



भा.कृ.अनु.प - राष्ट्रीय चावल अनुसंधान संस्थान
ICAR - National Rice Research Institute
(An ISO 9001: 2015 Certified Institute)
Cuttack – 753 006, Odisha, India



Agro-Advisory Service

Please follow COVID-19 guidelines as per the Ministry of Health and Family Welfare, Govt. of India/Odisha for doing any agricultural operations.

Strategies for Second Fortnight of July, 2021

Dry direct seeded rice in upland

- ❖ To control weeds in direct seeded upland rice spray, Bispyribac sodium 10% SC @ 120ml/acre in 8 tanks of 16 litre capacity sprayer at 8-10 days after emergence of weeds (or when the weeds are at 2-3 leaf stage) **or**, Fenoxaprop – p – ethyl 9 EC @ 260 ml/acre at 20 days after sowing (DAS) in moist soil as an alternate to manual weeding.
- ❖ In upland areas wherever herbicide has not been applied, first manual weeding or mechanical weeding by operating finger weeder or wheel hoe may be done. After weeding, apply 26 kg of urea/ acre as top dressing.

Dry direct seeded rice in lowland

- ❖ To control weeds spray, Bispyribac sodium 10% SC @ 120ml/acre in 8 tanks of 16 litre capacity sprayer at 8-10 days after emergence of weeds (or when the weeds are at 2-3 leaf stage) **or**, tank mix of Fenoxaprop-p-ethyl + Ethoxysulfuron (Rice star + Sunrise) @ 260 + 50 g/acre at 20 DAS in moist soil as an alternate to manual weeding.
- ❖ In semi deep/deep water areas, where direct seeding has been done and herbicide was not applied for weed control, '*beushening*' may be done after accumulation of sufficient water (at least 7-10 cm standing water) in the field. After '*beushening*' apply 18 kg of urea/acre as top dressing.
- ❖ In rainfed shallow lowland areas where direct seeding has been done and herbicide has not been applied to control weeds, '*beushening*' may be done after accumulation of sufficient water (at least 7-10 cm standing water). After '*beushening*' apply 36 kg of urea/acre as top dressing.

Transplanted rice

- ❖ Nursery sowing should be completed by end of 2nd fort night of July if not completed.
- ❖ Prepare wet bed nursery close to source of irrigation water with good drainage facilities. It is advisable to follow community nursery approach at village level.
- ❖ To transplant one-acre area about 320 m² area nursery beds are required. Prepare wet nursery raised beds of 10cm high, 1.2-1.5 m wide and of convenient length. Well defined irrigation/drainage channel of 30-45 cm width must be kept in between two beds.
- ❖ Use 14 - 16 kg seeds /acre of HYV and 5-6kg/acre of hybrids for nursery sowing. In less fertile lands apply fertiliser @ 6-3-3 g of N, P₂O₅, K₂O /m² of nursery at the time of land

preparation. In zinc deficient soil apply 960 grams of zinc sulphate to 8 cents (320m²) of rice nursery as basal dose.

- ❖ Before sowing the seeds should be treated with *Trichoderma* dust formulation @ 10g/kg of seeds (Soak the paddy seeds in water for 8 hours, decant water, mix with *Trichoderma* dust formulation and store as a heap covered with moist sack or polythene sheet for 12-24 hours before sowing in nursery or any other seed treatment chemicals provided by the State Government agencies.
- ❖ In heavy weed infested areas, spray Pyrazosulfuron-ethyl @ 80 g/acre in 8 tanks of 16 litre capacity sprayer at 3-5 DAS to control weeds in rice nursery **or**, Bispyribac sodium 10% SC @ 120ml/acre in 8 tanks of 16 litre capacity sprayer at 8-10 days after emergence of weeds (or when the weeds are at 2-3 leaf stage).
- ❖ If infestation of thrips is notice in rice nursery, spray NSKE (Azadirachtin) @ 800 ml/acre **or**, Lambda-cyhalothrin 5% EC @ 100 ml/acre **or**, Thiamethoxam 25 % WG @ 40g /acre.
- ❖ In root-knot nematode and stem borer endemic areas, Carbofuran granules @ 3 g/sq.m **or**, phorate @ 1g/sq. m **or**, Diazinon @ 1g/sq.m in nursery area is to be applied 5 days after sowing.
- ❖ If infestation of seedling blight is noticed, apply Propiconazole @ 1 ml/ 1litre of water.
- ❖ If leaf blast is observed in rice nursery, spray Tebuconazole 50% + Trifloxystrobin 25% WG @ 0.4 g **or**, Isoprothiolane 40EC @ 1.5 ml per litre of water. Repeat the spray at 7-10 days' interval.
- ❖ To control bakanae disease in rice nursery, spray Carbendazim 50WP @ 1g per litre of water and repeat the spray at 7-10 days' interval.
- ❖ In-case of brown spot, spray Propiconazole 25EC @ 1ml **or**, Mancozeb 75WP **or**, Carbendazim 64%+Mancozeb 8% 75WP @ 1.5g per litre of water.
- ❖ In-case of rice tungro, manage green leaf hopper by spraying Imidacloprid17.8SL @ 0.25 ml **or**, Thiamethoxam 25WG @ 0.2 g per litre of water.
- ❖ Keep 3 pheromone traps /acre of rice nursery for monitoring the stem borer and leaf folder infestation. Whenever the number of male moths/trap reaches 4 or 5 apply, Azadirachtin 0.15% EC @ 800 ml/acre **or**, Chlorantraniliprole 4%GR @ 4kg/acre mixing with sand at 1:1 ratio **or**, spray Chlorantraniliprole 18.5% SC @ 60 ml/acre in 200 litres of water **or**, Cartap hydrochloride 4G @ 10kg/acre.
- ❖ In-case of case worm, spray Indoxacarb 15.8% EC @ 80 ml/acre **or**, Flubendiamide 39.35% SC @ 20ml/acre.
- ❖ For transplanting by using mechanical transplanter, mat nursery preparation should begin 15-20 days prior to transplanting. Mix fine soil with well decomposed farm yard manure or compost or vermicompost in 4:1 ratio. After thorough mixing, spread the mixture for about 2 cm thickness on the seedling trays or polythene sheet. For spreading the soil over polythene sheet and making it uniform, use a wooden or iron frame divided into 4 equal segments. Fill the frame almost to the top with the soil mixture and level it. Spread the pre-germinated seeds over the soil mixture evenly. After spreading, cover the seed with a thin layer (0.5 cm) of soil mixture and a thin layer of straw or banana leaves if the nursery is grown in open area. Remove the straw or banana leaf cover after 2-3 days. Maintain the soil moisture by providing irrigation at regular interval. Seedlings raised in one cent area is sufficient to transplant in one-acre area.

- ❖ Main field land preparation should be done by puddling the field twice at 7 – 10 days' intervals and land levelling for uniform crop stand. About 0.8 t/ acre of well decomposed FYM may be applied before first puddling.
- ❖ Incorporate the *dhaincha* green manuring crop at the time of initial puddling of main field.
- ❖ For high yielding varieties apply 44 kg of DAP + 33 kg of MOP **or** 22 kg of urea +125 kg of SSP+ 33kg MOP as basal dose at the time last puddling. In sandy soil apply 44 kg of DAP and 16.5 kg of MOP **or** 22 kg of urea+125kg of SSP+ 16.5kg of MOP.
- ❖ Reduce the dose of N fertiliser by 25-50% in the transplanted rice where *dhaincha* is incorporated in to the puddled soil.
- ❖ In stemborer endemic areas, release egg parasitoid *Trichogramma japonicum*@ 40000 eggs /acre (3 cards /acre) for 3 times.
- ❖ Fix light trap @1/acre to attract and kill adults of stem borer and leaf folder.
- ❖ Keep 3 pheromone traps /acre of rice field for monitoring the stem borer and leaf folder infestations. Whenever the number of male moths/trap reaches 4 or 5 apply, Azadirachtin 0.15% EC @ 800 ml/acre **or**, Chlorantraniliprole 4%GR @ 4kg/acre mixing with sand at 1:1 ratio **or**, spray Chlorantraniliprole 18.5% SC @ 60 ml/acre in 200 litres of water **or**, Cartap hydrochloride 4G @ 10kg/acre **or**, Flubendiamide 20 WG 50g/acre in 200 litres of water.
- ❖ Whenever two folded leaves/ hill observed then to control leaf folder spray, Chlorantraniliprole 18.5% SC @ 60 ml/acre, **or** Flubendiamide 20 WG 50g/acre **or**, cartap50 WP@ 400 g/acre, **or** quinalphos 25 EC640 ml/acre in 200 litres of water.

Management of transplanted rice in saline soil

- ❖ In saline soil and saline water inundated areas farmers are advised not to go for dry nursery. In such areas, community nursery may be raised in less saline affected land with assured irrigation facilities.
- ❖ Use salt tolerant varieties like CR Dhan 405 (Luna Sankhi), CR Dhan 403 (Luna Suvarna), DRR 39, Lunishree or any other locally improved salt tolerant variety.
- ❖ Prepare wet nursery raised beds of 10cm high, 1.2-1.5 m wide and of convenient length. Well defined irrigation/drainage channel of 30-45 cm width must be kept in between two beds.
- ❖ Use 25% more seed (15-20kg/acre) than that recommended for normal transplanting.
- ❖ Keep the nursery bed at saturation by providing irrigation water if needed.
- ❖ Preferably use 30-45 days old seedlings with 4-5 seedlings/hill to minimize the mortality of seedlings after transplanting and maintenance of optimum plant population.
