

Research Note :

Performance of New Hybrids of Okra [*Abelmoschus esculentus* (L.) Moench] For Yield, Yellow Vein Mosaic Virus and Fruit Borer

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International Journal of Plant Protection, Vol. 2 No. 1 : 140-141 (April to September, 2009)

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Key words :

Opra, Hybrid, Yellow vein mosaic virus, Borer

Okra [*Abelmoschus esculentus* (L.) Moench] commonly known as *bhindi* belongs to family Malvaceae. It is a native of tropical and subtropical Africa and it is an important warm season fruit vegetable cultivated extensively in tropical and subtropical parts of the world. Because of its high nutritive value and prolonged shelf-life as compared to others, okra has captured a prominent position among the export oriented vegetable crops and it is being exported in Middle Eastern countries, Western Europe and U.S.A. The occurrence of okra yellow vein mosaic virus and fruit borer causes yield losses to 50-80 per cent depending upon severity. Therefore, it is important to search for resistant hybrids or varieties.

The study was carried out at the Department of Horticulture, Marathwada Agricultural University, Parbhani during *kharif* 2006. The experimental material comprised ten new hybrids *viz.*, T₁-SOH 1016, T₂-Saloni, T₃-Karishma, T₄-VLH 105, T₅-VOH 267, T₆-NBH 180, T₇-NBH 225, T₈-AROH 221, T₉-Mahabeej 333, T₁₀-Arya Dhanlaxmi along with two checks *viz.*, T₁₁-Parbhani Kranti and T₁₂-Pusa Sawni. The experiment was laid out in randomized block design with three replications. Seeds of different hybrids as per the treatments were obtained from All India Coordinated

Vegetable Improvement Project (AICVIP), sub centre Department of Horticulture, Marathwada Agricultural University, Parbhani and sown at July 5, 2006 with a spacing of 60 x 30 cm in a flat bed of desired dimensions. The observations on yield and yellow vein mosaic virus were recorded on plot basis and in case of fruit borer the infestation was recorded at each picking. The per cent yellow vein mosaic virus and fruit borer was calculated by using the following formula:

$$\% \text{ incidence of YVMV} = \frac{\text{No. of Affected Plants per Plot}}{\text{Total No. of Plants per Plot}} \times 100$$

$$\% \text{ infestation of borer} = \frac{\text{No. of Affected fruits per Plot}}{\text{Total No. of fruits per Plot}} \times 100$$

Analysis of variance carried for different characters indicates significant differences among all the tested hybrids.

The mean performance of different hybrid is presented in Table 1. The highest yields of green fruits was obtained from NBH-225 which emerged as the best performing hybrid and was statistically at par with Mahabeej-333 and significantly superior over the rest of the hybrids while Karishma recorded the lowest yield being

Table 1: Mean performance of different hybrids of okra for yield and resistance to YVMV and fruit borer

Sr. No.	Hybrids	Yield (q/ha)	% Incidence of YVMV	% Incidence of fruit borer
1.	SOH-1016	129.34	0.00	20.56
2.	Saloni	137.65	0.00	18.77
3.	Karishma	109.54	0.00	21.05
4.	VLH-105	123.12	3.05	22.29
5.	VOH-267	130.65	0.00	24.51
6.	NBH-180	153.74	0.00	22.16
7.	NBH-225	166.83	0.00	18.98
8.	AROH-221	143.42	0.00	18.23
9.	Mahabeej-333	160.49	5.05	24.60
10.	Arya dhanlaxmi	147.15	0.00	29.30
11.	Parbhani kranti ©	112.46	0.00	23.87
12.	Pusa sawni ©	110.40	6.21	21.41
	S.E. ±	5.8	1.36	1.06
	C.D. (P=0.05)	17.05	4.01	3.11

Accepted :
October, 2008

at par with both checks Pusa Sawni and Parbhani kranti. Similar marked differences in green fruit yield of okra genotypes were obtained by Neeraja *et al.* (2002) and Srabani and Nath (2003).

Data on respect of per cent incidence of yellow vein mosaic virus revealed that all the tested hybrids were resistant except VLH-105, Mahabeehj-333 and Pusa sawni which recorded very less incidence. Among the infected hybrids, no one is highly susceptible. Similar type of screening for incidence of yellow vein mosaic in okra has been reported by Shepherd and Winston (1999).

Minimum infestation of borer was recorded in treatment NBH225, AROH-221 followed by Saloni, SOH-1016 and Karishma while maximum infestation of borer was recorded in Arya Dhanlaxmi. Similar performance of hybrids of okra for borer was reported by Neeraja *et al.* (2004).

Among all the tested hybrids hybrid NBH-225 performed well by producing highest yield and produced 51 per cent and 45.15 per cent more yield over the checks, Pusa sawni and Parbhani kranti, respectively. This hybrid also recorded comparatively less infestation of borer and showed resistant to YVMV.

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