

Package of Practices for Rice Cultivation

Area Under Rice Cultivation In Distt. Saharanpur:

Recommended varieties: Pusa Basmati 1, Pusa Basmati 1121, Pusa-1401, Pusa-1460, Pusa-1612, Pusa-1509, Pusa-2511.

Land and its preparation: Loam to clay loam soil. The field is prepared primarily by ploughing with soil turning plough, followed by harrowing. Before transplanting, the main field is filled with water and is puddle twice by paddy puddler or once by rotavator. **Seed selection and treatment:** For seed treatment, dip the seeds in a solution prepared by dissolving 10 g carbendazim (Bavistin) or MEMC (Emisan 6 Hg) and 1g streptocycline in 10 litres of water (for 10 kg seed) for 24 hours. Take out the treated seed from the solution and cover it with moist gunny bags and allow it to sprout by sprinkling water frequently on the gunny bags.

Sowing Time: Medium and mid early duration varieties and hybrids 15-30 May, Scented (*basmati*) varieties 1-15 June.

Seed Rate (kg/ha.): High yielding (non scented medium, mid early and early) varieties 25-30, Hybrids 15-18, Scented varieties 20-25.

Transplanting: Uproot 25-30 days old seedlings carefully and transplant the seedlings in the main field with 2-3 seedlings at a place (hill) in rows 20 cm apart keeping 15 cm distance between hills in a row. Transplant the seedlings erect and at a depth of 2-3 cm.

Manures and Fertilizer Management: Apply FYM @ 15 t/ha. and incorporate it into soil by ploughing before 25-30 days of transplanting. For green manuring use *dhaincha*.

• The fertilizers should be applied as per soil test basis. However, in its absence, apply fertilizers according to the following general schedule.

Varieties	N(kg/ha.)	P2O5 (kg/ha.)	K2O (kg/ha.)	ZnSo4(kg/ha.)
non-scented varieties & hybrids	150	60	60	25
Scented varieties	90	30	30	25

• Apply full dose of phosphorus, potash and zinc at transplanting. Apply N in 3 equal splits at 0 (transplanting), 21 and 42 days after transplanting (DAT).

Weed management: Spray bispyribac sodium 10 SL (Nominee Gold) at 250 ml/ha. in 200 litres of water after 15-25 days of transplanting.

Water management: Maintain standing water (3-7 cm) in the field during vegetative growth period but thereafter, keep the soil wet by frequent irrigation. Withdraw irrigation one week before harvesting to ensure timely harvest of paddy and sowing of next crop.

PLANT PROTECTION: Diseases:
a) Foot rot and bakanae (*Fusarium moniliforme*): Uproot the nursery in standing water. Apply sand mix carbendazim (Bavistin) in nursery at the rate of 1 g/m² nursery area 7 days before uprooting.

b) Blast (*Pyricularia grisea*): Transplant the crop before 15th July to minimize disease incidence. Spray the crop with tricyclazole (Beam, Sivic) 120 g or carbendazim (Bavistin) 200 g or edifenphos (Hinosan) 200 ml in 200 litres of water twice at disease appearance on leaves & 50% panicle emergence stage

c) Bacterial leaf blight (*Xanthomonas oryzae* pv. *oryzae*): Seed treatment as above. Avoid excessive use of nitrogen. Remove and destroy diseased plants.

d) False smut (*Ustilaginoidea virens*): Spray the crop with 500 g copper oxychloride per acre in 200 l water at 50% panicle emergence. Spraying should be done with knapsack sprayer.

e) Brown spot (*Drechslera oryzae*): Spray the crop with mancozeb @ 600 g/acre in 200 litres of water twice, first at disease initiation and second 15 days later

f) Sheath blight (*Rhizoctonia solani*): Spray the crop with carbendazim 25% + flusilazole 12.5% SE (Luster 37.5 SE) @ 400 ml/acre at the time of disease initiation and 15 days later

B. Insect- pests

a) Hoppers (WBPH & BPH): Spray the crop with 250 ml monocrotophos or 125 ml dichlorvos (Nuvan), 400 g carbaryl in 250 litres of water per acre or dusting of methyl parathion (Folidol) @ 10 kg/acre and broadcasting of 250 ml dichlorvos diluted in 1.5 litre of water mixed in 15-20 kg sand in standing water.

b) Stem borer: Spray the crop with 500 ml methyl parathion or 500 ml monocrotophos or 1 litre chlorpyrifos (Durmet/Lethal) in 200 litre water per acre at 30, 50 and 70 DAT or broadcast 7.5 kg cartap hydrochloride 4G (Padan/Sanvex) or 7.5 kg Fipronil 0.3G (Regent) or 5 kg phorate (Foratox) mixed with 10 kg sand per acre in standing water at 30, 50 & 70 days after transplanting.

Harvesting: Harvest the crop when the panicles are mature and the plants have turned considerably yellow. The crop can be harvested manually by sickles or by combine harvester.

Storage: For safe storage, dry the produce in the sun for about one week and transfer it into the fumigated store. For safe storage its moisture content should be about 12%.