

## Soaking of Seed

Avoid using the muddy or stagnant water when soaking seed. Water in the irrigation channels is usually suitable for soaking. Soak seeds for 24 to 30 hours. Soaking and germination studies carried out at the Research Station indicated that all of the commercial varieties displayed the same imbibitions characteristics during the first four hours of soaking water absorption in Rustic and G98-22-4 after four hours of soaking was consistently higher than G98-24-1 and BR240 which displayed intermediate absorption characteristics and G98-135, G98-30-3 and G98-196 which were much slower in water absorption. Further research is required to ascertain the significance of these differences in water absorption. Longer soaking of F710 (30 hours) has resulted in maximum germination within 24 hours of incubation instead of 48 hours of incubation.

Remove at the end of the soaking period and wash-off mud if necessary. Allow water trapped in bags to drain off.

## Incubation of Seed

Germination is the resumption of growth of the embryo culminating in its emergence.

This can now be advised by covering the soaked lots of seed with moist bags or straw for 36 to 48 hours. All for the important requirements for germination (adequate moisture, oxygen and suitable temperature) would have been satisfied by the above procedure.

If sowing is to be carried out by aircraft, 24 hours of incubation is normally adequate. Light wetting (watering) may be necessary during incubation to maintain a relative humidity close to 100% in the germinating environment.

The germinated seed is now ready for sowing or broadcasting.

**For Further Information,  
Please call, visit or write:**



# GUYANA RICE DEVELOPMENT BOARD

*BURMA RICE RESEARCH STATION*



## GERMINATION OF RICE SEED



Before the germination procedures are implemented, consideration should be given to the following areas:

1. Choice of variety
2. Source of seed material
3. How much seed should be used

### **Choice of Variety**

In a continuous cropping situation, most farmers would have a variety of choice that has performed satisfactory on their respective farms. However, if a farmer is not satisfied with the variety he is growing he may use one of the following methods to identify a variety that is likely to do well on his farm.

1. Survey the neighborhood to see which variety is performing well on other farmers plots.
2. Visit any 'performance trial' conducted by the GRDB in his locality and evaluate the performance of the varieties involved in order to arrive at a suitable choice.
3. Discuss with his Extension Officers the choice of a suitable variety for his locality.

### **Source of Seed**

Suitable seed materials can be obtained through the following avenues:

1. The GRDB, Rice Research Station (Basic seed).
2. The RPA Seed Units (Certified seeds).
3. Farmer to farmer purchases.
4. Self supply by farmers.

Once the necessary steps are taken to obtain clean seeds that are free of red rice and weed seeds, the above seed sources can meet the seed requirements of farmers.

Carry out germination test on the seed you intend to use before soaking.

### **How much seed should be used**

The quantity of seed required to establish a good plant stand varies with:

- Variety
- The quality of the seed bed
- The percent germination of the seed

- Other factors in the immediate environment

Seed rate studies with the Rustic back-cross varieties have indicated that 120-140 pounds of good quality seed are usually adequate on properly prepared seed beds.

However, in the absence of specific information, the upper limit of the seed rate range (140lbs/acre or 1 bag/acre) is usually adequate for most field conditions.

This quantity of seed offers the best opportunity for the yield components (tiller number, grain number and grain weight) to interact and have a positive influence on grain yield.

### **Preparing seed for soaking**

Seeds increase in volume by around 25% during the soaking exercise. It is therefore recommended that each bag of seed is divided into two equal parts and tied slack to accommodate the increase in volume during soaking. Seed treatment may also be applied at this time if necessary.