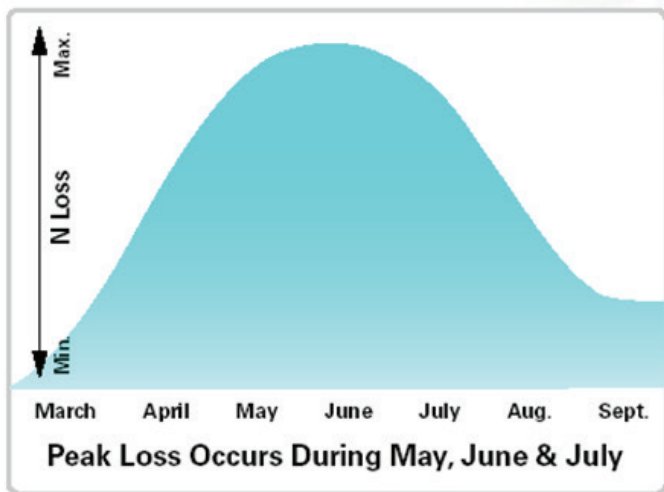
Source: Adapted from Illinois Corn Plant Development, Special Report, Illinois State University

As you can see from this graph, the corn plant does not start using larger portions of nitrogen until V10. With the possibility of rainfalls at any time throughout the growing season, your nitrogen may be more susceptible to loss by denitrification and leaching. It does not matter when you apply it, or how many applications you make, you could still lose it.

*Continued on next page...*

*...continued from previous page.*

This graph shows which months are the most susceptible to nitrogen loss. By keeping the nitrogen in the soil longer, the corn plant is able to use the majority of it to produce grain.



Let the Agronomy Team at Two Rivers Cooperative help you determine the best application schedule for your fields. We are also able to supply you with the products best suited to satisfy your crop's nitrogen needs.