

NC Cooperative Extension - Perquimans County Center

2022 Northeast Ag Expo Small Grains Field Test & Treatment Information



Agent Tests

Nitrogen Rate x Timing
Sulfur Rate x Timing
Product Seed Treatment Comparison
Seeding Rate
Fungicide

NC State Official Variety Testing Program

Commercial Wheat OVT
Experimental Wheat OVT

Field Day Site Map

White Hat Seed Farm

102 Whitehat Rd. Hertford, NC 27944



Production Information:

Planting Date: November 9, 2021

Seeding Rate: 1.8 million/ac

Soil Type: Roanoke Silt Loam

Varieties Utilized: USG 3661 (Vibrance Extreme Treatment)

Pioneer 26R59 & 26R45 (Untreated)

Previous Crop: Soybean

Pre-Plant Fertilizer: 25-60-80-(4S)

Nitrogen Rate x Timing Test

Study Design

Five treatments were established in a randomized complete block design. The plots were established in USG 3661 variety replicated four times. Plots measured 5 feet wide and 25 feet long. Each plot will receive 150 total units of nitrogen. Granular urea (46% N) will be utilized as the nitrogen source. GS 25 indicates main shoot + 5 tillers, GS 30 indicates jointing, and GS 37 indicated flag leaf is visible.

Table 1: Nitrogen Rate x Timing Test Treatment List

	Treatment Name				
	1	2	3	4	5
Application Timing	Standard Topdress	Late Topdress	Early Split	Late Split	Intensive Managed
	lbs N/ac	lbs N/ac	lbs N/ac	lbs N/ac	lbs N/ac
Pre-Plant	30	30	30	30	30
GS 25	-	-	30	-	30
GS 30	120	-	90	60	60
GS 37	-	120	-	60	30

Sulfur Rate x Timing Test

Study Design

Seven treatments were established in a randomized complete block design. The plots were established in USG 3661 variety replicated four times. Plots measured 5 feet wide and 25 feet long. Plots will be treated at a 1x or 2x rate (16 & 36 lbs S/ac) at pre-plant, topdress, and flag leaf growth stages. Additionally there was an untreated control that received 4 lbs of S/ac in the pre-plant fertilizer. Gypsum (19% S) was utilized as the sulfur source. Yield will be measured.

Table 2: Sulfur Rate x Timing Test Treatment List

Treatment Name	Pounds S/ac	Timing
Control	4 (pre-plant)	
Pre-Plant 1x	16	Pre-Plant
Pre-Plant 2x	36	Pre-Plant
Topdress 1x	16	GS 30
Topdress 2x	36	GS 30
Flag Leaf 1x	16	GS 37
Flag Leaf 2x	36	GS 37

Product Seed Treatment Test

Study Design

Five treatments were established in a randomized complete block design. The plots were established in USG 3661 variety replicated four times. Plots measured 5 feet wide and 25 feet long. The plot seed was treated with the company treatment on the day of

planting. Product rates were utilized based on the company recommendation. Yield will be measured.

Table 3: Product Seed Treatment List

Company	Product	Content	Rate
Control	-	-	-
Delta Ag	Seed Coat	2.0% S, 2.0% Mn, 2.0% Zn	4 oz/ac
Helena	HM-2048	9-15-0-18Zn	8 fl oz/cwt
Meherrin	Super Symcoat	0.05% Co, 0.25% Cu, 5.5% Mn, 0.05% Mo, 5.25% Zn	3 fl oz/cwt
Triangle C.C.	Tri-Able	9-6-4, 0.5% Mg, 1% S	.17 fl oz/cwt

Seeding Rate Test

Study Design

Six treatments were established in a randomized complete block design. The plots were established in USG 3661 variety replicated four times. Plots measured 5 feet wide and 25 feet long. Treatments consisted of seeding rates of 1 million seed/acre, 1.25 million seed/acre, 1.5 million seed/acre, 1.75 million seed/acre, 2 million seed/acre, and 2.5 million seed/acre. Yield will be measured.

Table 4: Seeding Rate Treatment List

Treatment	Seed/acre	Pounds Seed/acre
1	1 million/ac	89 lbs/ac
2	1.25 million/ac	111.5 lbs/ac
3	1.5 million/ac	134 lbs/ac
4	1.75 million/ac	156 lbs/ac
5	2 million/ac	178 lbs/ac
6	2.5 million/ac	223 lbs/ac

Fungicide Test

Study Design

Five treatments were established in two randomized complete block designs. One block was established in Pioneer 26R59 and the other in Pioneer 26R45, each replicated four times. Plots measured 5 feet wide and 25 feet long. Treatments consist of fungicide applications with the following products: Folicur/Tilt, Miravis Ace, Prosaro Pro, Sphaerex, and an untreated control. Applications will be made at flowering. Yield and DON levels in grain will be measured.

Table 5: Fungicide Test Treatment List

Product	Application Rate	Active Ingredient	Timing
Untreated Control	-	-	-
Folicur/Tilt	4 oz/ac each	Tebuconazole (Group 3) Propiconazole (Group 3)	Flowering
Miravis Ace (Syngenta)	13.7 oz/ac	Pydiflumetofen (Group 7) Propiconazole (Group 3)	Flowering
Prosaro PRO (Bayer)	8 oz/ac	Fluopyram (Group 7) Prothioconazole (Group 3) Tebuconazole (Group 3)	Flowering
Sphaerex (BASF)	7.3 oz/ac	Metconazole (Group 3) Prothioconazole (Group 3)	Flowering

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