

Development of suitable IDM approaches for management of Fusarium wilt of Tomato [*Fusarium oxysporum* f.sp. *lycopersici* (Sacc.) Snyder and Hansen] under climate change

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Received : 06.03.2019

Accepted : 08.03.2019

Published : 29.04.2019

Integration of different methods for suitable management of Fusarium wilt revealed that the minimum disease severity was found in case of soil application with mushroom spent + combined seedling treatment with *T. harzianum*, *Azotobacter* and *Rhizobium* + first foliar application with Benfil (Carbendazim) + second foliar application with Matco (Metalaxyl + Mancozeb), representing the value 6.50% as against 54.65 per cent in case of control. Growth promoting effect of plants had also been noticed due to application of IDM practices. The maximum shoot length and root length was observed in the treatment of soil application with mushroom spent + combined seedling treatment with *T. harzianum*, *Azotobacter* and *Rhizobium* + first foliar application with Benfil (Carbendazim) + second foliar application with Matco (Metalaxyl + Mancozeb) representing the values 45.50 cm and 37.00 cm, respectively at 45 DAT against 29.50 cm & 10.15 cm in case of control and 23.40 cm & 8.50 cm in case of control 2. Fresh and dry weights of the shoots were also found maximum in the same treatment, representing the values 66.50g and 21.50g, respectively. Similar observations had also been recorded in case of fresh and dry weights of roots with the values 36.50g and 12.30g, respectively. Maximum number of branches and flowers/plant were also found in the T7 treatment where soil application with mushroom spent + combined seedling treatment with *T. harzianum*, *Azotobacter* and *Rhizobium* + first foliar application with Benfil (Carbendazim) + Second foliar application with Matco (Metalaxyl +Mancozeb) showing 13.60 branches/plant and 90.60 flowers/ plant where in case of control-1 the values are 5.80 and 50.90 and control-2 values are 3.60 and 16.40. The maximum yield with 1.703kg/plant was also obtained from the same treatment.

Key words: Fusarium wilt, IDM approach, bio agents, bio-fertiliser, compost , fungicides
