

The Effects of Burst Yield Booster^R on DPL 61

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ABSTRACT

The third year was completed of a study designed to evaluate the effects of Burst Yield Booster, a cytokinin based plant growth regulator, on upland cotton. Five treatments were included in the 1986 experiment, which varied application timing, rate, and frequency. Consistent with our studies of the past two seasons, no significant differences in yield were observed.

INTRODUCTION

Independent research is often necessary to determine the applicability of commercial plant growth regulators to specific crops. This experiment is part of a study designed to evaluate such a product. Over the past three years, application timing and frequency have been varied in an attempt to find an application scheme which might affect yield.

METHODS AND MATERIALS

The most recent experiment was conducted at the Maricopa Agricultural Center during the 1986 growing season. Five treatments were incorporated into a randomized complete block design with 8 replications. Each experimental unit was 8 rows wide (40" spacing) by 275 feet in length. The field was planted with DPL 61 seed on 4 April. The field was fertilized with a preplant application of 46% urea (170 lbs/A) and on 11 June with ammonium nitrate (100 lbs/A). Applications of the treatments were made with a high boy sprayer.

The treatments applied were:

- 1- BURST at 2 oz/A, 4 weekly applications starting at pinhead square
- 2- BURST at 8 oz/A at first bloom
- 3- BURST at 8 oz/A at first bloom, plus BURST at 8 oz/A at 2 weeks after first bloom
- 4- BURST at 2 oz/A, 4 weekly applications starting at pinhead square, plus BURST at 8 oz/A two weeks following the last weekly application
- 5- Control

The test was harvested on 18 November. Two samples from each plot, each 2 rows by the length of the plot, were individually harvested with a spindle picker and weighed.

RESULTS

No significant differences in yield were observed (Table 1). Average yield across all treatments was 3.16 bales/A. These results are similar to our findings reported for the 1984 growing season (Hofmann, Else and Tabo, 1985) and for the 1985 season (Hofmann and Else, 1986).

Table 1. BURST yield data, Maricopa, Az., 1986.

	-----TREATMENT-----					Std. Error	Signi- ficance of F
	#1	#2	#3	#4	#5		
Seed cotton yield (lbs/acre):							
East 2 rows	4799	4630	4663	4734	4715	126.8	.716
West 2 rows	4689	4780	4758	4683	4870	141.2	.675
Average yield	4744	4705	4711	4708	4793	165.3	.933
Lint yield (bales/A)	3.16	3.14	3.14	3.14	3.20		

REFERENCES

- 1) Hofmann, W.C., P.T.Else, and R.Tao. 1985. The effects of three plant growth substances on DPL 90. Univ. of Az. College of Agric. Cotton Report Series P-63. p 55-59.
- 2) Hofmann, W.C. and P.T.Else. 1986. The effects of BurstR on DPL 61. Univ. of Az. College of Agric. Cotton Report Series P-63. p 94-96