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Screening of some genotypes of brinjal for their relative resistance against jassid and whitefly

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Studies were carried out on screening of some genotypes of brinjal for their relative resistance against jassid and whitefly on brinjal (*Solanum melongena* L.) at Regional Horticultural Research Station Farm, NAU, Navsari during 2011-12. The results revealed that out of fourteen genotypes of brinjal, the genotype AB-8/5 (6.65 jassids/three leaves) recorded the lowest population of jassids and genotype AB-8/6 (5.93 whiteflies/three leaves) recorded lowest population of whiteflies.

Key words : Brinjal, Varietal screening, Jassid, Whitefly

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Brinjal, eggplant or aubergine is an important vegetable crop in tropical and sub-tropical countries particularly in India, Japan, Indonesia, Bulgaria, Italy, France, USA and several African countries. Though brinjal is a summer crop, it is being grown throughout the year under irrigated condition. Hence, it is subjected to attack by number of insect pest right from nursery stage till harvesting (Regupathy *et al.*, 1997). As per the report of Ratanpara *et al*. (1994) the jassid (*A.biguttula biguttula*) was regularly occurring insect pest of brinjal in Gujarat was found throughout the year. According to Patel (1992), from Gujarat the brinjal crop was free from infestation of *B. tabaci* in July-August, while the pest was active during colder months *i.e.* November to January. The studies on screening of fourteen genotypes of brinjal *i.e.* AB-07/2, AB-8/6, AB-8/5, AB-8/14, AB-9/1 , AB-10/4, AB-10/14, JBG-6/7, JBG-8/6, JBR-8/8, JBGL-10/20, JBJL-10/197, JBJL-10/203 and JDNB-19 for their relative resistance against jassid and whitefly on brinjal (*Solanum melongena* L.) were conducted during the year 2011-12 at Regional Horticultural Research Station Farm, NAU, Navsari. For recording observation on sucking pests, *viz.*, whitefly and jassid, five plants were selected randomly from each plot. The number of jassids (nymph) and whitefly (adults) were counted on three leaves, representing top, middle and bottom of each selected plant. Observation was recorded from second week after transplanting till last harvesting of the crop at weekly interval.

The data presented in Table 1 revealed that none of the genotypes of brinjal were found free from incidence of jassids and whitefly, however, among all the genotypes of brinjal, AB-8/5 (6.65 jassids/three leaves) recorded the lowest population of jassids which was at par with the AB-9/1 (8.48 jassids/three leaves), JBG-6/7 (9.07 jassids/three leaves), JBG-8/6 (11.98 jassids/three leaves) and JBR-8/8 (12.57 jassids/three leaves). While, genotype AB-8/14 (15.63 jassids/ three leaves) recorded moderate population of whitefly which was at par with the AB-10/4 (17.01 jassids/leaves), AB-07/2 (17.14 jassids /three leaves), AB-10/14 (17.14 jassids / three leaves), JBGL-10/20 (17.61 jassids/three leaves) and JBGL-10/203 (17.75 jassids/three leaves). However, genotype AB-8/6 (33.82 jassids/three leaves) showed highest population of jassids which was at par with the variety JBJL-10/197 (33.21 jassids/three leaves) and JDNB-19 (30.45 jassids/three leaves). In past, Kumar *et al.* (2002) screened 12 cultivars of aubergine, among them F-1 Hybrid was least preferred, while the local cultivar was most preferred by jassids.

Among all the genotypes AB-8/6 recorded lowest population of whiteflies (5.93 whiteflies/three leaves) which was at par with the genotype JBR-8/8, JBG-8/6, JBJL-10/203,

Table 1 : Screening of some genotypes of brinjal for their relative resistance against jassid and whitefly

Sr. No.	Genotypes	Jassids/three leaves	Whitefly /three leaves
1.	AB-07/2	4.12 (17.14)*	4.25 (18.23)
2.	AB-8/6	5.81 (33.82)	2.43 (5.93)
3.	AB-8/5	2.54 (6.65)	3.11 (9.95)
4.	AB-8/14	3.95 (15.63)	3.19 (10.38)
5.	AB-9/1	2.88 (8.48)	3.18 (10.28)
6.	AB-10/4	4.09 (17.01)	3.32 (11.15)
7.	AB-10/14	4.12 (17.14)	4.26 (18.24)
8.	JBG-6/7	2.99 (9.07)	4.67 (22.24)
9.	JBG-8/6	3.42 (11.98)	2.82 (8.20)
10.	JBR-8/8	3.49 (12.57)	2.77 (7.66)
11.	JBGL-10/20	4.14 (17.61)	3.37 (11.77)
12.	JBJL-10/197	5.71 (33.21)	3.70 (13.97)
13.	JBJL-10/203	4.19 (17.75)	3.07 (9.68)
14.	JDNB-19	5.50 (30.45)	3.57 (12.79)
	S. Em. $\pm$	0.36	0.32
	C.D. (P=0.05)	1.04	0.93
	C.V. %	15.25	16.35

*Figures in parenthesis is original value while those outside are arcsine transformed value

AB-8/5, AB-9/1, AB-8/4 and AB-10/14 as they recorded (7.66, 8.20, 9.68, 9.95, 10.28, 10.38 and 11.15 whiteflies/three leaves, respectively). The genotype JBGL-10/20 recorded 11.77 whiteflies/three leaves and found middle in order which was at par with the genotypes JDNB-19 and JBJL-10/197 (12.79 and 13.97 whiteflies/three leaves, respectively). While, whitefly population was maximum in genotype JBG-6/7 (22.24 whiteflies/three leaves) which was at par with the genotypes AB-07/2 and AB-10/14 (18.23 and 18.24 whiteflies/three leaves, respectively). In past, Singh *et al*. (2002) noticed that among all genotypes none of the genotypes were free from whitefly infestation, although significantly lower populations of the pest was recorded on CO-2 (4.48/3 leaves).

Overall it can be concluded that among all the genotypes of brinjal, AB-8/5 (6.65 jassids/three leaves) resistant to jassids which was at par with the AB-9/1 (8.48 jassids/three leaves), JBG-6/7 (9.07 jassids/three leaves), JBG-8/6 (11.98 jassids/three leaves) and JBR-8/8 (12.57 jassids/three leaves) and genotype AB-8/6 (5.93 whiteflies/three leaves) resistant to whiteflies which was at par with the genotype JBR-8/8, JBG-8/6, JBJL-10/203, AB-8/5, AB-9/1, AB-8/4 and AB-10/14 as they recorded (7.66, 8.20, 9.68, 9.95, 10.28, 10.38 and 11.15 whiteflies/three leaves, respectively).

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