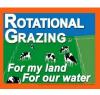
Safe Tillage Tip from Agricultural Outreach Specialist, Whitney Burgess:

While unintended contact with underground utilities can be a costly disruption to your fieldwork, it can be avoided, free of cost, by contacting *Dig Safe*. To learn more about the location and general presence of underground public utilities on your land, call *Dig Safe* at 811, or visit their website a www.DigSafe.com to use their marking service. Information will be provided on how to pre-mark your site to assure the correct area is being checked and marked. Even if you've inquired about utilities on your land before, their depth can shift with factors like last season's heavy rains and resulting erosion. The network of underground utilities is growing and changing — *Dig Safe* can help you keep up with these changes.















Signs of Conservation Announcement from Agronomy Specialist, Jennifer Alexander:

We offer free roadside "Signs of Conservation" to farmers that implement conservation practices. These signs are meant to raise awareness and appreciation for farmers' efforts to build soil health and improve water quality. Placing these signs around your farm informs the community, and those visiting Vermont, that local farmers care about soil health and water quality and manage their land accordingly. Folks outside of the agriculture community may lack the context to identify conservation practices in action, like distinguishing between hay fields and well-established cover cropped fields. These signs can help educate onlookers and promote productive discussions. Please reach out for your free signs if you're interested!

Spring 2024 Newsletter





PO Box 209 Poultney, VT 05764 802-287-6880 www.pmnrcd.org

POULTNEY METTOWEE NATURAL RESOURCES CONSERVATION DISTRICT

POULTNEY METTOWEE NATURAL RESOURCES CONSERVATION DISTRICT



Spring Plant Sale

Our annual fundraiser is right around the corner!

In addition to native trees, shrubs, and perennial flowers, we're offering fruit trees (apple, pear, peach, cherry), berries (strawberries, blueberries, raspberries), asparagus and horseradish crowns, lilacs, a native wildflower and grass seed blend, And — new this year — tree protection gear and nursery logo hats!

Ordering is open until **April 15th**. Pickup will be **Saturday, May 4th (9am - 12pm)** at the Champlain Valley Native Plant Restoration Nursery.

Find our **catalog** and **order form** on the PMNRCD website's nursery tab or contact us to request a mailed catalog. Please check availability before placing an order after March 31st.

If you'd like to make some lovely, beneficial additions to your landscape, this is your opportunity! Create wildlife habitat, offer birds and pollinators a treat, increase flood resilience, improve soil and water quality, and enjoy a sensory spectacle through the seasons.

The Champlain Valley Native Plant Restoration Nursery is a partnership with PMNRCD and the Nature Conservancy with support from the Village of Poultney. We grow native plants from local seed for statewide conservation and restoration projects. PMNRCD and CVNPRN provide education to schools and the wider community: sale proceeds will fund educational and technical programming.

Champlain Valley Native Plant Restoration Nursery: 685 York Street, Poultney, VT 05764

www.pmnrcd.org/champlain-valley-native-plant-restoration-nursery

Questions? Contact nursery manager Sadie Brown: sadie@pmnrcd.org or (802) 287-6606





POULTNEY METTOWEE NATURAL RESOURCES CONSERVATION DISTRICT

PMNRCD Staff

Hilary Solomon District Manager Hilary@pmnrcd.org

Jennifer Alexander Agronomy Specialist

Jennifer@pmnrcd.org

Sadie Brown Nursery Manager Sadie@pmnrcd.org

Averie Noble Project Specialist Averie@pmnrcd.org

Whitney Burgess Agricultural Outreach Specialist

Sophia Milkowski Administrative Assistant



District Manager Updates

Progress reports from PMNRCD manager, Hilary Solomon

South Lake Tactical Basin Planning

PMNRCD works with the Rutland NRCD and the Rutland Regional Planning Commission (Rutland RPC) to assist the Vermont Department of Environmental Conservation (DEC) with their basin planning efforts in the Poultney and Mettowee Watersheds, also known as the South Lake Champlain Watershed. These groups coordinate to offer services that promote planning efforts and strategy implementation to improve regional water quality. This year, PMNRCD staff are analyzing water quality sample data for levels of phosphorus and chloride: two common elements that, in excess, can harm aquatic ecosystems. We're also conducting landowner outreach in the forested headwaters of our local rivers and streams. This field season's focus is the Lake St. Catherine Watershed in the Wells area. If you'd like a site visit for your property to discuss the potential of grant-funded water quality projects.

South Lake Clean Water Service Provider

PMNRCD and the Rutland RPC continue to work together, administering funds for phosphorus control projects aimed at cleaning up Lake Champlain. We just wrapped up our fourth open grant round and we're currently accepting qualification packets from entities who wish to manage projects. To date, we have funded of projects from Dorset to Benson and many towns in between. Projects range from assessments for project identification, to engineering design, to project implementation. While a variety of project types are eligible for funding, they must reduce phosphorus flowing to Lake Champlain and fall below an average target price determined by Vermont DEC staff to qualify. Please call (802) 558-3515 for more information.

Learn about Neonics

An update from Agricultural Outreach Specialist, Whitney Burgess

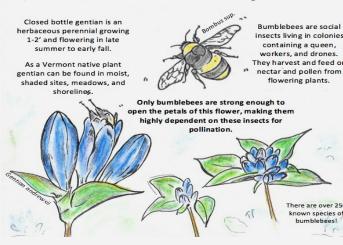
Neonicotinoids, or "neonics", have been a topic of conversation in Vermont with legislation currently being proposed regarding their use. Legislators base their proposals on concerns with broadscale applications of neonicotinoids and their potential to impact non-target organisms, like bees and other pollinators. For Vermont crop producers, the proposed legislation would likely impact the use of seed treated with neonicotinoids.

Currently, much of the purchased corn and some soybean seed is coated with neonicotinoids as a method to control insect pests.

For more information on neonicotinoids, check out the webinar series, "Managing Neonicotinoids in Row Crops" hosted by Heather Darby of the University of Vermont Extension. Topics include: an introduction to the Agricultural Innovation Board (AIB), neonicotinoids and pollinators, integrated pest management (IPM), cover crops and no-till, reducing bee exposure, and transitioning away from neonic-treated seeds. Recordings are available to view at the following link, under the "Past Events" section:

www.uvm.edu/extension/nwcrops/conferences-events-current-and-past

Bumblebee & Closed Bottle Gentian



Artwork by nursery manager, Sadie Brown

The Importance of Soil pH

Advice from Agronomy Specialist, Jennifer Alexander

What makes the soil sour? Soil acidification occurs as a result of rainfall, plant decomposition, and application of manure and fertilizers. Besides acid rain, rainfall can cause nutrient leaching, which indirectly contributes to soil acidification. Decomposing plant material, manure, and fertilizers release compounds that decrease soil pH and affect soil nutrient balance. Soil nitrification, which is also caused by decomposition, manure, and fertilizers, accelerates soil acidification.

It has been understood for over 125 years that soil needs proper pH to grow lush plants with high yields. Acidic soil can limit plant abilities to uptake nutrients. It also affects the growth of fine root hairs and the production of nitrogen-fixing nodules in legumes. Soil pH can affect the efficacy of some herbicides. The optimal soil pH range for plant growth is 6.2-7. According to a 2020 article by the U.K. Department of Agriculture, Environment, and Rural Affairs, farms may lose up to 52% of phosphorus sown when soil pH falls below 6.0. One way to prevent this on your land, is to create a liming plan.

Liming – the process of adding limestone to soil – was once a foundational practice of good field management, but it seems to be a less commonly used practice in recent years. In addition to raising soil pH, liming adds calcium and magnesium to the soil and makes soil nutrients more available for plant uptake. A general rule of thumb is that for every 100 pounds of nitrogen fertilizer applied, 500 pounds of "typical" agricultural lime is needed to neutralize nitrification-induced acidity. Crushed limestone applications can take 4-6 months to start neutralizing soil acidity. The courser the liming material, the longer it will take to alter soil. The best way to apply limestone is to surface-apply and disk it in, which allows the limestone to mix into the soil profile without burying it. Plowing can bury lime rather than incorporating it into the top 3" of soil.

It's ideal to ensure good soil fertility and pH prior to implementing no-till systems or long-term hay fields. Even so, the soil pH will still drop over time due to rainfall and surface applications of fertilizers and manure. Unfortunately, lime doesn't seem to leach deeper than the top 3" in most soils. A long-term study conducted by Penn State found that lime applications in no-till systems showed no difference in liming capacity between annual applications at a lower rate vs. triennial applications at a heavier rate. There was also concern that more frequent lime applications could cause soil compaction.

Proper soil pH is vital for crop health and high yields. With increased expenses and market volatility of agricultural products, farmers need to bolster their bottom lines. Before buying more fertilizer to bump up production, check your soil pH!

Springtime Soil Health Tips

Administrative assistant, Sophia Milkowski, shares insights from a soil health course

After last summer's historic floods, Vermont land needs some TLC. As we step into spring and start another growing season, it's worth considering what we can do to protect and rehabilitate the soil. PMNRCD staff are taking a 12-week Soil Health Training course, created by the Franklin County NRCD with support from LCBP and NEWIPCC. The course, which is as inspiring as it is informative, will hone our expertise to better serve the local farmers and landowners we assist. Soil specialists from a myriad of backgrounds are sharing their knowledge alongside our assigned reading: the class textbook, Building Soils for Better Crops Ecological Management for Healthy Soils by Fred Magdoff and Harold van Es, is one of dozens of fascinating resources we're studying. The tips below were gleaned from topics covered in this program.

Keep the soil covered

April showers bring more than just May flowers. Raindrops are small, but they pack a punch when they hit the ground! The force of a raindrop is strong enough to break apart soil aggregates, which seals soil pores and causes rainwater runoff. This vicious cycle of erosion and compaction ultimately impedes water infiltration and percolation, resulting in lower crop yields and less healthy plants. Physical barriers on the ground can greatly reduce raindrop impact. Some buffer options include cover crops, perennial vegetation (like filter strips or grassed waterways), compost, manure, mulches (organic or synthetic), and post-harvest crop residues. Beyond raindrop interception, covering soil also protects it from wind erosion and evaporative moisture loss.

Take advantage of timing

Soil is most vulnerable when it's wet. Avoiding field operations in wet conditions mitigates soil damage. In contrast, frost tillage and frost seeding capitalize on semi-frozen soil's weight-bearing ability to minimize soil compaction from heavy machinery. The "ball test" can help determine soil moisture: soil that's sticky enough to be shaped into a ball is too wet, whereas soil that's dry enough to crumble won't be as impacted.

Consider tillage modifications

While there are study-backed benefits to no-till agriculture, it's not inherently appropriate or accessible for every piece of land. There's a spectrum of options between no-till and conventional tillage. Practices like strategic tillage, rotational tillage, strip tillage, zone tillage, ridge tillage, contour tillage, and frost tillage lessen soil erosion and compaction. Reducing tillage frequency, using specialized equipment, and tilling under optimal conditions can improve soil health and resilience.