EVALUATION OF A POP-UP FERTILIZER ON GRAIN SORGHUM

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SUMMARY:

Five gallons of 9-30-0-1sulfur applied in-furrow at planting in a grain sorghum field replicated six times with and without resulted in the pop-up fertilized sorghum yielding 6 pounds/acre less than the untreated, thus a negative return of $5.25 for the practice. Actual pop-up fertilizer applications should be based on a soil test only.

OBJECTIVES:

To determine if additional fertilizer applied in a pop-up application at planting will increase grain sorghum yields and be profitable.

MATERIALS and METHODS:

Asgrow 570 grain sorghum was planted on March 30, 2005 at the seeding rate of 85,000 seeds per acre. Insecticide included Gaucho treated seed plus 0.8 oz/ac of Mustang Max banded at planting. Herbicide used was Guardsman Max banded at 1.5 pt/ac.

Soil tests taken prior to fertilizer applications showed phosphorus, sulfur, copper, iron, manganese and zinc to be low. Fertilizer applied on November 14, 2004 included: 500 lbs/ac of 20-10-0-2sulfur or a total of 100-50-0-10sulfur. A soil test was pulled in February, 2005 showing only zinc copper and boron to be low. A pop-up fertilizer of 9-30-0-1sulfur was applied at the rate of 5 gallons/acre at planting.

Yield data was collected with a combine harvesting three one-quarter acre plots each in the pop-up area and the area without pop-up fertilizer.

RESULTS and DISCUSSIONS:

The grain sorghum grew well and there was no difference seen in any of the treatments. Harvest yields between the plots varied from 6073 - 6543 pounds/ac but there was nearly equal variance and the final yields were only 6 pounds/ac different.

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DISCLAIMER CLAUSE:

Trade names of commercial products used in this report are included only for better understanding and clarity. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas A&M University System is implied. Readers should realize that results from one experiment do not represent conclusive evidence that the same response would occur where conditions vary.

Table 1. Evaluation of six replications of pop-up fertilizer application on grain sorghum. Leland Lange, Cooperator, Victoria County, TX 2005.

Fertilizer Application	Bushel Wt. Lbs/Bu	% Moisture	Yield Lbs/Ac	$ Return above no Pop-up [a/]
100-50-0-10sulfur plus 5 gal/ac of 9-30-0-1sulfur pop-up	56	16.1	6178	$-5.25
100-50-0-2sulfur	55	16.0	6184	–

a/ Based on grain sorghum at $3.66 /cwt, fertilizer at $0.095/pound, and harvesting/hauling costs at a custom rate of $0.80/cwt.