

Plant Growth Regulators and Physiology

Cotton Harvest-Aid Chemical Test, Marana, 1984

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Harvest-aid chemicals were applied on October 12, 1984 to Deltapine 55 cotton approximately 85% open which had been planted at the Marana Agricultural Center on April 18, 1984. Plant height ranged from 36 to 54 inches with the shortest cotton at the head end of the experimental area. Plot size was four rows 30 feet long with four replications. Application of the harvest-aid chemicals was done with use of a hand sprayer with a two row boom with one nozzle per row over the top of the plants. The total spray volume was 25 gpa with a pressure of 40 psi. Following application, daytime temperatures ranged from 75 to 85°F with nighttime temperatures in the mid to low 50's.

Plots were evaluated on October 19 and 22, 1984 by two individuals with the results shown in Table 1. The data are an average of the visual ratings of both observers and both evaluation dates.

There were statistical differences between the treatments. All harvest-aid treatments were significantly better than the untreated check. This was a late application date for a defoliation study. The cooler temperatures may not have been conducive to certain treatments which are normally recommended when temperatures are warmer.

Table 1. Cotton Harvest-Aid Chemical Test, Marana Agricultural Center, 1984

Chemicals	Rate per Acre	Percentage leaf drop
PPG ^{1/} and Surfactant X-77	0.075 lb a.i. + 0.25% v/v	79.1 a*
DEF 6 and Goal and Surfactant X-77	1.5 pts + 0.125 lb a.i.	77.8 a
PPG and Surfactant X-77	0.1 lb a.i. + 0.25% v/v	76.9 ab
DEF 8 and DROPP and Surfactant X-77	1.5 pts + 0.05 lb a.i. + 0.25% v/v	75.8 ab
PPG and Crop Oil	0.1 lb a.i. + 1.0% v/v	75.2 abc
DEF 6 and Surfactant X-77	1.5 pts + 0.25% v/v	75.0 abc
Bollseye and DEF 6 and Surfactant X-77	2 pts + 2 pts + 0.25 % v/v	74.7 abc
DEF 8 and Surfactant X-77	1.5 pts + 0.25% v/v	73.8 abc
PPG and Surfactant X-77	0.05 lb a.i. + 0.25% v/v	70.8 bc
Bollseye + Surfactant X-77	3 pts. + 0.25% v/v	69.3 c
DEF 6 and DROPP and Surfactant X-77	1.5 pts + 0.05 lb a.i. + 0.25% v/v	59.5 d
Check		28.1 e

^{1/} Experimental product of PPG Industries, Inc.

* Percentages followed by the same letter are not significantly different at the 5% probability level by the Duncan's Multiple Range Test.

CV = 11.2%