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Population Build Up of Jassid *Empoasca kerri* Pruthi (Cicadellidae : Hemiptera) in Popular Varieties of Groundnut

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ABSTRACT

The field experiments were conducted during two consecutive *kharif* seasons of 1995 and 1996. Fifteen popular varieties grown in different parts of the country were sown for the study of incidence of jassid, *Empoasca kerri* Pruthi in the agroclimatic condition of Junagadh. Results indicated that GG 3 carrierd significantly lowest jassid population, whereas variety Somnath harboured maximum number of jassids among the tested varieties.

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INTRODUCTION

Groundnut is important cash crop of Saurashtra region of Gujarat State. Many insect pests cause damage to this crop, of which jassid, *Empoasca kerri* Pruthi is one of the most serious pest. The resistant or less susceptible variety plays an important role in formulating pest management programme. The present studies deal with population build up of jassid in popular varieties of groundnut.

MATERIALS AND METHODS

The field experiments were conducted during *kharif* seasons of 1995 and 1996 at Gujarat Agricultural University, Junagadh Campus, Junagadh. Fifteen popular varieties of different habit groups grown in different parts of the country were sown for the study of incidence of jassid in the agroclimatic condition prevailing at Junagadh. Each variety was grown in a plot size of 4.5 x 6.0 m. The details regarding varieties and their habit group are given below :

Sr. No.	*Variety*	*Habit group*	*Botanical group*
1.	GG 2	Erect (bunch)	Spanish
2.	GG 3	Erect (bunch)	Spanish
3.	GG 4	Erect (bunch)	Spanish
4.	JL 24	Erect (bunch)	Spanish

Sr. No.	Variety	Habit group	Botanical group
5.	J 11	Erect (bunch)	Spanish
6.	TG 26	Erect (bunch)	Spanish
7.	ICGS 37	Erect (bunch)	Spanish
8.	Girnar 1	Erect (bunch)	Spanish
9.	GG 20	Semi-spreading	Virginia
10.	TMV 10	Semi-spreading	Virginia
11.	Kadiri 3	Semi-spreading	Virginia
12.	GG 11	Spreading (runner)	Virginia
13.	GG 12	Spreading (runner)	Virginia
14.	GG 13	Spreading (runner)	Virginia
15.	Somnath	Spreading (runner)	Virginia

All the plots received an uniform basal fertilizer dose of 12.5 N + 25.0 P kg/ha. The experimental plots were kept free from weeds by weeding and hoeing as and when required. The plot was kept unsprayed throughout the seasons. Each plot was divided into four quadrates. Ten plants from each quadrate were selected for observing jassid population. The jassid nymphs per plant were recorded at weekly interval till harvest of the crop. Mean pest incidence was worked out and the data thus obtained were subjected to statistical analysis for assessing the relative incidence on groundnut varieties.

RESULTS AND DISCUSSION

The yearwise results (Table 1) indicated that the population build up of jassid, *E. kerri* was higher in the year 1995 as compared to 1996 in different varieties. However, similar trend was observed in different varieties during both the year. Pooled results revealed that groundnut variety GG 3 carried significantly least jassid population (4.67 nymhs/plant) among fifteen varieties tested. Next in order was J 11, GG 2 and GG 4. The variety Somnath was found to be the most susceptible as it recorded 6.45 nymphs per plant and was at par with Kadiri 3 (6.45)

TABLE 1

Mean number of *E. kerri* nymphs per plant in different groundnut varieties.

Sr. No.	Variety	1995		1996		Pooled mean	
1.	GG 2	2.53*	(6.40)	2.01	(4.04)	2.27	(5.15)
2.	GG 3	2.42	(5.86)	1.90	(3.61)	2.16	(4.67)
3.	GG 4	2.57	(6.61)	2.04	(4.16)	2.30	(5.29)
4.	JL 24	2.67	(7.13)	2.18	(4.75)	2.42	(5.86)
5.	J 11	2.44	(5.95)	1.97	(3.88)	2.20	(4.84)
6.	TG 26	2.76	(7.62)	2.27	(5.15)	2.52	(6.35)
7.	ICGS 37	2.76	(7.62)	2.27	(5.15)	2.52	(6.35)
8.	Girnar 1	2.77	(7.67)	2.27	(5.15)	2.52	(6.35)
9.	GG 20	2.61	(6.81)	2.08	(4.33)	2.34	(5.48)
10.	TMV 10	2.77	(7.67)	2.30	(5.29)	2.53	(6.40)
11.	Kadiri 3	2.78	(7.73)	2.30	(5.29)	2.54	(6.45)
12.	GG 11	2.73	(7.45)	2.25	(5.06)	2.49	(6.20)
13.	GG 12	2.74	(7.51)	2.25	(5.06)	2.49	(6.20)
14.	GG 13	2.62	(6.86)	2.14	(4.58)	2.38	(5.66)
15.	Somnath	2.78	(7.73)	2.30	(5.29)	2.54	(6.45)
	S. Em. ±	0.01		0.01		0.01	
	C. D. at 5%	0.02		0.03		0.03	
	C. V. %	4.22		9.25		6.74	

* $\sqrt{}$ Tranformed values.

Figures in the parenthesis are retransformed values.

TMV 10 (6.40), Girnar 1 (6.35), ICGS 37 (6.35) and TG 26 (6.35). The varieties GG 12, GG 11, JL 24 and GG 13 showed moderate population of jassid as they registered 6.20, 6.20, 5.86 and 5.66 jassid nymphs per plant respectively. Therefore, GG 3 variety may be recommended for cultivation in this region. According to Singh (1989) and Wheatley *et al.* (1989) the varieties, JL 24 and Kadiri 3 carried higher jassid population. Thus, present findings confirm the same.

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