

EFFICACY OF DIATHANE M-45 FOR CONTROL IN DRY ROT OF POTATO

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ABSTRACT. :

Potato (*Solanum tuberosum*) is an important *nutrative* food crop and cultivate all-over the world. It's get

affected by various pests and diseases, among these fungi plays major role for destruction of tuber Potato get affected by (*Fusarium coeruleum*) and cause dry rot .due to disease development heavy economic loss is occurs to the cultivators. For the control of this disease different fungicide were tested against *Fusarium coeruleum* . The fungicide Dithane M-45 were foundeeffective for control fungal growth causing dry rot of potato.

KEY WORDS: Fungicide; Dithane M-45; Potato dry rot ;control .

INTRODUCTION

Potato is an important narrative food Corp has become a source of carbohydrates and energy food especially in developing countries and it's likely to be further food security .It's very efficient food Corp .Per unit area and time, the Potato produce more drymatters, edible energy,minerals.compared to Wheat, rice and maize. (Khurana,2002).

Potato contain high levels of Protein calories , more edible energy and rich in diatory fibres as a balance nutrative food. Quality of potato protein is comparable to egg and milks, therefore superior to those present in cereals, pluses, and vegetables for high population areas like India, Potato is an important narrative supplements food.(Sigh;1999.;Prahraj ,Paulkhurana,and Lal.2006).

Potato is an important part of the cotton industry for sizing cotton cloths., paper industry. Adhesive industry and uses in production of alcohol. In views of above properties it's permanent solution of 21st centuries major problems like hunger, malnutrition and unemployment.(Prahraj;Paulkhurana and Lal.2006.;Shekhawat and Naik.1999.).

This important narrative Corp get affected by various pests and diseases among theses fungi , bacteria , virasus and aphides are important casual agents .the dry rot of potato is causes by fungi *Fusarium coeruleum* that causes by faulty handling during transportation and in storage (Boy A.E.W.1972.;Somani A.K.2004).the main symptoms of this disease are shrinkage and drying of content due to water loss tuber becomes light in weight.(Gadewar A.V.1989;Hawale M.P.1993). The attempt has been carried out to control the growth of fungus by applications of fungicides Dithane M-45.

MATERIALS AND METHODS

The efficacy of different synthetic fungicides were tested by using potato slice. (Wakle and Kareppa .2000) potato slice of 75 mm. Diameters and 10 mm. Thick were prepared. The various concentration of fungicides Dithane M-45 were prepared on the basis Of active ingredient ie. 100 to 1000 micrograms per mililiters. The potato slice were dipped in different concentration of fungicides Dithane M-45 for 5 minutes .the slic treated with sterile distilled water acts as control. A 5 mm. Mycelial mat of *Fusarium coeruleum* were incubated aseptically at the centre of slice .the plates containing potato slice were incubated at room temperature in laboratories. During incubation period the liner growth of *Fusarium coeruleum* were measured in mm. At 24 hours of intervals for 8 days . The result was presented in the form Of percent control efficacy (PCE).

RESULTS :

The sensitivity of different fungicides were tested against *Fusarium coeruleum* causing dry rot of potato .(Datar and Mayee ,1985,;Kareppa and Gangawane,1999).Dithane M-45 at 800 micrograms per mililiters concentration shows highest growth of inhibitions. At this concentration 100% growth

was observed .therefore Diathene M-45 were found effective against *Fusarium coeruleum* causing dry rot of potato.

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Table: Efficacy of Dithane M- 45 on PCE of Fusarium coeruleum.

Conc (%)	Percent control efficacy							
	Incubation period in days							
	1	2	3	4	5	6	7	8
100	78.64	70.38	63.49	51.89	43.24	32.69	23.47	14.67
200	79.43	73.74	65.67	53.69	45.36	34.57	26.79	17.48
300	80.57	74.69	68.64	55.67	47.81	37.93	29.44	20.91
400	81.26	77.29	70.63	58.29	50.83	40.74	33.59	25.28
500	82.37	79.36	73.43	50.62	53.76	43.29	36.11	30.32
600	83.99	81.72	75.63	63.89	56.34	46.39	40.66	37.84
700	84.27	82.49	78.74	65.26	60.84	51.92	55.73	35.89
800	100	100	100	100	100	100	100	100
900	100	100	100	100	100	100	100	100
S.E.=+_	1.97	1.87	1.73	1.2	1.02	1	2.55	2
C.D.=0.01	9.72	6.13	8.53	5.92	5.03	4.93	4.44	9.87
C.D.=0.05	6.52	5.19	5.73	3.97	3.37	3.31	2.98	6.62