Jarette's Grains Journal

Jarette Hurry
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Contact Us

For more information regarding any of your farming needs, please feel free to contact the Bertie County Cooperative Extension Office at 794-5317. Your questions and comments are important us.

Soil Conditions for Corn Planting

Corn should be planted when soil temperatures reach **55° F at a 2-inch depth** and the long-range weather forecast shows a good chance of warm temperatures. In the coastal plains 55°F soil temperatures usually occur from **March 20 –March 25**. Due to wet soil conditions limited corn has been planted however this is expected to change with a warmer and drier April approaching.

Corn Starter Fertilizer

Corn starter fertilizers have been used successfully to increase early plant growth, nutrient uptake, and yields in research trials and on the farm. They also promote earlier maturity, improve southern corn billbug control, and help suppress weeds through earlier shading. **Corn starter fertilizer should be placed 2-3 inches away from the seed and 2-3 inches deep the blend should supply 20 -30 lbs./acre of actual nitrogen (N) and phosphorous (P)**

Corn Plant Populations

The optimum population for a given situation varies with soil type, hybrid, the ability to supply irrigation water and other management practices. For our area final plant populations should range from **24,000 to 33,00 plants per acre for non-irrigated corn**. Populations as high as 43,00 plants per acres are acceptable for irrigated corn.

Wheat Diseases

Powdery mildew is possibly the most common disease found in wheat and is usually most active in thick, lush areas of the field. Cool and rainy weather enhance the development of this disease. Temperatures in the range of 59°F to 79°F favor powdery mildew infestations and development. The disease is slowed significantly when temperatures are above 77°F Wheat varieties susceptible to Powdery mildew should be sprayed with a recommended fungicide when 5 to 10% of the upper plant leaves are covered with Powdery mildew mycelium. The most effective chemistry for Powdery mildew control is propiconazole.

Leaf rust has characteristic red-orange pustules that erupt from the upper epidermis of the leaves. These pustules are approximately the size of a pinhead and filled with thousands of red-orange spores that are wind-borne and can infect additional leaves and wheat plants. Leaf rust develops extremely rapidly at temperatures of 60°F to 80°F. Apply a fungicide when rust covers 1% to 3% of the area on the upper leaves.

Septoria glume blotch disease is characterized by lens shaped lesions on leaves. Leaf lesions develop initially as small water soaked areas that become chlorotic (yellowed) and with reddish-brown centers. As the lesion matures to a size of 1/16 inch by ¼ or ½ inch it becomes grayish-brown with chlorotic edges. This disease is favored by splashing rain, high humidity, and temperatures between 68°F to 82°F.

Head Scab (Fusarium Head Blight) infection occurs at or soon after flowering and is favored by wet weather before, during and after this time. Consider a fungicide at flowering for wheat to protect against scab. The most effective fungicides against scab are **Caramba, Proline**, and **Prosaro**. Folicur will provide some protection. Do not apply strobilurins such as Quadris and Headline close to flowering they may increase DON levels. Spray nozzles should be angled at 30° down from horizontal, toward the grain heads, using forward and backward mounted nozzles or nozzles with a two directional spray, such as Twinjet nozzles.

Enclosed is a listing from the 2015 North Carolina Agricultural Chemicals Manual of labeled fungicides for use on wheat and a wheat development scale

Wheat Insect Pest

Cereal leaf beetle can be a major insect pest on wheat. The population usually peaks between mid- April and early May. It prefers areas of the fields with thin stands and fields that were planted late. Eggs laid by the adult beetle are about 1/32 inch long, and are easy to spot with little experience. The eggs are elliptical in shape and laid singly or in groups on the upper leaf surfaces, often along the mid-vein. The larval stage, which does the most damage to small grains, is shiny black and wet. Underneath the mucous and fecal matter it covers itself you will find a pale yellow larva with brown legs.

When scouting for this pest, sample a minimum of ten sites per field and examine ten plants at each site. **The treatment threshold is 25 eggs and/or larvae per 100 stems (tillers).** If the proportion of eggs is higher than larvae scout again in 5 days. Treat when 50% or more of the eggs have hatched. This insect is fairly easy to control, if treated timely, requires one insecticide application since there is only 1 generation per year. Insecticides labeled for controlling cereal leaf beetle s include**: Baythroid XL, Sevin XLR Plus, Cobalt Advanced, Tombstone, Declare, Karate, Karate Z, Warrior II, Lannate, and Mustang Max.**

Armyworms are a sporadic pest of wheat that may appear from late-April to mid –May. On sunny days they will most often be found under residue from the previous crop or weed residue. On sunny days they will most often be found under residue from the previous crop or weed residue. On cloudy days, it may be found on the stems of the plants feeding on the foliage or stem itself. A good indicator of armyworm activity is the presence of feces on the ground. Also look for feeding damage on the plants and heads lying on the ground. This pest begins feeding at the bottom of plants and works its way upward until it cuts the stem just below the head. The economic treatment threshold is **two 3/8- inch or longer worms per square foot. Insecticides labeled for control include: Sevin, Declare, Tombstone, Baythroid XL, Warrior II, Karate Z, Silencer, Lannate, Mustang Max**

Upcoming Small Grain Field Days

Tidewater Field Day

May 21st - 2:00 p.m.

Griffin Farms

1694 Avenue Rd. Washington, NC 27889

Foliar Fungicides for Wheat Leaf Disease Control

S. R. Koenning, Plant Pathology

Table 10-1A. Foliar Fungicides for Wheat Leaf Disease Control

Disease Fungicide Type and (FRAC Code)	Fungicide[1]	Amount of Formulation Per Acre	Remarks[2]
Powdery mildew, Leaf Rust			
Triazoles (3)	tebuconazole		For Powdery Mildew, apply fungicide only when mildew covers 5% to 10% of area of upper leaves. For leaf rust, apply fungicide only when disease covers 1% to 3% of total leaf area. Do not apply after head emergence (Feekes Growth Stage 10.5). Make no more than one application of tebuconazole per year. Apply Caramba immediately after flag leaf emergence for optimum control of diseases other than Fusarium head blight.
	metconazole (Caramba)	10 to 14 oz	
	propiconazole (Propimax, Tilt) 3.6 EC	4 fl oz	
	Prothioconazoe (Proline)	4.3 to 5.0 oz	
Combinations of Strobilurins and Triazoles (3,11)	metconazole (7.4%) + pyraclostrobin (12.0 %) (Twinline)	7 to 9 fl oz	For Powdery Mildew, apply fungicide only when mildew covers 5% to 10% of area of upper leaves. For leaf rust, apply fungicide only when disease covers 1% to 3% of total leaf area. Do not apply after head emergence (Feekes Growth Stage 10.5). Do not apply if head scab is anticipated to become a problem.
	propiconazole (11.7%) + azoxystrobin (7.0%) (Quilt)	10.5 to 14 fl oz	
	prothioconazole (10.8 %) + trifloxystrobin (32.3%) (StrategoYld)	4.0 to 4.65 oz	
	propiconazole (11.7%) + azoxystrobin (13.5%) (QuiltXcel)	10.5 to14 fl oz	
	cyproconazoe (7.2 %) + picoxystrobin (32.3 %) Approach Prima	3.4 to 6.8 fl oz	
Strobilurins (11)	azoxystrobin (Quadris) 2.08 F	6.2 to 10.8 fl oz	
	pyraclostrobin (Headline) 2.09 EC	6 to 9 fl oz	
	picoxystrobin (22.5 %) Aproach	6.0 to 12.0 fl oz	
Staagonospora Leaf and Glume Blotch, Tan Spot, Powdery Mildew, Helminthosporium Leaf Spot			
Multi-site action (M3)	mancozeb (various brands) 4 F 80 WP 75 DF	 1.6 qt 2 lb 2 lb	If 25% of the indicator leaves have one or more lesions, then a fungicide application is indicated. Indicator leaves are: Feekes Growth Stage 6 to 8: Flag - 4 and Flag - 5 Feekes Growth Stage 8 to10: Flag - 3 Feekes Growth Stage 10 to 10.51: Flag - 2 Feekes Growth Stage 10.52 to 11: Flag - 1 Do not apply mancozeb after late heading (Feekes Growth Stage 10.5) or Tilt after flag leaf emergence (Feekes Growth Stage 8).
Strobilurins (11)	pyraclostrobin (Headline) 2.09 EC	6 to 9 fl oz	For Powdery Mildew, apply fungicide only when mildew covers 5% to 10% of area of upper leaves. For Stagonospora, if 25% of the indicator leaves have one or more lesions, then a fungicide application is indicated. Indicator leaves are: Feekes Growth Stage 6 to 8: Flag - 4 and Flag - 5 Feekes Growth Stage 8 to 10: Flag - 3 Feekes Growth Stage 10 to 10.51: Flag - 2 Feekes Growth Stage 10.52 to 11: Flag - 1 Do not apply if head scab is anticipated to become a problem.
	azoxystrobin (Quadris) 2.08 F	6.2 to 10.8 fl oz	
	picoxystrobin (22.5 %) Aproach	6.0 to 12.0 fl oz	
Combinations of Strobilurins and Triazoles (3, 11)	trifloxystrobin + prothioconazole (Stratego Yld)	4.0 to 4.65 oz	
	metconazole (7.4%) + pyraclostrobin (12.0 %) (Twinline)	7 to 9 fl oz	
	cyproconazole (7.2 %) + picoxystrobin (32.3%) Approach Prima	3.4 to 6.8 fl oz	
Head Scab			
Triazoles (3)	tebuconazole (generic brands)	4 fl oz	Specifically, forward and backward mounted nozzles, or nozzles that have two-directional spray, should be used. Spraying at 45 degrees down from horizontal has been shown to be most effective. Operate nozzles within the spray pressure directions suggested by the manufacturer. Do not make more than one application of tebuconazole per year
	Tebuconazole (19.0%) + prothioconazole (19.0%) (Prosaro 421 SC)	6.5 to 8.2 fl oz	
	metconazole (Caramba)	13.5-17 oz	Do not apply Caramba within 30 days of harvest.
	prothioconazole (Proline)	4.3-5.7 fl oz	Do not apply Proline or Prosaro within 30 days of harvest or after full flower (Feekes 10.52).

[1] Fungicides are more likely to be profitable when the yield potential is 50 bushels/acre or more.

[2] Triazole fungicides are generally more effective in control of powdery mildew, while the strobilurins are generally more effective against leaf rust and Stagonospora. Some triazoles can suppress but not eliminate head scab, whereas strobilurins should not be used if there is concern about head scab.

Further Information

Measured Crop Performance: Small Grain

Small Grain Production Guide: www.smallgrains.ncsu.edu

Copies of these publications are available from your county Cooperative Extension center.

Couldn't Get in the Field? Nitrogen Applications After GS 30

Nitrogen must be applied in a timely manner to maximize yield potential. Delaying N application after Feekes 6 (Zadoks 31, appearance of the first joint on the main stem) to an N-deficient crop will result in **decreased yield potential most years. As plant development advances, yield response to added N progressively declines.** After Feekes 9 (Zadoks 39, flag leaf fully developed), there **is usually little yield return to added N.**

Figure 5-1. Nitrogen uptake during the growth of winter wheat.

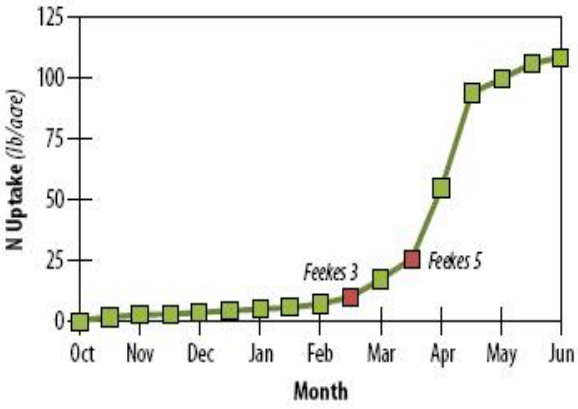
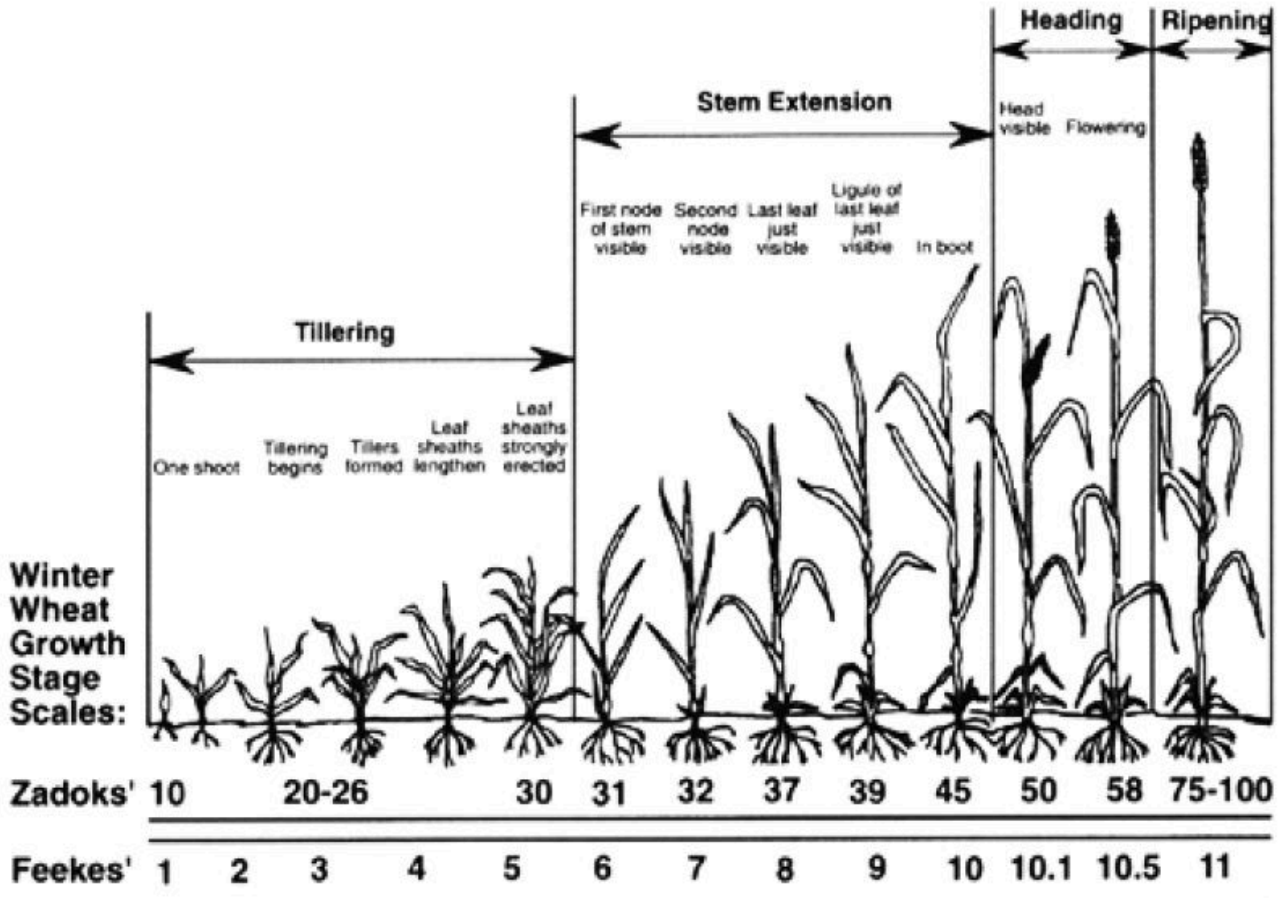


Figure 1. Zadoks scale for wheat development.



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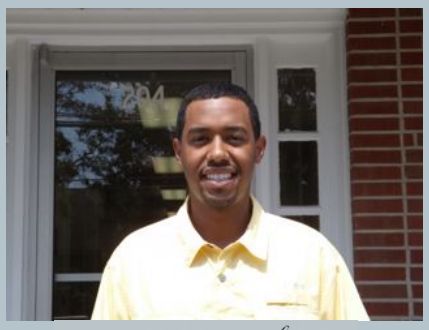

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