**RICE**

***(Oryza sativa L.)***

**Equipment**

A pair of scissors, forceps, a pair of pointed needles, magnifying lens. Camel hair brush, butter paper bag (4'x2'), black paper, petri dish, methylated spirit, thermos bottle, centigrade thermometer, stove, hot water container, tag and lead pencil.

**Procedure**

Rice is naturally self-pollinated crop. Blooming sometimes occur the same day on which a spikelet emerges above the sheath. Ordinarily the whole panicle completes anthesis in 4-7 days. Flowers in the middle of inflorescence open first and blooming progress downward and then upward. The most active period of blooming is in September and between 11:00 am. To 12 noon in October.

**Selfing**

Bag the panicle to avoid whatever little chances there are for the cross pollination.

**Crossing**

***Emasculation***

**i. Hand Emasculation**

1. in the evening, select a desirable panicle.

2. Retain only 10-20 florets on the panicle and clip off the top 1/3 portion of the floret with a pair of scissors.

3. Remove the anthers with forceps very gently so that the female parts are not injured.

4. Bag the emasculated panicle with butter paper bag.

**ii. Hot water treatment**

1 Dip the panicle in hot water at 40-44 C in the thermos bottle for about 10 minutes.

2. After the dipping remove the panicle and cover it with a butter paper bag.

**iii. Black paper bag method**

1. Cover panicle with a black paper bag
2. Next day remove the bag from the panicle and remove the protruding stamens with a fine forceps. This protrusion of stamens is brought about by the heat produced Within the black paper bag.

**Pollination**

1. ln the evening, cover the panicle of the male parent before the dehiscence of anthers with the butter paper bag.
2. Next day collect the pollen grains from the bagged male parent in the Petri dish.
3. Remove the bag of the emasculated panicle and dust the pollen grains with a camel hair brush by opening the floret with a forceps and a needle, or place the mature anther as such within the floret
4. Again cover the panicle with the respective bag.
5. Sterilize your hands and equipment with methylated spirit.

**Labelling**

Tag the plant, indicating the name of the cross, date of pollination and your signature. Write the-female parent first and then the name of the pollen parent (male). Always use lead Pencil as it is water proof and will, not be damaged during rains or due to dew.