

THE GERMINATION OF PADDY SEED

BY G. JOGI RAJU

In conducting germination tests of paddy varieties it has been found that some germinate almost cent per cent, immediately after harvest, while others require rest before they are capable of sprouting. The resting period again varies with different varieties. In the table below, a list of some varieties is given showing the percentages of their germination at intervals of one month from September to March.

Variety	Harvested in the month of	Percentage of germination (average of 5 determinations) in the month of						
		Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	March
1. <i>Swarnalu</i> ...	September	99	...	...	...	...	...	...
2. <i>Garikasannavari</i> ...	October	...	97	...	...	...	...	...
3. <i>Punasa Atragada</i> ...	do	...	...	100	...	...	...	...
4. <i>Dalwa</i> ...	do	...	...	99	...	...	...	...
5. <i>Basangi 33</i> ...	do	...	...	97	...	...	...	...
6. <i>Rasangi 21</i> ...	November	...	...	2	...	94	96	99
7. <i>Rasangi 26</i> ...	do	...	...	48	...	93	96	100
8. <i>Punasa Konamani 3</i> ...	do	...	...	...	3	62	92	99
9. <i>Pala Gummasari 7</i> ...	do	...	...	...	5	45	86	100
10. <i>Punasa Akkullu 3</i> ...	do	...	...	...	7	45	92	97
11. <i>G. E. B. 24</i> ...	do	...	...	...	0	9	91	99
12. <i>Co 1</i> ...	do	...	...	...	7	62	96	99
13. <i>Co 2</i> ...	December	...	...	...	16	59	91	100
14. <i>Co 3</i> ...	do	...	...	...	61	95	99	99
15. <i>Ratnachudi 9</i> ...	do	...	...	...	0	55	95	99
16. <i>Kanaka Sompu</i> ...	do	...	...	...	1	18	87	99
17. <i>Navakoti Sannalu</i> ...	do	...	...	...	1	16	86	100
18. <i>Krishna Katukalu</i> ...	do	...	...	...	0	37	94	95
19. <i>Konamani</i> ...	do	...	...	...	1	51	85	98
20. <i>Panianla</i> ...	do	...	...	...	0	41	84	98
21. <i>Harisankar</i> ...	do	...	...	...	9	33	99	99
22. <i>Baital Fakir</i> ...	do	...	...	...	0	1	25	98

Many early varieties appear to require no resting period for germination, but there are exceptions, e.g., *Rasangi 21*. In some varieties, e.g., *Garikasannavari* the seed germinates even while on the plant, if the crop lodges or if there is heavy rain after ripening. Such varieties therefore are usually harvested at an earlier stage of ripening. Another practical application of a study of this character in respect of which even two similar strains of the same variety may differ, has been brought to the writer's notice during a

recent tour in the Amalapur taluk of the Godavari district where the ryots of some villages complained about the seed of *Rasangi* 26 germinating while on the crop when it lodged, thereby suggesting that under these conditions *Rasangi* 21, the seed of which does not so germinate, would be preferable (vide items 6 and 7 of the table). Yet another application of a knowledge of this aspect of paddy varieties is that the seed of varieties, which germinate immediately after harvest, produced in the first crop season (*sariva*) can be used for sowing in the second crop season (*dalwa*).

The late varieties, in general, appear to require a considerable period of rest for the seed to germinate, but there are exceptions, e.g., Co 3.

When conducting germination tests of seed, this character should be taken into consideration because a premature test giving negative results may lead to the rejection of vital seed.

THE DRYING OF PADDY SEED

By G. JOGI RAJU

On the Agricultural Research Station, Samalkot, paddy seed intended for sale to ryots is generally stored in gunnies and before bagging, the seed is dried on a Cuddapah slab floor over a period of four to seven days. It has been found, however, that grain treated in this way produces a high percentage of broken rice when pounded or milled and that in consequence when sold for consumption and not propagation, its value is reduced. In the year 1929 an experiment was made with Punasa Konamani No. 2 to ascertain the exact amount of drying necessary to maintain the vitality of seed in storage. The crop was harvested on January 20th and the grain was threshed out the same day and put into five bags each of which weighed 166 pounds gross. The bags were numbered I to V.

Bag No. I was not dried, whereas the contents of numbers II, III, IV and V were spread to a depth of $1\frac{1}{2}$ " and dried on a tarpaulin for one, two, three and four days respectively, after which they were weighed and bagged again. The weather, throughout this period, remained bright. Periodic weighments of the bags were made at intervals till August 1929 and a test of the germinating capacity of samples from each bag was also made in the first week of May. The weights obtained from time to time and the results of the germination test are noted below,