Efficacy of fungicides on leaf blight of chilli caused by *Cercospora capsici*

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SUMMARY

In vitro effect of ten popular fungicides *viz.,* carbendazim, captafol, thiram, captan, haxaconazole, chlorothanonil, companion, copper oxychloride, ridomil MZ-72 and mancozeb in single and combination were evaluated against mycelial growth of *Cercospora capsici* causing leaf blight of chilli. Among the fungicides used, there was no mycelial growth in carbendazim treated which showed 100% inhibition over the control.

In vivo effect of ten fungicides *viz.,* carbendazim, captafol, thiram, captan ridonil, MZ-72, copper oxychloride, chlorothanonil and companion were tested singly and in combination against disease intensity (%) and yield (q/ha) of chilli. Among all the eight fungicides, most popular fungicide carbendazim gave the lowest (12.20%) disease intensity and maximum ripe fruit yield (28.94 q/ha). Next best fungicide was captafol, which gave (14.40%) disease intensity and (25.38 q/ha) ripe fruit yield.

MATERIALS AND METHODS

In vitro effect of ten popular fungicides *viz.,* Carbendazim, Captafol, Thiram, Captan, Haxaconazole, Chlrothanonil, Companion, Copper oxychloride, Ridomil MZ-72 and Mancozeb in single and in combination were tested against mycelial growth of *Cercospora capsici* by employing poison food technique devised by Nene and Thapliyal, 1979 for screening the fungicides. The requisite quantities of the fungicides were incorporated in 2 per cent sterilized Potato dextrose agar medium and shaken well to make it homogenous. These fungicides impregnated medium was then poured in 10 cm sterilized

Petridishes with three replications for each treatment and allowed to solidify. These dishes were then inoculated with 5 mm circular disc of inoculum from 10 days old culture and this disc was placed in the centre of each Petriplate in such a way so that fungus may come in direct contact with the medium. The medium, without any fungicide, poured and inoculated similarly served as control. These Petridishes were incubated at 28 ± 1^0C for 7 days. The efficacy of fungicides was assessed by measuring the radial growth of the fungal colony in mm along with control. The data so obtained were computed to per cent inhibition of growth (I) over by using the formula :

$$I = \frac{C-T}{C} \times 100$$

where C= Radial growth of control, T=Radial growth of treatment.

In vivo, an experiment was conducted at the Research Farm of Department of Vegetable Science, C.S. Azad University of Agriculture and Technology, Kanpur to find out the best foliar treatment of Cercospora leaf spot of chilli during 2008-09 and 2009-10 with eight treatments and three replications. Treatments *viz.,* two foliar sprays of carbendazim (0.1%), two foliar sprays of captafol (0.3%), two foliar sprays of Thiram + carbendazim 1:1 (0.2%), two foliar sprays of captan + carbendazim 1:1 (0.2%), ridomil MZ-72 (0.2%), copper oxychloride (0.3%), chlorothalonil (0.3%) and companion (0.25%) were used. All the recommended agronomic practices for raising the nursery and in main field crop were followed. Thirty plants were transplanted and maintained at 50 cm x 40 cm distance in 3mx2m plot. The

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