

Water Management

- Keep the field under saturated condition for a week after transplanting for better seedling establishment.
- There after, maintain a water level of 3-5 cm during the entire crop growth period until 15 days after milk formation stage. However, the field should be drained prior to top dressing of fertilizer and irrigate after 24-36 hours.

Insect and Disease Control

- Soak the seedlings in a solution of 1 ml Chlorpyrifos (20EC) in 1 ltr of water overnight before transplanting.
- Use Carbofuran at 30 kg/ha against stem borer and leaf folder.
- If sheath blight appears, avoid N application at panicle initiation stage. Spray Validamycin at 3.0 ml/ltr or Propiconazole (25%) at 1.0 ml/ltr in 500 ltr of water/ha after appearance of the disease symptoms or immediately after first top-dressing.
- Keep the field bunds clean to minimize disease and pest attack.

Harvesting, Drying & Storage

- Harvest the crop 30-35 days after flowering when stalks are still green to avoid grain shattering. Moisture content of paddy grain should be 20-24% at time of harvest.
- Thresh the produce immediately after the harvest and dry the grains in shade up to 12% moisture content for seed purpose and 14% for milling.
- Grains can be milled in traditional huller but for higher price use rubberized sheller for milling.

Cropping System

- After harvest of the rice crop in the first week of December, green gram can be grown with the residual soil moisture.

Swarna-Sub1

A promising high yielding rice variety
for flood - prone rainfed shallow lowlands of coastal Odisha

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Swarna-Sub1

A promising high yielding rice variety
for flood - prone rainfed shallow lowlands
of coastal Odisha

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Swarna-Sub1 was developed under a collaborative programme of Indian Council of Agricultural Research, (ICAR), New Delhi & International Rice Research Institute, (IRRI), Philippines. It was released by the Orissa State Seed Sub-Committee on Crop Standards after three years of rigorous testing in the target environment. Swarna-Sub1 is a semi-dwarf (105-110 cm) variety and matures in 140 days under direct seeded condition and 145 days under transplanted condition. Swarna-Sub1 has medium slender grain with 66.5% head rice recovery (HRR) and elongation ratio of 1.76. It yields 4.5-5.5 t/ha under normal condition while the yield reduces to 3.0 - 4.0 t/ha under the stress situations.

RECOMMENDED CULTURAL PRACTICES

Field Situation

Farmers can grow Swarna-Sub1, where Swarna variety is grown. It is suitable for the shallow lowlands and medium lands, where the crop is usually affected by flash floods and submerged completely for 12-14 days during kharif season. It is not recommended for the areas where the flood water comes and stays for more than 15-20 days.

Seedbed Preparation

Seedbed

Plough the nursery field and level it properly. Make raised seed beds of 1.0 m width with convenient length, keeping a gap of 40 cm between the beds. Nearly one-tenth of the main field is required as seed bed.

Seed Selection and Seed Rate

Prepare salt solution by dissolving 600 g of common salt in ten litres of water, which will be adequate for 25-30 kg of seeds.

Pour the seed in the salt solution, remove the floating materials and then wash the selected seed in fresh water.

Use a seed rate of 25-30 kg/ha for transplanting and 60-70 kg/ha for direct-seeding.

Seed Treatment

Dry sowing: Treat the seed with Bavistin @2.0 g/kg of seed.

Wet sowing: Soak the seed for 8-10 hours in a solution prepared by dissolving 1.5 g Streptocycline and 20 g Captan in 20 ltr of water, which is sufficient for 10 kg of seed, and then drain the water. Dry the seeds in shade before sowing.

Sowing time

For direct-seeding, optimal time of sowing is the first fortnight of June.

For transplanting, sow the seeds in nursery by the 1st week of June.

Nursery Management

Soak the seed for 24 hours, drain the water and then cover the seed with gunny bags for effective germination.

Sow the sprouted seeds in nursery beds and keep the beds moist for first 5-7 days.

Maintain a thin layer of water after the seedlings are of about 2.5 cm height.

Follow the need based application of Carbofuran @ 1.0 kg a.i./ha.

Top dress the nursery bed with 100 kg N/ha seven days before uprooting.

Land Preparation

- Plough the land by using a tractor-drawn or bullock-drawn plough in dry condition during pre-monsoon rain or immediately after the harvest of the previous crop. This will reduce pest and weed incidence.
- Puddle the field twice at 7-10 days interval for better weed control and nutrient availability. Level the land with a leveler to maintain uniform water level throughout the plot.

Spacing and Crop stand

- Transplant the seedlings by 1st week of July at 20 x 15 cm spacing using 2-3 seedlings/hill or maintain 35-40 hills/m² for random planting.
- Gap filling should be done 7 days after transplanting. Second gap filling can be done if necessary by splitting the existing tillers.
- In case of delayed planting, follow closer spacing (15 x 15 cm) and use 5-6 seedlings per hill with higher dose of basal N application.
- In absence of nursery treatment with Carbofuran, seedling root dipping in a solution of 1 ml Chloropyrifos (20EC) in 1 ltr of water overnight before planting helps in controlling rice whorl maggot, stem borer etc.

Fertilizer Management

- Apply NPK @ 60:40:40 kg/ha. Soil test-based fertilizer application especially for P and K is preferred over the blanket dose.
- Apply half of the N, entire amount of P and two-third of K as basal and the remaining N in two equal splits at 3 weeks after transplanting and at panicle initiation. Also apply the remaining one-third of K at panicle initiation.
- If possible, the field should be drained prior to top dressing of nitrogen and then irrigated after 24-36 hours.
- Apply Zn @ 25 kg/ha in zinc deficient soils.

Weed Management

- Spray Pretilachlor @ 1.6 ltr/ha or Anilophos at 0.5 kg/ha in 500 ltr of water 4-6 days after planting when there is a thin film of water in the land for effective control of weeds.
- The chemical can also be mixed with 50 kg sand or 10 kg urea and applied in the field uniformly. Do not drain out water for 48 hours for best effect.
- Alternatively, do hand weeding twice at 20 and 40 days after transplanting.
- Use cono weeder for weeding in row-planted crop.