



Rice is an important food crop for a large proportion of the North- East population. It is a staple food in the diet of the North-East region. It is the major kharif crops of Arunachal Pradesh. Rice is primarily a high-energy food.

Climate:

Rice crop needs a hot and humid climate, the average temperature required throughout the life period of the crop ranges from 21-37^oc..

Soil:

Clay or clay loams are most suitable for rice cultivation.

Cultivars:

Sl. No.	Name of cultivar	Maturity(days)	Yield (q. /ha.)
1	CAU-R1	170-180	50-55
2	CAU-R3	165-170	40.0
3	CAU-R4	170-175	45-50
4	TTB-404	160-165	55-60
5	Ranjit	160-165	45-50
6	Gitesh	165-170	50-55
7	Gandhari	160-170	40-43
8	Mohan	165-170	40-42
9	Srimanta	170-175	45-50
10	Bharati	160-165	41-47

Nursery Management:

Seed rate:- 40-45 kg/ha.

Seed treatment:

Seed should be treated with captan@ 2.0g/kg seed .

Computation of nursery bed area:

100g of seed per square meter bed area is required in one seed bed of 10mx1.25m size generally 1000gm seed is required, 50-60 nos. seed bed is required for transplanting in one hectare area.

Nursery bed preparation:

Ploughing and puddling:

Ploughing and cross ploughing operations of nursery field should start latest by middle of March under dry conditions. First puddling of nursery field should be start by the last week of March by keeping water to the nursery field to just submergence.

Preparation of raised nursery bed:- Raised nursery bed of about 5 cm. high and about of 1 to 1.25 cm. width with convenient length may be prepared with inter bed furrow of 30 t0 40 cm. width for better nursery management in respect of weeding, plant protection, fertilization, water management etc. Raised nursery bed should be levelled properly protection, fertilization, water management etc. Raised nursery bed should be levelled properly.

Seed sowing:

Sprouted seeds of 1or 2 mm. In length may be sown on the well levelled nursery bed@ 100g/m².

Water management in Nursery:

Until the sprouted seeds start growing to a height of about 1to 1.5 cm. on the raised nursery bed, keep the seed bed only to saturate the soil surface with water by providing water in the interbred furrow. Standing water to a depth of about 2 to 3 cm. should be maintained just before 2-3 days of uprooting. Main field preparation:-Main field should be prepared

thoroughly by 4-5 times of ploughing followed by harrowing. 1st ploughing should be done at least one month before transplanting so that weeds are dried and decomposed properly in the field itself.

Manures and fertilizers:

Well decomposed F.Y.M or compost should be applied @ 10 t/ha. during 1st time of ploughing. The urea @ 130kg/ha, S.S.P.@188kg/ha. and M.O.P. @ 50 kg/ha. Half of urea (60kg), full dose of S.S.P. and 2/3rd (30kg) M.O.P. should be applied uniformly as basal at the time of last puddling. Split application of ¼ of urea (35kg) should be done at panicle initiation stage(about 20-25DAT) and 2nd split application of the remaining 1/4th urea(35kg) and 1/3rd M.O.P.(20kg) should be done at panicle initiation stage (about 60-70 DAT).

Time of transplanting: First week of May.

Intercultural operation:

Two hand weeding should be done before active tillering and panicle.

Pre-emergence application of Butachlor@ 2.0 kg a.i. /ha. Just before transplanting or at about 3 days after transplanting before germination of weed seeds.

Water management:

After 3-4 days of transplanting, at least 3 to 5 cm. depth of water should be maintained in the main field at every 3 days after disappearance of ponding water continuously up to 10-15 days before harvesting or hard dough stage. At the critical growth stage of rice in relation to water requirement are early tillering stage and period from panicle initiation to flowering stages.

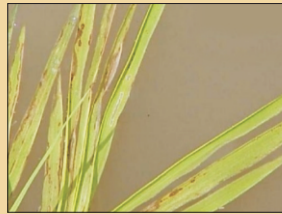
Disease management:

A. Blast: Boat or eye-shaped spots with grey or dark brown margin appear on the leaf and leaf sheath

Control: Treat the seed at the rate of 10kg seed with 5 gm Emisan+1gm. Streptocycline.



B. Khaira: On lower leaves, a large number of small, brown to bronze spots appear, which coalesce to bigger spots and ultimately the entire leaf turns bronze coloured and dries.



Control: Spray a mixture of 5 kg zinc sulphate and 2.5 kg lime in 1000 liter of water.

Insect-pest management:

Stem borer: The larvae bore and feed inside the stem. They cut the growing parts of the plant from the base causing the plant to die.

Control: Apply 3per cent Carbofuron granules@ 30-33 kg/ha in 3-4 cm.standing water in the field at 20-25 days and again 50-60 days after transplanting.



Gundhi bug: Both nymphs and adults cause damage by sucking the plant sap and particularly the milky juice of the developing grains in early morning hours. The grains are then either empty or partly filled and shrivelled.



Control: Apply 5%Malathion dust @ 20-25kg/ha.

Harvesting and Threshing:

Rice crop is ready for harvesting at about 80% grain maturity, when the grain colour turns to golden yellow. Threshing may be done manually or by power thresher after sun drying adequately.

Yield:-The rice crop cultivated through above mentioned technique, then on an average 3-5t/ha. grain yield can be achieved.



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Scientific cultivation of

Rice in Tawang District



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