



Field Crops, Forages and Soils Updates for NNY

13 April 2020

Soil temperatures across the North Country remain cold.

- Some directly measured soil temperatures across St. Lawrence, Franklin and Clinton Counties were between 37 and 42 degrees last week. See our April 6th NCRAT [blog post](#). Soil temps remain generally well below 50 this week. The table below lists 2” soil temperatures reported by 18 [NYS Mesonet](#) stations across the North Country.
- Soil temperature is a good indicator of suitability for planting and fertilizing many important crops. A soil temp of 50 °F is generally considered as a minimum for planting corn while many grasses will start to green up when soil temps are above 42 °F for a few days. In addition to soil temperature, frost risk also determines appropriate planting dates. Alfalfa, red clover and most forage grass seedlings are relatively resistant to cold injury. Jerry Cherney reminds us that Reed Canarygrass may be the one exception, that it is more sensitive to freezing temperatures.



County	Station Location	Elevation	Soil type	2” Soil Temp, °F
Lewis	Osceola	1093’	Colton cobbly fine sand	44
Lewis	Glenfield	838’	Hudson silt loam	46
Lewis	Copenhagen	817’	Plainfield fine sandy loam	45
Lewis	Croghan	1375’	Croghan fine sand	44
Jefferson	Belleville	475’	Collamer silt loam	49
Jefferson	Cape Vincent	275’	Benson-Galoo complex	43
Jefferson	Wellesley Island	285’	Hudson silt loam	47
Jefferson	Philadelphia	430’	Rhinebeck silt loam	45
St. Lawrence	Hammond	367’	Matoon silty clay loam	45
St. Lawrence	Edwards	682’	Roundabout silt loam	44
St. Lawrence	Potsdam	422’	Hailesboro silt loam	44
St. Lawrence	Louisville	279’	Hogansburg fine sandy loam	44
Franklin	Malone	775’	Madalin silt loam	42
Franklin	Gabriels	1758’	Colton gravelly loamy sand	41
Clinton	Ellenburg	977’	Schroon fine sandy loam	42
Clinton	Chazy	186’	Malone gravelly loam	46
Essex	Essex	182’	Kingsbury silty clay loam	45
Essex	Ticonderoga	274’	Scio silt loam	45

Itching to get out and plant already? Here’s some guidance.

- *New seedings and small grains.* If you are planning on planting any new seedings or spring cereal crops (oats, barley or wheat) these can be planted anytime assuming field conditions allow for proper seedbed preparation. We do have some new seedings and small grains already planted in NNY.
- *Field Corn.* If you are thinking about planting corn, the factors to consider are calendar date, field conditions, soil temperatures and short term forecast. For some locations in NNY- if it is the last week of April, dry soil conditions, soil temperatures are close to 50 degrees and the short term forecast includes warm temperatures with no rain expected in the next 24 to 48 hours; go ahead and plant corn on well drained soils. In all locations in NNY- If we have the same scenario and it is the first week of May; go ahead and plant corn. If soil conditions are too wet to plant, wait until they

improve. Make sure to plant corn between 1.5 to 2 inches deep, even for the early planted corn. We can expect lower emergence rates for April planted corn, plant slightly higher (~5%) seeding rates to compensate for reduced emergence.

- *Soybean.* There is no reason to try planting soybeans in NNY in April. The risk outweighs the minimal potential for higher yields compared to May planted soybeans. For some locations of NNY- if it the first week of May, field conditions are suitable for planting, soil temperatures have reached 50 degrees and the short term forecast includes warming temperatures with no rain in the next 24 hours; go ahead and plant soybeans. For all areas of NNY- if we have the same scenario and it is after the first week of May; go ahead and plant soybeans. Early planted soybeans should include a fungicide and possibly an insecticide seed treatment for added protection if the seed were to sit in the ground for an extended period of time prior to emergence. Also, there is no reason to increase seeding rates for early planted soybeans. We can expect lower emergence with the earliest planted soybeans but there is plenty of growing season ahead for these plants to fill in the space and compensate for the reduced populations on their own.

Resist the urge to turn livestock out on pastures too early.

- Grazing too early can weaken both native and improved grass stands and can shorten the grazing season. It can also make a muddy, disturbed, compacted mess of pasture soils that can take years to correct. Animals and grazers are typically anxious to get outside and take advantage of the greening landscape, but be patient. Pasture plants need at least 3-4 leaves before they can tolerate grazing well. When they're grazed too early, the plants are forced to use valuable root energy to regrow leaves and stems - before root reserves are plentiful. This puts plants in a vulnerable state, regrowing more slowly and less likely to overcome subsequent stresses. Plant stress also carries over from one season to the next. Plants that were grazed too early, too short or too frequently last summer and fall will continue to be stressed this year. Waiting for plants with 4+ leaves, dry soils and then leaving 5-8" after grazing and adequate rest is the best way to avoid those stresses.

Pesticide Certification during PAUSE- NY

On April 7, 2020 the NYS DEC issued an **Enforcement Discretion for Extension of Pesticide Applicator Recertification and Business and Agency Registration during the COVID -19 Emergency** notice (found here: <https://www.dec.ny.gov/chemical/298.html>).

Here are the highlights of this action and how it applies to pesticide applicators with expired licenses:

- Any applicator, both private and commercial, whose certification lapsed on or after November 1, 2019 is allowed to possess, purchase and apply restricted use pesticides until 60 days from the expiration of Executive Order 202 (issued March 7, 2020 and found here: <https://www.governor.ny.gov/news/no-202-declaring-disaster-emergency-state-new-york>)
- As of now, the Executive Order 202 expires September 7, 2020. The enforcement discretion will expire 60 days from that date or any extensions issued to it.
- The pesticide applicator must follow these steps during the period of time outlined:
 - Make sure that their applicator card expiration date is *after* November 1, 2019
 - Keep the expired applicator card in their possession
 - Have a printed copy of the Enforcement Discretion Letter in their possession
 - These are not addressed to a specific applicator, only "To Whom it May Concern"
 - The Enforcement Discretion Letter can be found here: https://www.dec.ny.gov/docs/materials_minerals_pdf/enfdiscretion.pdf
 - Present both the expired license and a copy of the Enforcement Discretion letter to the pesticide dealer when purchasing restricted use pesticides.

Burndown herbicide options in no-till soybeans

Glyphosate (and possible multiple resistant) marestalk is spreading across NNY and may already be on your farm. If it is not on your farm, it is likely on its way. Now that herbicide resistant marestalk, tall waterhemp and palmer amaranth are in NY, we need to start to manage like we already have them on the farm. In no-till, strip-till and very minimum-till (i.e. one pass with a vertical tillage tool) burndown herbicides will be necessary to control weeds prior to planting.

If any marestalk is present, it must be controlled before planting. Marestalk can be either a summer annual or winter annual. The winter annual marestalk rosettes are present right now and as soon as it begins to warm up these will begin to bolt and grow tall quickly. Once resistant marestalk gets any taller than 6 inches it becomes very difficult to control. If we are dealing with multiple resistant marestalk (resistant to Group 9 and Group 2 herbicides) Liberty Link, Xtend and Enlist soybeans are the choices that allow for effective postemergence options.

The most effective burndown programs for resistant marestalk in soybeans will have *more than one effective site of action*. If dandelions are a problem consider using one of the listed programs that include 2,4-D ester. Don't substitute 2,4-D amine formulations for the ester formulation. Apply 1 pint per acre of 2,4-D ester (4 lb gal formulations) to keep the preplant interval to 7 days, rates higher than that will lengthen the planting interval. Apply 1 oz/acre of Sharpen (saflufenacil) with no preplant restrictions.

Here are some choices that include more than one effective site of action for the control of resistant marestalk in soybeans:

- Sharpen (1 oz) + glyphosate + metribuzin
- 2,4-D ester (1 pint) + glyphosate + metribuzin (7 days prior to planting)
- 2,4-D ester (1 pint) + Sharpen + glyphosate + metribuzin (7 days prior to planting)
- Sharpen (1 oz) + glufosinate (Liberty)
- Sharpen (1 oz) + glufosinate + metribuzin
- 2,4-D ester (1 pint) + Sharpen (1 oz) + glufosinate + metribuzin (7 days prior to planting)
- paraquat (Gramoxone) + metribuzin
- 2,4-D ester (1 pint) + paraquat (Gramoxone) + metribuzin (7 days prior to planting)
- Sharpen (1 oz) + glyphosate + dicamba (must use one of these: XtendiMax, Engenia, FeXapan, Tavium (dicamba + s-metolachlor)) *In Roundup Ready 2 Xtend (dicamba tolerant) soybeans only*
- Sharpen (1oz) + Enlist One + glyphosate (or Enlist Duo (2,4-D choline + glyphosate)) *In Enlist soybeans only*

Here are 4 additional options that include only one effective site of action for the control of resistant marestalk in soybean:

- 2,4-D ester (1 pint) + glyphosate (7 days prior to planting)
- Sharpen (1 oz) + glyphosate
- glyphosate + dicamba (must use one of these: XtendiMax, Engenia, FeXapan, Tavium (dicamba + s-metolachlor)) *In Roundup Ready 2 Xtend (dicamba tolerant) soybeans only*
- Enlist One + glyphosate or Enlist Duo *In Enlist soybeans only*

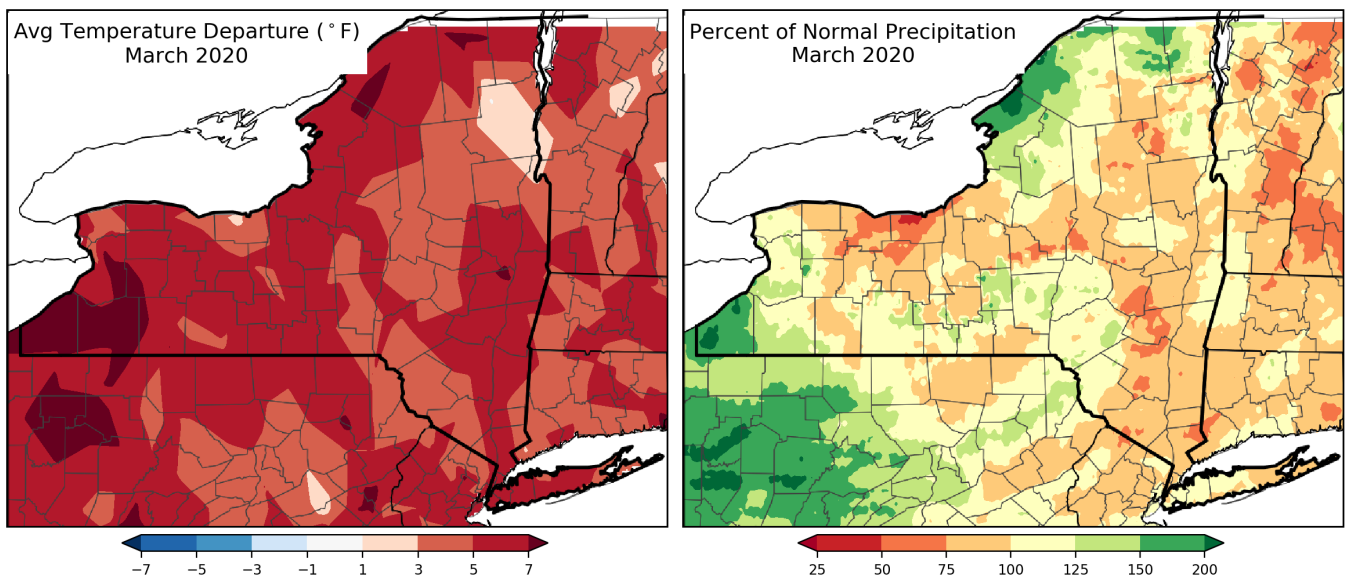
Using Surplus Milk as Fertilizer in NYS

- COVID-19 has temporarily disrupted milk markets causing dairy farms to have surplus milk. Milk does have value as a fertilizer, but also can cause environmental harm. Guidance for safe, agronomic, and environmentally sound storage and use of this surplus has been developed by NYS Ag & Markets, NYS DEC, with Cornell's Nutrient Management Spear and Pro-Dairy programs. The NYS DEC memo permitting land application and storage of milk is [here](#).

- Nutrient content of milk, calculations for use of milk as a fertilizer and environmental considerations for land-applying milk are summarized by NYS Ag & Markets and Cornell [here](#).

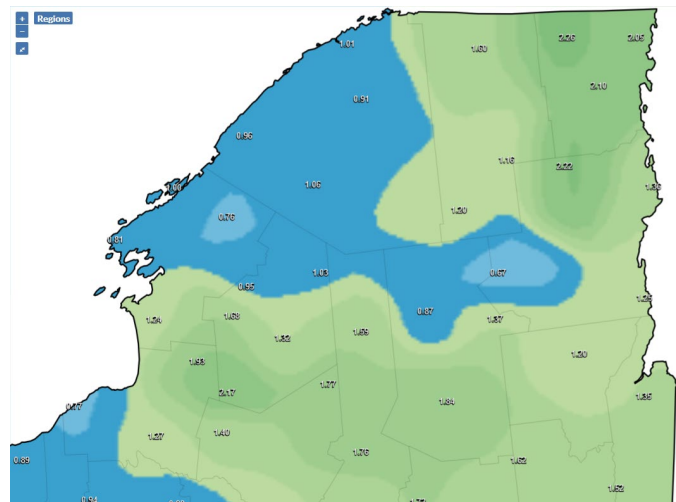
NNY Weather Summary for March 1 through early April, 2020.

- March was a warm and dry month for the entire Northeast, with average temperatures ranging from 3°F to 9°F above normal across the region. All 35 major climate reporting sites experienced above-normal temperatures, with 27 of them ranking March 2020 among their 10 warmest Marches on record. It was also the fourth *consecutive* warmer-than-normal month for the Northeast. See ‘Avg Temperature Departure (F)’ below. First week of April was similarly warm but the near term forecast for mid-April is colder temperatures.
- March was a bit dry in NYS and e April has continued this trend. Precipitation for March was about 95% of normal for the Northeast US, however there are areas along the Seaway and around Ellenburg where more rain fell. No areas of NYS are currently classified as abnormally dry or in drought.



Early April precipitation ranged from 0.67” to 2.26” across the North Country.

- The map at the right shows precipitation totals across the North Country for April 1 to 13. Totals from 0.5” to 1.0” are shown in blue while totals above 1.0” are green. Darkest green shades near Ellenburg and Osceola are over 2” during that time period.
- Soil moisture across the region is adequate and about normal at this date.



Additional resources:

1. [Cornell Cooperative Extension's North Country Regional Ag Team Web Resources](#)
2. [New York Integrated Pest Management \(NYSIPM\) Web Resources](#)
3. [Weekly Crop Progress & Condition Report. 2019. New York USDA-NASS.](#)
4. [Northeast Regional Climate Center](#)
5. [NYS Mesonet](#)

For more information about field crop and soil management, contact your local Cornell Cooperative Extension office or your CCE Regional Field Crops and Soils Specialists, Mike Hunter and Kitty O'Neil.

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Our Mission

“The North Country Regional Ag Team aims to improve the productivity and viability of agricultural industries, people and communities in Jefferson, Lewis, St. Lawrence, Franklin, Clinton and Essex Counties by promoting productive, safe, economically and environmentally sustainable management practices and by providing assistance to industry, government, and other agencies in evaluating the impact of public policies affecting the industry.”

Building Strong and Vibrant New York Communities

Cornell Cooperative Extension provides equal program and employment opportunities. NYS College of Agriculture and Life Sciences, NYS College of Human Ecology, and NYS College of Veterinary Medicine at Cornell University, Cooperative Extension associates, county governing bodies, and U.S. Department of Agriculture cooperating.