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Varietal Reaction of Tomato to Early Blight Caused by *Alternaria solani* (Ell. & Mart.) Jones & Grout

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Tomato is cultivated throughout the year in Maharashtra as the crop is highty remunerative. Early blight caused by *Alternaria solani* is the most severe disease of this crop and it always results in quantitative and qualitative lossses (Datar & Mayee 1981). Disease resistance is an important aspect in the management strategy and therefore, promising lines of tomato were screened against the natural incidence of the disease.

TABLE 1

Reaction of tomato varieties against early blight.

Sr. No.	*Name of variety*	*Per cent disease intensity*				*Reaction Type*
		40 DAT	55 DAT	70 DAT	85 DAT	
1.	LE-415	13.93	30.14	48.25	71.48	S
2.	BT-102-12	15.74	32.53	52.36	77.12	S
3.	BT-8	12.19	22.65	39.84	60.24	S
4.	BWR-5	17.38	30.83	51.42	74.32	S
5.	BRH-1	9.28	17.65	27.78	33.19	MS
6.	BRH-2	11.34	19.53	31.29	45.41	MS
7.	BT-21	8.66	16.92	24.43	35.82	MS
8.	EL-333	7.59	14.32	24.63	34.91	MS
9.	EL-342	10.82	18.24	28.56	39.33	MS
10.	Sun-7610	8.37	15.23	24.49	35.80	MS
11.	Sun-7611	9.72	17.80	25.32	36.69	MS
12.	DPL-T-4	5.37	10.52	15.63	23.72	MR
13.	DPL-T-14	5.24	11.31	17.87	24.44	MR
*14.	Megha	-	-	-	-	-
*15.	Pusa ruby	-	-	-	-	-
*16.	BT-1	-	-	-	-	-
Location severity index (LSI)		10.43	19.82	31.68	45.57	-

Where,

S = Susceptible
MS = Moderately Susceptible
MR = Moderately Resistant
DAT = Days After Transplanting
* = Susceptible to Bacterial wilt.

In all, sixteen tomato varieties were sown in the last week of November-1997 by adopting regular nursery practices. One month old seedlings were transplanted at the spacing 60 x 60 cm in RBD with three replications. Ten randomly selected plants were tagged for recording observations. Per cent disease intensity was recorded four times at 40, 55, 70 and 85 days after transplanting (DAT). Per cent disease intensity (PDI) was recorded by adopting 0-4 scale. (Ramakrishnan *et al.* 1971) and on this basis varieties were differentiated into different categories.

It is evident from the table -1 that, there is differential varietal reaction of tomato varieties to early blight. The location severity index (LSI) ranged between 10.43 to 45.57 per cent. There was gradual increase in the disease intensity with increase in the crop age. All varieties recorded highest disease intensity at 85 DAT.

Out of sixteen entries DPL-T-4 and DPL-T-14 recorded minimum intensity of early blight (PDI 23.27 and 24.44 respectively) and these varieties are rated as moderately resistant varieties. These lines also showed high degree of tolerance to bacterial wilt. Varieties viz., BRH-1 & 2, BT - 21, EL - 333 & 342 and Sun - 7610, 7611, were rated as moderately susceptible as PDI ranged between 26-50 per cent. LE-415, BT-102-12, BT-18 and BWR-5 recorded susceptible reaction. However reaction of Megha, Pusa ruby and BT-I could not be recorded as these varieties succumbed to bacterial wilt within 30 to 45 days after transplanting.

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