

## Reducing Boll Shedding in Cotton by Treatment with "Planofix"

Yield of cotton can be increased by controlling pests and by reducing boll shedding. If the shedding of bolls is due to physiological factors, it can be prevented by plant regulant sprays as reported by Bharadwaj and Santhanam (1964). 'Planofix' is a proprietary product containing Naphthalene acetic acid (NAA) as an active ingredient known to increase the fruit-set in several crops.

An experiment was laid out in Tamil Nadu Agricultural University at Coimbatore in 1971-72, 1972-73 to study the practical utility of this regulant.

The cotton variety MCU 5 was chosen in both the years. The field was prepared and applied with 5000Kg FYM/ha. A basal application of 30Kg N, 30Kg  $P_2O_5$  and 30Kg  $K_2O$ /ha was done. As a top dressing an additional 30Kg N/ha was given during square formation stage. The experiment was laid out in RBD with three replications. The following were the treatments.

- i. No spray,
- ii. Water spray serving as control at flowering stage,
- iii. Planofix 10ppm spray at flowering stage,

- iv. Planofix 10 ppm spray at flowering stage + Planofix 10 ppm spray at boll setting stage sprayed twice,
- v. Planofix 20 ppm as a single spray at flowering stage.

Planofix was sprayed on the crop first at the initial flowering stage at 10 ppm concentration and repeated 3 weeks later as a second spray.

No significant difference in yield was noticed due to Planofix spray (Table 1). However from the final boll counts taken on the 105th day, 67 per cent increased bolls over control plots were found to have been retained in plots receiving a single spray of 10 ppm planofix during the flowering stage. The analysis of mean number of bolls retained on the 105th day was significant for both the years. From the data it could be seen that spraying of Planofix reduced the boll shedding. Application of 10 ppm Planofix both at flowering stage and boll setting stage was also found to be good. Among the concentrations and times of spray spraying of Planofix at 10 ppm level at flowering stage recorded good boll retention. As such Planofix sprays could be taken up with advantage for higher boll retention



TABLE 1. Effect of "Planofix" on boll retention and yield of cotton MCU 5

S. No.	Treatments	1971-72						1972-73					
		Mean plant height (cm)	Mean No. of bolls formed in 100 th day	Mean No. of bolls retained on 105 th day	% of bolls retained	Yield of seed cotton Kg/ha	Diff. in yield over control kg/ha	Mean plant ht. (cm)	Mean No. of bolls formed in 100th day	Mean No. of bolls retained on 105 th day	% of bolls retained	Yield of seed cotton kg/ha	Diff. in yield over control kg/ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	No spray	137.0	32.6	9.0	—	1108	—	97.0	29.1	8.6	—	997	—
2.	Water spray (control) at flowering stage	129.0	33.2	16.1	—	1106	—	99.2	30.2	15.2	—	999	—
3.	"Planofix" 10 ppm at flowering stage	122.0	36.1	27.0	67	1307	291	144.2	34.3	24.7	62.5	1256	257
4.	"Planofix" 10 ppm at flowering stage + "Planofix" 10 ppm at boll setting stage (2 sprays)	123.0	37.2	27.1	67	1392	286	115.6	37.7	22.1	45.4	1212	213
5.	"Planofix" 20 ppm on single spray at flowering stage	125.0	35.0	26.2	62	1266	160	117.1	30.9	21.3	40.1	1201	202
	S. E	3.74	2.22	1.85	—	138	—	5.73	0.88	0.87	—	72.3	—
	C. D	—	—	5.86	—	—	—	—	2.608	2.608	—	—	—

and the net increase seed cotton yield was 2 quintals/ha. The cost of two sprayings of 'Planofix' was Rs. 47/- per ha. Cost of 2 quintals of extra yield at Rs. 400/-Q was Rs. 800/- thus a net gain of Rs. 753/- per ha as additional income was obtained by using this regulant.

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#### REFERENCE

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