

The Effect of Galecron on a Field Near Phoenix in 1982

J. R. Mauney, Plant Physiologist

The Galecron was applied on 6-3, 6-9, 6-16, and 6-23. Square and boll counts were made throughout the season on meter square areas in the treated and untreated rows. These data are shown in Table I. During the period 6-9 to 7-9 there were more squares on the treated than the controls. During the period 6-25 to 7-26 there were more bolls in the treated. However, on 7-22 there were more squares in the untreated and by 8-16 the number of bolls was essentially the same in the two areas. While these trends were consistent during the year the differences were never statistically significant.

Population of Lygus bugs was determined by sweep net sampling. Table 2 shows that the Lygus population were influenced by the Galecron treatment for the last two weeks in June. It was during this period that the square counts of the treated area began to exceed the controls.

Microscopic examination of shedding square from this field from June 15 to July 15 showed that 90% of the shed squares had symptoms of plant bug damage. Thus, the change in Lygus population was the most likely cause of the reduced shedding and increase in square and boll numbers early in the season.

My interpretation of these data is that Galecron application did influence the plant bug population for a brief period early in the season. The reduced insect feeding allowed the plants to carry more squares to maturity early so that the boll load was greater in mid-July. However, the untreated plots continued to produce squares and bolls for a slightly longer period in August. Thus, by the end of the season no difference in yield could be observed. Plots were harvested and results are presented below.

Unfortunately, the field in which this study was conducted was so variable that sample variation was great. Statistically significant differences were not observed in any of the measurements. The trends are apparent and lead to the interpretation I have outlined but rigorous statistical analysis of this interpretation is not possible.

TABLE 1

Numbers of Reproductive Structure per Meter Row

Date	Squares		Bolls		Total Fruiting Sites	
	Trt	Cont	Trt	Cont	Trt	Cont
5-25	13	20			13	20
6-2	31	25			31	25
6-9	81	70			81	70
6-11	55	66			91	90
6-18	119	116			134	146
6-25	148	138	26	19	217	197
7-2	184	199	44	24	291	295
7-9	208	158	81	56	391	276
7-19			70	56		
7-22	70	128	114	77	269	263
7-26			97	78		
8-2			111	94		
8-16			93	100		

TABLE 2

Lygus Populations in Galecron Test
(Insects/100 Sweeps)

Date	6-14	6-21	6-29	7-8
Treated	12	10	10	9
Control	18	18	8	10
Treated with Galecron		849 Lint lb/A		
Control		836 Lint lb/A		