

Cottonwood District Sorghum Fertility Study - 2025

Cooperator Mike Younger



Planted: June 11, 2025

Hybrid: DK 38-16

Population: 40,500 planted

Prior Crops: Wheat, wheat

Fertility: The field was grid sampled. 17 gallons 32% (64 lbs. actual N), 3 gallons (10%) Thiosulfate 12-0-0-26 & 1 oz. Humic Acid per lb. N applied at planting 2 x 2

Herbicide: 3 qts./ac. FulTime NXT, 10 oz. Dicamba, 5.5 oz. Calisto & 36 oz. Roundup preplant 7 days before planting

Planter: JD 16 row 1770 NT

Three different treatments replicated twice across the field in 120' wide strips.

All treatments at planting had 3 gallons (10%) Thiosulfate, 1 oz. Humic Acid per lb. N applied.

Treatment 1 – flat rate 60 lbs. actual N

Treatment 2 - variable rate N applied according to grid sampling, ranged from 30-60 lbs. N/ac. Averaged about 45 lbs/ac.

Treatment 3 - variable rate N applied according to grid sampling and 4 gallons of water per acre aerially applied with 6.3 lbs. N as melted Urea water, 32 oz. potassium acetate, 28 oz. sugar, 1/2 oz. Fulvic acid and 6 oz. Humic Acid per acre at the 5-leaf growth stage.

Harvested: November 3, 2025

Treatment	Yield (bu/ac)	TW (lb./bu)	Average
60 lbs. of actual N	125.9	61	
60 lbs. of actual N	131.5	61	128.7
Variable rate N applied	131.3	61	
Variable rate N applied	129.6	61	130.4
Variable rate N applied plus			
Urea, Folic & Humic Acid	130.9	61	
Variable rate N applied plus			
Urea, Folic & Humic Acid	128.2	61	129.5

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