



2020 Wheat Update

Since we started tracking weather in 2003, our best yields have come when wheat is top-dressed with a winter nitrogen application between 800 and 1,000 Growing Degree Units (GDU) in Central Virginia which usually occurs between Jan. 20 and Feb. 20 based on an October 15th planting date.

As shown in the graph below, wheat planted on Oct. 15 in Central VA has reached 895 GDU today according to our Manquin satellite weather station. This is slightly cooler than our 927 GDU average. The next ten days will only produce an additional 17 GDU.

In most fields there are less than two full tillers so the recommendation is for 40 to 50 lbs. /acre of nitrogen with 8-10 lbs./acre of sulfur. Fewer tillers means a 10 lbs./acre more nitrogen while more tillers means 10 lbs./acre less nitrogen. A tiller is defined as a branch with three leaves and a growing point (see photo).

For November-planted wheat, winter applications will need to be completed by the end of February regardless of the GDU accumulated if nitrogen is to be split-applied. As the days get longer, the wheat accelerates thru the vegetative stages and tillering will be completed just after March 21 (days become longer than nights).

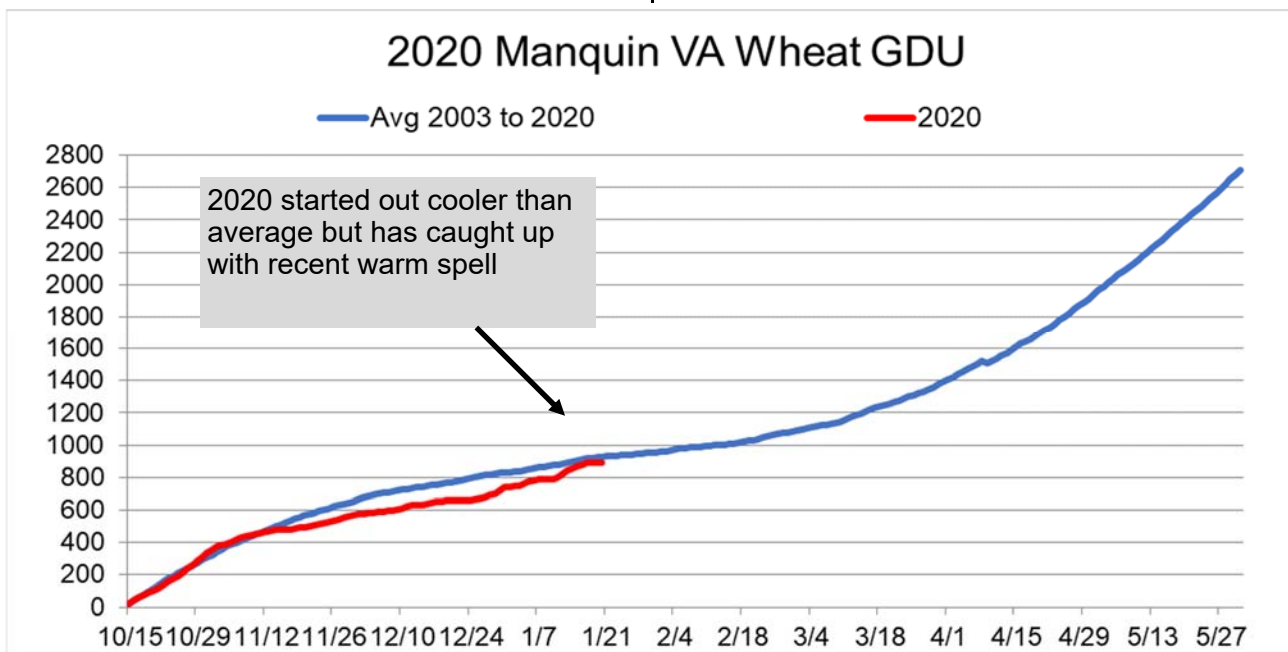
We recommend 4 ozs./ acre of propiconazole or 5 ozs./acre of Topguard® with this topdress to keep the wheat clean from mildew and septoria.

Splitting two fungicides on wheat produced 12 bu./acre more wheat in NC State plots over a three-year period. A second fungicide is recommended at either flag leaf emergence or at flowering depending on the scab resistance of the wheat variety.

If a full rate of seed insecticide, like **Vizor Plus**, or a late fall pyrethroid was used, no insecticide is recommended at this time. Seed treatments with half-rates of insecticide may need control.

If weeds were not controlled last fall, add either Harmony Extra or Quelex to the tank mix. Either can be used with 2-4 ozs./acre of Clarity® to clean up broadleaf weeds. Do not add any surfactant with these chemicals when using nitrogen. Do not add boron to Quelex tank mixes.

If ryegrass has not been controlled, wait until average daily temperatures reach 45F before spraying. Spraying before these temps are reached will result in significantly less (and disappointing) control.





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Don't forget discounts are available on USG Soybean seed and RenPro seed treatments through January

Wheat Nutrition for Higher Test Weight and Falling Numbers

Two major limiting factors affecting profitable wheat production for food-grade wheat in the eastern US are *low test weights* and *low falling number scores*.

Low test weight indicates a physical change in kernels. Test weight is a measure of how much grain weight can be placed in a given volume. At maturity (about 30% kernel moisture), prior to any rain, wheat kernels will pack well into a bushel. When it rains, kernels swell and upon drying, the kernels do not shrink back to their original volume, shape, and smoothness. This results in more space between kernels, and they will not pack into a bushel as well as they did before the rain or even heavy dews. The result is a lower test weight.

Low falling numbers indicate a chemical change in kernels. The Falling Number test is used to measure sprout damage in wheat. Sprout damage is caused by the enzyme alpha-amylase, which cuts long starch chains in the wheat endosperm into shorter pieces, resulting in poor bread, cake and noodle quality.

According to recent research, **applying molybdenum as a foliar application** increases the dormancy period of the kernel for about two weeks. This means both higher falling numbers and higher test weights.

In the data, foliar applications at flag leaf were critical to prevent low falling numbers. However, for increasing test weight (and protein), the molybdenum applications will have begin prior to that growth stage.

For 2020, Renwood Farms is recommending 1 qt. / acre of **Molyron™** be applied twice during the spring season but no later than flag leaf emergence.

Boron leaf levels continue to test very low or deficient. Boron must be supplied throughout the life of the crop.



Boron increases nitrogen efficiency and utilization by the wheat plant. Apply 1 qt. /acre of 10% boron with this winter topdress. Do not use Solubor in sprayers that have had Roundup® unless cleaned.

In fields with very high soil phosphorous from litter, manure or sludge, zinc will become a limiting factor. In these fields, or where zinc has not been applied, add either one lb. /acre of zinc (from sulfate) or .25 lbs./acre of EDTA chelated zinc with this topdress.