

## NOTE

## Effect of Different Seed Treating Chemicals on Brown Spot of Rice

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### Abstract

Seven chemicals viz., bavistin, beam, kawach, ahook, dhanteam, antracol and armure were used for seed treatment against brown spot of rice. Seed treated with bavistin recorded minimum disease severity (4.10%) and maximum yield (2.36 t/ha).

**Key words :** Rice, Brown spot, Fungicides, Seed treatment.

Rice is the most important cereal crop of India. Brown spot caused by the fungus *Drechslera oryzae* is one of the most prevalent fungal diseases of rice and significantly reduces the yield and milling quality of grains. Yield losses due to brown spot have been estimated to range between 16 to 43% (Datenoff et al. 1991). Since disease is seed borne in many regions, seed treatment is one of the best option to control the disease. Keeping in view the importance of the disease, various fungicides were evaluated for control of the brown spot disease.

Seven fungicides viz., bavistin (1.0 g/kg seed), beam (0.6 g/kg seed), Kawach (1.5 g/kg seed), ahook (5 ml/liter water), dhanteam (0.6 g/kg seed), antracol (3.0 g/kg seed) and armure (1.0 ml/liter water) were used for seed treatment. Seed treatment was done by slurry method, which was prepared by mixing required amount of fungicide in water. Seed treatment was done

in polythene bags and treated seeds stored at room temperature in polythene bag. Treated seeds were sown in nursery during *Kharif* of 2005 and 2006. Field trials were laid out in randomized block design with three replications and Pankaj variety. Recommended fertilizer dose was followed. Observations on disease severity were recorded at dough stages, following 0—9 scale and yield were recorded after harvest of the crop.

The results of the pooled analysis showed that all the seed treating chemicals significantly lowered the severity of brown spot over control. Among the seed treating chemicals, bavistin (1.0 g/kg seed) recorded the least disease severity (4.10%) and the highest yield (2.36 t/ha). This was at par with armure (1 ml/liter water) and antracol (3.0 g/kg seed) (Table 1). In control plot, however, the yield produced was less (1.17 t/ha). During *kharif* of 2005, highest yield (2.18

**Table 1.** Effect of different seed treating chemicals on the severity of brown spot disease of rice. \*Average of three replications.

Treatment	Dosage	2005		2006		Pooled		
		Disease severity (%)*	Yield (t/ha) *	Disease severity (%)*	Yield (t/ha) *	Disease severity (%)*	Yield (t/ha) *	
T <sub>1</sub>	Bavistin	1.0 g/kg seed	4.20	2.18	4.00	2.55	4.10	2.36
T <sub>2</sub>	Beam	0.6 g/kg seed	9.10	1.40	8.70	1.47	8.90	1.43
T <sub>3</sub>	Kawach	1.5 g/kg seed	6.00	1.93	5.40	2.07	5.60	2.01
T <sub>4</sub>	Ahook	5 ml/l water	6.70	1.77	6.30	1.87	6.50	1.82
T <sub>5</sub>	Dhanteam	0.6 g/ kg seed	8.20	1.58	7.30	1.62	7.70	1.60
T <sub>6</sub>	Antracol	3.0 g/kg seed	5.80	2.02	5.10	2.15	5.40	2.08
T <sub>7</sub>	Armure	1 ml/l water	5.20	2.10	4.30	2.25	4.70	2.18
T <sub>8</sub>	Check		28.10	1.02	25.0	1.32	26.50	1.17
	CD (0.05)		2.30	0.24	1.05	0.31	1.46	0.29
	CV (%)		14.34	8.80	7.29	10.7	9.59	10.68

t/ha) and least disease severity (4.20%) were found when seed was treated with bavistin. The control plot showed 28.10% disease severity and gave 1.02 t/ha yield. During *kharif* of 2006, least disease severity (4.0%) and highest yield (2.55 t/ha) were found in treatment bavistin. The control plot produced less yield (1.32 t/ha) and maximum disease severity (25.0%). The results are in confirmity with the findings of Buffa et al. (1993), Swaminathan and Selvaraj (1994), Krishnamurthy et al. (2001) and Jha et al. (2004).

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