

NOTE

Management of Leaf Blight Disease of Onion (*Allium cepa*) caused by *Alternaria porri* (Ellis) Cif.

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Abstract

Leaf blight is the most deadlier disease in onion. Mancozeb is the most widely used fungicide since several years. An attempt was therefore made to evaluate new chemicals for an effective management of the disease in the field condition. The results revealed that ziram at 0.25% registered lowest disease incidence (20.7%) resulting in maximum yield (122 q/ha) with an ICBR of 1 : 14 followed by companion and mancozeb (rec.check) which recorded 20.8 and 22.6% disease incidence and yield of 120 and 115 q/ha with an ICBR of 1 : 7 and 1 : 12 respectively.

Key words : Leaf blight disease, Onion, *Alternaria porri*, Management.

Onion is the most important bulb crop of Karnataka. This crop is grown extensively in many parts of India. It is grown mostly as an irrigated crop during *kharif* season in Karnataka and also grown in rainfed in southern and northern transitional zone. Leaf blight is the most commonly occurring devastating disease, where onion crop is grown. As the disease advances the leaves are blighted and the infection spreads to bulb, resulting in rot (1). Mancozeb was the most effective fungicide against leaf blight disease (2–5). Since several years, this is the most widely used chemical, an attempt was made to screen other easily available fungicides for the effective management of the disease.

A field trial was conducted during 1999–2002 at Zonal Agricultural Research Station, Navile, Shimoga in *kharif* season. The experiment was laid out in randomized complete block design with three replications and ten treatments. The onion variety Bellary red was used and nursery was grown in a raised bed; 35 to 40 days old seedlings were transplanted at 30 × 10 cm spacing in the main field having the plot size of 3 × 4 m. Three sprays were given. The first spray was given 25 days after transplanting and the subsequent sprays were given at 15-day intervals. The observations were made on disease incidence using 0–9 scale

and the per cent disease intensity (PDI) was calculated as $PDI = (\text{individual leaves rating} \times \text{average infection level}) / (\text{total number of leaves observed} \times \text{highest infection value}) \times 100$. The three years data were pooled, analyzed and cost benefit ratio was worked out for each treatment.

The results of the pooled data presented in Table 1 showed that all the chemical treatments were significantly superior to control with respect to param-

Table 1. Effect of fungicides on *Alternaria* leaf blight and yield of onion. (pooled data of 1999–2002).

Treatment (%)	Percent disease index	Bulb yield (q/ha)	ICBR
1. Hexaconazole 0.1	27.1	113	1 : 1
2. Iprodione 0.2	20.9	113	1 : 3
3. Bitertenol 0.1	23.9	108	1 : 5
4. Carbendazim 0.1	22.6	99	1 : 6
5. Ziram 0.25	20.7	122	1 : 14
6. Propiconazole 0.1	24.1	107	1 : 10
7. Plusilazole 0.1	24.8	99	1 : 6
8. Campanion 0.2	20.8	120	1 : 7
9. Mancozeb 0.25	22.6	116	1 : 12
10. Control	39.5	70	
SE ±	1.21	5.1	
CD ($P=0.05$)	3.67	15.2	

eters studied. Among the chemical treatments, ziram at 0.25% was the best and recorded the least disease incidence (20.7%) and registered maximum yield of 122 q/ha. Companion registered an yield of 120 q/ha with disease of (20.8%) which is next best to ziram compared to recommended check mancozeb which recorded an yield of 115 q/ha and per cent disease incidence of 22.6 .

Maximum disease incidence of 39.5% was observed in control where the lowest yield of 70 q/ha was registered. The results are in conformity with earlier findings (2,5,6) where the fungicide ziram, recorded least disease incidence with maximum yield. The C : B ratio obtained with ziram was found to be 1 : 14 and that of mancozeb was 1 : 12.

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