

RESEARCH NOTE

In vitro evaluation of fungicides and organics against *Curvularia lunata* and *Curvularia pallescens* causing leaf blight in gladiolus

■ D. M. PAWAR

Department of Plant Pathology, College of Agriculture, Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli, RATNAGIRI (M.S.) INDIA

ARTICLE INFO

Received : 27.02.2012

Accepted : 18.07.2012

Key Words :

Curvularia lunata, *C. pallescens*,
Fungicides, Gladiolus blight

*Corresponding author:
sandeshpawar55@gmail.com

ABSTRACT

Curvularia blight is an important disease of gladiolus. The causal agents were identified as *Curvularia lunata* and *Curvularia pallescens*. Eight fungicides were screened against *C. lunata* and *C. pallescens*. Out of them, Mancozeb (0.2%), Tricyclazole (0.1%) and Campaignion (Mancozeb + Carbendazim) (0.25%) were found effective against *C. lunata*. In case of *C. pallescens* also, Mancozeb (0.2%) and Mancozeb + Carbendazim (0.25%) and Tricyclazole (0.1%) were found effective. In case of Organics, Humaur (0.1%) was proved effective against both the pathogens.

How to view point the article : Pawar, D.M. (2012). *In vitro* evaluation of fungicides and organics against *Curvularia lunata* and *Curvularia pallescens* causing leaf blight in gladiolus. *Internat. J. Plant Protec.*, 5(2) : 442-443.

Among the various flowering plants that provides beauty, gladiolus (*Gladiolus grandiflora*) tops the list and can rightly called as “Queen of bulbs” and ideal for gardens as well as floral decoration. Now a days consumption of flowers in most countries is rising, associated with income development. In Konkan region of Maharashtra state high relative humidity and moderate temperature prevail which are suitable for growth and production of quality flowers of gladiolus. However, this climate is also suitable for the attack of several fungal pathogens which adversely affect the quality production of the flowers. Among the various diseases of gladiolus, the crop was found affected by blight disease caused by *Curvularia lunata* and *Curvularia pallescens* which need to be controlled. *C. lunata* and *C. pallescens*, incitant of leaf blight of gladiolus were found predominant. The present study was aimed at determining the efficacy of different fungicides and organics for the control of the pathogenic fungi.

Eight fungicides *viz.*, Zineb, Mancozeb, Carbendazim, Tricyclazole, Chlorothalonil, Bordeaux mixture, Thiophanate methyl and Campaignion, (Mancozeb + Carbendazim) were tested by poisoned food technique (PFT). Pure culture of the fungus was grown on Potato dextrose agar medium at 28±1°C

and 8 days old culture was used as inoculum. The were eight fungicides evaluated by poisoned food technique (Nene and Thapliyal, 1993). All fungicides were incorporated in PDA before pouring. The plates were then inoculated with 0.5cm circular disc cut with sterile cork borer from culture grown on PDA. The plates were incubated at 28±1°C in incubator and observation for colony diameter was recorded. Three replications of each treatment were maintained.

Three organics *viz.*, Azotomeal, Humaur and Vipul were taken for 100 ml PDA was 0.1 ml, 0.2 ml and 0.05 ml, respectively. Organics filtered from sintered filter filter to avoid bacterial contamination.

The effect of fungicidal treatments on both fungi revealed that at 0.2 per cent concentration, Mancozeb completely inhibited growth of *C. lunata* and *C. pallescens* and proved as the best fungicide (Table 1). This was followed by Tricyclazole (0.1%), Campaignion, (Mancozeb + Carbendazim) (0.25%) and Zineb (0.2%) resulting in 85.44, 81.45, 75.00 and 80.60 per cent inhibition over control, respectively. Similarly, Gadage and Patil (1977) carried out *in vitro* studies to control *C. lunata* in which they found that Mancozeb (0.2%) and Zineb (0.2%) were effective in controlling

Sr. No.	Fungicides	Concentration (%)	Per cent inhibition over control	
			<i>C. lunata</i>	<i>C. pallescens</i>
1.	Zineb	0.2	75.00	80.60
2.	Mancozeb	0.2	100.00	100.00
3.	Carbendazim	0.1	32.22	65.69
4.	Tricyclazole	0.1	84.44	81.45
5.	Chlorothalonil	0.1	38.55	42.66
6.	Bordeaux mixture	1	73.00	66.54
7.	Thiophanate methyl	0.1	31.11	68.12
8.	Mancozeb + Carbendazim	0.25	83.76	85.44
9.	Control	-	00.00	00.00
	S.E.±		0.05	0.04
	C.D. at 5%		0.17	0.13

the fungus. Kolse and Savant, (2000) found at gladiolus blight caused by *C. lunata*, was effectively controlled by Mancozeb (0.2%) and Zineb (0.2%). Prasad (1982) also reported that Dithane M-45 was most effective against *C.pallescens* in coriander.

In an experiment on organics, it was revealed that Humaur was significantly effective over control than Azotomeal and against both the pathogens (Table 2).

Sr. No.	Treatments (organics)	Per cent inhibition over control	
		<i>C.lunata</i>	<i>C. pallescens</i>
1.	Humaur	27.77	32.50
2.	Azotomeal	20.00	10.00
3.	Vipul	17.77	18.75
4.	Control	00.00	00.00
	S.E.±	0.12	0.10
	C.D.at 5%	0.39	0.33

REFERENCES

- Gadage, N.B. and Patil, B.P. (1977).** Chemical control of Curvularia leaf spot of cotton. *Pesticides*, **11**(11) : 11-12.
- Kolse, S. Devkar and Sawant, D.M. (2000).** Diseases of gladiolus and their control. *Kisanshakti*, **3**(8):42-43.
- Mandokhot, A.M. and Basu Chaudhary, K.C. (1971).** Control of leaf spot of maize caused by *Curvularia* species. *Proc. Indian Acad. Sci.*, **37**:502-505.
- Nene T.L. Thapliyal, P.P. (1993).** *Fungicides in plant disease control*. (Third Ed.). Oxford and IBH publishing Co., New Delhi, 531pp.
- Prasad, B.K. (1982).** Seed borne fungi of coriander, their pathogenicity and control. *Indian J. Mycol. & Pl. Pathol.*, **12**(2):238-239.
