

# **CONTINGENCY PACKAGE OF PRACTICES ON RICE**

## **FOR CHRONICALLY FLOOD AFFECTED AREAS**

### **A. Raising Community Nurseries:**

Community nursery may be raised to meet the seedling requirement of flood affected areas. Community nursery may either be raised by the farmers of flood affected areas in non-flood prone or high lands or by other farmers from flood free areas to help distressed farmers.

**1. Varietal Selection:** Select recommended varieties for late planting having wide flexibility in respect of seedling age and transplanting time under the following situations.

a) In occasionally flood affected areas if flood recedes early and rice can be transplanted by mid August, use varieties Kushal, IET-6666, Pankaj, Biraj, Anderw Sali, Solpona, Gitesh and Prasadbhog.

b) In chronically flood affected areas where flood is expected to recede by the last part of August, varieties like Andrew Sali, Biraj, Monohar Sali, Kmj-1-19-1, Luit, Kapilee, Dum Sali, Gitesh and Prafulla should be selected. In absence of these varieties any traditional photo period sensitive coarse grain sali variety can be used.

c) In areas where transplanting is not possible before mid-September, extra early varieties such as Luit, Kapilee, Culture-1, Heera and Disang should be selected.

**2. Seed bed preparation:** Seed bed should be initially ploughed with addition of adequate FYM/compost. The Flat beds may be selected and a gap of 30 cm (1 ft.) may be left at an interval of every 1.25 m (4 ft.) as passage between the beds. Beds within the strip should be well levelled. Chemical fertilizers @ 500 g urea, 500 g SSP and 250 g MOP for the area used to transplant one bigha of land should be applied at the time of final puddling. Strip beds to be made after levelling the field.

**3. Seed Rate:** About 10 kg seeds are needed to transplant 1 bigha of land i.e. ten strips of 10m × 1.25m size @ 1 kg seed/bed.

**4. After care:** The gap of 30 cm may be converted into channels one week after sowing for draining out excess water during heavy showers and to supply water to the channels to keep the raised beds moist in the event of drought.

**5. Transplanting:** Transplanting may be done at a convenient time particularly soon after flood recession. It is to be noted that moisture stress is a common feature after flood recession in flood affected areas.

**6. Plant population:** Closer planting is essential in case of late planting since tiller development is checked due to emergence of non-effective tillers. In case of modern varieties 36 hills/sq.m (20 cm × 15 cm) and in case of tall varieties 25 hills/sq.m (20 cm × 20 cm) are to be maintained.

**7. Seedlings/hill:** In late planting situations, the only option to have maximum panicles per unit area is from that of the main culm and primary tillers. Therefore, 6-8 seedlings per hill may only yield 18 panicles per hill, as the growth phase of the rice plant almost expires in the seed bed.

**8. Fertilizer:** In chronically flood affected areas where high silt deposition occurs; there may not be any need for fertilizer application. However in occasionally flood affected areas irrespective of varieties, a basal application of fertilizer should be done. The fertilizer doses are 40:20:20 or 20:20:40 N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O as the case may be.

## **B. Double Transplanting:**

Double transplanting is a method for seedlings multiplication under seedling scarcity condition. Traditional or improved varieties may be transplanted during July with closer spacing of 20 × 10 cm (50 hills/sq.m) and each tiller developed may be separated and planted once again, which fulfills the seedling requirement by 5-7 times.

**1. Varietal Selection:** Traditional or improved varieties with long duration (150 days or more) having photoperiod sensitivity, should be selected.

**2. Sowing:** Sowing should be done during early part of June in well prepared seed beds as indicated earlier.

**3. First transplanting:** Transplanting should be done in early part of July with 25-30 days old seedlings. About 50 hills/sq.m (20 cm × 10 cm) is to be maintained during first planting. Fertilizers @ 20:10:10 kg/ha is to be applied for rapid and healthy tiller development.

**4. Second transplanting:** Uprooting should be done at 25-30 days after the first planting and each tiller may be separated and re-transplanted with a single tiller/hill. In case of further delay however, 3-4 tiller/hill may be planted with closer spacing. In flood affected areas, there is no need of any fertilizer application in second transplanting if planting is delayed beyond August and fertilizer is added only in first planting.

## **C. Direct Seeding (Wet Sowing):**

This is an effective and remunerative method of rice cultivation in flood affected areas after recession of flood. In general, very short duration or extra-early (less than 100 days), such as Luit, Kapilee, Culture-1 and any traditional photo period sensitive coarse grain varieties are suitable for wet sowing in the main field. Seeds @ 75 kg/ha are to be soaked for 24 hours and incubated for 24-48 hours for sprouting. In the meantime, the field has to be puddle with minimum tillage and levelled properly by laddering to ensure uniform moisture retention. Sprouted seeds are then broadcast uniformly on to the puddled and levelled field after application of basal dose of fertilizer @ 40:20:20 kg/ha. Nitrogen should be applied in 2 splits, viz., top dressing at 20 days after sowing and at 45-50 days after sowing. Only P and K are to be applied as basal dose. Direct seeding of sprouted seeds on puddled soil can be done at any convenient time after flood recession upto September 10. The main drawbacks of this system are: Water management as moisture stress is a common problem after flood recession. Late sowing may result in spikelet sterility if temperature falls early.