

## EFFECT OF FUNGICIDAL PRE-STORAGE TREATMENTS ON VIABILITY OF PADDY SEEDS

Seed treatment with copper and organic fungicides is generally practiced as a control measure against seed-borne diseases of paddy. Hingorani and Prasad (1951) tested fungicides like Semesan, Granosan, Uspulum, red copper oxide, Ceresan and Agrosan for the control of seedling blight of paddy in Sind and reported seed treatment as an effective means of control of the disease. Padmanabhan (1956) studied the effect of different fungicides on the viability of different varieties of paddy and found that the treatments prevented the deterioration of viability of the seeds in storage. Seed treatment with Bordeaux mixture, Blitox 50, Fytolan, Dithane Z 78 and Captan against seedling blight of paddy was reported to be very effective by Misra and Singh (1969).

In extensive paddy areas like the Kuttanad in Kerala, large areas have to be sown simultaneously necessitating fungicidal treatment of large quantities of paddy seeds at a time. Under such circumstances, the seeds may have to be treated in advance and stored for varying periods. Hence an attempt was made to assess the effect of the seed dressing fungicides Agrosan G N, Ceresan, Captan, Dithane M 45 and TMTD (Tetramethylthiuramdisulfide) on the viability of the treated paddy seeds in storage. Fivehundred grams each of healthy and sun-dried seeds of Kochuvithu (local variety) were thoroughly mixed with the fungicides and stored in airtight bottles. Untreated seeds served as control. To assess the effect, if any, of the fungicidal treatments on the viability of seeds, germination tests were undertaken at different intervals for a period of one year.

**Table I**

Viability of paddy seeds treated with different fungicides and stored for varying periods

Fungicide	Percentage germination at different intervals (of days)									
	1	20	92	183	214	245	273	304	334	365
Ceresan	92	98	100	98	98	84	80	86	78	62
Agrosan	96	98	94	88	94	90	86	90	84	70
Captan	88	100	94	92	76	86	80	86	78	44
Dithane M 45	88	98	100	94	86	70	76	78	64	34
TMTD	94	100	96	62	46	22	40	32	14	Nil
Control	86	94	96	78	94	52	86	66	38	48

*(The seeds were treated with the fungicides on 10-6-1966)*

Results are given in Table 1. Treatments with Geresan and Agrosan G N were found to prevent any substantial loss to the viability of the seeds which remained highly viable upto one year. TMTD impaired the germination of the seeds considerably and there was a drastic reduction in viability from the third month onwards resulting in complete loss of viability in one year. Gaptan and Dithane M 45 maintained the viability of the seeds upto 11 months without much reduction. Thus paddy seeds pre-treated with Agrosan G N, Ceresan, Captan and Dithane M 45 were found not to lose their viability for periods upto 11 months.

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### References

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