

AG FOCUS



Effects of Late-Season Application of Nitrogen in Corn

by Jodi Putman

High-clearance fertilizer application equipment has become more widely available in recent years. Such tools make it possible to apply nitrogen (N) fertilizer to corn later in the growing season. These options give corn growers more choice in their N fertilizer program, but what are the potential benefits and risks of late-season N applications? Nitrogen is one of the most expensive inputs for corn producers. It's also the most difficult nutrient to manage in the soil. Once applied, N fertilizer may be lost through leaching, denitrification, and volatilization. How much N gets lost depends on soil factors (such as moisture and temperature) and on N fertilizer factors (such as source and placement), and on crop factors (like rate and timing of N uptake). Corn accumulates the majority of the N it needs between growth stages V6 (six visible leaf collars) and R1 (silking). The aim of managing N should be to have the amount of available N as close as possible to its peak when the crop needs it. Farmers can influence when and how long N is available by considering the source of N used, application timing, and use of N inhibitors. Somethings corn producers should consider when managing N is when does the corn need N?

Corn development is divided into two categories:

1. Vegetative stages (prior to silking)
2. Reproductive stages (after silking)

The plants' primary goal during vegetative growth stages is to accumulate leaf area, biomass, and N for reproductive stages. Vegetative growth ceases after silking, but the plants are approximately doubled in dry weight because ears account at maturity for about 55% of the total dry matter of the plant. Plant N uptake times are different from dry weight gains. Generally speaking, a plant accumulates around 70% of the total N needed before it is silked and accumulates around 30% during reproductive growth. The percentages, of course, depend highly on weather and environment.

Corn plants cannot meet the N needs of a growing ear from new N uptake alone during the reproductive growth. Rather, a plant depends on remobilizing the N from its stems and leaves. More than half the N present in the grain at harvest originates from remobilized N.

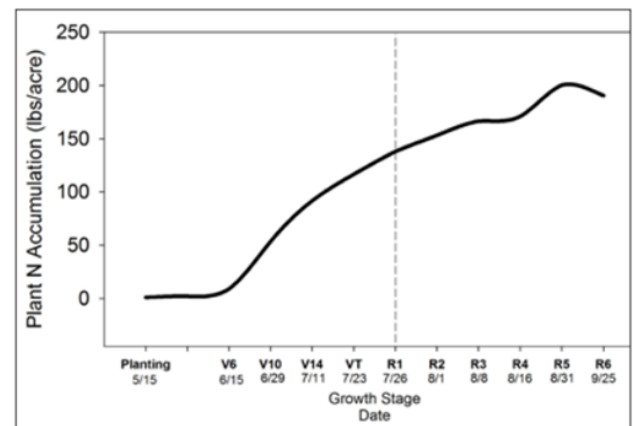


Figure 1. This graph shows how much a N a corn plant accumulates over the growing season. Dates are included for reference. Source: Woli et al., 2017. Figure 1 Source: www.extension.purdue.edu

Recent research shows no evidence that split, late-season N applications provide significant yield benefits over the same N rate applied in a single application at early side dress or at planting. In several cases split-N applications increased whole-plant N accumulation but that did not increase grain yield or grain N concentrations. Modern hybrids have the flexibility to increase post-silking N accumulation if early-season N is limited; however, if post-silking N accounts for more than 40% of the total N accumulation at maturity, more than likely yields will still be reduced. Split applications are useful in cases of unforeseen circumstances that prevent timely N applications. More information can be found at: <https://www.extension.purdue.edu/extmedia/AY/AY-364-W.pdf>

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Margaret Quaassdorff
Dairy Management

Genesee County
585.343.3040 x 133 (office)
585.405.2567 (cell)
maq27@cornell.edu



Libby Eiholzer
Bilingual Dairy Management

Ontario County
607.793.4847 (cell)
585.394.0377 (fax)
geg24@cornell.edu



Nancy Glazier
Small Farms, Livestock

Genesee County
585.315.7746 (cell)
nig3@cornell.edu



John Hanchar
Farm Business

Livingston County
585.991.5438 (office)
585.233.9249 (cell)
jjh6@cornell.edu



Jodi Putman
Field Crops & Soils

Livingston County
585.991.5437 (office)
585.208.8209 (cell)
jll347@cornell.edu



Ali Nafchi
Precision Ag

Monroe County
585.313.6197 (cell)
amn93@cornell.edu



Joan Sinclair Petzen
Farm Business Management

Wyoming County
585.786.2251 (office)
716.378.5267 (cell)
jsp10@cornell.edu



Mike Stanyard
Field Crops & IPM

Wayne County
315.331.8415 x 123 (office)
585.764.8452 (cell)
mjs88@cornell.edu

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Brandie Waite
Administrative Assistant

Genesee County
585.343.3040 x138 (office)
bls238@cornell.edu

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Upcoming Webinar

July 13, 2020 - Noon (CST)

Calf Management, Behavior and Welfare

Emily Miller-Cushon, University of Florida

<https://hoards.com/flex-309-Webinars.html>

Dairy calf care broadly affects behavior, including social interactions and feeding patterns, which impact calf performance and welfare. Miller-Cushon will discuss how early life experiences further influence the development of behaviors that persist beyond the preweaning period. The webinar is sponsored by [Agri-Plastics](#).



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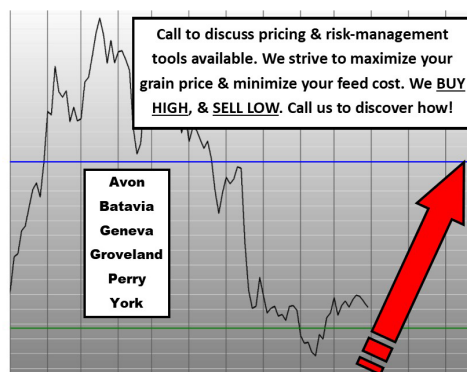
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Pasture Pests - It's All About IPM by Nancy Glazier

As I write this in early June grazing season is well underway. Unfortunately, it's time for pasture pests, too. These can include face flies, horn flies and stable flies. Internal parasites' eggs and larvae are there, but can't be seen. This may sound strange, but one way to gauge your natural controls is by looking at manure pats. There is a bunch of beneficial insects in there that can help with control. One group/kind/class of beetles that can help control these is dung beetles. Dung beetles will either tunnel, roll, or dwell in the manure; you will most likely find *Aphodius* species, which are dwellers, in NY. If the pats disappear in a few days, there is probably a decent population of beetles.

Why are dung beetles important? If you can help eliminate the breeding grounds of livestock pests, wouldn't you do it? They have also been found to improve pasture yields and soil health.

Unfortunately, some of the most commonly used treatments for flies and stomach worms are detrimental to dung beetles and other beneficial insects. Some pests can quickly develop resistance to products that are used repeatedly. It can all get rather complicated.

One class of dewormer products used for treatment of internal parasites is macrocyclic lactones. Ivermectin (Ivomec®) is most commonly used due to its ease of use as a pour-on. It is broad spectrum. Its efficacy has been found greatly reduced due to resistance. Another dewormer, fenbendazole (Safeguard®), has been found to be safe for dung beetles. Overuse of fenbendazole on some farms has led to resistance issues, too. Moxidectin (Cydectin®) has been found safe for dung beetles, but I could find no reported instances of parasite resistance. Recommendations for deworming cattle include using both ivermectin and fenbendazole for control. This overcomes resistance, but not the loss of dung beetles. Stick with one product for control in small ruminants.

Fly control options have their drawbacks with resistance and dung beetles. Pyrethrin products are one example. Horn flies have been reported resistance to the products in a study done in Kentucky. Houseflies can develop resistance, too. There are feed-through fly control products available such as growth regulators and modes of actions. Studies have mixed results of their impacts on dung beetles.

This highlights the importance of integrated pest management (IPM). It is critical to know what pests you have in and on your livestock. Fecal egg counts can be done on livestock to gauge internal parasite populations. Your veterinarian can help with this. Don't treat the whole herd or flock. This creates refugia, a susceptible pest population. Time treatments during cooler periods of the year when dung beetles are less active.

Know the numbers before treating animals. Flies have treatment threshold numbers – horn flies: for beef, 200 for dairy cattle and are found on sides, backs; face flies: 10 flies per animal; stable flies: 10 per four legs.

Some producers have moved away from chemical pest treatments and now focus on pasture management. Use short interval rotations to uniformly spread the manure. This helps keep the grass taller and helps prevent the pats from getting disturbed. To reduce risks of livestock picking up larvae on pasture, don't let them graze below 4 inches.

These are just a few highlights. Ken Wise and Jaime Cummings with NYS IPM program and Mike Baker, Cornell Beef Specialist recently wrote a resource, *Dung Beetles Aid in Reducing Flies and Gastrointestinal Parasites in Pastures*. I'll post it to our website and it is also available at: <https://ecommons.cornell.edu/handle/1813/69933> Let me know if you have questions.



A cow pat crusted over with dung beetle holes.
Photo: N. Glazier / CCE NWNV Team



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Back to Basics: Herd Management Lessons from COVID-19

by Lindsay Ferlito, Betsy Hicks and Margaret Quaassdorff, CCE Regional Dairy Specialists

In response to these especially volatile times, producers have been faced with having to make rapid changes. These changes have led to some unintended consequences, many of which would often be considered positive in a typical dairy market. When producers take a step back to ensure they are doing the basics of herd management, it provides cows the best environment to be productive and healthy. Below are some reminders of best management practices, and stories of producers who implemented these strategies and saw positive results.

Cow Comfort

Given that cows spend about 11-12 hours per day lying down, providing a properly designed and managed stall is one of the most significant factors impacting cow comfort and production. While deep-beds are usually considered the “gold standard” (reduced lameness, fewer injuries, higher lying times), other types of stalls can work really well with the right amount of bedding and management. Cows lie down longer with more, dry bedding, and lameness is reduced when there are at least 2 inches of bedding covering the stall surface. Maintaining stall hygiene and comfort is key to overall cow health and performance no matter what the circumstances.

Stocking Density

When cows are too crowded, lying time is reduced, feeding rate increases, competitive interactions increase, and milk production and reproduction can suffer. While there are multiple research studies that show these negative impacts of overcrowding at the feedbunk and the stalls when stocking density gets above 115-120% and less than 24 inches of feed space, there is no perfect stocking density – this is a number that is herd and situation specific. What works on your herd is unique given your facilities and management, and it will vary depending on other factors, such as outside temperature, time spent out of the pen, feed management. Stocking density is something that should be continually evaluated, and you may be surprised that you’ve slowly crept up and are above an optimal level. Several producers have mentioned how they sold an extra 20, 50, or 100 cows and milk in the bulk tank actually went up.

Water Space

When was the last time the linear water space was evaluated per cow in the high pen? Recommendations are for at least 4” of linear water space per head, but often pens have been crowded and cows on average have less than 2” of water space. One producer recently pulled out wa-



Appropriate stocking density in pens and at the feedbunk allows cows to freely access resources.

Photo: M. Quaassdorff / CCE NWN Team

terers that were not using the full length of crossovers, as he measured only about 2” per head, and put in waterers that fit the full length of the crossover, putting him closer to that 4” per head. Within a week, the whole herd average increased about 4 pounds of milk. This is in agreement with research that has shown a linear milk response with increasing water space.

Diet Considerations

High quality forage sources in lactating cow diets are always important, but become increasingly so when we raise the forage to concentrate ratio. This has been a strategy to reduce excess milk production, increase components, and contribute to overall rumen health, without threatening future production. Working with a nutritionist to properly balance and strategically feed a higher forage diet will also give producers a chance to uncover opportunities to save on diet and health costs, and set a plan for forage production and inventory goals in the future. Many producers have also taken this opportunity to work with their nutritionist to become more knowledgeable about the return on investment of feed additives, while focusing on a more efficient and profitable ration with better cow health and components.

Strategies for Feeding Milk to Calves

Feeding an increased plane of nutrition to calves has long

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Back to Basics: Herd Management Lessons from COVID-19

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been recommended and studied by researchers at Cornell. The benefits include higher and more efficient growth rates early on that last throughout the cow's productive life, as well as increased nutrient availability in times of cold stress (where nutrient requirements are increased for maintenance and growth) and for immunity response. The presence of excess milk production over what milk processors will pick up have given farms the chance not only to feed whole milk to calves, but the opportunity to keep calves on milk longer. Transition milk (the first four or five days post-calving) contains a high amount of growth factors that research says enhances health and long-term performance of calves. Producers have experimented with extending milk feeding up to 60-90 days of age, which has reduced waste of excess milk, and showed noticeable improvements in calf growth and condition.

First Lactation Cows

It is well recognized that heifers have different requirements than mature cows; in terms of growth, milk production and behavioral/social needs the first lactation heifer is a vastly different animal than a 3rd or 4th lactation cow. Herds that take the time to identify a strategy for making a separate plan for housing first lactation animals see results quickly, and often state they wish they had done it sooner. One producer, after figuring out how to manage lactating first calf heifers separately, saw pounds of milk at peak increase almost ten pounds and whole herd milk production increased almost five pounds.

Culling Strategies

What does your optimal herd look like? We have seen farms experience disturbances in labor, and reduced milk pickup. This had led to farm managers to evaluate each cow before you invest in dry cow treatment, or another straw of semen/sync program. On the heifer side, determine how many replacements are needed, and whether each heifer has the potential to improve overall herd performance when she reaches the productive stage. Producers have improvements in overall herd performance when choosing to cull less productive and problem animals.

Farm Team Communication

Communication between employees and the farm management team is important during the best of days, and especially during times of struggle or challenge. Writing protocols and organizing staff meetings are probably most farmers' least favorite tasks, but they are critical to

a smooth and successfully run farm business. Further, most dairies are required to have written protocols and continuing education training with their employees through programs like the FARM Program. Ensure your dairy has a detailed on-boarding process for new employees, up to date written protocols (in their language), and a plan to have staff meet regularly to not only address issues as they arise, but also to celebrate farms wins, contributing to a sense of farm culture and community.

Recognizing All Farm Options

When thinking about making a change, only looking at one option is just that: a farm either makes a change or stays doing what they're doing. Instead, producers should sit down and evaluate the problem or issue at hand, and identify a few ways to remedy that problem. Sitting down with a CCE farm management consultant to do a partial budget analysis on multiple options often gives clarity to what move is best. Today, a hard option to think through might be what it looks like to not be dairy farming, but in some instances that can be a valid scenario to work through. In the end, a change in operation should be the result of a decision-making process and not a knee-jerk response. CCE educators can help with the process.



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Budgeting: A Valuable Farm Financial Management Practice for an Unfavorable Economic Environment

by John Hanchar and Joan Petzen

Due to the COVID-19 health pandemic, an unfavorable economic environment once again challenges farm business owners' abilities to achieve financial objectives. The environment will test farm business owners' management abilities. To successfully meet the challenges, farm financial management practices play a prominent role.

Some Do's and Don'ts

Excerpts, lists of first three "do's and don'ts" follow. (Knoblauch and Karszes. Do's and Don'ts for Dairy Farmers When Facing Financial Difficulty. Ithaca, NY: Cornell University/CALS/Dyson & PRO-DAIRY. Revised April 2020.) The complete lists can be found here <https://prodairy.cals.cornell.edu/sites/prodairy.cals.cornell.edu/files/shared/documents/Financial%20Difficulty%20DOs%20and%20Dont%27s.pdf>

Do

1. Complete production and financial management analyses for 2019. Determine strengths, but most importantly, areas for improvement that result in an immediate response and improvement in cash flow.
2. Complete, review and update profit and cash flow projections.
3. Meet with your lender to share your financial analyses. Use analyses to communicate with your lender often and provide periodic updates regarding your financial situation.

Don't

1. Make decisions that will cause conditions to be worse in a week, month, or year.
2. Continue the same practices simply because you've always done it that way.
3. Neglect needed farm financial management tasks because there isn't time right now.

A Prominent Role for Farm Financial Management

Note the prominent role of farm financial management practices in the above – farm business summary and analysis, budgeting, projections. Whether managing risks, or managing during difficult financial times, financial summary and analysis with emphasis on budgeting are keys

to answering:

- Where is the business now financially?
- Where do you want it to be?
- How will you get the business to where you want it to be financially?

Budgets

Budgets estimate future financial condition or performance. A budget is a projection. For farm business owners, most budgeting work focuses on estimating expected effects on profit, and on projecting the business' ability to meet cash obligations in a timely manner. Regarding where the business expects to be and how to get there, budgeting plays an important role.

Key characteristics of budgets include the following.

- Budgeting helps you see what a future period's financial performance will look like for planning purposes. A budget allows one to project cash flow shortages, plan borrowings, and determine the ability to repay borrowings.
- Budgeting provides the manager with a tool for assessing how well the business is meeting projections, and to identify and correct problems.
- Budgets help the farm business owner communicate to others where the business is headed financially.

Examples of budgets include partial, enterprise, and whole farm budgets for projecting expected effects on profitability and for projecting expected effects on the business' ability to meet cash obligations. Income statements or cash flow statements that report a past period's performance, for example, an income statement for the 2019 calendar year, are not examples of budgets. They report actual past performance, and do not project or estimate future financial performance.

Whole Farm Budgets

A whole farm budget measuring profit summarizes expected income, expenses, and profit. A cash flow budget for projecting the business' ability to meet cash obligations is a summary of the expected cash inflows (cash farm receipts, money borrowed, capital sales, non-farm income) and outflows (cash farm expenses, principal pay-

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Budgeting: A Valuable Farm Financial Management Practice Cont.

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ments, capital purchases, withdrawals for family living and other personal withdrawals).

Characteristics include the following.

- Whole farm budgets consider all items including those that are not expected to change between the base period and the future period. For example, a cash flow budget projects what the cash flow statement will look like in a future period and reports total values for all inflow and outflow items.
- The most useful, valid projections are obtained when proper procedures are used. LaDue, Schuelke and Mensah-Dartey offer some basic rules to follow to insure useful projections (LaDue, Eddy L., Jacob Schuelke and Virgil Mensah-Dartey. 2000. CASHPRO: A Computer Spreadsheet for Projecting Annual Cash Flows and Pro Forma Income Statements.)
 1. Project cash flows from accrual (or accrual adjusted) receipt and expense values.
 2. Exclude unusual occurrences from base year data

used for projections.

3. Use causal logic to estimate each receipt and expense item.
 4. Adjust for inflation.
 5. Livestock farms that grow forages or concentrates should assess forage and/or concentrate balances whenever significant changes are expected in the size or composition of the animal herd or cropping program.
- Conducting sensitivity analysis and seeking critical review of the projections enhance the usefulness and validity of projections.

The CASHPRO electronic spreadsheet with instructions is available at: <https://dyson.cornell.edu/outreach/farm-management-decision-aids/>. Monthly, whole farm, cash flow budgeting is also an option. See the previous link for a monthly cash flow budgeting tool.

To learn more about tools and resources, including budgeting assistance, please contact Farm Business Specialists John Hanchar, jjh6@cornell.edu, (585) 233-9249, or Joan Petzen, jsp10@cornell.edu, 585-786-2251.



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* New Podcast from CCE Dairy Educators and PRO-DAIRY *

Dialing into Your Best Dairy

This podcast is a series about management practices and tips to reaching your herd's full genetic potential. It features PRO-DAIRY and CCE Dairy Specialists who over the course of 8 episodes will discuss the different life stages of the dairy cow, including episodes focusing on:

- Raising calves through the milk phase and weaning
- Managing weaned heifers up to freshening
- Making decisions about which replacements to keep including talking about inventory
- Disease prevention, and culling decisions
- Feeding and nutrition management during lactation
- Facilities, time management, and ventilation considerations throughout lactation
- Management factors around reproduction, gestation, and the dry period

This series also features interviews with Cornell's Dr. Mike Van Amburgh, the owners of Selz-Pralle Dairy in Wisconsin, and Paul Fouts, a NY dairy producer. Check out the podcast on the PRO-DAIRY website (<https://prodairy.cals.cornell.edu/events/podcasts/>) where you can find each episode along with additional resources and speaker contact information. You can also listen via SoundCloud on the CCE Dairy Educators channel, and check back for future podcast series.

For more information, contact Margaret Quaassdorff, NWN Dairy Management Specialist at: 585-405-2567 / (maq27@cornell.edu) or PRO-DAIRY's Kathy Barrett (kfb3@cornell.edu).

Make Your Next Farm Meeting a Success

by Libby Eiholzer

Although I haven't been conducting farm visits as usual during the Coronavirus pandemic, I've been keeping in touch with farmers in a variety of ways. In addition to answering questions over the phone, I've conducted safety and animal-handling trainings as well as facilitated and translated staff meetings via Zoom, FaceTime, and WhatsApp.

Spending so much time in virtual meetings has led me to think about what makes a meeting successful...or a snooze fest. Virtual meetings tend to be less personal and less interactive, so facilitators need to be intentional about keeping everyone's attention. Instead of viewing the pandemic as a hindrance, take the opportunity to re-vamp your approach to meetings. Before you schedule your next meeting, take into account the following considerations.

COVID-19

The threat of Covid-19 isn't going away anytime soon. So now is NOT the time to host large all-staff meetings. Meet in smaller groups, preferably cohorts of people who are already working together. Enforce social distancing. Meet outside or in a large building so there is better air-flow and everyone can spread out. If you want to include more people, set up a way for some staff to attend virtually. I've had success in using WhatsApp to facilitate farm meetings between myself, the farm manager, and employees in two separate locations.

Technology

If you're going virtual, test out the technology beforehand. Let your staff know what app they need to download. If you haven't used the particular platform (Zoom, WebEx, etc.) before, set up a test meeting to try it out. Test your microphone, speakers, and camera. If your internet connection isn't reliable, consider using your cell phone data as a backup.

Meeting in person doesn't mean you can ignore the technology. Nothing derails a meeting quicker than attendees constantly checking their phones, taking calls, or texting. A great way to set the stage is to take out your phone, put it on silence and ask everyone else to do the same. You could even ask everyone to set their phones on the table as they arrive to help remove the temptation.

Meeting Content

Come to the meeting prepared with an agenda and stick to it so you use everyone's time well.

Meetings are a great opportunity to reinforce your goals as a business. Talk about farm progress towards specific goals, positive things employees are accomplishing, discuss upcoming changes, and seek input. Encourage conversation.

A common mistake is to focus on negativity. *Don't mix up cows! Clean the teats better! Stop running the skid steer into gates!* This will discourage discussion and cause employees to dread meetings.

Regardless of the topic, design meetings to cultivate open communication on your farm team.

Timing

Try to keep meetings short, to the point, and regular. Try to stay within the planned time period. If you have to go over, take a minute to acknowledge that and give people an out if they have to leave.

Feel free to reach out to Libby if you'd like help in conducting a virtual meeting!



With the ongoing pandemic, we need to rethink how we host staff meetings. *Photo Provided by: L. Eiholzer / CCE NWNY Team*

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<p>550 HP CAT</p> <p>2006 KENWORTH T800: Flatbed Winch Truck w/Bradco 30-Ton Winch; 550 HP CAT C15; 18-Spd. Manual; 16K F/A; 46K Full Locking Rears; 284" WB; 18" Deck; Air Ride Susp.; Flo Over 5th Wheel; Will Separate Deck & Winch from Chassis; 21" Frame; 206" CT; 4.30 Ratio; 235,224 Miles; Sk. #6148 - \$45,000</p>	<p>Heavy Spec Allison Auto.</p> <p>2004 PETERBILT 320: CAT 330 HP; Allison Auto.; Refuse Truck w/180" WB; 18K F/A; 44K Rears; Can Separate Compactor from Chassis; 17" Frame Behind Cab; 148" CT; 14,873 Engine Hours; 69,512 Miles; Sk. #6209 - \$37,900</p>	<p>Heavy Spec Chassis 8,500 Miles!</p> <p>2004 WESTERN STAR 6900 XD: Detroit Diesel 430 HP; Allison Auto. Trans. w/PTO Pump & Tank; Triple Frame Cab & Chassis; 20K F/A; 50K Full Locking Rears; Air Ride Suspension; 26" Frame Behind Cab; 168" CT; 258" WB; 8,500 Miles; Sk. #6245 - \$64,500</p>	<p>20K/46K Rears 475 HP</p> <p>2007 PETERBILT 357: 475 HP CAT C15; 18-Spd Manual; Clean Daycab w/Tulsa Winch; 20K F/A; 46K Full Locking Rears; Chalmers Susp.; 224" WB; 496,503 Miles; Sk. #6241 - \$39,900</p>
<p>46K Rears CAT 6NZ</p> <p>2003 KENWORTH T800: 475 HP CAT C15 6NZ Turbo; 8LL Manual Trans.; Clean Daycab w/12,000# Front Axle; 46K Rears on KW 8-Bag Air Ride; 4.11 Ratio; 188" WB; Wetline; 447,898 Miles; Sk. #5925 - \$49,900</p>	<p>18K/60K Rears Allison Auto. 87,000 Miles</p> <p>2010 PETERBILT 365: 350 HP Cummins ISM Engine; Allison Auto.; Long, Double Frame Cab & Chassis w/302" WB; 227" CT; 31" Frame Behind Cab; 18,000# F/A; 60,000# R/A On Hendrickson Susp.; 87,267 Miles; Sk. #5907 - \$59,900</p>	<p>Dozens of Mack Dumps!!</p> <p>1999 MACK RD688S DUMP TRUCK: 400 HP Mack E7; Engine Brake; 8LL Trans.; Rubber Block Susp.; Tri-Axle; 19" Steel Body; 20,000# F/A; 46,000# R/A; 22.5 Times; 248" WB; Spoke Wheels; EXPORT PRICED!!!; 777,148 Miles; Sk. #5902 - \$19,500</p>	<p>Clean Heavy Spec Chassis</p> <p>2005 PETERBILT 357: 370 HP Cummins ISM; 8LL Trans.; Quad Axle Cab & Chassis w/Convertible; 18K F/A; 44K Full Locking Rears; (2) 11K Steerable Lift Axles; Air Trac Susp.; 22" Frame Behind Cab; 212" CT; 302,500 Miles; Sk. #5831 - \$41,500</p>
<p>5x6 Flatbed Low Miles</p> <p>2006 PETERBILT 357 5x6: Clean Double Frame 24" Flatbed Truck CAT 350 HP; 8LL Trans.; 28" F/A; 46K Full Locking Rears; 426,692 Miles; Hendrickson Haulmax Susp.; 565 Rating 288" WB; 210" CT; 31" Frame Behind Cab; Will Separate Bed from Chassis; 174,188 Miles; Sk. #5701 - \$49,900</p>	<p>268 in. Frame</p> <p>2004 KENWORTH T800: CAT C15 Single Turbo 435 HP; 10-Spd. Manual; Double Frame; 46K F/A; 16K F/A; Air Lift Axle; 4.33 Axle Ratio; 280" WB; 206" CT; 256" Total Usable Frame; 241,888 Miles; Sk. #5939 - \$48,200</p>	<p>Cheap Export \$\$\$</p> <p>2001 MACK DM688S - EXPORT PRICING SHOWN! Double Frame Mixer Truck w/12 Cu. Yd. London Mixer; 350 HP Mack E7; 8LL Trans.; 18K F/A; 46K F/A; 20K Tag Axle; 254" WB; Hendrickson Rubber Block Susp.; 332,458 Miles; Sk. #6246/6250 - \$11,600</p>	<p>Low Mile Vac Truck!!!</p> <p>2005 MACK GRANITE GU713: Mack 350 HP; Eaton 9LL Trans.; Low Mile Vacuum Truck w/4,000 Gallon Westec Vac Tank System; 250" WB; 18K F/A; 46K Full Locking Rears on Chalmers Suspension; 15,803 Hours; 126,229 Miles; Sk. #6145 - \$38,500</p>
<p>Heavy Spec Chassis 450 HP</p> <p>2002 MACK DL713: 460 HP Mack E7; 18-Spd.; Double Frame Cab & Chassis; 20K F/A; 46K Rears; 292" WB; 24" Frame Behind Cab; 208" CT; PTO; Good Rubber; Mack Air Ride Suspension; 309,234 Miles; 17,680 Hours; Sk. #5909 - \$42,600</p>	<p>Will Separate</p> <p>2011 AUTOCAR AC164 GARBAGE TRUCK: 350 HP Cummins ISL; Allison Automatic; Shur-Pak 24 Cu. Yd. Side Load Packer; Double Frame; LH & RH Drives; 20,000# F/A; 44,000# R/A; Will Separate Packer from Chassis; 22" of Frame; 70,022 Miles; Sk. #6236 - \$29,900</p>	<p>Heavy Spec Allison 20 ft. Box</p> <p>2006 INTERNATIONAL 5600i: Cummins 425 HP Engine; Allison Auto Trans.; Double Frame Dump Truck; 20" Steel Body w/4" Sides; 20K F/A; 46K Full Locking Rears; Hendrickson Rubber Block Susp.; Air Lift Axle; 246" WB; 313,882 Miles; Sk. #6254 - \$48,500</p>	<p>20K/46K Axles Allison Auto. Chassis</p> <p>2005 PETERBILT 357: CAT 305 HP; Allison Auto.; Clean Cab & Chassis; 20K F/A; 46K Rears on Haulmax Susp.; 17" Frame Behind Cab; 140" CT; 216" WB; New Drive Tires; 129,217 Miles; Sk. #4894 - \$59,000</p>
<p>46K Rears 500 HP</p> <p>2003 WESTERN STAR 4900S: 500 HP Detroit Diesel; 13-Spd. Manual; Air Slide 5th Wheel; 14,600# F/A; 46,000# Rears On Hendrickson Air Ride; 226" WB; 544,913 Miles; Sk. #5962 - \$26,500</p>	<p>20K/46K Rears Allison Auto.</p> <p>2003 KENWORTH W800: 320 HP Cummins ISM; Allison Auto.; Clean, Low Mile Cab & Chassis w/20,000# Front Axle; (2) 11,000# Steerable Lift Axles; 44,000# Full Locking Rears On Chalmers Susp.; 3.45 Ratio; 250" WB; 21" Frame Behind Cab; 158" CT; Muttler Takes Up 12" Behind Cab; Sk. #6016 - \$45,900</p>	<p>Heavy Spec Chassis 118,700 Miles</p> <p>2004 KENWORTH W800: 335 HP CAT C10 Engine; 8LL Trans.; Cab & Chassis; 20K F/A; 46K Full Locking Rears; 252" WB; 21" Frame Behind Cab; 150" CT; 4.89 Ratio; Haulmax Susp.; 118,703 Miles; Sk. #6075 - \$29,900</p>	<p>4,360 Gal. Low Mileage Tanker</p> <p>2004 WESTERN STAR 4900S 430 HP CAT C12: 18-Spd. Manual; Clean, Low Mile Tank Truck w/4,360 Gal. Steel Tank & Bowtie 3" Pump; 16K F/A; 46K Full Locking Rears; 252" WB; Chalmers Suspension; 133,613 Miles; Sk. #5979 - \$38,500</p>

\$\$\$ WE BUY MACK, FREIGHTLINER, PETE, KENWORTH, Etc. TRUCKS and CAT, KOMATSU, CASE, HYUNDAI, IR, Etc. CONSTRUCTION EQUIPMENT for \$\$\$

Quitting, Strategically by Timothy X. Terry, Farm Strategic Planning Specialist

How many of you remember those motivational posters that used to be plastered on the walls of your high school, especially in the hallway near the Guidance Office? Do you remember the one about “Winners never quit...” with some sort of sports themed back drop? How about the one popular with many college co-eds of a kitten dangling from a rope by one claw with the caption, “Hang in there!”?

In our society the verb “quit” has acquired a very negative connotation, and rightly so, I suppose, if it’s associated with sloth, apathy, and failure to achieve. However, *strategic* quitting is part of a healthy and successful business plan. In other words, selectively quitting the right stuff at the right time. You need to discern which projects, tasks, initiatives, etc. are going to yield a great return and which ones are just sucking up time, talent, and treasure (mostly treasure); and/or are keeping you from doing the more valuable things.

Sunk Costs

One of the reasons it is so hard to quit a project or enterprise is that as managers we feel we’ve invested way too much time and effort to just walk away from something. In other words, we’ve succumbed to the Sunk Costs Fallacy, which also known as Loss Aversion.

I see this most often when it comes to retrofitting older facilities. The thought is, “We have it (the structure), so we must use it!” Thus a boatload of bucks and a mountain of effort are dedicated to the project only to have the final product scarcely more efficient and still housed in an older structure that may require considerable upkeep. Unfortunately, many times for a few dollars more (or even less, in some cases) they could have had a new, efficient facility, in a better location, with expansion capabilities and structural flexibility should another enterprise present a better opportunity.

Avoiding the Trap

So how do we avoid this insidious trap?

1. Only focus on future costs – not on the ones that have already happened. The money has already been spent, the effort expended. Like things dropped in the ocean there’s nothing you can do to get it back. Rather, focus on the future. Don’t make decisions based on previous investment but on the financial viability

of the enterprise going forward.

2. Realize that past investments do not obligate future resources. There’s no reason to throw good money after bad. This includes human capital, as well.
3. Ask yourself, “Does this enterprise have a fighting chance, or is it just a chance to fight?” If it’s more the latter than the former, then it might be time to pull the plug.
4. Sometimes the best decision is to quit. This is not admitting failure. Rather, it is a wise response to a changing business climate that makes the original goal no longer viable (i.e. – raising more calves and heifers than really needed with the intention of selling the excess).
5. Get the facts. Many times we may want to continue, or even start, an enterprise simply based on feelings. However, the best option is to be brutally honest with

Don’t make decisions based on previous investment but on the financial viability of the enterprise going forward.

yourself and analyze it against the facts. Then make your decision based on the “realities of the analyses” rather than emotion and pride. (See #2 below)

To Do

1. Diminish the stigma. Recognize and understand that strategic quitting is a normal, necessary, and healthy part of a change-oriented and responsive business plan.
2. Set up a system to detect winners and losers. This is something your Dairy Profit Team or Farm Advisory Group, especially your financial planner, should be able to help you do.
3. Acknowledge the “quit”, but keep moving forward and reallocate those resources to more profitable ventures.
4. Focus on the most rational thing to do next

Conclusion

Kenny Rogers once sang, “You got to know when to hold them, know when to fold them...” (*The Gambler*/Schlitz 1978). It takes more guts to admit you were wrong and make a change than to simply stay the course for no reason. Moreover, there is no shame in making the best decision for yourself and your business.

Winter Wheat Harvest, Protection and Storage by Mike Stanyard

Overall, I am impressed with the winter wheat and all other winter grains this year. The June 15 USDA National Ag Statistics Service report rated the NY winter wheat crop as 31% excellent, 47% good, 20% fair and 2% poor. I know of a least three farms who have entered the National Wheat Yield Contest!

We had a reasonably mild winter with limited wet holes and winterkill losses. With temperatures above normal in March and early April, many fields received that early shot of nitrogen and responded. The second half of April and early May were definitely cooler. I feel this really held back the powdery mildew and it was not an issue during early growth stages. When it warmed up the wheat took off. The flag leaf surprised many that had not applied their herbicides yet and they missed the window. I also saw more roughstalk bluegrass than normal as fields began to head out. Osprey herbicide will no longer be manufactured and was hard to find this spring unless you had some from last year. Osprey Xtra (Osprey plus Thien-carbazone) will be produced moving forward but at this time we do not have a label for NY. I am not seeing the marestail issues yet but it will become more evident as wheat matures and dries down. I know more growers were applying Huskie to take care of it.

Wheat planted in mid-to-late September started to flower in the last days of May into the first week of June. Conditions for pollination were excellent. We did find a couple fields with Stripe Rust and cereal leaf beetles were starting to become more obvious. Growers who sprayed a fungicide for Fusarium Head Scab were able to clean up some of these other pests at the same time. The Fusarium Risk Assessment Tool (<http://www.wheatscab.psu.edu/>) predicted a low risk of FHS infection (green) for most of the NWN region on June 3. However, by June 6, a good portion of the NWN counties moved to medium (yellow) and high risk (red) with only portions of Fingerlakes remaining at low risk.

Harvest Preparation

Know your grain moisture and have the combine prepared to go when it is time to pull the trigger. Weather and field conditions do not always cooperate during harvest. Many producers will start harvesting at 20% and dry it down to 13%. Producers who don't have dryers and rely on field drying, run the greater risk of reduced grain quality. The first harvested wheat will have the best quality. If your wheat flowered that first week of June, vomitoxin from FHS could be a concern. Look for pink coloration and

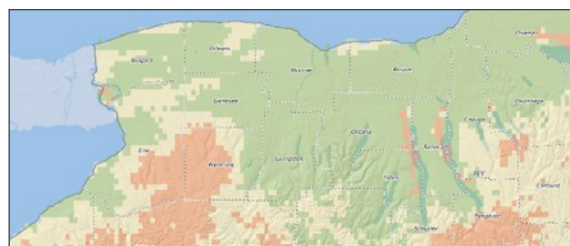
shrunken kernels in the heads. If these conditions are present, set the combine fans to high and try to blow these light kernels back onto the field.

Grain Bin Preparation

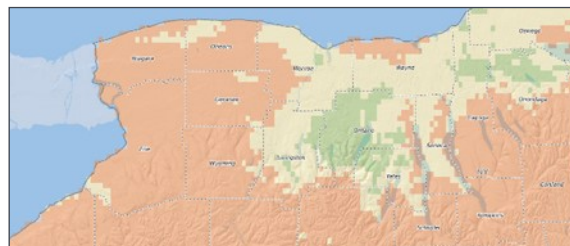
Storage facilities should be inspected thoroughly prior to grain fill. Look for openings, leaky vents, fallen supports, and signs of rodents. Bird nests are always a treat to find in the auger or vents. Stored grain insects survive in old grain so a thorough cleaning is the first line of defense. Clean up all remaining grain on the floor of the bin. Take a long-handled broom and remove any grain stuck to the walls, around the door, supports, ladder rungs and in the fan opening. If there are lots of fines remaining on the floor, clean up with a shop vacuum. It is amazing how many insect eggs and larvae are in a small amount of material. The same is true for grain handling equipment such as augers and drying bins.

After the bin is cleaned out, an insecticide application will help keep the grain mass clean. This can be more helpful the longer you keep the grain in storage. We are very limited when it comes to empty bin insecticide treatments. TEMPO® SC ULTRA and STORCIDE™ II (see label for application restrictions) are both labeled. Diatomaceous earth is a non-insecticidal silica sand applied as a dust in the bin and below the floor.

I know many growers are excited about their potential wheat yield this year. The NY final average for last year was 68 bushels. Fingers crossed for some great yields this month!



Fusarium Head Scab Risk in WNY on June 3, 2020



Fusarium Head Scab Risk in WNY on June 6, 2020

Source: <http://www.wheatscab.psu.edu/>

Terrain Compensation Module GPS Calibration by Ali Nafchi

Terrain Compensation Module, better known as “TCM”, makes calculations to adjust for roll, pitch, and yaw to improve GPS receiver and Auto-Trac system performance. The TCM is designed to improve the GPS accuracy to keep the vehicle on the right track even on the uneven terrain. The TCM Calibration may be needed if the receiver has moved to a different machine or if experiencing “wide and narrow” rows when using Auto-steering.

How to check your current TMC calibration?

On a flat open area, where you have enough space to turn the tractor around, set a new AB line and let the machine drive itself for about 50 yards. Turn around and let the machine drive itself back down the same tracks you just made. If your tires are falling back exactly in the previous tire tracks the TCM is calibrated correctly. If the tires are offset from the previous tracks the TMC need to be recalibrated.

How to calibrate your TCM?

On a level ground, on the “Main Menu”, click on the ISO bus VT at the bottom of the page. Prior to calibrating the TCM we need to verify the 3D position mode and then drive a figure 8 (Fig. 1) two times in a row.



Figure 1. Prior to calibration, drive a figure 8 two times in a row

Click the Menu Button and then click the Starfire receiver in the Menu. At the top of the page choose the tab labeled Setup. Click on the Setup tab, the TCM section located on the bottom right quarter of the page. By clicking the button with the black triangle labeled “CAL”, you will get to the calibration page.

Menu Button → Starfire Receiver → Setup → CAL.

Once you are in the calibration page, follow the on-screen instructions, which will walk you through the calibration step by step. When the calibration is completed, you can re-check and see if you have a good calibration

(using the “How to check your calibration” section of this article). You may need to calibrate the TCM more than one time to get it tuned.

For more information, please visit the reference websites below:

TCM Calibration from Horizon Equipment -
<https://www.horizonequip.com/webres/File/TCMCalibration.pdf>

How to Calibrate Your TCM from Kurt Hurst -
<http://kurthurst.com/blog/how-to-calibrate-your-tcm>

John Deere TCM Calibration -
<https://www.youtube.com/watch?v=y9z8yxXF45w>

Welcome to the NWNY Team Intern!



Hello, my name is Jacob Stanyard and I will be fulfilling the Field Crops Nutrient Management Applied Research and Extension Internship this summer. I will be entering my junior year at Cornell University this fall, majoring in Biology and Society. I have lived in western New York my whole life, and have had an interest in biology, nature and the outdoors for as long as I can remember.

This internship experience especially intrigues me due to its combination of responsibilities in field experience and research along with in-person interactions with farmers and those associated with the agricultural industry. As a Biology and Society major, this experience could help me further my interests in developing a career that brings cohesion to biology and the communication of science. I am very excited for this opportunity, and look forward to an eventful internship experience.



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Soil Electrical Conductivity (EC) Mapping Research Opportunity

Precision agriculture can contribute to long-term sustainability of agriculture production, by applying more targeted use of inputs only where they are needed, and when they are needed. Since incredible soil variations occur across production fields, **Establishing Management Zones** can help to address these variations.

Soil electrical conductivity (EC) is the ability of a soil to transmit an electrical current. Research has shown that a soil electrical conductivity (EC) can be used successfully to quantify variations in soil texture and yield potential of production fields in most of the region. Once a map of management zones has been constructed for each field, the zones become the subunits for managing the field more precisely (usually 3-4 zones). The EC map needs to be constructed only one time (depending on the soil type and conditions, sometimes it is valid up to 7 years), since soil texture is static and the major factor affecting soil EC.

NWNY team works with growers on existing technologies (EM38-MK2, soil electrical conductivity meter Fig. 1), to provide knowledge about all stages of zone creation and philosophy of zone management. This will enable farmers to address the variations in their fields, and create management zones to assist them in optimizing crop inputs on their farm.

We are seeking opportunities to work with growers, interested in collaborating on using of Soil Electrical Conductivity Maps (Desirable: field size larger 10ac and started using precision Ag technologies).

Outcomes/Results

- Identifying management zones, and generate prescription maps.
- Yield map analysis and improving generated maps.
- Research on feasibility of using Soil Survey instead of the EC data for creating management zone.
- Conduct demonstration fields and collect research data adopted for the region.
- Provide research-based knowledge to farmers about all stages of zone creation and philosophy of zone management.

Please contact Ali Nafchi, at amn93cornell.edu or 585-313-6197, for more information.



Figure 1: The Geonics EM38-MK2 soil electrical conductivity meter. <http://www.geonics.com/>

COVID-19 Information Websites:

Need information? View the following Cornell CALS and CCE Resource Pages that are updated regularly.

General Questions & Links:

<https://eden.cce.cornell.edu/>

Food Production, Processing & Safety Questions:

<https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/>

Employment & Agricultural Workforce Questions:

<http://agworkforce.cals.cornell.edu/>

Cornell Small Farms Resiliency Resources:

<https://smallfarms.cornell.edu/resources/farm-resilience/>

Financial & Mental Health Resources for Farmers:

<https://www.nyfarmnet.org/>

Cornell Farmworker Program

www.farmworkers.cornell.edu

www.trabajadores.cornell.edu (en espanol)

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