

Nutrient Management :: Rice : Main Field

Application of Inorganic Fertilizers

[\(Please Click Here\)](#)

- [Apply Fertilizers as per STCR-IPNS Recommendations \(or\)](#)
- [N dose may be through Leaf Colour Chart \(LCC\)](#)
- [P & K may be through Site Specific Nutrient Management \(SSNM\)](#)

If the above recommendations are not able to be followed, adopt blanket recommendation as follows:

Nutrients	N	P ₂ O ₅	K ₂ O
(kg/ha)			
Short duration varieties (Dry Season)			
a) Cauvery delta & Coimbatore tract	150	50	50
b) For other tracts	120	40	40
Medium and long duration varieties (Wet Season)			
Hybrid rice	175	60	60
Low N responsive cultivars (like Improved White Ponni)	75*	50	50

*For Ponni, N should be applied in three splits at AT, PI and H stages

Phenological stages of rice (days after sowing)

Stages	Short (105)	Medium (135)	Long (150)
Active Tillering (AT)	35 - 40	50 - 55	55 - 60
Panicle Initiation (PI)	45 - 50	70 - 75	85 - 90
Heading (H)	70 - 75	100 - 105	115 - 120

Split application of N and K

- Apply N and K in four equal splits viz., basal, tillering, panicle initiation and heading stages.
- Tillering and Panicle initiation periods are crucial and should not be reduced with the recommended quantity.
- N management through LCC may be adopted wherever chart is available.



Application of P fertilizer

- P may be applied as basal and incorporated.
- When the green manure is applied, rock phosphate can be used as a cheap source of P fertilizer.
- If rock phosphate is applied, the succeeding rice crop need not be supplied with P.
- Application of rock phosphate + single super phosphate or DAP mixed in different proportions (75:25 or 50:50) is equally effective as SSP or DAP alone.

Application of Micronutrients

Soil Application

- Soil application of 25 kg zinc sulphate /ha mixed with 50 kg dry sand or apply 25 kg of TNAU Wetland rice MN mixture/ha enriched in FYM at 1:10 ratio incubated for 30 days at friable moisture, just before transplanting.



- It is enough to apply 12.5 kg zinc sulphate /ha, if green manure (6.25 t/ha) or enriched FYM is applied.
- For saline and sodic acid 37.5 kg $ZnSO_4$ /ha can be applied.
- Apply 500 kg of gypsum/ha (as source of Ca and S nutrients) at last ploughing.
- Application of 50 kg $FeSO_4$ + 12.5 t FYM /ha, if the soil is deficient in Fe.
- For Cauvery delta zone, application of 5 kg $CuSO_4$ /ha can be recommended.

Foliar Nutrition

- Foliar spray of 1% urea + 2% MAP + 1% KCl at Panicle Initiation (PI) and 10 days after first spray to improve grain filling rate and yield in all varieties.
- If deficiency symptom appears in the standing crop (15 days after transplanting) foliar application of 0.5% zinc sulphate can be given at 7-10 days interval for short duration and 15 days interval for medium and long duration crop until the Zn deficiency symptoms disappear.
- Biofortification strategies : For biofortification of Zn in rice, the efficient cultivars viz., CO 51, CO 47, ADT 47, ADT 37 may be grown with the basal soil application of 50 kg $ZnSO_4$ /ha along with foliar spraying of 0.5% $ZnSO_4$ thrice at 50% flowering, milky and dough stages to enrich the grain Zn content.

Updated on Jan 2023

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