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Seasonal Incidence of Sucking Pest Complex of Cotton Under Rainfed Condition of South Gujarat

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ABSTRACT

Studies on seasonal incidence of sucking pests of Cotton (Digvijay) in rainfed condition were conducted at Regional Cotton Research Station, Guj. Agril. University, Bharuch during 1979-80 and 1981-82. Results revealed that aphids population was peak (43.05/plant) in the second fortnight of October. The population of jassids was ranged from 0.59 to 2.78 per plant while thrips were ranged from 0.61 to 4.64 per plant. In case of spider mite, maximum (17.51) population noted in the second fortnight of November.

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INTRODUCTION

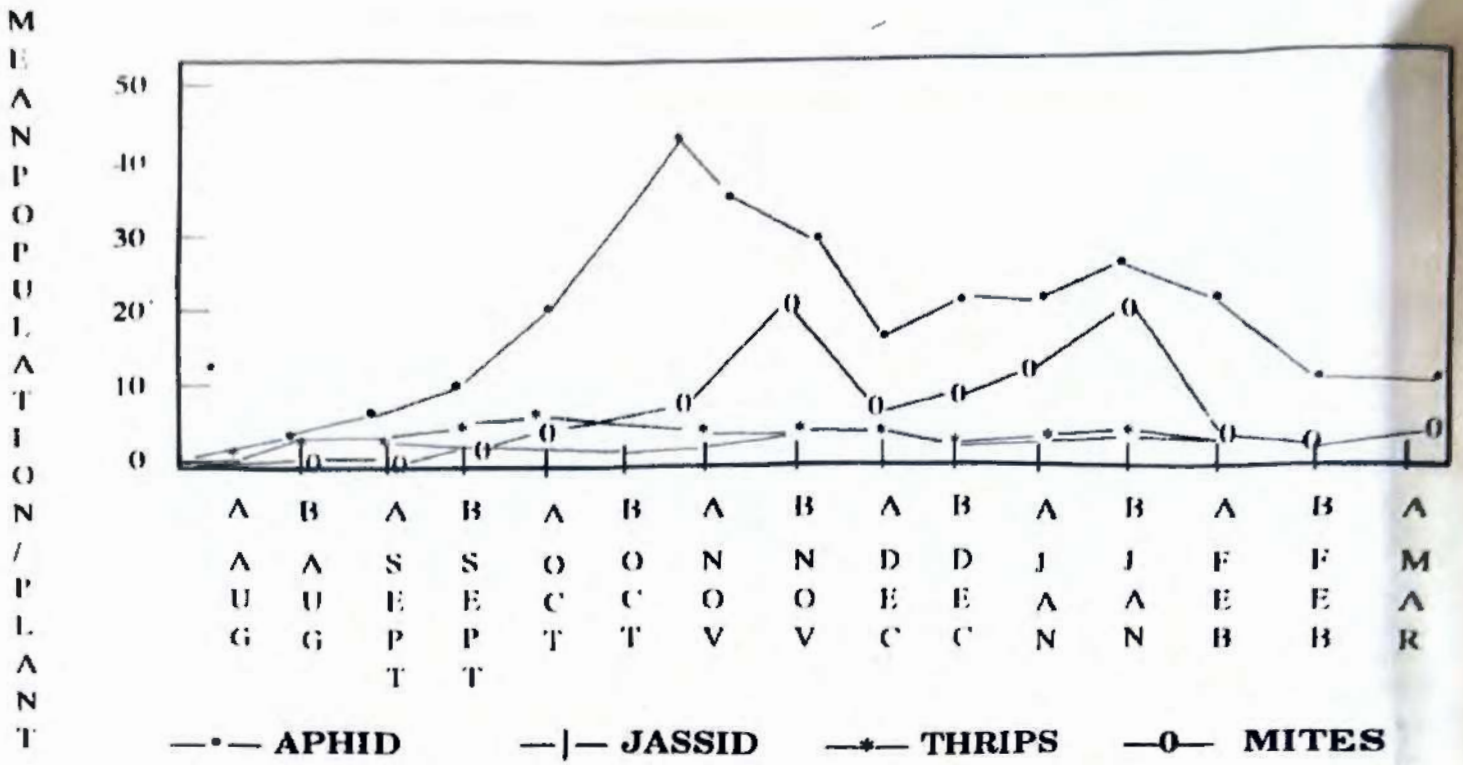
The cotton plant in India is attacted by 130 species of insects and a few species of mites which cause an average loss of 25% in yield (Sohi, 1964). Cotton suffers a substantial loss due to ravages of sucking pest viz., *Aphis gossypii* G., *Amrasca bigutulla bigutulla I., Scirtothrips dorsalis R.*, and *Tetranychus telarius* L.The seasonal incidence of these pests were studied by different workers in India (Lad, 1974; Sidhu and Dhawan, 1980; Thangvelu 1983: Jose and Shah 1984; Intodia and Sharma 1977 and Mathur and Sharma; 1977). In view of the importance as a serious pests of this crop, it was properly planned to study its seasonal incidence under rainfed condition of South Gujarat.

MATERIALS AND METHODS

An investigation was carried out at the Research farm of Regional Cotton Research Station, Gujarat Agril. University, Bharuch during the three consecutive season of 1979, 1980 and 1981. For the study, 0.5 ha area of cotton (var. Digvijay) was kept under isolated natural condition. To assess the population of sucking pests, 50 plants were selected at random and tagged. The number of aphids, jassids, thrips and mites were recorded by selecting three random leaves, one each from upper, middle and lower portion of the each tagged plant. In case of aphids, thrips and mites both nymphs and adults were counted, whereas in case of jassids only nymphs were counted. Observations were recorded at an interval of 15 days and graphically represented in Figure 1.

RESULTS AND DISCUSSION

The data presented in Table 1 indicates that the aphids population was at peak in the



A = 1st Fortnight B = 2nd Fortnight
Average mean of three years

Figure – 1 : Seasonal incidence of sucking pests in cotton at Bharuch.

second fortnight of October followed by first and second fortnight of November. It was again decreased in the month of December slightly increasing in January. Similar results were also obtained by Mathur and Sharma (1977) who reported that the incidence of *Aphis gossypii* was occured from IInd week of August to Ist week of February. On the other hand, the population of jassids and thrips were very low during the investigation. Jassid population was ranged between 0.59 in August and 2.78 in the first fortnight of October, then after it remained more or less during the season. Sidhu and Dhawan (1980) also reported that jassid population was higher in July-August. The population of thrips varied from 0.61 (Ist fortnight of August) to 4.64 (first fortnight of October). Then it fluctuated between 1.10 in second fortnight of December to 2.73 in first fortnight of October. A similar trend was also earlier reported by Thangvelu (1983). The incidence of spider mite was observed from the first fortnight of October. It gradually increased and reached its peak (17.51) in the second fortnight of November. Then its population suddenly dropped to 4.07 in the first fortnight of December. It again gradually increased and occured its second peak (15.95) in the second fortnight of January. According to Jose and Shah (1984), incidence of spider mite was occured from October (3.5) to February (26.00).

TABEL 1

Seasonal incidence of different sucking pest complex attacking cotton crop at Regional Cotton Research Station, Bharuch during 1979-80 to 1981-82.

Period of observation	*Mean population/plant*			
	Aphids	*Jassids*	*Thrips*	*Mites*
Ist fortnight of August	0.80*	0.59*	9.61*	0.00*
IInd fortnight of August	1.53	0.69	1.17	0.02
Ist fortnight of September	3.00	1.13	1.27	0.00
IInd fortnight of September	8.14	2.73	2.18	0.32
Ist fortnight of October	19.73	2.78	4.64	2.95
IInd fortnight of October	43.05	1.57	2.73	2.56
Ist fortnight of November	36.81	1.01	2.64	5.80
IInd fortnight of November	30.35	1.49	1.40	17.51
Ist fortnight of December	11.71	0.90	0.79	4.07
IInd fortnight of December	18.87	1.36	1.10	4.91
Ist fortnight of January	18.81	0.89	1.35	10.71
IInd fortnight of January	25.73	1.41	1.91	15.95
Ist fortnight of February	18.57	0.52	0.34	1.49
IIst fortnight of February	6.35	0.47	0.25	0.79
Ist fortnight of March	5.71	0.54	0.42	1.97

* Mean of 3 Years

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