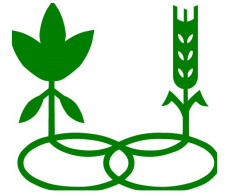


## 2023 Wheat and Barley Update

By Paul W. Bodenstein, agronomist, ag.systems, LLC



Since we started tracking weather in 2003, our best cereal yields have come when top-dressed with a winter nitrogen application between 800 and 1,000 Growing Degree Units (GDU) in Central Virginia. This 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, 2022 in Central VA reached 865 GDU on Jan. 22, 2023, according to our Manquin satellite weather station. This is slightly cooler than our 895 GDU average. The next ten days is forecasted to produce an additional three GDU (not much).

In most fields, there are less than two full tillers so the recommendation is for 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).

**Add 4 ozs./acre of Topguard EQ® with this top-dress to keep the wheat clean from mildew, septoria and/or tan spot.**

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.

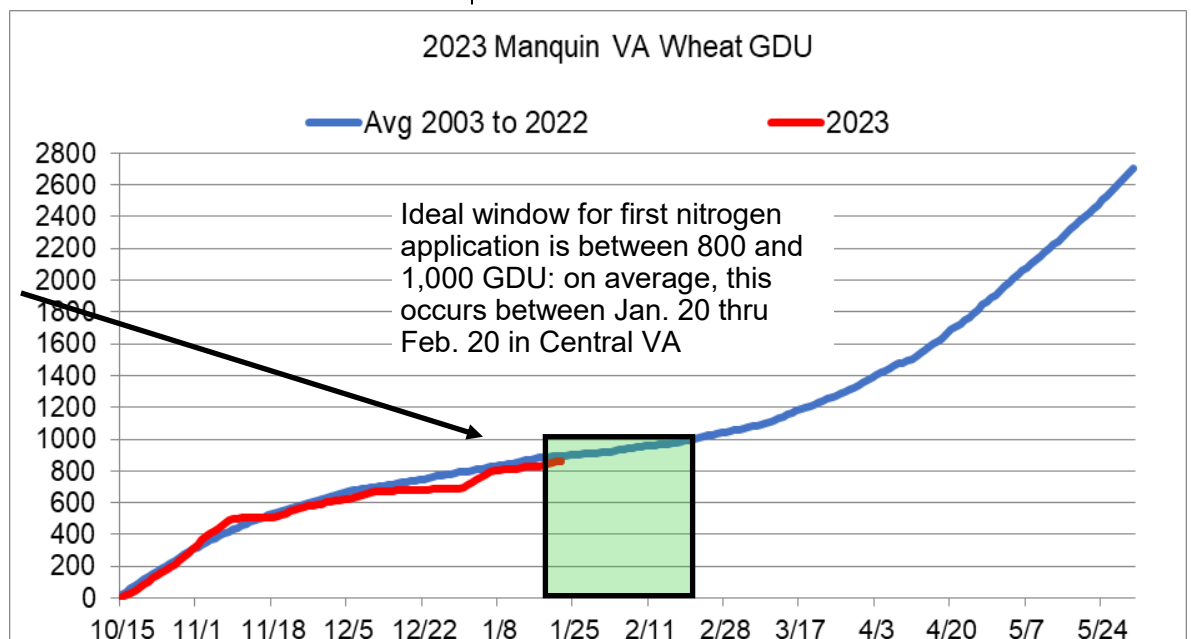
If **Vizor Plus™** seed treatment was used, no insecticide is recommended at this time. Seed treatments with half-rates of insecticide or no insecticide will need a pyrethroid insecticide with this application to control winter aphids.



One full tiller: three leaves and a growing point

The 2023 cereal season has been about as average as you can get in total GDUs.

There are very few GDUs forecasted through the end of January. This gives growers a wide window to get this topdressing applied.





**Renwood Farms**  
17303 Sandy Point Rd  
Charles City, VA 23030

Sales and Customer Service: (804) 829-2450

Paul W. Bodenshteyn, agronomist: (804) 314-7463

[paulb@agsystemsva.com](mailto:paulb@agsystemsva.com)

**Don't forget discounts are available on USG Soybean seed with Enlist, Xtend Flex and Xtend technology through January**

## Cereal Nutrition for Higher Yields, Test Weight and Falling Numbers

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 broad-leaf weeds. **Do not add any surfactant** with these chemicals when using liquid nitrogen solutions. **Do not use 2,4-D.** If ryegrass or bluegrass have not been controlled, **wait until average daily temperatures reach 45F** at least two days before and two days after **before spraying**. Spraying when colder will result in significantly less (and disappointing) control.

Fields with heavy ryegrass pressure can receive a second Anthem Flex application to provide over layering treatments.

### **Nutrition for Yields and Disease Control**

The two major limiting factors affecting profitable wheat production for cereals in the eastern US are **poor grain quality** from low test weights and low falling number scores and **low grain yields** from low kernel numbers and reduced tillers.

**UNION BMZ**, a pre-mix of boron, molybdenum and zinc formulated with an exclusive plant growth promoter (PGP) called **Arcus™**. At 72 ozs./acre, Union BMZ provides for .25 lbs./acre of boron (**from boric acid**), .25 lbs. / EDTA zinc (equals 1 lb. zinc from sulfate) and .5 ozs./acre of molybdenum. **Add Union BMZ with this winter top-dress.**

Applying **molybdenum** as a soil or foliar application increases the dormancy period of the kernel for about two weeks during harvest. This means both higher falling numbers and higher test weights.

### **Boron and molybdenum**

increase nitrogen efficiency and utilization so overall n rates can be reduced.

Plants with adequate boron levels produce more kernels per head.

Plants with higher zinc levels produce and keep cereal tillers. Maintaining adequate zinc levels will elevate manganese levels elevated which reduces leaf burn when topdressing.

**Arcus™** PGP stimulates plants to extract soil reserves of manganese and iron, critical nutrients for disease prevention, grain quality and grain yields.

In fields with very high soil phosphorous or receiving litter, manure or sludge, **adding a Bio-Amp (Amplify) will release the nutrients from these organic sources of fertilizer, especially nitrogen.**

**Union BMZ, Arcus, 16% molybdenum and Bio-Amp are all available from Renwood Farms as part of our new biological product line.**

If you have any questions about these recommendations or products, please contact Renwood Farms.

