

# TURN ROWS

A NEWSLETTER COVERING THE SOUTHERN PIEDMONT OF NORTH CAROLINA

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## Topics:

- Split N Applications for Winter Wheat
- Is Hessian Fly a Problem?
- Upcoming Events!

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**CAUTION:** Information & recommendations presented are applicable in the Southern Piedmont of NC & may not apply in your area. Consult your local extension agent.

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## Split Nitrogen Applications for Winter Wheat

Timing nitrogen applications in wheat is necessary for optimum yield. There are two critical times to make fertilizing decisions: late January to early February and at Growth Stage 30 (GS-30) which is typically in early March. The time period from late January to early February is the key factor in determining whether a split nitrogen application will be beneficial. If in this time period, the stand has enough tillers for optimal yield, it is best not to split nitrogen, and only apply later. Applying nitrogen in January and February when it's not needed can increase the risk of freeze damage, disease, lodging and can actually reduce yield. If however, a stand is unsatisfactorily thin, it needs more nitrogen at an earlier date to increase the number of tillers in order to respond more efficiently to the later nitrogen application.

In well tillered stands, the later applied nitrogen is used more for grain production. The earlier applied nitrogen is used more for increasing tillering. The decision on whether or not to recommend a split nitrogen application depends heavily on the degree of tillering.

Timing the arrival of the GS-30 and its coincided nitrogen application is not always easy. Varieties will differ greatly in the arrival of this growth stage, however one clue is that the plants start to "stand up" and get taller. The best way to determine the growth stage is to pull several plants and split the stems in half and look for the growing point, in dark green and shaped like a tiny pine cone in the stem. At GS-30 this growing point will have moved  $\frac{1}{2}$  inch up the stem. Once a "joint" or "node" will have appeared on the stem, the ideal time to apply late nitrogen is over.



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## Winter Wheat continued..

If an early split of N was not made in January or February, yield is optimized at an application around 90-120 lb. N. If an earlier N application was made to promote tillering, the second N application should bring the total amount of Spring N up to 90-120 lbs. (For example if 60lbs of N was applied early, then another 30-60 lbs should be applied at GS-30.)

## Is Hessian Fly Something to be Concerned About?



It is important to scout your wheat to determine if symptoms you are seeing (yellowing, lack of vigorous growth, poor tillering, etc.) is a result of Hessian fly or something else. Other causal agents of these symptoms could include things like cold weather, lack of nitrogen, and wetness. Hessian fly are present as pupae in the fields at this time of the year. To scout for pupae, carefully dig up tillers below the soil and peel back the outer layers of

leaves. Often pupae will fall out into the soil or will be feeding on the base of the plant behind these leaves. Once you have determined the presence of Hessian fly, you need to make a decision about what to do with your field. Our resistant varieties are still holding up well, so you should focus on fields that are planted with a susceptible variety. Then separate your fields with susceptible varieties into three categories independent of planting date:



- 1) Fields that have some Hessian fly from the fall generation and are planted with a susceptible variety. Research from our state has shown that these fields will not benefit from a spring foliar spray. All fields with a susceptible variety likely have Hessian fly at some level. The vast majority of fields in our state fall into this category.
  - 2) Fields that are moderately infested with Hessian fly from the fall generation and are planted with a susceptible variety. These fields may benefit from a spring foliar spray, but timing will be critical. Try to time the spray for warm weather in mid-March. You can improve your chances for spray effectiveness by looking at the progression of pupae development. When you squeeze them and they begin to pop pink or red, instead of white, they are close to becoming adults. Remember that we are timing the spray to kill adults, so you should try to hold off your spray until most of the pupae are developed or some have emerged. Any pyrethroid can be used. The cutoff for this category (heavily infested) and the previous category might be somewhere around 50% infested tillers from the fall generation.
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## **Hessian Fly continued..**

3) Fields that are severely infested with Hessian fly from the fall generation and are planted with a susceptible variety. Unfortunately the best option for some fields will be to till them up. Fields approaching a 100% rate of infested tillers with plants that are dying or dead will fall into this category.

## **News and Upcoming Events!**

- Cotton Production Meeting, February 6, 10am-12noon, Stanly County Agri-Civic Center
- Southern Piedmont Grain Sorghum Meeting, February 13, 10am-12:15pm, Union County Agricultural Center
- V Credit Pesticide Class, February 21, 10am-12noon, Union County Agricultural Center
- Corn/Soybean Production Meeting, February 26, 6pm-830pm, Union County Agricultural Center
- V Credit Pesticide Class, February 27, 10am-12noon, Stanly County Agri-Civic Center

**--'Green Books' for Corn and Corn Silage as well as Cotton and Soybeans are now in. They will be available at your local Extension office and the production meetings--**

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