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Use of banana flour and fig Attempts have been made to work out methods of preparing from the banana flour and fig a large number of appetising dishes and beverages. The results of these attempts have disclosed numerous possibilities which remain yet to be fully exploited. A number of recipes which have already been tested are being published in the form of a Departmental Leaflet.

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Effect of Seed Treatments on the Germination of Paddy

By J. C. SAHA

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That the cultivation of paddy suffers, often considerably, from the attack of various diseases is well known in India and elsewhere. Attempts are therefore made to prevent or control their damage through various means, viz., through propagation of more resistant varieties, seed treatment, or spraying (or dusting) the standing crop with fungicides. Seed treatment being a cheap and easy method, is within the reach of common cultivators, who, being proverbially poor, are unable to pay for the cost of fungicides and the spraying outfits apart from the question of labour that is necessary to spray large areas. Further, the quantity of fungicide that would be required for seed treatment is infinitesimally small in comparison with the quantity that would be required for spraying fields grown out of the same quantity of seeds. From these considerations agricultural workers are now paying more attention to develop seed treatment as a practical means to combat the diseases. Attempts have, therefore, been made in the present investigation to ascertain whether the chemicals used for treatment have got any detrimental effect on the germination of seeds and, if so, to modify the seed rate in sowing accordingly.

Transplanted *Aman*, var. Chinsura 72, was selected for the purpose. Seed treatments* were done with the following chemicals, that are commonly used in Bengal:—

A—Agrosan G
B—Bordeaux mixture, 1% for 10 minutes
C—Copper sulphate solution, 2% for 30 minutes
D - Formalin (aqueous) solution, 2% for 15 minutes

* The seeds were treated 24 hours ahead of sowing and the lots that were treated with liquid fungicides were dried in the sun after the period of treatment was over.

E—Mercuric chloride solution, 2% for 5 minutes
F—Potassium permanganate solution, 5% for 15 minutes
G—Sulphur dust
H—Water (control)

The experiment was laid out in 15 randomized blocks, each having eight unit plots corresponding to the eight different seed treatments. Only 100 seeds from each treated lot were sown per unit plot. The percentage of germination was calculated on the number of seedlings that come above the soil level. The analysis of variance of the data obtained shows that the seed treatments are significant in their action at 1 per cent level.

Effect of seed treatments on germination of paddy (Summary of results)

	Seed treatments								Standard
	E	A	F	G	H	B	C	D	Error
Average percentage of germination	99·0	98·7	97·6	97·0	97·0	89·3	89·3	87·0	1·34

From the summary of the results given above it will be seen that different treatments have different effects on germination. B (Bordeaux mixture, 1 % for 10 mins.), C (copper sulphate sol., 2 % for 30 mins) and D (formalin—aqueous sol., 2 % for 15 mins.) significantly lower the percentage of germination to the extent of 9 to 10 per cent, while the rest of the treatments have no such inhibitory effect. In fact E (mercuric chloride sol., 2 % for 5 mins.) and A (Agrosan G.) increased the rate of germination by 2 and 1 per cent respectively. But these increases in germination percentage are not statistically significant.

Therefore, when any of the above three chemicals, viz., Bordeaux mixture, copper sulphate solution and formalin are used in seed sterilization the seed rate in sowing should accordingly be increased by 10 per cent.

SELECTED ARTICLES

Improved Breeding for Milk Production

By JOHN HAMMOND, M. A., D. Sc., F. R. S.,
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In travelling round the countryside to-day one is struck by the vast improvement made in the state of cultivation and in the production of crops during the war. No such improvement has occurred in live stock, however, but most people will probably agree that the time has now come for this to be taken in hand. A widespread movement for the improved breeding of dairy cattle is required, not only for increased production in war time but also to enable the dairy farmer to hold his own successfully after the war. There is every indication that there will be a world shortage of animal products in the immediate post-war years, and we should be prepared to meet this situation. At the present time, and immediately after the war, when supplies of animal feeding stuffs will be difficult to obtain, it is important that the best use should be made of those that are available.