Corn Looks Pretty Good...Could Tar Spot Make It Ugly?  
by Mike Stanyard

Tar spot is not a new corn disease to the U.S., but it is new to New York. In 2021, two corn fields in Erie County were suspected of having the leaf disease and both were officially confirmed as tar spot by Cornell plant pathologist, Dr. Gary Bergstrom. So, it is “officially” here in NY! We have been talking about tar spot at Corn Congress since 2016 when it was a new disease. It was spreading rapidly across the Midwest, and we truly expected it to get across the NY border years ago.

Tar spot most likely overwintered in NY on corn stubble, and we now need to be vigilant about scouting our corn particularly in the counties surrounding Erie County. What should we be looking for? I personally have not seen tar spot, only pictures. Included is a picture taken by one of the growers who found it in his corn field in Erie County near Buffalo in early October. You can see why it is called tar spot. It does look like small droplets of tar have been spattered on the leaf. This is the later stages of the disease and the black overwintering structures are called stromata. Some insect frass can look similar but that can be wiped or scratched off, tar spot stromata can’t be wiped off! The black stromata also have a shiny sheen and are a little bit raised up.

Can it cause economic yield loss? In the Purdue article referenced below, Drs. Quinn and Telenko state, “a severely infected field can reach yield losses upwards of 60 bushels per acre! Yield losses are often a result of reduced photosynthetic capacity (green leaf area) of the corn plant during grain fill resulting in poor grain fill, kernel abortion, and reduced kernel weight. In addition, severe infection can reduce corn stalk integrity and cause significant lodging later in the season.” So, this fungus is no joke and a serious yield reducer.

NY seems to have the right environmental conditions that are conducive to the production and spread of tar spot. Purdue states that, “Tar spot pressure in corn is fueled by cool (60-70 degrees F), humid conditions (>75% relative humidity) and prolonged leaf wetness (>7 hours).” We have that covered. These conditions are also prevalent around the great lakes and river bottoms. What about all our corn planted close to the finger lakes?

How can we manage tar spot moving forward? Unfortunately, there does not seem to be any natural host plant resistance in our current corn hybrids. Fortunately, there are many labeled fungicides that are very effective against tar spot. Most are labeled for application, tassel to R2 (blister stage), when our other problematic leaf diseases such as northern corn leaf blight and gray leaf spot are also active. Burying infected corn residue through tillage and crop rotation are good cultural management practices.

Dr. Bergstrom gave a great overview of tar spot at this year’s virtual corn congress. His recorded zoom presentation can be found on the NWNY Team’s YouTube channel (https://youtu.be/OB6ChvcGMA8). Dr. Darcy Telenko from Purdue University (formerly of the Cornell Veg Program right here in NWNY), has done some excellent work in understanding this disease in Indiana. Here is the most recent article (June 14) explaining the background, importance and future research plans of tar spot from Purdue, https://extension.entm.purdue.edu/newsletters/pestandcrop/article/tar-spot-of-corn-what-to-know-and-new-research/.

This summer I will be scouting corn fields in the NWNY region that are closest to the initial tar spot infection. This would be in Wyoming, Livingston, Genesee, Orleans and Niagara Counties. If you see anything that you think might be tar spot, please call me or text me a picture. I would be glad to come and take a look. I will be working closely with Dr. Bergstrom to confirm any possible future infections.
To simplify information, brand names of products may be used in this publication. No endorsement is intended, nor is criticism implied of similar products not named.

Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Changes occur constantly & human errors are still possible. These recommendations are not a substitute for pesticide labeling. Please read the label before applying pesticides.

By law and purpose, Cooperative Extension is dedicated to serving the people on a non-discriminatory basis.

Remember To Check Out The NWNY Team Blog!
The blog will feature Crop Alerts, Dairy Alerts, Bilingual (Spanish) Resources, Upcoming Events and more from our team members. You can visit the blog at: https://blogs.cornell.edu/nwny-dairy-livestock-field-crops/

For more information about our program, visit us online at: https://nwnyteam.cce.cornell.edu/
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I have a small cow calf herd and they receive their water from a creek most of the year. I had a well drilled in October of last year to utilize at times when the creek goes dry. In past years we utilized city water to supplement them. The creek quit flowing so I started to offer well water to the herd. It seems their consumption is very low. I know there is some iron in the water, but the taste and smell are not very offensive to me. Can you recommend any tests I should do on the water? Any other suggestions would be appreciated.

This is an abridged question I recently received. The US Drought Monitor map shows the NWNY region as abnormally dry (7/11/22). Creeks have dried up, which are sometimes used as a water source for livestock on pasture. The water table is low and that can impact well water quantity and quality. I’m also assuming quality can vary with public water supplies.

The first step in assessing quality is with water testing. Two nearby labs perform testing for around $50. Make sure to follow the labs’ instructions when sampling. A contaminated bottle will give inaccurate results. Dairy One, based in Ithaca, provides testing. Information can be found here: https://dairyone.com/services/forage-laboratory-services/water-analysis/. They will send sample bottles free of charge. They also have drop off sites, information is here, https://dairyone.com/resources/sample-transportation/.

Cumberland Valley Analytical Services offers water testing, too. There is a location in Batavia. Information here: https://www.foragelab.com/Services/Water. They have drop off locations listed here: https://www.foragelab.com/Drop-Boxes/New-York-Central/. Supplies are available from the drop off locations or you can contact the lab.

These labs will perform complete analyses. These include mineral levels (hardness) and pH. Though we may not notice taste or smell problems, livestock may. High mineral content can impact water intake, water drives forage intake. It is important to test for pathogens, which can cause toxicity issues. Total coliform and E. coli should be tested for and are included in testing.

Testing for sulfates and nitrates are included. These can be problematic if water sources become contaminated from fertilizers, decaying organic matter, or manure, more likely to occur with surface water or shallow wells. Sulfates can cause interactions with copper and molybdenum.

Interpretation for species and class of animals is important. A very handy table from University of Wisconsin can be found here, https://www.vetmed.wisc.edu/fapm/wp-content/uploads/2020/01/Water-Quality-Recommendations-Oetzel-080104.pdf. If you have questions let me know.

Quality as well as quantity is critical for intake of good, clean, water. As temperatures remain high, intake will be high. Pastures are very dry right now, so not much water will come from them. Keep your stock tanks clean. And keep ample access available. If one cow is bossy, she may not let others drink.

It is important to have good, clean water available for livestock at all times. Photo: N. Glazier / CCE NWNY Team
August 8, 2022 - Noon (CST)
“Strategies for silage harvesting success”
John Goesser, Rock River Laboratory

September 12, 2022 - Noon (CST)
“Inflammation - Fiend or Foe?”
Barry Bradford, Michigan State University

NWNY Team YouTube Videos
Available When You Are

The NWNY Team has several recorded on-demand webinars available on our YouTube channel. Several topics are available to view for free, anytime and some are available in both English and Spanish.

Topics Include:
- Transition Cows
- Calf Care
- Feeder School
- Focus on Farm Management
- Sustainability
- Waterhemp Control in Soybeans and Corn
- Pasture Management
- Marketing Meat Products

Visit: https://www.youtube.com/user/CCENWNY
Are you feeling frustrated with the amount of training that is required by the FARM program? If so, you’re not alone. Last week I did a stockmanship training on a dairy and afterwards had a long chat with the herd manager that made it clear he was feeling just that. I can understand the frustration of needing to be trained annually on euthanasia, when you have been doing it yourself for the past 20 years. It seems redundant and perhaps insulting. I can also understand, as a veterinarian who was lucky enough to see hundreds of dairies over the years, that there are folks out there who have euthanized cattle for 20 years, incorrectly. Of course, these cases are rare, but the point is that the industry is not uniform, and our knowledge of best practices and consumer demands are rapidly evolving.

Let’s change perspective. When was the last time you had a new employee on your dairy? If you have employees, the answer was likely within the last year, maybe month. If that employee was Hispanic, and 64% of NY dairies have a workforce with over 50% Hispanic workers (Maloney et al., 2016), then they likely had little to no dairy farm experience. In fact, only 2% of dairy workers from Latin America have worked with cows prior to working on a dairy in the USA (Delgado, 2022).

So, training is needed for employees to have a chance at doing their job well. But why the one-size fits all model? Our consumers are demanding to know more about their food and the care of the animals that produce it. FARM is an attempt at unifying our extremely large and diverse dairy industry in a direction that ensures that we still have consumers in the future. I’d encourage you to participate in the public comment period regarding the next FARM version 5.0, so that you can share your ideas about how to improve the program from the producer perspective. The public comment period will be open from September-November 2022 and can be accessed on the FARM website (https://nationaldairyfarm.com/).

There are many ways to fulfill the training requirements for FARM including on-farm trainings, dairy industry meetings, job shadowing, or watching videos and reading articles. On farm, in person trainings tailored to your farms are preferable from a learning perspective and I’d encourage you to continue working with your vet, consultants or us on the NWNY team to offer these opportunities to your employees. I also realize that some topics could best be addressed with some readily available resources that you can use on-demand when it suits your farm’s schedule. There are some great resources out there, in English and Spanish, and you can find a recently updated list, sorted by topic, on the bilingual section of our website. We also recently added articles in English and Spanish on the 5 required training topics (stockmanship, fitness to transport, calf care, non-ambulatory animal, and euthanasia) to our website.

Don’t forget that no matter how the training was delivered, it must be documented. You can find the FARM training signature sheet on their resource page, or in your FARM binder. Another option if you want to streamline the process is to use a learning management system. These systems are electronic, subscription based and act as a warehouse for videos, SOPs etc. They allow you to track individual employees, what trainings they need when and evaluate their performance to ensure they’re learning. Some local Co-ops have recently bought into one system called Train-Trac, which in my opinion is the most user-friendly. It’s something to keep in mind as labor efficiency and continual training become more important than ever in NY state.
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When we think about free-flow management in an automated milking system, we often assume that because cows can choose when to be milked (and perform other activities) that they don’t spend much time waiting to be milked. Until recently, this idea has not been evaluated by research groups.

From a recent preliminary observational study conducted by researchers at UW-Madison, it was determined that several factors influence cows and the time they wait to be milked in free-flow automated milking systems. Only 40 cows in one pen on a single commercial farm were observed for a 2-day period, so take the results with a grain of salt. What the researchers observed, though, is enough to get us thinking about how we are grouping our cows within robot groups, and if there is an optimal strategy.

On average, cows visited the robot and waited 15 minutes, 6 times per day to be milked. The total average waiting time was about 1 hour 20 minutes, but ranged from 5 minutes to about 5.5 hours depending on the cow. Researchers found that 1st calf heifers waited longer than mature cows to be milked, but as they got more experience in days in milk, that time decreased some. On top of waiting longer to be milked, those cows that waited longer also had shorter daily lying times of about 9.5 hours versus cows who had a shorter wait time and 11.1 hours of rest (Solano et al., 2022).

Researchers also suggested that the pen design, along with the layout of the robot box entry and fetch pen had an effect on waiting behavior. Some cows constantly exerted their will to enter the robot first over those cows waiting in the fetch pen by using a swing gate giving them priority access. Other displacements occurred at the exit of the box where some cows, after being successfully milked, disrupted the line of cows waiting to be milked. Though it is unclear as to whether or not the facility in the study was a retrofit, it is a good idea to take into perspective the proper value of the cost of long-term inefficiencies that remain with an old facility or poorly designed pen and robot layout. As Tim Terry of Cornell’s Dairy Environmental Systems Program says in his July 2022 factsheet (https://tinyurl.com/To-Retrofit), To Retrofit or Not to Retrofit, That Is the Question!, “...if it takes only five minutes per day, that’s over a half hour per week and 30 hours per year...”. He goes on to explain more about cattle preferences when it comes to turning radiuses and changes of direction. If you are thinking about retrofitting a facility for robots, take a moment to grab some tips from the rest of his article linked above.

We know that in parlor herds, time spent waiting takes away from resting time (Charlton et al., 2014) and that reduction in resting time leads to a higher probability of cows becoming lame (Proudfoot et al., 2010). Studies have also shown that lameness prevalence can be similar in AMS herds as in conventional herds. Not only is minimizing waiting time a good idea in order to increase efficiency of your automated milking system, but it is also potentially a key to reducing standing time and the risk of developing lameness in your cows. This is especially important during the heat stress season (going on now).
2-Day Hoof Trimming Workshop

August 16 - 17, 2022
9:30am - 3:30pm ET
In-Person Event
Offered in English and Spanish

This workshop is for dairy employees or others interested in bovine hoof care. This program will cover the basics of foot care and hoof trimming practices.

Performance Objectives:

- Understand bovine foot anatomy
- Practice basic hoof trimming methods
- Perform lameness detection and scoring
- Learn proper knife sharpening
- Practice safety in handling tools and cattle

*Limited to 15 Participants*
Lunch will be provided

Register: [https://nwnyteam.cce.cornell.edu/events.php](https://nwnyteam.cce.cornell.edu/events.php)
or contact Brandie Waite at 585-343-3040 x138
*Participants are required to be 18 years or older*

Questions? Contact
Margaret Quaassdorff
maq27@cornell.edu
585-405-2567

Presenters:

Chip Hendrickson
Professional Hoof Trimmer
AgroChem USA

Aaron Lavoy
Professional Hoof Trimmer
Midwestern Hoof Trimming School
Hortonville, WI

Location:
Lamb Farms
6880 Albion Rd.,
Oakfield, NY 14125

Cost:
$175 per person enrolled in the NWNY Team
$250 per person NOT enrolled in the NWNY team
Cornell Nutrition Conference

October 18 - 20, 2022
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East Syracuse, New York

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Thursday Breakfast Sponsor

Registration is open
Dairy Cattle Lameness Videos- in Spanish!

This past March, CCE regional teams and Pro-Dairy teamed up to host a webinar on Understanding and Mitigating Lameness. We had a great attendance and had a few participants ask if we would be offering the webinar in Spanish. We have made 4 animated videos, in Spanish, highlighting the key concepts that were presented during the webinar.

The videos are broken into the following topics:

**Lameness Overview** - In this short video, we discuss the impact of housing facilities and management on lameness and some best management practices for employees.

**Facility Considerations** - In this short video, we discuss the impact of housing facilities and management on lameness and some best management practices for employees.

**Impact of Nutrition** - In this short video, we discuss the impact of nutrition on lameness, risk factors associated with nutrition and lameness, and best management practices for employees to use when working with groups of cows.

**Hoof Trimming and Foot Baths** - In this short video, we will discuss the importance of hoof trimming and footbath management to prevent lameness in dairy cows.

You can access the video series on the NWNY Team’s YouTube channel (https://www.youtube.com/user/CCENWNY). We hope you find them useful and, as always, would love to hear your feedback. Reach out to Kaitlyn Lutz or Margaret Quaassdorff with suggestions for future video topics!

Don’t Miss Out on the 2022 NY Corn and Soybean Yield Contests

The annual corn and soybean yield contests sponsored by the New York Corn & Soybean Growers Association are underway. On the following page is the 2022 yield contest entry form. This form and contest rules can be found on the NY Corn & Soybean Growers Association web page at: [https://nycornsoy.org/yield-contests/](https://nycornsoy.org/yield-contests/). Entry forms must be postmarked by August 30 and mailed to: Brandie Waite, CCE Genesee, 420 East Main St., Batavia, NY 14020 or emailed to Mike Standy at: mjs88@cornell.edu. Cost is $30 per entry. This year the overall corn and soybean champions win an all-expense paid trip for two to the 2023 Commodity Classic in Orlando, Florida.

The deadline for the National Corn Yield Contest sponsored by the National Corn Growers Association (NCGA) is August 17 and the entry form can be found on their webpage at: [https://www.ncga.com/for-farmers/national-corn-yield-contest](https://www.ncga.com/for-farmers/national-corn-yield-contest). Please remember that this is a different contest than the state contest sponsored by the NYC&SGA. I would encourage growers to enter both corn contests. Applicants in the NCGA contest can use their contest harvest results to fulfill the requirements in the NYC&SGA contest as long as they fill out the entry form and pay the NY entry fee by August 30. Good Luck!
2022 New York Grain Corn and Soybean Yield Contests
Entry Form and Field Designation

Entries must be RECEIVED and PAID by August 30, 2022

Name_________________________________________Farm Name____________________________________
*Only one person per farm may enter and no more than two entries each for corn and soybean*
Address___________________________________________________________
Town________________________State______Zip_________County_________________

Email_____________________________________________________________
Home Phone________________________Work/Cell Phone_____________________
Sponsor(if sponsored)_________________________________________________

Grain Corn Entry #1                                                  Grain Corn Entry #2
Hybrid_____________________________________________________________
Company___________________________________________________________
County____________________________________________________________

Grain Corn Entry #1                                                  Grain Corn Entry #2
Hybrid_____________________________________________________________
Company___________________________________________________________
County____________________________________________________________

Soybean Entry #1                                                  Soybean Entry #2
Variety_____________________________________________________________
Company___________________________________________________________
County____________________________________________________________
Maturity group (circle one): 0 1 2 3
County____________________________________________________________

I hereby agree that all the contest information provided by me pursuant to this Yield Contest shall be the property of the New York Corn and Soybean Growers Association and can be used and distributed at the sole discretion of the Association.

Signature of the Entrant________________________________________Date________

Number of grain corn entries (limit 2 per farm)  _____ x $30/entry  Total  _____
Number of soybean entries   (limit 2 per farm)  _____ x $30/entry  Total  _____
New NYCSGA membership  Renew NYCSGA
($99/year membership not required to enter state contest)

Total Enclosed  ________

Method of Payment (check one) :
☐ Bill my seed provider-name/phone#____________________________________(contest only)
☐ Cash  ☐ Check(payable to NYCSGA)  ☐ Credit card

Credit card number_____________________________________________________
Expiration date________Sec Code_________Billing Zip Code__________________
Signature_____________________________________________________________

Return to: Brandie Waite, Genesee County CCE 420 East Main Street Batavia, NY 14020
Questions? Contact Mike Stanyard at Email: mjs88@cornell.edu  Phone: 585-764-8452

If this form is properly submitted, you will receive the appropriate Harvest Report Forms in the mail or email if provided.
Summer-Seeding by Jodi Letham

Summer offers us the opportunity to successfully plant perennial forages such as alfalfa. It is essential to pay attention to the timing and conditions of the seedbed. Having sufficient soil moisture and a seedbed that maximizes seed-to-soil contact will contribute to a rapid, more uniform emergence.

Summer seeding offers a number of advantages over spring seeding:

- Less weed pressure, therefore this can be an optimum time to seed legume-grass mixtures, which have limited herbicide options.
- Spreads out the planting workload.
- Harvest a small grain crop followed by a full forage production year after seeding.
- Perennial forages can get a jump start on the growing season and can produce at or near established stand production the following year.
- Increase soil health, reduce soil erosion through the winter months.
- More time to prepare an optimal seedbed in the summer.

For optimum crop establishment and to minimize winterkill approximately 6 to 8 weeks are needed for the seedlings to germinate and develop sufficient root reserves to survive. Ideal planting depth for alfalfa in clay or loam soils is ¼ to ½ inch at a rate of 15-18 lbs./acre.

Here are some recommendations for summer-seedings:

1. **Plant only if conditions are right**
   - a. Never seed in dry soil—a light rain (1/2” or less) can germinate seed, but the new seedlings will die from drought in a matter of days if no more rain is received.
   - b. Weeds must be controlled.

2. **Plant at proper date**
   - a. Next to dry soil, planting too late is the biggest cause of summer seeding failures.
   - b. Dates vary based on temperature and moisture availability. *Need at least 45 frost free days of good growing to build up adequate carbohydrate reserves for winter.

3. **Weed control**
   - a. Use a burn-down herbicide before planting to control perennial weeds and destroy any remaining vegetation from the previous crop.
   - b. Do not use a cover crop with summer seedings as it will slow establishment down and compete for water.

4. **Fertility**
   - a. Have soil tested and follow lime and fertilizer recommendations.
   - b. Optimum pH level is 6.8. Liming should be done 6 to 24 months prior to planting.
   - c. Phosphorus is critical to proper root and seedling development. Potassium increases yields and stand persistence.

5. **Variety selection**
   - a. Plant alfalfa varieties with high genetic potential for yields, quality, persistence and the pest resistances you will need for maximum long-term performance from your alfalfa stand (disease resistance and winter hardiness).

August 2022

**Cornell Hemp Field Day** - August 11, 2022 from 8:00am - 3:00pm at Cornell’s AgriTech Campus in Geneva, NY. The focus this year includes hemp genetics and breeding, pest management, and grain and fiber production, including demonstrations of combine harvesting and baling. Registration is available online [https://tinyurl.com/2022-Hemp-Day](https://tinyurl.com/2022-Hemp-Day)

**Two Day Hoof Trimming Workshop** - August 16-17, 2022 from 9:30am - 3:30pm at Lamb Farms, 6880 Albion Rd, Oakfield, NY. Registration is now open. Offered in English and Spanish. Limited to 15 participants. Cost is $175 per person (enrolled in NWNY Team), $250 per person (not enrolled), lunch will be provided both days. Information and registration is posted on the NWNY Team website, [https://nwnyteam.cce.cornell.edu/](https://nwnyteam.cce.cornell.edu/) . See page 10 for details.

**2022 Aurora Farm Field Day** - August 18, 2022 from 10:00am - 3:00pm at the Musgrave Research Farm in Aurora, NY. The program will consist of 8 presentations from CALS researchers on a host of topics. DEC credits will be available. The full agenda and registration are coming soon, visit [https://events.cornell.edu/event/2022_aurora_farm_field_day](https://events.cornell.edu/event/2022_aurora_farm_field_day)