

Variety: Bhalum 4

S. no.	Particulars	Details
1.	Suitability of the variety for the area-agro-climatic zone	Low to mid altitude upto 1000m asl under rainfed upland rice cultivation system in the main kharif. The variety is moderately cold tolerant and, therefore should not be grown beyond 1000m asl. The variety also possesses some tolerance to low-light intensity.
2.	Selection of field/land preparation practices	With the initial summer rainfall, prepare the field. Plough the field well. Apply farm yard manure (FYM) at 10 t/ha. As upland rice fields are mostly acidic, apply lime every 3 years. Determine dosage after soil testing. Furrow application of lime will reduce lime requirement. Ensure proper levelling of the field before sowing. Make uniform rows at 20 cm distance. Use a row marker for making shallow furrows (rows). Apply basal dose of fertilizer (20kg N, 60kg P, 40 kg K/ha) in furrows before seeding and mix well. In areas where organic cultivation is practiced, FYM should be applied well in advance or recommended organic fertilizer should be applied at the time of sowing. Also, suitable organic insecticide should be used to control nematodes.
3.	Seed treatment-rate of timing/chemical	Soak seeds in 0.2% Carbendazim 50WP solution for 12-18 hours before sowing to protect from leaf blast. Seed treatment with Imidachlorprid 17.5 SL@ 3ml/kg of seed protects the crop from root aphids.
4.	Sowing time	First week of June to first week of July
5.	Seed rate/sowing method-line sowing with row to row and plant to plant distance/direct sowing	<p>Seed selection</p> <p>Select seeds for sowing using the common salt solution (1.65kg common salt in 10 litter water). Put seeds in salt solution and discard all floating seeds. Wash the seeds settled at the bottom thoroughly with water to remove salt, drain out water and dry seeds in the sun for a day. If sowing is to be done at a later date, dry seeds thoroughly and store in a proper package.</p> <p>Seed rate and sowing</p> <p>Use 40-50 kg seeds per hectare. Sow treated seeds thinly in furrows and cover with soil. Irrigate the field if the soil is very dry and rain is not expected within 2-3 days. In some areas it may be needed to cover the soil with net or grass to avoid damage by birds. Thin/fill gap 15 - 20 days after germination and maintain optimum plant population. Plant to</p>

		plant distance should be approximately 10 – 12 cm.
6.	Fertilizer doses with timing	Use 60 kg/ha nitrogen in three split dosages (30:15:15). Apply the first dose as basal dose. Second as top dress at active tillering stage (40 – 45 days after germination) and the third just before panicle initiation. Phosphorus (60 kg/ha) and potash (40 kg/ha) fertilizers are applied as basal dose. However, the dose would vary depending on the soil analysis.
7.	Weed control-chemicals with doses and timing	Herbicides like Pretilachlor 50% EC @ 1.25 lit per hectare may be used as pre-emergence weedicide. Post emergence weedicide, Bispyribac-sodium 10 SC, at 25 g/ha may be used as foliar spray 30-40 days after seeding. If row planting is practiced, wheel harrow can be used 40 days after seeding (just before first top dressing). In high rainfall areas chemical control should be combined with at least one hand weeding. If chemical control is not used, adopt hand weeding or harrowing thrice at 20, 40 and 60 days after germination.
8.	Disease and pest control-chemicals with doses and timing	Spray Tricyclazole fungicide @ 0.6% at panicle initiation stage to protect from neck blast. Sow in April-May to escape blast disease. Spraying of Imidachloprid 17.5 SL @ 5ml / 10 lit of water after 40 days after seeding protect the crop from stem borer and sucking pests. Installation of pheromone traps @ 20 traps/ha can effectively used for monitoring and male capture of stem borer. During milk stage, use rotten crab in a plastic funnel trap @ 100 traps/ha. This can control gundhibug up to 60%.
9.	Irrigation schedule	There is no specific irrigation schedule. When grown in terraces or slopes, it should be grown in the lower portion of the hill slope where runoff concentrates. Water harvesting in-situ in flat or terrace land can be done by providing peripheral bunding to increase crop yield.
10.	Harvesting	Depending on altitude about 40-50 days after 50 % heading is required for the grains to become mature. Harvesting is done at the yellow ripening stage when about 90% of the grains are physiologically mature to avoid shattering loss in field. The variety matures in 140-150 days from seeding.
11.	Quality characteristics of the variety, if any	Short bold; white kernel; L/B ratio 2.86; alkali value 2.8 3.2; Grain chalk - C/VOC
12.	Expected yield of the variety	3.8-4.0 t/ha

