Variety: Megha SA1

S. no.	Particulars	Details
1.	Suitability of the variety for the area-agro-climatic zone	Low to mid altitude upto 1000m asl under wet rice cultivation system in the main kharif. The variety is moderately cold tolerant and, therefore should not be grown beyond 1000m asl.
2.	Selection of field/land preparation practices	**Nursery Preparation :** a. **Raised seed bed**: Normally a raised bed is preferred for raising seedlings. A bed of 10 cm high from ground level in high rainfall areas is necessary. Size of each bed should be 10 m in length and 1.25 m width with 30 cm wide channel between the two seed beds. Treated seeds should be evenly broadcasted in each bed after manure application. **b. Wet nursery**: Nursery should be thoroughly ploughed and perfectly levelled so that a thin layer of water is maintained during the emergence. After the manuring and puddling, sprouted seeds are uniformly broadcasted in each seed bed. For getting sprouted seeds, soak treated seeds in water for 12 – 15 hours, fill in wet gunny bags and keep for about 48 hours or till good sprouting. **Transplanting/direct sowing :** a. **For transplanting**: Prepare the land thoroughly and keep well leveled with peripheral bunding. Puddlingg should be done 3-4 times to make it weed free and water retentive. All the phosphorus and potash and 50 % of nitrogen should be incorporated thoroughly into the soil at the final puddling. b. **For direct seeding:** Two cross ploughing (4 ploughing) is necessary to get good tilth of soil and weed free land. Application of lime @ 2 t/ha at the first or second ploughing is necessary to obtain good yield. Lime should be applied at least 1-2 weeks before sowing. Liming should be repeated every 3-4 years. All the phosphorus and potash should be placed in furrow before sowing.
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. Overnight seedling root dip treatment in Chlorpyriphos 20EC @ 10ml per 10 lit of water protects the crop from stem borer, gall midge, rice hispa and to certain extent from sucking pests

		(hoppers and thrips)
4.	Sowing time	It should start between the 2nd fortnight of May to first week of June. For transplanting one hectare of land by conventional practice, a nursery area of 500-600 sq.m would be sufficient. The area under nursery sowing can be further lowered down to 50-100 sq.m by adopting SRI and ICM method of rice cultivation.
5.	Seed rate/sowing method-line sowing with row to row and plant to plant distance/direct sowing	40 kg/ha for transplanting, 60 kg/ha for broadcasting, 20 kg/ha for SRI or ICM (considering more than 95% germination). When transplanted, row to 20cm and plant to plant 15cm distance should preferably be maintained.
6.	Fertilizer doses with timing	**For seed bed:** 1. For raised seed bed, application of cowdung or compost @ 10 -15 t/ha (10 kg/seed bed) plus a starter dose of 30:30:20 kg NPK/ha (Urea 80 g, SSP 225 g and MOP 40g/seed bed) is necessary. 2. For wet nursery, well decomposed FYM @ 10-15 t/ha may be applied before puddling and during puddling an extra quantity of 30:30:20 kg NPK/ha is required for raising healthy seedlings. 3. Modified Mat Nursery (MMN): System of Rice Intensification (SRI) needs careful nursery preparation. Nursery is prepared in raised bed with soil and FYM (2:1). If required, 30:30:20 kg NPK/ha may be used. For transplanting / direct seeding Application of fertilizer @ 80:60:40 kg NPK/ha is considered sufficient for transplanted rice in low valley land as well as terrace land. This dose will vary according to the fertility status of soil. All P and K and 50% of N should be applied as basal dose and 25% N at maximum tillering and 25% at panicle initiation stage. In zinc deficient soils, application of zinc sulphate ($ZnSO_4$) @ 25 Kg/ha at the final land preparation is useful. During the application of fertilizer (Top-dressing) the soil should be moist. Heavy irrigation should be avoided. Application of well decomposed organic manures like FYM @ 10 t/ha or enriched compost @ 5t/ha (mixed with 60 kg P using Rock phosphate and incubating for 30 days) along with 50% NPK improve yield and soil health. **Bio-fertilizer Application:** Application of fresh *Azolla* @ 10 t/ha + 50% N through urea improved yield. *Azolla* should be incorporated

		into the soil before transplanting or it can be taken as dual cropping i.e., inoculation of fresh *Azolla* @ 2t/ha, at 7-10 DAT in standing water with 20 Kg P_2O_5/ha. Soil application of *Azotobacter or Azospirillum* @ 1kg/ha is also recommended for N economy and it can supplement up to 30 Kg N/ha.
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 spray 20 days after transplanting. Rotary paddy weeder can be used for weeding by running the weeder in between the rows. For SRI and ICM practice weeding should be done in 15 days interval up to maximum tillering.
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 25 – 30 days after transplanting 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	Continuous submergence of 2-5 cm during crop growth (transplanting to maturity) gave higher yield. This practice helps to suppress weed growth right from the beginning. Water is drained out during fertilizer application. The depth of water should not exceed 5 cm in the field particularly at the tillering stage of the crop. Higher depth of water during tillering reduces the number of tillers/hill causing reduction in yield. After the completion of tillering, the field should be drained out for a week and re-flooded. This will result in higher number of effective tillers/hill. In any case, there should not be any water stress during panicle initiation to grain filling stage. Irrigation should be stopped 3-4 weeks before harvesting the crop. Under SRI practice no flooding is needed and field is kept saturated. No standing water to be maintained during tillering up to panicle initiation. Intermittent wetting and drying until panicle initiation stage is desirable. The period of drying and wetting can range from 2-7 days.

		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. Saturation and submergence are equally effective for direct sown rice.
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 85% of the grains are physiologically mature to avoid shattering loss in field. Maturity 145-155 days from seeding.
11.	Quality characteristics of the variety, if any	Long slender, LB Ratio 5.47, moderately aromatic, non-glutinous
12.	Expected yield of the variety	3.9 t/ha