

Effect of Timing and Herbicide Compatibility in the Application of Burst on Upland Cotton

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SUMMARY

A field trial was conducted to study the elements of application timing and herbicide compatibility in the use of Burst, a plant growth regulator, and the effects of these two factors on yield of upland cotton. Eight treatments combined the two factors of timing and tank mix. The results showed no significant difference in yield between treatments.

INTRODUCTION

The manufacturer's guidelines for Burst suggest that applications be made at any time beginning with first elongated square up to 2 weeks after first bloom. The element of timing has received experimental attention in the last few years with the expectation that greater precision in the timing of application would enhance the effectiveness of the plant growth regulator and increase yields.

The compatibility of Burst with other herbicides in a tank mix is a question of concern to growers, and though there has been successful tank mix applications with Burst, there is no information available regarding the effects of compatibility on yield.

The purpose of this field trial was to investigate these 2 factors of Burst application, (timing and herbicide compatibility), and determine their effects on yield.

Quick Pick and Fortune are both foliar fertilizers that were combined and added as a single treatment to the test.

METHODS AND MATERIALS

The field trial was conducted at Carl Clapp Farms near Casa Grande, AZ. Eight treatments (Table 1), were incorporated into a randomized complete block design. Each experimental unit was 8 rows wide (40" spacing) and 1279 feet in length using Deltapine 91 seed.

Table 1 - Treatments

Treatment #1	Tank Mix	Timing of Application
1	Burst	Pin Square Elongation
2	Burst & Fusilage	Pin Square Elongation
3	Burst & Post	Pin Square Elongation
4	Burst	Pin Square & Flowering
5	Burst & Fusilage	Pin Square & Flowering
6	Burst & Post	Pin Square & Flowering
7	Quick Pick & Fortune	Pin Square & Flowering
8	Untreated	

RESULTS

No significant differences were observed between treatments (Table 2), with an average yield of 1295 lbs. lint/acre and a standard deviation of 68 lbs. lint/acre

Table 2 - Yield Data

Treatment	Application Timing (Growth Stage)	Yield Lint lbs/A ^{1/}
Burst & Post	Pin Square Elongation	1327 a ^{2/}
Quick Pick & Fortune	Pin Square & Flowering	1314 a
Untreated	1304 a	
Burst & Post	Pin Square & Flowering	1304 a
Burst & Fusilage	Pin Square & Flowering	1296 a
Burst	Pin Square & Flowering	1285 a
Burst & Fusilage	Pin Square Elongation	1266 a
Burst	Pin Square Elongation	1264 a

1/ Turnouts based on 34% estimate

2/ Values followed by the same letter are not significantly different at the .05 level by the Student-Newman-Keul's Test.

CROP HISTORY

Previous Crop: Fallow
 Tillage: Plow, disc
 Planting: April 6, to moisture
 Fertilizer: 160 lbs nitrogen
 Irrigation: Eight irrigations (5/19, 6/4, 6/17, 6/30, 7/11, 7/21, 8/9, 8/20) totaling 5 acre feet
 Insecticide: Ten applications with pyrethroid
 Defoliation: Prep and chlorate
 Harvest: 11/3 and 11/4