Cornell Cooperative Extension
South Central NY Dairy and Field Crops Program
Broome | Cayuga | Chemung | Cortland | Onondaga | Tioga | Tompkins

DAIRY & FIELD CROPS DIGEST
May/June 2022

Welcome Cayuga County Farmers to our Program!

We look forward to getting acquainted and finding opportunities to work with you. We would like to take this opportunity to introduce the Team members and the work that we do.

As the dairy industry continues to undergo structural changes; tight margins, loss of infrastructure and milk markets, as well as facing a higher bar for environmental expectations and new regulations, we strive to bring a network of resources to the farming community and provide tools and strategies needed to effectively manage the changes agriculture faces.

Our strength is educating and advising on technical production issues and management. Apart from our experience, we have access to a network of resources of which Cornell researchers provide a base. If you are confused about the maze of potential contacts at Cornell, we can refer you to the person who can best address your needs from alfalfa varieties to zearalenone testing.

Janice Degni is the Team Leader and Agronomist. Janice addresses integrated crop management, forage quality, crop needs, rotation and nutrient management planning, practices to minimize non-point source pollution from cropping and manure practices and crop troubleshooting. She has worked more than 25 years as a field crop specialist with Cornell Cooperative Extension and received her B.S. in agronomy and M.P.S. in plant protection from Cornell University.

Betsy Hicks addresses the broad range of Dairy Management production issues. Dairy enterprise issues focused on profitability and sustainability include herd performance, dairy nutrition, calf care, reproduction, feeds and feeding, livestock environments and facilities. She offers hands-on trainings from a menu that includes feeder schools, herd health management and calf care. She recruits local herds to participate in practical applied research projects, including lameness and cow comfort, application of beef on dairy, grazing management and calf health and performance. Betsy has 8 years of experience as an extension dairy educator, 5 years of experience as a dairy nutrition consultant and has worked as a milk inspector. She has a B.T. and M.S. degrees in animal science specializing in livestock and dairy nutrition.

As our Farm Business Management Specialist, Mary Kate MacKenzie provides education around farm recordkeeping, financial analysis, business planning, tax management, and succession planning topics. She is a QuickBooks pro and teaches an online QuickBooks for Farmers class. Dairy producers can work with Mary Kate to complete the Dairy Farm Business Summary, which provides detailed financial reports and opportunities for benchmarking. She also delivers trainings and support on risk management and human resource management topics. Mary Kate has been with the team since 2018 and holds a BA in Environmental Studies and a MS in Applied Economics and Management.

Fay Benson is our Small Dairy Support Specialist. He brings years of experience as a dairy farmer to the team. Fay's work addresses grazing management, organic dairy production, and education and evaluation of alternative marketing channels and opportunities.

Donette Griffith is our talented communication specialist and administrative assistant who brings years of experience with her. She manages our event registrations, social media, marketing and more and can help you connect with any one of us.

We work to be a reliable resource for information, training and troubleshooting for our area dairies and agriservice personnel. Please give us a call if we can be of any assistance. **Our contact information is inside the newsletter cover**.

We are looking forward to meeting and working with you!

Your South Central
Dairy & Field Crops Team

The **South Central New York Dairy and Field Crops Program** is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in 7 Counties.

Cornell Cooperative Extension

South Central NY Dairy and Field Crops Program

We are pleased to provide you with this information as part of the Cooperative Extension Dairy and Field Crops Program serving Broome, Cayuga, Cortland, Chemung, Onondaga, Tioga and Tompkins Counties. **Anytime we may be of assistance to you, please do not hesitate to call.** Visit our website: http://scnydfc.cce.cornell.edu and find us on social media!

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Facebook, YouTube, & Twitter!

We put knowledge to work in pursuit of economic vitality, ecological sustainability, and social well-being. We bring local experience and research-based solutions together, helping our families and our community thrive in a rapidly changing world.

Coaching Tip:

Is Your Team Ready for Planting?

Dr. Bob Milligan, Dairy Strategies LLC

April 2022 - Those of you who work with crops have spent all winter preparing the machinery and selecting crop inputs so everything will run smoothly during planting. Have you made similar plans for your people?

After all those preparations, issues with your people are the most likely impediment to a smooth planting season. So what plans should be made for yourself and for crop employees.

I recognize that long hours are typically necessary during planting (and harvesting season). I do believe, though, that too many hours create unnecessary risk to safety, to the long-term motivation of employees, and even to the culture of the business.

Here are my recommendations to assure that you will have productive, upbeat, and passionate employees during the busy cropping season:

1. Anyone, including yourself, who has not had a recent significant break away from the farm should have one before it gets really busy.
2. Check your personal calendar and ask your employees to identify special family events – birthdays, weddings, anniversaries, etc. – that will occur during the planting season. Make plans to ensure that you and your employees will not be expected to work on those important dates.
3. Identify a time, preferable at least one day a week, that you and your employees know they will never be working. Each person and their family need some time when they can schedule family activity and personal commitments.
4. Identify a maximum work period that will NEVER be exceeded. This may be per day and/or per week.
5. Make certain that you have sufficient labor to deliver on points 3 and 4. This may require additional part-time labor, perhaps from one or more people that are moonlighting. Be certain they are not stretching themselves too far as well.
6. Delivering on points 3 and 4 means you will have to have at least two people who can do almost every task. As the season progresses observe everyone including yourself for symptoms of stress, emotional or physical, and burnout.

You have your equipment and your inputs ready for spring. Now make certain your workforce plan is in place as well.

Considerations for Adoption of Automated Sensor Technology

By Betsy Hicks, Dairy Management Specialist, CCE

Automated sensor technology for dairy cattle is not only a trending option for dairy farms, but one that is starting to look more attractive as the dairy industry continues to evolve. This article strives to bring some considerations to mind when thinking about adoption of this technology before any purchases are made. Considerations shared are from conversation with Dr Julio Giordano of Cornell University, who is an excellent resource on all aspects of automated sensor technology for dairy cattle.

Sensors

There are several options for companies to work with, as well as types of sensors available. Typically, sensors are available to be placed in the ear as a tag, or on the collar worn by the cow. Each has their pros and cons but thinking through which application is right for the herd and facilities is a good first step when considering adoption of a system. If the herd is considering moving towards robotic milking, setting up a collar system from the start may be the right move. If there are problems with using collars, but the herd has facilities that make applying ear tag sensors easy, it may be the better plan. With whichever application a farm chooses, know that there will be a learning curve for application of sensors and how they may be lost or damaged.

Number of Sensors Needed

The more sensors you utilize, the more expensive (in general) a system will be. By not doing 100% of cows, a herd can save a significant amount of money if they choose to only utilize sensors on half or slightly more of their cows. This scenario makes sense if a herd will be utilizing them for reproduction only, but realize that the poorer reproductive performance a herd has, the more sensors a herd will need, as they would typically stay on cows longer than a herd with excellent reproductive performance. In general, if a herd wants to improve reproductive performance, sensors will achieve about the same results as good visual observation two times a day for about a half hour each time.

If a herd wants to utilize sensor technology for both reproduction and health, a herd can still plan for sensors for a percent of cows, but this may be closer to 65-70% of the herd.

Integration with Dairy Comp

Be advised that all systems that are available don't necessarily integrate well or at all with Dairy Comp 305. Many companies are working on software to achieve this, but if it's a necessity for a herd to have their information integrated to their herd software, be informed on the choices available. For many herds, this isn't a deal breaker, and opt to flip between programs, or utilize a separate monitor for sensor information when using it to compare to herd information.

Labor Savings & Investment

It is very important to keep in mind that a system won't necessarily save a herd labor. Like many technologies, it does change labor and make timing more flexible – such as receiving an alert for a cow in heat, rather than watching for heats. Some herds have been able to minimize their reproductive programs – utilizing only an Ovsynch program instead of an Ovsynch/Resynch program, which has minimized reproductive drug costs and labor associated with giving those shots. At any rate, though, a herd does have to factor in time and labor for applying the sensors and upkeep of the sensors, as well as time to learn and properly utilize the system.

Questions to Ask to Help you Decide on a System

What's the ease of applying the tag or collar, and where would do accomplish this? If there are no headlocks, would you utilize the parlor, and what impacts does that have?

What will the sensors get stuck on or hit on and damaged, or lost?

What's the life span of the tags? What happens after that has expired?

What's the company's tag loss rate? Ask about a clause in your contract that states how many they'll replace at no charge in a specified time period.

If you graze – what the company's calibration for grazing cattle? Have they calibrated sensors for grazing herds?

What are the best settings for your herd, and how much support is there for tweaking specificity and sensitivity?

What are their tech services? Who does the updates, and how frequently are they done?

Resource and photo credit: https://cals.cornell.edu/news/2022/03/julio-giordano-pushing-bounds-digital-agriculture-dairy

Pasture Regrowth Project Helps Farms Keep Pace with Grazing

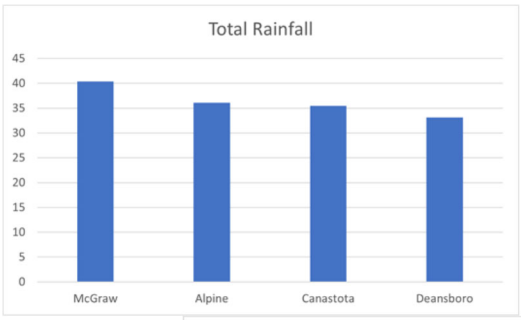
By Betsy Hicks, CCE Dairy Management Specialist &
Troy Bishopp, Upper Susquehanna Coalition/Madison County SWCD

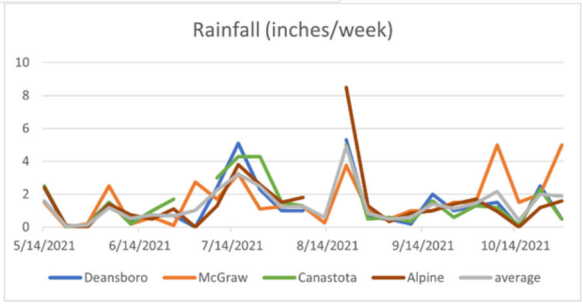
From May to November 2021, several farms participated in a pasture regrowth monitoring project. Troy Bishopp of the Upper Susquehanna Coalition/Madison County SWCD and Betsy Hicks of Cornell Cooperative Extension collaborated on this project, with the goal of helping graziers make mindful grazing decisions based on actual environmental measurements. Participating farms took weekly measurements of grass height and rainfall totals, which were reported along with farm elevation, growing degree days and calculated grass regrowth rates.

Over fifteen locations reported information early on, but four main herds participated through the duration of the project. Information was compiled and sent out weekly to over eighty graziers throughout NY, whether they reported monitoring information or not. While each season is unique, 2021's conditions were very much so, and participants often shared their own grazing experiences to the wider group of people on the list. Troy's weekly "Pasture Pontifications" gave readers a sense of what is "normal" in the grazing season as well as strategies for resiliency during the period. These weekly updates can be found on Troy's blog at https://thegrasswhisperer.com/2021-nys-pasture-regrowth-monitoring-project/ .

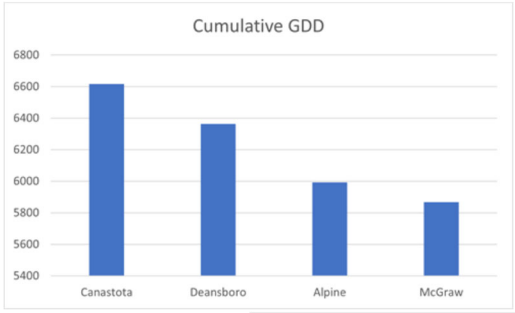
The Results

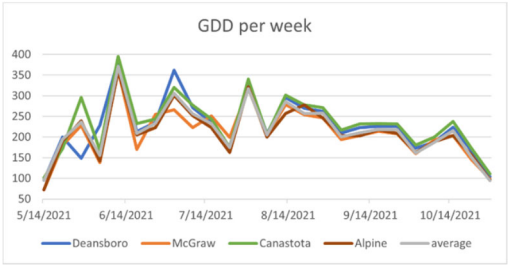
Looking at the four main locations reporting information, 2021 proved to be an unusually wet year. Through May and early June, locations appeared to be on the drier side, but that rapidly changed once July arrived. Total rainfall throughout the period for these locations averaged over 34 inches; weekly average rainfall was 1.4" and ranged from 0" to events over 8" in one week.





Locations also had cumulative Growing Degree Days (base 32) recorded on a weekly basis. Locations showed some variation in weekly accumulations of GDD, with the spread spanning over 100 GDD. This span was very apparent early on in the project, especially when some locations reported excellent green-up and rapid grass growth while others felt they were lagging in grass growth comparatively. By the end of the project, the four main locations reporting showed a span of almost 800 GDD difference.





Using the weekly reported grass height, a weekly grass regrowth rate was calculated for each reporting location. As expected, growth rates early in the season averaged 0.75" per day, but started to lag as the feeling of little moisture in addition to warmer summer weather started to be experienced. After the rains started, however, regrowth rates rapidly rebounded, and continued to average over 0.6" per day through the heat of the summer. Regrowth rates stayed above 0.5" per day through early October, as

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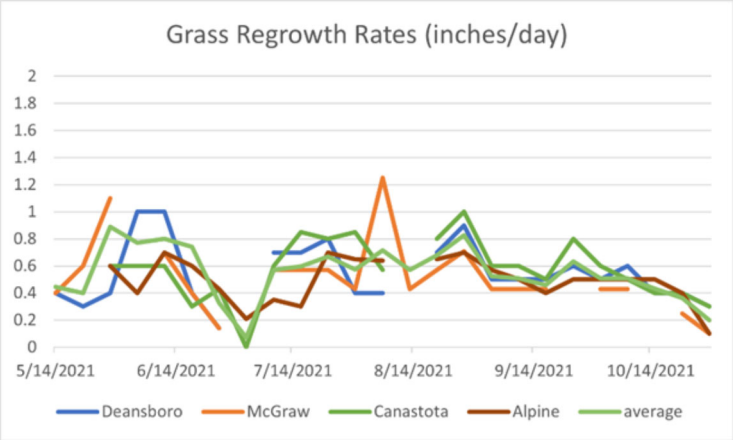
GDD stayed fairly strong through the fall and ample moisture allowed grass to keep growing.

Application to 2022

The abundant grazing season of 2021 was quite forgiving if errors in grazing judgement were made. As with year's past with less moisture, applying some lessons learned from the Pasture Regrowth Project can help graziers avoid judgement mistakes.

Measuring rainfall is an activity that many farmers, graziers or not, actively monitor. For graziers, though, recording this information is crucial for forage inventory planning and recovery period vetting. Keeping this simple data on a grazing chart or pasture tool along with planned rotations can hint at possible conditions that could be



more difficult to graze through.

This project reached another level by including regrowth rates. The weekly grass height measurements compelled participating graziers to physically walk to the same area in a pasture to evaluate grass growth. While the act of measuring and calculating a rate is helpful, the basic action of visiting the same spot each week to compare against the week prior was very powerful.

In a dearth of rain, a weekly visit to the location can confirm that regrowth is reaching targets for a pasture rotation plan, or alert the grazier to the possibility that conditions may not allow for it and changes should be considered.

Further adding to a farm's environmental story, tracking growing degree days relative to the week before or in comparison to other locations reveals more insight to the grazier. Spring green-up can feel different each year or in different locations in the same year. Putting a number on the warmth experienced can help graziers pinpoint differences even when the calendar says the date is the same as the year before. In addition to early season, the warmth experienced during the summer can be tallied and evaluated with the rainfall events recorded and grass regrowth monitored to give a fuller picture of how plants are responding to grazing decisions in addition to environmental conditions.

To make the best and most dynamic plan for your grazing system, graziers should regularly evaluate their pasture swards and environmental conditions, including total rainfall, cumulative growing degree days and grass regrowth in addition to making scheduled grazing rotations using a grazing chart. 2022 is sure to be different than the past two seasons. Gathering information from the start will only help inform grazing decisions as the season progresses.

Access to grazing chart templates are available at http://www.madcoswcd.com/grazing-charts.html or contact Troy Bishopp (315) 824-9849 or troy-bishopp@verizon.net to get a paper wall chart.

If you'd like more information on this project or how to track grazing information, contact Betsy Hicks at 607.391.2673 or bjh246@cornell.edu.

YouTube

In Case You Missed It…

Visit our YouTube Page to catch up on any of our programming you may have missed out on!

Our Playlist now includes the following materials:

⇒ Net Zero

⇒ Transition Cow Tuesdays

⇒ Healthy Hardy Heifers

⇒ Critical Calf Care

⇒ Feeder School (Spanish & English)

⇒ Podcast "Troubleshooting Herd Health Issues"

⇒ Podcast "Dialing In To your Best Dairy"

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How To Plan Termination Of Multi-Species Cover Crop Mixtures Amid Herbicide Shortages

By Bill Johnson, Marcelo Zimmer, and Bryan Young posted on March 16, 2022 | Posted in Termination
Source: Purdue University Extension

Last fall, we discussed the herbicide shortage for the 2022 growing season and outlined a couple of scenarios where we can switch to alternative herbicides to accomplish the same weed control objectives. In this article, we want to discuss some options for fields that have a mixture of cover crop species growing in them and how to effectively terminate the cover crops before corn or soybean production.

Corn – Multi-species mixture of cover crops that contains cereal rye (although some may use annual ryegrass rather than cereal rye) and other species, which include legumes and brassicas that need to be terminated prior to corn planting.

We have to design a program to 1) control the winter annual cover crops and early spring summer annual weeds that have emerged, and 2) factor in the fairly long list of residual premixes that might have some combination of atrazine, isoxaflutole, mesotrione, rimsulfuron or thiencarbazone, metribuzin or saflufenacil in them. All these herbicides have some foliar activity on some cover crop species and fit into this burndown/termination scenario. Isoxaflutole, rimsulfuron, and thiencarbazone have foliar and residual activity on grasses and will control a few selected broadleaf cover crops and weeds. Metribuzin, saflufenacil and mesotrione have foliar and residual activity on the legumes and brassica cover crops, a key no-till weed, horseweed (aka marestail) and can also help with waterhemp and Palmer amaranth control. A group 15 herbicide (metolachlor, dimethenamid, pyroxasulfone, acetochlor) is also needed to form the backbone of the soil residual grass and small-seeded broadleaf weed control program for the season.

The key challenge with this system is how to control large cereal rye or annual ryegrass if glyphosate is in short supply? One possibility is to terminate the grasses early (March), while the grass cover crops are small (6 inches tall or less) with clethodim, a reduced rate of glyphosate or paraquat added to a broadspectrum residual herbicide that contains isoxaflutole, rimsulfuron or thiencarbazone. Except for clethodim applied by itself, the rest of the treatments mentioned can suppress or control many of the other cover crop species in the mixture. Keep in mind that the activity of clethodim will be slow in cool weather conditions and will require a preplant interval before planting corn. If you choose early termination with your cover crop termination program, you will need to determine the overall value of limiting additional biomass production of the other species with this decision. Regardless of your decision, if glyphosate is carrying the load for terminating the grass, add saflufenacil or a saflufenacil containing herbicide to speed up the activity of glyphosate on the grass species. If you use paraquat, add atrazine or a premix containing atrazine to the application to improve grass control.

If you wait to terminate cover crops closer to planting (mid-April through mid-May), you will need a full rate of glyphosate to terminate the grasses. Paraquat won't be effective on the larger grasses, and the clethodim preplant interval might be too constraining to be a viable option. If we are in a warm, sunny weather pattern, glufosinate could be substituted for glyphosate, but be prepared to do a follow-up treatment if complete control is not achieved. However, glufosinate products are also in short supply this year, and you will be better off saving the glufosinate for postemergence control of glyphosate-resistant weeds if you are growing glufosinate-resistant crops (Liberty Link). If glufosinate is used to terminate cover crops prior to corn, the best management strategy will be to apply it with something that has grass activity such as an isoxaflutole, rimsulfuron, or thiencarbazone containing premix to help with grass control.

For weeds that break through the cover crops and termination/residual treatment, use glufosinate + dicamba on Liberty Link corn or glyphosate + dicamba on Roundup Ready corn and add a 1/3 to 1/2 label rate of the atrazine premix product that contains a group 15 herbicide to lengthen the window of residual weed control in the crop. You can also use Revulin Q, Realm Q, Armezon, Armezon PRO, Impact or Laudis for postemergence grass control if glyphosate or glufosinate is not available or the corn is non-GMO corn.

Soybean – Multi-species mixture of cover crops such as cereal rye

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(How to Plan Termination of Multi; Continued from page 6)

(and to a lesser extent annual rye) and other species which include legumes and brassicas to be terminated prior to soybean planting.

In this field, broadleaf cover crops and possibly horseweed are the main target with the burndown treatment. Start by determining which soybean trait will be planted. If it is non-GMO or straight Roundup Ready or Liberty Link, remember that there will be a preplant interval for 2,4-D or dicamba applications, and for these traits, the 2,4-D interval is shorter. A mixture of 2,4-D + saflufenacil or metribuzin for legumes and brassicas will be the backbone of the burndown program. Generally, 2,4-D is a bit weaker than dicamba on some of the legume cover crop species, but the addition of metribuzin or saflufenacil will help to increase overall efficacy. Considering the soybean traits chosen here, adding 2,4-D to premixes that contain saflufenacil (Verdict, Zidua Pro) or metribuzin (Authority MTZ, Canopy Blend, Intimidator, Kyber, Matador, Boundary/Moccasin MTZ, Trivence, or Panther Pro) makes the most sense and would require a 7 to 30-day preplant interval depending on the 2,4-D formulation and rate used. If you planted Enlist soybeans, you would use the same strategy, but no preplant interval is required if you use the 2,4-D choline (Enlist One) product from Corteva. If you plant Xtend or XtendFlex soybeans, simply replace 2,4-D with an approved dicamba product (Engenia, Xtendimax, or Tavium), and no preplant interval is required for that trait.

As mentioned in the corn example, the key challenge with this system is how to control large cereal rye or annual ryegrass if glyphosate is in short supply. One possibility is to terminate the grasses early (March), while the grass cover crops are small (6 inches tall or less) with clethodim or a reduced rate of glyphosate or paraquat added to a broadspectrum residual herbicide. Remember that the glyphosate- or paraquat-based treatments can suppress or control many of the other cover crop species in the mixture. If you choose to go this route with your cover crop termination program, you will need to determine the overall value of limiting additional biomass production of the other species with this decision. Regardless of your decision, if glyphosate is carrying the load for terminating the grass, add saflufenacil or a saflufenacil containing herbicide to speed up the activity of glyphosate on the grass species. If you use paraquat, add metribuzin or a metribuzin containing premix to the application to help paraquat on the grasses. Clethodim can be used for emerged grasses, but activity will be slower in cool weather conditions and can also be antagonized by other components of the mixture (2,4-D, dicamba, acetochlor). Rimsulfuron can be used 30 days or more before planting soybean and may help with winter annual grasses, providing some residual control of summer annual grasses as well. The use of rimsulfuron would be best suited to STS or Bolt soybeans since they will be more tolerant to rimsulfuron.

The postemergence weed control program will be based on the soybean trait planted and the weeds that break through the residual herbicide. Adding a group #15 residual herbicide (metolachlor, dimethenamid, pyroxasulfone, acetochlor) to the postemergence application will be the backbone of your small-seeded broadleaf and grass control program, and reduce the need for a second postemergence application later in the growing season.

Non-Chemical Methods of Cover Crop Termination

Roller Crimping – We know there are a few folks out there who have had good success with roller crimping as part of their termination program. We have experience with roller crimping cereal rye and balansa clover, but less experience with other cover crop species. The key to making the roller-crimper work is to hit the weeds at a time when they are less likely to stand back up after being hit with the crimper. For cereal rye, this stage of growth is anthesis, which means the cereal rye is fairly large and the biomass production on the field is substantial. For those that have not used roller crimping previously, you will need to do your homework about the impact of very high biomass production on corn and soybean stand establishment and yield, and decide on whether to wait that long to terminate cover crops with the roller -crimper fits your production goals.

Mowing – Mowing is pretty straightforward and allows some flexibility in timing. The obvious considerations here are timing and frequency (mowing can be done more than once before planting if needed), mowing height, the time and labor needed to complete the operation, and dealing with biomass accumulation in streaks. Most farmers have some experience with mowing and corn stalk shredding, so there really isn't a lot that needs to be written in this article about the process.

These are just a few examples of some different scenarios to consider when building a weed control program. Keep in mind that the concern isn't just the limited supply of glyphosate and glufosinate, but the increase in cost, especially glyphosate which may be four times the cost of just a few years ago, which makes other herbicide options much more feasible than previous years.

Other Tips

- Target using "regular" rates of glyphosate to stretch supply. Instead of using 32 or 44 ounces per acre of a Roundup brand product, consider using the standard rate on the label such

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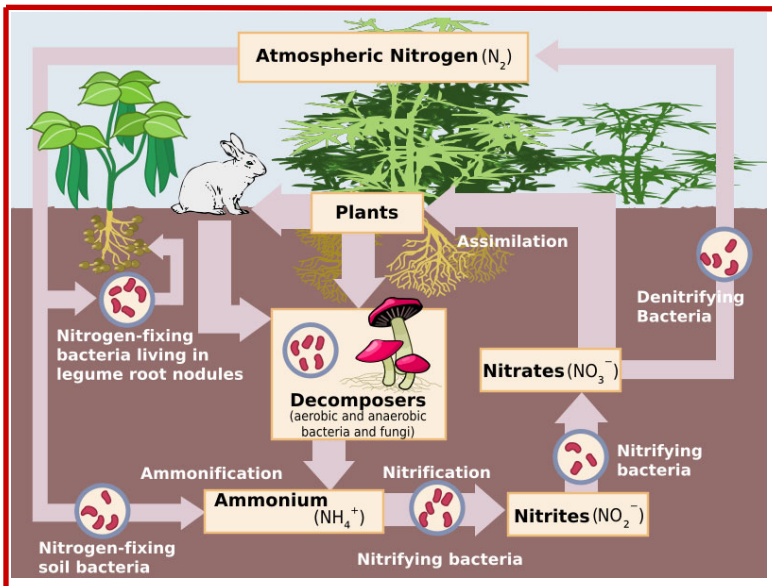
Nitrogen Protectants: When and Where do They Fit?

By Janice Degni, Field Crop Specialist



Everyone is concerned about the high cost of fertilizer, so let's strive to get the most from each dollar spent. We also know that nitrogen is a very mobile nutrient as show in the graphic above depicting the nitrogen cycle (source). N can be lost to the atmosphere or through leaching depending on timing, source or method of application, One loss, typical of surface applied unprotected urea, is by the conversion of urea to ammonia through an enzymatic breakdown lead by microbes. The enzyme that breaks down urea is called urease (which converts urea to to ammonia). *Nitrification* is the transformation of soil stable ammonium ($NH_4^{+)}$ to nitrate (NO_3) which is a 2-step process driven by microbes; first to nitrite (NO_2) and then to nitrate, which is available for plant uptake. Denitrification is the loss of N when nitrite converts to N gas in waterlogged soils. Nitrate can be lost by leaching. (Both ammonium and nitrate are available for plant uptake).

We need to match our use and application with the mode of action for protection to select the product that matches the potential cause of loss. The article that follows from University of Nebraska explains the products, how they work and whether they pay for themselves.

R.L Nielsen. Purdue University Agronomist, provides some guidance...

"**Inhibitors vs. Sidedress**

Urease inhibitors (used with urea or UAN solutions), nitrification inhibitors (used primarily with anhydrous ammonia), or polymer coated urea represent various forms of nitrogen loss "insurance" that add cost to your nitrogen management program. Like any insurance policy, the policy will "pay off" only if conditions are suitable for N loss to occur prior to plant uptake. **Another strategy to manage the risk of N loss is sidedress apply your fertilizer N instead of applying it pre-plant.** The main reason that sidedress N applications will be more efficient in the "long haul" is that there is a shorter calendar "window" between application and plant uptake for sidedress than for pre-plant applications. The shorter time period means there are fewer opportunities for heavy rainfall events and nitrate-N loss; and thus NUE (nitrogen use efficiency) will be greater on average. Sidedress applications often do not add dollar cost to your fertilizer program, but obviously alter the logistics of your farming operation and are more at risk from rainy weather prior to "too tall" corn.

In Summary… One of the keys to managing costs of nitrogen fertilizer or maximizing nitrogen use efficiency is to manage N sources wisely to minimize the risk of nitrogen loss due to leaching, denitrification, or volatilization. **The use of a sidedress application strategy remains one of the easiest and least expensive ways to maximize nitrogen use efficiency.** Other application methods and timings need to be matched wisely to nitrogen fertilizer source to minimize the risk of nitrogen loss prior to plant uptake.

Source: N Loss Mechanisms and Nitrogen Use Efficiency R.L. (Bob) Nielsen, Purdue Agronomy. rnielsen@purdue.edu. 2006NLossMechanisms_Neilsen Purdue.pdf

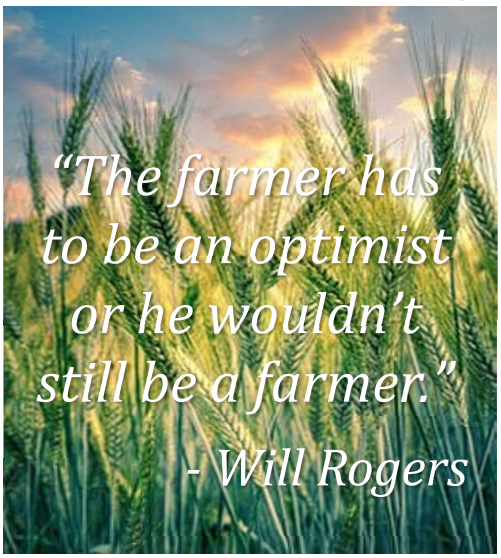
(How to Plan Termination; Continued from page 7)

as 22 ounces per acre for Roundup PowerMax (Note: Roundup PowerMax 3 will be launched in 2022, and the standard rate is 20 ounces per acre, equivalent to 22 ounces per acre of the old R. PowerMax formulation).

- Identify glyphosate or glufosinate premixes that may be in greater supply or at lower relative costs compared to solo glyphosate and glufosinate products.
- Failure is not an option for herbicide applications. Make sure you optimize your herbicide applications using the best methods (GPA, spray nozzles, etc.), adjuvants and minimal weed size for foliar applications.
- Substitute alternative corn post herbicides that control grasses and broadleaves. If they don't include a residual group 15 herbicide, add one to the postemergence mixture.
- Cultivate if needed and/or possible.

Hand weed escapes prior to the weeds setting seed.

Original article found at https://www.covercropstrategies.com/articles/2268-how-to-plan-termination-of-multi-species-cover-crop-mixtures-amid-herbicide-shortages



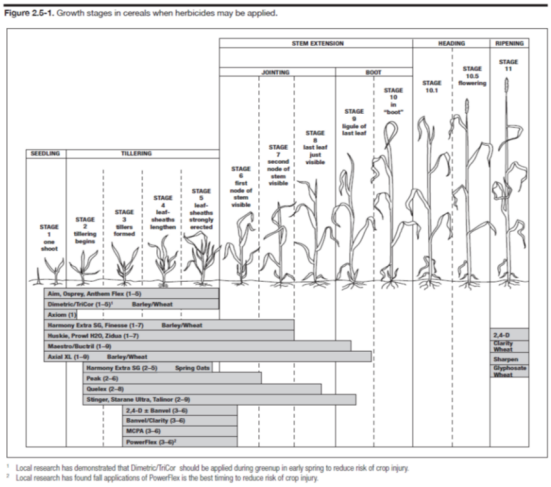
Late Spring Weed Control in Wheat

Published April 5, 2022 | Author: Dwight Lingenfelter

From PennState Extension website

A weedy small grain field in spring.
(Source: Penn State Weed Science; D. Lingenfelter)

As wheat approaches the stem elongation and jointing growth stage, be cautious of certain herbicide applications. Once wheat has passed Feeke's Stage 6 (i.e., when the first node of stem is visible), the risk of herbicide injury from 2,4-D, MCPA, Clarity/ dicamba, or Curtail increases and application of these herbicides is not recommended. In this situation, the remaining herbicide options for broadleaf weed control are Harmony Extra (similar products: Edition, Treaty Extra, Nimble, others), Harmony SG (similar products: Treaty, Harass, Volta), and Finesse can be applied to wheat until the flag leaf is visible (before Feeke's Stage 8). While Maestro, Huskie, Stinger and Starane can be applied to wheat up to boot stage (before Feeke's Stage 9). Refer to wheat growth stage graphic (Figure 2.5-1) from the Penn State Agronomy Guide for more details.



Each spring there are questions about the risks associated with 2,4-D or MCPA application to wheat past Feeke's Stage 6. Wheat tolerance of 2,4-D is highest between Feeke's stages 3 and 6 and is lowest in Feeke's Stages 9 and 10. Between stages 6 and 9, sensitivity to 2,4-D gradually increases as wheat growth stage advances. Thus, the risk of injury increases as wheat growth stage advances between stages 6 and 9. Severe injury is highly probable when 2,4-D is applied at Feeke's stages 9 and 10. In most cases, herbicide injury can set back growth of the crop and potentially cause reduced yields since the crop can't recover in a timely manner.

It is recommended that application of 2,4-D to wheat be made after wheat has reached Feeke's stage 3 but prior to Feeke's stage 6. If growers choose to apply 2,4-D at later stages, they need to understand the associated risk. This risk can be minimized by applying the amine form of 2,4-D or reducing the rate of a 2,4-D ester. A much better alternative on wheat past Feeke's stage 6 is to use another broadleaf herbicide with a wider application window that is effective on the weeds present in the field.

Original Link: https://extension.psu.edu/wishlist/index/add/product/37005/form_key/4frdhaU9glLq6ZRg/

First-cut alfalfa: try not to blow it

by Mike Rankin on April 19, 2022 | Re-Printed from Hay & Forage Grower

One chance per year. That's all you get.
There are no do-overs — no country club mulligans.

That one chance refers to the proper timing of making first-cut alfalfa or grass, and given the price of other commodities, the stakes are at an all-time high this year.

No other cutting of alfalfa offers more opportunity than the first one. Forget the myth that big stems equal poor quality; it's simply not true. In the vast majority of years, the first cutting of alfalfa offers the opportunity to harvest the highest concentration of digestible fiber of any remaining summer cutting. If the current cool spring continues, fiber digestibility should be well above average with a timely harvest.

During the past 15 years, the University of Wisconsin Department of Extension has coordinated the Wisconsin Yield and Persistence Project. Yield and forage quality have been measured on 127 different production fields over a stand's full productive life. In other words, a lot of data.

The average neutral detergent fiber digestibility (NDFD) of first cutting topped that of subsequent cuttings except for the low-yielding fifth cuts that were often taken in late fall (see graph). That same first-cut forage accounted for 38% of the total-season yield in a typical four-cut system.

Even small improvements in fiber digestibility can make for large differences in livestock performance; however, fiber digestibility usually takes a wild ride during the course of spring forage growth.

Although first cutting offers the opportunity for harvesting forage with the highest digestible fiber of the growing season, forage quality declines at a faster rate for first cut compared to subsequent cuttings. This presents the possibility of also harvesting large quantities of very poor, low-digestible forage once maturity advances beyond alfalfa bud stages.

First cutting is the only one of the year when there is no number of days since the previous harvest. The decision options are wide open, but the consequences of the decision often impact the rest of the harvest and feeding seasons.

Given the high stakes, the need to estimate first-cut forage quality as it stands in the field becomes a necessity if forage quality train wrecks are to be avoided. Attempts to gauge forage quality solely by either maturity stage or calendar date have proved inconsistent at best, or a total failure at worst. Spring growing conditions are simply too variable.

Predictive equations for alfalfa quality (PEAQ), growing degree day tracking, or clipping fresh forage for analysis are useful tools for estimating first-cut forage quality. Investing time in these forecasting methods can help take some of the guesswork out of the process.

Weather matters

The downhill ride in first-cut forage quality is accelerated by warming temperatures and becomes more dramatic if grass is present in the stand. Missing the optimum time to harvest first cutting is akin to missing Christmas and getting a lump of coal on New Year's Day in the form of many tons of low-quality forage.

No cutting experiences the possible range in environmental conditions that first cutting does. It can be cool and wet, cool and dry, hot and wet, or hot and dry. This potential range in growing environment has a profound impact on forage growth, nutritive quality, and optimum harvest date from year-to-year.

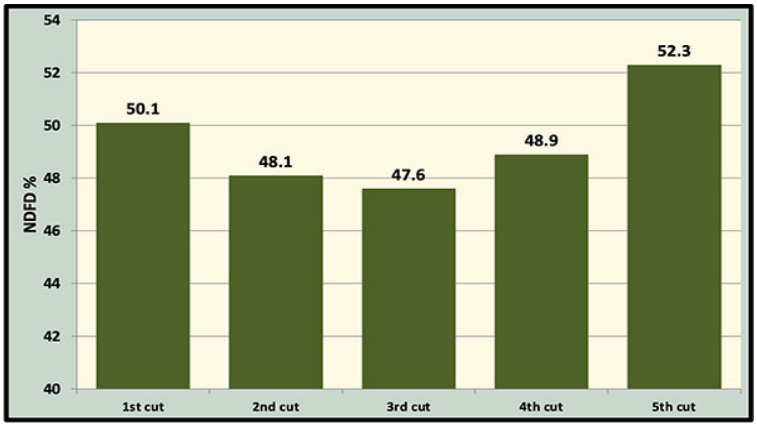
(Continued on page 11)

(5 Tips for a Successful Dry; Continued from page 10)

In addition to forage quality, first cutting also has some unique yield characteristics. As mentioned previously, spring alfalfa growth almost always provides the highest percentage of total-season dry matter yield. The economic consequences of making a first-cut timing mistake are higher than for any other cutting because there is usually more forage than any other cutting.

Similar to forage quality, changes in initial spring growth occur more rapidly for yield than for summer and fall growth cycles. Growing environment will dictate the rate of dry matter accumulation per acre, which can approach 100 pounds per acre per day.

First-cut timing sets the pace for the rest of the growing season. In other words, the first-cut harvest date may dictate how many future cuttings will be taken, the interval between those cuttings, and/or how late into the fall the last cutting will be harvested.



NDFD by cutting in the Wisconsin Yield and Persistence Project (2007-2021) (re-published from Hay & Forage Grower article)

The challenge is defined. The stakes are high, and as I'm often told, don't blow it.

Original Article can be found at: https://hayandforage.com/article-3921-First-cut-alfalfa-try-not-to-blow-it.html

Your local alfalfa height measurement reports will start May 4 and will be available on our blog.

There is a **Mexican Consulate** visit being planned, as well. Please keep an eye out for more information for that schedule.

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