

Management of fusarium wilt of chickpea (*Cicer arietinum* L.) with *Trichoderma viride*, neem cake and fungicides

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ABSTRACT : Chickpea (*Cicer arietinum* L.) is one of the most important pulse crops of India. Wilt of chickpea caused by *Fusarium oxysporium* f.sp. *ciceri* is the most important disease, causing more economic damage to the crop. It causes on an average 10-25 per cent loss in yield and the damage has been observed to the extent of 61 per cent and 43 per cent at seedling and adult stages, respectively. For the present study, JG 62 variety of chickpea was used. Seven treatments including control were tested for the management of wilt pathogen disease, which were carbendazim 12% + mancozeb 63% WP seed treatment, carbendazim 50 % WP seed treatment, mancozeb 75% WP seed treatment, zineb 75% WP seed treatment, *Trichoderma viride* seed treatment, and neem cake soil application and control. Observations recorded on 90 DAS pertaining to mean per cent disease incidence revealed that it was lowest with *T. viride* (6.663), followed by carbendazim (8.093), carbendazim + mancozeb (9.566), mancozeb (10.946), zineb (10.946), neem cake (12.376) and control (21.896).

Key Words : Chickpea (*Cicer arietinum* L.), fungicides, fusarium wilt, *Fusarium oxysporium* f.sp. *ciceri*, neem cake, *Trichoderma viride*.

Table-1 : Effect of *Trichoderma viride*, neem cake and fungicides on wilt incidence % and yield q/ha of chickpea (*Cicer arietinum* L.).

Treatments	Disease Incidence %			Yield q/ha
	30 DAS	60 DAS	90 DAS	
Control	13.803	16.663	21.896	11.48
carbendazim 12% WP + mancozeb 63% WP (Seed Treatment)	4.756 ^a	6.663 ^{bc}	9.566 ^b	14.48
carbendazim 50% WP (Seed Treatment)	3.326 ^b	5.233 ^{cd}	8.093 ^c	15.62
mancozeb 75% WP (Seed Treatment)	4.996 ^a	8.093 ^{ab}	10.946 ^{ab}	14.36
zineb 75% WP (Seed Treatment)	5.210 ^a	8.093 ^{ab}	10.946 ^{ab}	13.06
<i>Trichoderma viride</i> (Seed Treatment)	2.300^b	4.280^d	6.663^c	16.18
Neem cake (Soil Application)	5.233 ^a	9.046 ^a	12.373 ^a	11.94
S Ed (±)	0.525	0.817	0.663	0.365
CD (p=0.05)	1.146	1.786	1.459	0.081

*Data are average of three replicates. Values in the same column followed with similar letters are not significantly different (p=0.05).

