

CONTINGENCY PLAN FOR RICE UNDER ABERRANT WEATHER SITUATIONS

MID/ LATE SEASON DROUGHT

- If receipt of rainfall is delayed upto August end, early maturing rice varieties (90-105 days) like CR Dhan 101, CR Dhan 102, Vandana, Shusk Samrat, Sabaur Surbhit, Sahbhagidhan, Khandagiri, Parijat, Narendra 97 can be grown in rainfed shallow lowlands by direct seeding upto end of August with basal application of 30 kg P₂O₅ and 30 kg K₂O for better establishment. Initial Nitrogen fertilizer dose @ 30 kg ha⁻¹ should be applied 7-15 days after sowing.
- In medium lowlands, where direct seeding is not feasible, farmers are advised to take up either transplanting of the available aged seedlings (upto 60 days old) of long duration varieties *viz.*, CR Dhan 803, CR Dhan 410, CR Dhan 507, CR Dhan 508 and CR Dhan 510 etc. or transplanting of clonal seedlings from the surviving rice crop in the neighboring fields at closer spacing (15 x 10 cm) with basal application of 40:40:40 kg N, P₂O₅ and K₂O.
- In coastal saline areas, transplanting of aged seedlings of salt tolerant rice varieties like CR Dhan 412 (NICRA Dhan: Luna Ambiki), CR Dhan 414, Lunishree, Luna Suvarna, Luna Sampad, SR 26B, etc. can be done upto September first week with basal application of 30:30:30 kg N, P₂O₅ and K₂O.
- In above situations, it is advisable to raise the bund height and plug the holes in the bunds to arrest the seepage loss and keep the fields weed free.
- Implement efficient irrigation techniques such as alternate wetting and drying that reduces water consumption.
- Apply organic mulches to soil to reduce evaporation losses.
- Apply balanced and appropriate fertilizers according to crop's growth stage. Avoid excess nitrogen as it promotes excessive vegetative growth and increase water demand.
- If feasible, apply foliar sprays of nutrients like potassium (KNO₃ @ 1%) to improve the plant's stress tolerance.
- Regularly monitor soil moisture levels using appropriate tools to make informed irrigation decisions.
- Drought-ready infrastructure: Invest in efficient irrigation systems such as drip or sprinkler that deliver water directly to root zone.
- Emergency irrigation planning: Develop plan for prioritizing water allocation to critical growth stages.
- Monitor for pest and diseases closely, as drought stressed plants are more susceptible. Use integrated pest management strategies.
- In the case of delayed transplanting or direct seeding during August or early September, foliar spray of insecticides like thiamethoxam 25% WG @ 40 g/acre or imidacloprid 17.8

SL @ 40-50 ml/acre should be applied at 15-20 days after transplanting for late- planted rice pests like thrips.

- For swarming caterpillar infestation, spray Chlorpyrifos 20 EC @ 600 ml/acre or Acephate 75 SP @ 400 g/acre; for rice hispa and gundhi bug infestation, spray Imidacloprid 6% + Lambda cyhalothrin 4% SL @ 120 ml/acre.
- In case of gall midge infestation, spray Fipronil 5 SC @ 400-600 ml/acre or Thiamethoxam 25 WG @ 200-300 g/acre; for rice stem borer and leaf folder, apply chlorantriliniprole 0.4% GR @ 4 kg/acre or chlorantriliniprole 18.5 SC @ 60 ml/acre.
- In uplands, if rice crop is not yet sown or damaged due to drought, farmers should take up short duration low water requiring crops like cowpea (Utkalmanika), blackgram (T-9, Sarala, PU 19, 30), green gram (K851), Horsegram (Urmi) and Sesamum (Kanak, Kalika, Uma, Usha).
- Adopt in-situ rain water conservation measures such as plugging the holes in the field bunds to arrest the seepage loss and keep the fields weed free.
- Go for supplemental/ life saving irrigation if water is available in rainwater harvesting structures.
- If the crop is completely damaged, go for rice fallow pulses (black gram/ lathyrus) or toria after receipt of sufficient late season rains.
- Crop insurance should be taken to mitigate financial losses on crop failure.
- Utilize weather forecasting and climate prediction tools and plan accordingly. csaXpert app from google play store can be downloaded for the same.
- Research and extension services: Stay updated with the latest research and recommendations for managing drought stress in rice crop through agricultural extension services.
- Undertake rainwater harvesting like farm ponds, community tanks, watersheds and pools. Repair and rejuvenate local water bodies before the rainy season.
- Create awareness and participate in water conservation programmes. Listen to radio, watch TV and read newspapers for warnings, updates and instructions.