

MILLE LACS SOIL SERVICE



MONTHLY NEWSLETTER

MAY 2023

Soil Temperature And Planting Corn

Soil temperature is an important factor in seed germination and emergence. Together with soil moisture, the temperature determines the ideal planting time for many crops. The minimum threshold temperature for corn seed germination is 55 degrees in the seed zone. Corn will germinate and emerge slowly and unevenly when soil temperatures are less than 55 degrees. Under ideal soil temperature and moisture conditions, corn will emerge in 7 to 10 days. Cold and uneven soil temperature in the seed zone can be caused by variable soil texture, soil color, soil drainage, surface residue cover, and seeding depth. Dark-colored soils will typically warm more quickly than light-colored soils. As of 04-25-23, the Mn Department of Ag was around 40-45 degrees.

Quick Reference To Nutrients

Nitrogen is one of the more mobile nutrients, this is your water uptake. N is taken up in NO₃ & NH₄⁺ forms and is used to synthesize amino acids.

Phosphate stimulates roots, flowers, and helps fruit development and overall crop maturity. P is necessary for energy transfer. The higher the clay content in soils the more immobile it becomes. P is most readily available with pH levels between 6.5 - 7.0

Potassium is essential for the transport of sugars and formation of starches and oils. K helps regulate the opening and closing of a leaf's stoma which is important for the efficiency of water.

Sulfur is a secondary element but is equally as crucial to healthy crop development. It is found in amino acids that make up plant proteins. Sulfur has also been shown to increase the seed oil contents in soybeans. Sulfur aids in seed production and promotes nodules in legumes. The lack of Sulfur results in small, slow growing plants.

Calcium is King although it is considered a secondary nutrient, Ca is responsible for nutrient uptake, it is required for the formation of new cells and is present in cell walls. Calcium deficiency will show the effects of stunted growth, tip burn, and shedding of blossoms. Magnesium is the yang to the ying of Calcium with a direct 1:1 ratio of movement in the soil. Mg is the central atom of chlorophyll. Mg aids in phosphate and Nitrogen metabolism. Mg also is essential in early growth and uniform crop maturity.

FSA DATES & REMINDERS

- May 26 - CRP Grassland signup ends
- May 31 - Final date to take a marketing loan on 2022 corn or soybeans
- June 2 - PARP and ERP Phase 2 Deadline

STAY CONNECTED



Mille Lacs Soil Service



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Figure 1. Planting into cold soil (below 50°F) when cold conditions are expected for the next 48 hours can lead to germination problems and seedlings not emerging or not emerging well. 1a. Corn seedling that started leafing out below ground and now has twisted leaves which will delay or negate normal plant development.. Figures 1b-c. Unemerged seedlings attempting to leaf out belowground. None of the seedlings shown should be counted as a productive plant. (Courtesy of UNL)

NOW HIRING

FULL TIME & PART TIME
AVAILABLE

- Seasonal Work-
- Operators-
- Tender Drivers-
- Warehouse Help-

Contact
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For More Information

JOKE OF THE MONTH

An elderly woman was very proud of her four-month-old grandson.....

so she took him with her down to Miami Beach. The first morning she got him all decked out, and down they went to the beach, where she set him by the shore to play. But no sooner had she sat down in her beach chair than a huge tidal wave rose up and swept the baby away.

“God,” she said, standing up and shaking her fist at the sky, “you aren’t very nice! Here was this little baby boy, whose mother carried him for nine months, barely around for four. We haven’t even had time to get to know him or give him a happy life.”

In another instant the wave returned, setting the infant down unharmed on the sand.

The grandmother looked him over, looked right back at the sky, and snapped, “He had a hat!”