

Champlain Valley CROP, SOIL & PASTURE Team



University
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Extension
College of Agriculture and Life Sciences

SPRING 2026 NEWSLETTER



Preparing for Plant Diseases During the Cropping Season

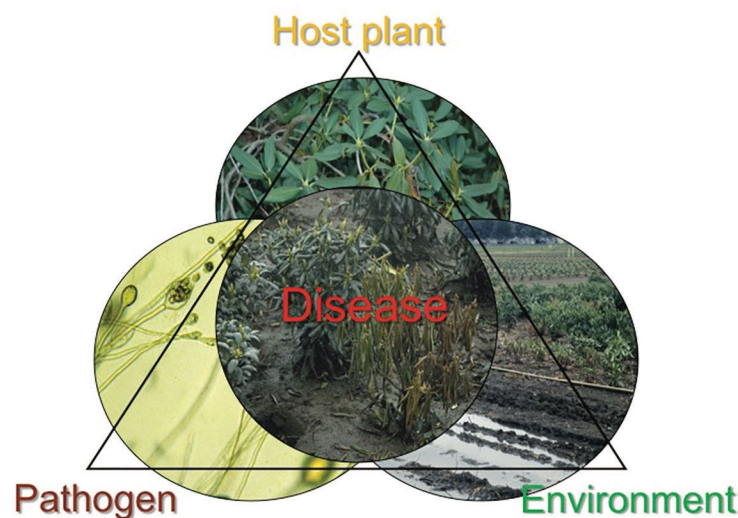
Alyssa Thelin, Agronomist, Champlain Valley Crops, Soils and Pasture

WITH THE UPCOMING CROPPING SEASON, disease management preparation may be on the horizon for some farmers. The first step to planning disease management is understanding what, why, and how plant diseases occur. Plant diseases can be defined as anything that prevents a plant from performing to its maximum potential, which is a very broad definition and includes biotic and abiotic diseases. They negatively impact crops by competing with plants for nutrients and increasing plant systemic responses (ex: lignification or leaf shedding) reducing forage quality and crop yield. There are six different types of plant pathogens: fungi and fungal-like organisms, bacteria, phytoplasmas, viruses and viroids, nematodes, and parasitic higher plants.

For a disease to proliferate, three criteria have to be met. There must be a susceptible host, a virulent pathogen, and a favorable environment. If all three of these are met, then disease will occur. Each criteria have factors that will influence the disease severity and incidence. Genetic diversity within the host plant or pathogen may determine resistance in the plant to the pathogen or resistance in the pathogen to a chemical treatment. The biol-

ogy and lifecycle of the host and pathogen may affect when the plant is most susceptible to disease and when the pathogen is most virulent. Some pathogens may only be virulent at certain periods in their lifecycle, and some plants may only be susceptible to disease at certain developmental stages. Environmental conditions in the region, as well as microclimates, can have an impact on the severity and incidence of diseases. Microclimates are small areas within a geographical location that vary in amount of sun exposure, wind, soil types, etc. An example may be a dense crop canopy that is cooler and moister because there is less sunlight penetrating through the canopy and less air movement between the crops. This creates a favorable climate for many disease pathogens because there are prolonged periods of wetness, and temperature swings

are less extreme giving pathogens the chance to grow and multiply. Fungi and fungal-like organisms cause more plant diseases than any other group. They thrive in moist to wet environments at a wide range of temperatures. Once there is a susceptible host, a virulent pathogen, and a favorable environment, diseases will progress through a disease cycle. Disease cycles have six stages:



Requirements for disease proliferation as shown by the Disease Triangle. Credit: Oregon State University.

Preparing for Plant Diseases During the Cropping Season cont'd.

1 Inoculation or the introduction of the pathogen to the host. Different pathogen groups employ different methods often with specialized mechanisms to aid the inoculation phase. For example, fungi produce spores that are easily spread through wind and/or water movement and land on crop material sometimes hundreds of miles away.

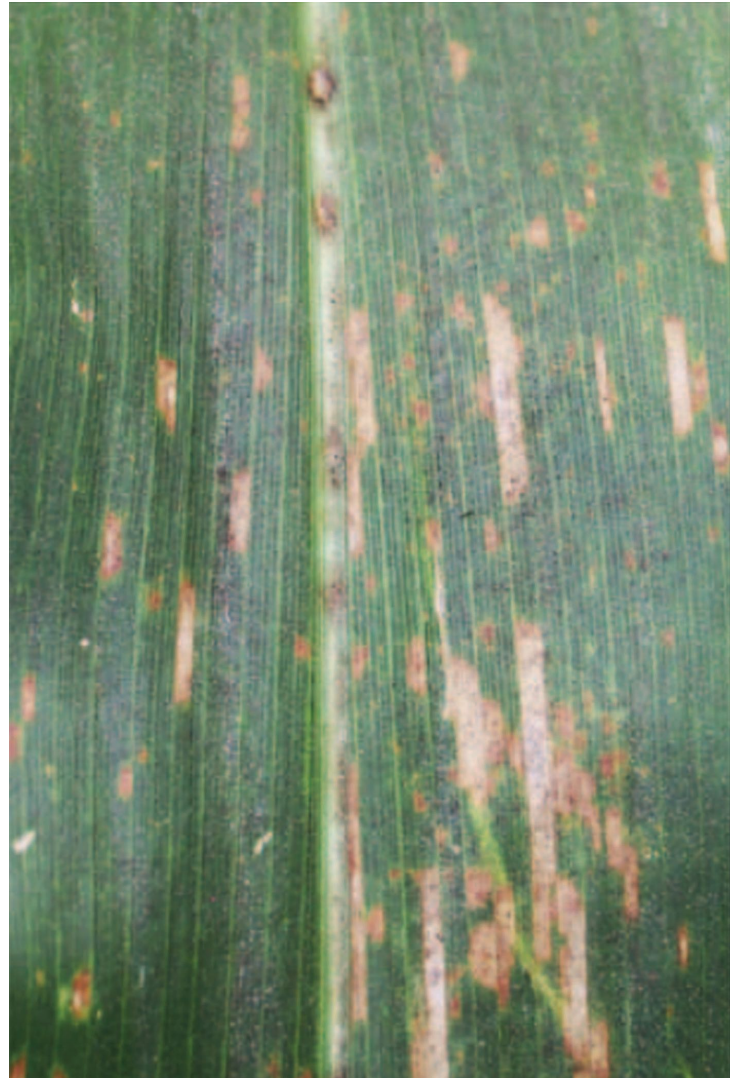
2 Pathogens penetrate plant tissue through tissue wounds or natural openings, like stomata. Some pathogens, like certain species of nematodes and fungi, can penetrate directly into plant tissue given that environmental conditions allow. Microbial and microscopic pathogens (bacteria, phytoplasmas, and viruses) often rely on vectors to damage plant tissue so they can enter. Associations with insects are common, and pathogens can be easily spread and introduced to plants through insect feeding wounds.

3 Infection of the plant occurs when the pathogen invades and establishes a parasitic relationship with the plant.

4 Once inside the plants, pathogens may enter an incubation period and lay low for a length of time before disease is initiated and symptoms are observed.

5 Reproduction can occur throughout the season with multiple generations causing disease over the course of the growing season.

6 Lastly, survival of the pathogen from one year to the next varies species by species. Some have evolved specialized characteristics that aid in survival over long periods of unfavorable conditions. Soybean cyst nematodes lay eggs in a cuticle casing that is very hard and resistant to microbial and chemical penetration preventing the eggs from being killed before they hatch. Some fungal pathogens have evolved to produce dark colored spores that reduce the amount of UV light that can penetrate and cause cell death.



Symptoms of gray leaf spot in corn. Spots are restricted by leaf veins and expand into rectangular areas of dead tissue as they mature.

Credit: Purdue Extension, BP-56-W.

Understanding lifecycles of common diseases is key to implementing the correct management strategies. Utilizing resistant varieties of crops to diseases commonly seen in your fields is a good place to start. Corn, soybeans, and other small grains have been bred with resistance or tolerance to a variety of pathogens. Crop rotations help to decrease disease occurrence by reducing the amount of time host crops are in the field. Tillage implementation, cover cropping, and chemical treatment all vary in their ability to effectively manage plant diseases as there are multiple considerations that must be made for each treatment method, such as survival characteristics and chemical resistance of each pathogen. For more detailed information or questions, feel free to connect with me via email: Alyssa.thelin@uvm.edu 🐾

Managing for Grassland Nesting Birds in Hayfields and Pastures

Carly Bass, Grazing Specialist, UVM Extension

AS THE WEATHER WARMS UP, the symphony of bird calls is a sign of Spring and the growing season approaching. While we are preparing to plant fields and cut hay, birds are looking for places to nest and lay eggs. Some bird species nest in grasslands and will choose hayfields or pastures to lay their eggs and hide them in the tall grass. The typical schedule we follow for hay cuttings can pose a threat to these birds, and the populations of these bird species are declining. Paying attention to where they are nesting and managing those fields accordingly will help prevent these birds from becoming extinct.

The three main grassland nesting birds we see in Vermont are the Bobolink, the Eastern Meadowlark, and the Savannah Sparrow. They all prefer to nest in fields/ open

land that is at least 20 acres (Eastern Meadowlark prefers at least 40) and regular shaped, making it possible to nest away from woodland and shrubby perimeters where predators may be. They also prefer fields with a 3:1 grass to legume/forb ratio, meaning fields that are legume or other broadleaved species dominated will be less attractive to these birds for nesting. However, they will occasionally choose a spot that does not quite fit that criteria, so it is wise to monitor your fields for bird activity before cutting or grazing them for the first time in the Spring. The birds will pick nesting spots towards the end of May and will be established in the fields for the month of June. Below are different management strategies for protecting grassland birds in your fields: *(continued on next page)*



From left to right: boblink, savannah sparrow, nest, eastern meadowlark



Managing for Grassland Nesting Birds in Hayfields and Pastures cont'd.

Delayed first cut — The first cutting or graze in fields where grassland birds have nested until after their offspring have fledged. That means fields would not get cut until July 15. While this management strategy is easy to execute, it can pose challenges to farmers in terms of forage quality and weed pressure.

Delayed second cut — Birds do not start nesting until the end of May; that means fields could be harvested in the early weeks of May before the birds come, if weather permits. This strategy could work well if you are able to prioritize your larger fields for an early harvest and then leave those fields undisturbed until mid-July fledging time. The rough timeline of this strategy is no cutting between May 20 and July 24 but can be shifted if the field is monitored and the birds fledge earlier. This strategy can be beneficial in terms of forage quality for our livestock but can be hard to execute during a wet Spring.

Partial cutting — Since the birds do not like nesting too close to the perimeter, farmers can harvest the outer edges of their fields throughout the nesting season if there is a decent sized space left in the middle to protect the birds. Since grassland birds rely on a “needle in a haystack” strategy to protect their nests from predators, it is important their nests are still camouflaged and cannot be easily located after harvesting part of the field. Therefore, this strategy requires larger fields since it is recommended that around 10 acres of undisturbed grass are left in the center.

Low stocking density — Grazing at a low stocking density can allow the livestock to avoid nests and still have space to forage and roam. This strategy can be done through the season, avoiding the time restraints the other management options have. The recommended density is currently 30 to 40 cattle days per hectare, which converts into grazing 425 lbs. of forage/acre or about half the stocking density you would normally have in a paddock.

An important thing to consider that helps protect these birds with any management strategy is to mow from the inside of the field outwards so that birds have time to escape through the grass instead of getting pushed and trapped in the middle of the field. Another consideration is to keep these fields productive. Even though they are managed slightly differently than typical hay fields and pastures, these fields still require the same level of care. Neglecting to put amendments on the fields and allowing weeds to establish will not only prevent grassland nesting birds from returning but also produce lower quality forage for your livestock.

Financial assistance and field monitoring are available through the Bobolink Project to promote these habitats. If you are interested in promoting bird habitat in your fields, visit www.bobolinkproject.com or contact Hyla Howe at hhowe@massaudubon.org or (781) 259-2119. ∞



Changing forage landscapes in dairy

Phasing out BMR Corn and thinking about alternative forages

Shawn Lucas, Assistant Professor, Extension Agronomy

IN SILAGE PRODUCTION SYSTEMS, Brown Midrib (BMR) corn varieties are known for having higher digestibility (due to reduced lignin content) and for driving higher milk production. They are also known to be prone to lodging (also due to lower lignin content; lignin provides structure) and yield a little lower than conventional varieties. Despite these drawbacks, many producers find that the benefits of BMR outweigh the challenges. Some estimates suggest that BMR corn varieties make up about 20 to 30% of the total acreage of silage corn produced in the northeastern United States. This proportion varies by region across the country. Nationally, U.S. producers grow between 90 to 95 million acres of corn annually with a little over 6 million of that acreage being silage corn. When one

looks at BMR corn as a proportion of the total national corn acreage, it is not hard to imagine that for companies that breed and market corn seed, the economics of producing and maintaining BMR varieties for a relatively small market might not make sense. Corteva Agriscience, the primary producer of BMR corn in the U.S. with their brands including Pioneer, Brevant, and Dairyland Seed, announced in 2025 that they will phase out BMR varieties by 2030. This has raised concern among many producers who currently include these varieties in their operations.

Corteva intends to replace BMR varieties with higher yielding varieties that have been bred for improved digestibility, however the most digestible conventional varieties currently contain 47%–67% neutral detergent fiber



A sorghum-sudangrass crop near Ferrisburgh, Vermont at second cut in late summer 2025.

Changing Forage Landscapes in Dairy cont'd.

digestibility at 30 hours (NDFD30) while BMR varieties typically have 54 to 74%. Farmers and researchers are exploring other ways to make up for the loss in digestibility. Both reduced planting populations and higher cutting height are being explored; however, both options generally mean reduced tonnage. Another option may be short stature corn. These varieties have digestibility characteristics that are closer to BMR compared to conventional hybrids and also have a higher starch content than conventional varieties. In early trials, they have shown similar yields as conventional varieties. These varieties are still in relatively early testing, but they seem to have promise.

Another option for farmers might be to consider alternative annual forages such as forage sorghum, sorghum-sudan, sudangrass, and pearl millet. These alternative forages may offer a feed option as well as other benefits that can help operations. In particular, BMR sorghum-sudangrass varieties have been in use on some dairy farms in the northeast for many years. Similar to corn, BMR stands for Brown Midrib in the context of sorghum-sudangrass, and these varieties offer good digestibility. This grass can be planted later than corn offering flexibility in operations (such as allowing more time to harvest the first cutting of hay, which often happens around the same time as corn planting) and providing a potential “emergency” crop in years when spring conditions are too cold and/

or wet for optimal corn planting. Sorghum-sudangrass is also drought tolerant. Several local producers working with the UVM Extension Champlain Valley Crop Soil and Pasture Team in 2025 reported that their sorghum-sudangrass plantings yielded well during that very dry year. Sorghum sudangrass also provides more ground cover than corn, potentially reducing erosion and nutrient runoff concerns. Some producers regionally have related that it seems to improve soil structure and tilth. Some research from Cornell and trials from the UVM Extension Northwest Crops and Soils Team suggests that in a two-cut system sorghum sudangrass can provide similar tonnage and nutritional value to corn silage. The UVM Extension Northwest Crops and Soils Team continues to do variety trials with this crop and the UVM Extension Champlain Valley Crop, Soil and Pasture Team is beginning research trials on sorghum-sudangrass in 2026 with the intention of evaluating a few varieties for performance, nutritional value, and impacts on soil health. If you're interested in this crop as an alternative (or supplement) to corn silage, feel free to get in touch with us. We'd be glad to connect with you, and we're always looking for future partners for on-farm trials. For more information on sorghum sudangrass (or other cropping needs) contact Shawn Lucas (shawn.lucas@uvm.edu) or Alyssa Thelin (Alyssa.thelin@uvm.edu). ☺



Events

Vermont Pay For Performance Program

Wednesday, May 20, 2026, 11:00 a.m. – 12:30 p.m.
Middlebury, Vermont

A new application period for VT PFP will be available for farmers summer 2026. Join Otter Creek NRCD, UVM Extension, and VAAFAM for a workshop on the program & application process. We'll provide the new updates on what's different, and answer questions about eligibility, applications, record collection, and if it's a good fit for your farm. Otter Creek NRCD can also provide application assistance.

The Vermont Pay For Performance Program (VPPF) is a program that provides performance-based payments to Vermont farmers for reducing phosphorus (P) losses from their agricultural fields. While most current conservation programs pay cost-share for practice implementation, VPPF pays for the outcomes of practices: it recognizes that conservation practices generate value to the public and directly compensates farms for that value. This event will fulfill (2) total hours of Water Quality Training Credit and (2) total hours of Custom Applicator Training Credit.

Rotational Grazing Systems for Horses

Thursday, June 4, 2026, 1:00 – 3:00 p.m.
Becky Kinkead's Farm, 83 Abernathy Pl., Cornwall, VT 05753

Join us for a pasture walk at Becky Kinkead's Icelandic horse farm where she grazes her horses on a paddock paradise system to benefit the land and horses. Speaker Dr. Katherine Goldberg, Veterinarian, Icelandic horse endurance rider, rotational grazer and tract system expert, will be joining us. Some of the many benefits of rotationally grazing that will be covered: Benefits of tall, fibrous forage to your horse's metabolism; Benefits of a Track system to your horse's health and behavior; Reducing mud and improving hoof health; Improving plant and soil health; Benefits to water quality

Stay tuned for our upcoming **Corn Evaluation Workshops** this summer! These sessions will cover key challenges for the upcoming growing season, including crop performance, nutrient management, and in-field decision making. Join us to learn practical strategies, ask questions, and connect with other farmers and ag professionals. More details coming soon!

Stay tuned for the **Addison County Fair & Field Days**, happening August 4–8! We're excited to once again host the Crops Contest, showcasing local production and giving growers a chance to highlight their work. More details on entry requirements and how to participate will be coming soon — keep an eye out!



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