

Rice (*Oryza sativa*) Hybrid *Boro* rice

Varieties:

Variety	Duration (days)	Yield (t/ha)
Pro Agro 6444 (Arize 6444)	170-175	7.5
KRH 2	175-180	6.0

Newly recommended hybrids for *boro* season

Variety	Agroclimatic Zone	Yield(t/ha)	Pest and disease reaction
PAC 837	UBVZ, LBVZ, HZ & CBVZ	6-7	Resistance to Blast; MR to RTV & BS; tolerant to GLH
Arize 6129	UBVZ, LBVZ, HZ & CBVZ	6-7	MR to BS, BLB & Sheath Blight; tolerant to blast & SB

Land selection:

Area with assured irrigation facilities are to be selected.

Seed treatment:

- a) **Wet method:** Seeds are to be soaked directly in the following fungicidal suspensions for 24 hours.

Fungicide	Concentration (g/lit of water)
Carboxin	2.0

- b) **Dry method:** Seeds and the following fungicide are to be put in a closed container and for five minutes for thorough mixing.

Fungicide	Concentration (g/kg of seed)
Carboxin	2.0

Raising of seedlings:

- a) **Seedbed preparation:** Flat seedbed with 1.25 m width, 10.0 m length and 30 cm gap between two beds is to be prepared. Land is to be thoroughly puddled.
- b) **Seed rate:** Pre-germinated seeds are to be sown @ 250-300 g/bed. Seed requirement for transplanting one hectare of main field is 7.5kg.
- c) **Manures and fertilizers:** 20-30 kg FYM or compost, 80 g urea, 80 g SSP and 40 g MOP are to be applied in each bed.
- d) **Sowing time:** 15-30th November
- e) **Water management:** Standing water in the furrows between beds is to be kept to maintain saturated condition in the seedbeds. Irrigation up to submergence of beds

before uprooting of seedlings facilitates the process.

f) Plant protection: Same as *boro* rice.

g) Age of seedling: 45 days old seedling (5-6 leaf stage).

Main field preparation:

1. The field should be ploughed properly and leveled to retain water uniformly in the field.
2. First irrigation for soaking the land is to be applied before preparatory tillage. Second irrigation is to be applied at 10-12 days prior to transplanting followed by ploughing, laddering and puddling accompanied by repairing and mud plastering of bunds. Thereafter, irrigation is to be applied for land submergence.
3. The final puddling is to be done just before transplanting. One irrigation is to be applied before final puddling.

Fertility management:

Nutrient	Requirement (kg/ha)	Form	Fertilizer requirement	
			kg/ha	kg/bigha
N	100	Urea	217	29
P ₂ O ₅	60	SSP	375	50
K ₂ O	60	MOP	100	13

Time of application of fertilizer:

One fourth of total urea, full doses of SSP and MOP at the time of final puddling are to be applied as basal dressing. The 2nd, 3rd and 4th doses of urea are to be applied as top dressing and incorporated with soil at maximum tillering, panicle initiation and booting stages, respectively.

FERTILIZER RECOMMENDATION AS PER FERTILIZER PRESCRIPTION EQUATIONS (FPE)

Fertilizer prescription equations can be used to find out the amount of NPK fertilizers to obtain a certain yield target of the crop based on soil test values for NPK. The yield target must not cross the potential yield of the crop. For hybrid rice, calculate fertilizer requirement using Fertilizer Prescription Equation or consult the ready reckoner at Annexure XVII (A)-(D).

Fertilizer Prescription Equations (Only chemical fertilizer)

$$FN = 4.08 * T - 0.75 * STVN$$

$$FP = 1.39 * T - 2.57 * STVP$$

$$FP = 4.17 * T - 1.15 * STVK$$

Fertilizer Prescription Equations (Chemical fertilizer + FYM)

$$FN = 4.08 * T - 0.75 * STVN - 0.59 * M$$

$$FP = 1.39 * T - 2.57 * STVP - 0.37 * M$$

$$FK = 4.17 * T - 1.15 * STVK - 0.58 * M$$

Where FN FP & FK- Fertilizer N, P, and K; T- Targeted yield, STV- Soil test values, M- FYM

Spacing: 20 cm × 15cm (33 hills/sq. m)

No. seedlings per hill: 1 (one)

Depth of planting: 5 cm

Gap filling:

The dead hills are to be transplanted within 7-10 days of transplanting.

Water management:

Irrigation water is to be applied at a depth of 5cm 3 days after disappearance of ponded water from the date of transplanting.

Intercultural operation:

Two weedings are to be given at 3-4 weeks and 6-7 weeks after transplanting. Paddy weeder can be used after top dressing to incorporate the nitrogenous fertilizer with soil.

Plant protection:

Plant protection measures against insect pests and diseases are same as for *boro* rice.