



# 2019 Wheat Update: March 18, 2019

As of March 17, we are about three weeks behind the average GDU for this date in Central VA. (see graph below). Soon after days get longer on March 20, wheat plants will stop making tillers and advance their growth regardless of the accumulated GDU (Growing Degree Units).

If you have not applied your winter application of nitrogen, the data suggests the value of splitting nitrogen is limited at this date. Apply all of the wheat nitrogen (80 to 100 lbs./acre) by April 1 if possible.

If you have applied winter nitrogen in February, plant tissue samples taken just prior to GS30 (jointing) will give a guide to the amount of nitrogen needed to complete this crop. It usually takes between 60 to 80 lbs. /acre of nitrogen to finish the crop. Always **balance nitrogen with sulfur**. Zinc, boron, manganese, copper and magnesium have all been recommended if needed.

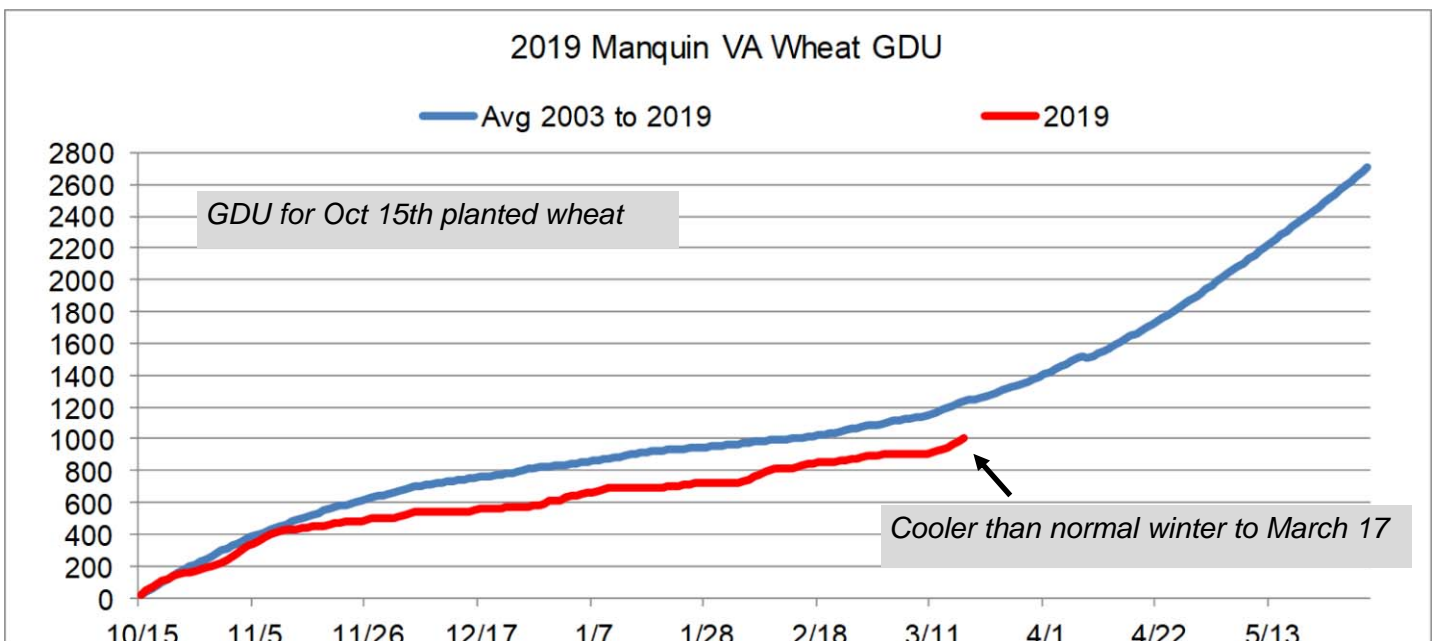
It takes between 1200 and 1400 GDU for a soft red winter wheat plant to grow from seed to jointing. Jointing is identified as either Growth Stage 30 (Zadoks) or Growth Stage 5 (Feekes) depending on your preference.

Nitrogen applications applied just prior to or at this growth stage have a significant contribution to wheat yields. If nitrogen applications are delayed and leaf nitrogen levels dip below 3.0%, yields are lost.



With the wet winter, several fields did not get the February (800-1000 GDU) topdress. The photograph displayed here shows the importance to plant development of this nitrogen application. The photo above shows the same wheat variety planted the same day (October 19).

This photo was taken on March 12. The plant with 50 lbs./acre of nitrogen applied at 846 GDU (February) has three potential tillers compared to one tiller on plants with no Feb. nitrogen. Timing matters!





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## Wheat Health for Higher Test Weight and Falling Numbers Scores



Septoria leaf blotch in wheat

### Diseases

Septoria leaf blotch is present in many wheat fields. The GS30 topdress is a good time to add *Headline*® or *Quadris*® to the nitrogen topdress application to control these diseases when infections are light.

### Insects

Including a pyrethroid insecticide in the GS30 application *prior to beneficial insect emergence* should provide CLB, Hessian fly, armyworm and aphid protection for the entire season. Do not add this treatment if the wheat is not close to GS30 or beyond. The insecticide will not hold if applied too early.

### Weeds

Chemicals used to control ryegrass must be applied when average daily temps are over 45F. *Quelex*™ is controlling weeds better than *Harmony Extra*™: both are working better with 2-3 ozs./acre of *Clarity*®. We have recommended *Buctril*® in some fields to control resistant weeds.

### Wheat Quality

For 2019, Renwood Farms is recommending 1qt. / acre of *Molyron*™ be applied with the spring topdress and again at flag leaf to preserve grain quality.

According to research, applying *Molyron*™ as a foliar application reduces the enzyme alpha-amylase activity in mature wheat by increasing the dormancy period of the kernel for about two weeks.

In 2017, *Molyron*-treated wheat was three lbs. heavier in test weight than untreated wheat with falling number scores increased by almost 60 points.

*Molyron*™ is formulated and sold by Renwood Farms and can be ordered by calling Jeff or Iain.

*Molyron*™ was developed to address the two major limiting factors affecting profitable wheat production for food-grade wheat in the eastern US: *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. 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 high alpha-amylase activity in wheat which results in poor bread, cake and noodle quality.

In the data, foliar applications of *Molyron*™ at flag leaf were critical to prevent low falling numbers.