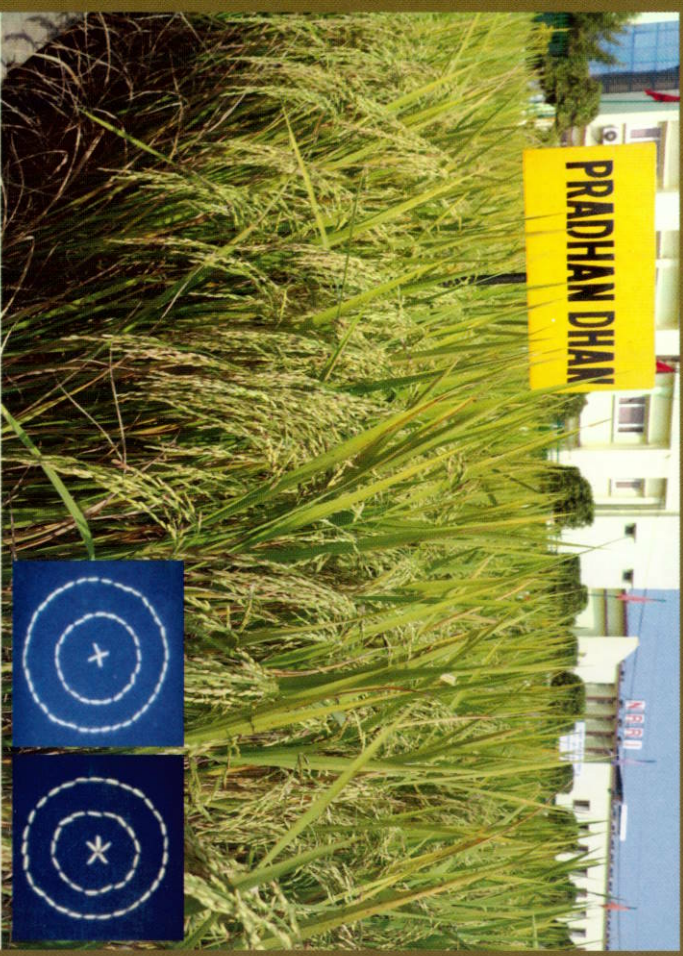


Production Technology for Rice Variety

# CR DHAN 409 (PRADDHAN DHAN)

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**Farmer FIRST**  
Empowering Knowledge - Integrating Technology

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The variety CR Dhan 409 (Pradhan Dhan) is recommended for cultivation in the rainfed shallow lowlands of Odisha. The variety produces long slender grains. Quality-wise, grains of the variety are superior and fetches higher market price. The grains of the variety are suitable for puffed rice, puffed paddy, flattened rice, wet rice and fried rice preparations. The average yield of the in Odisha is around 5t/ha, but, the potential yield is 8.5t/ha. Maturity duration of the variety is 160-165 days with semi-tall plant type (130-135cm height). Base of the plant is purple in color which helps in manual weeding. Also, tip of the grains are purple which helps in maintaining genetic purity of the variety. The variety has submergence tolerance for more than a week. It produces long slender grain, 250-300 panicles per m<sup>2</sup> area with 135-140 days to 50% flowering, high tillering (12-15/hill), medium and dense panicle with moderate test weight (22.5g/1000 grains). It is moderately resistant to leaf blast, neck blast, sheath blight, sheath rot, stem borer (both dead heart and white ear head) and leaf folder. CR Dhan 409 has good hulling, milling and head rice recovery. The grain chalkiness is absent with 4.0 alkali spreading value and is having intermediate amylose content and other desirable grain quality parameters. Hence, the superior variety with multiple value added uses may be cultivated in rainfed lowland ecology of Odisha.



# Package of practices for high yield

## SEED SELECTION

- Ensure genetic purity with more than 80% germination by obtaining seeds from a reliable source.
- Select well-filled seeds from a healthy crop, free from insect and disease attack.

## LAND PREPARATION

- Plough the land immediately after the harvest of wet season rice, preferably with a mould board plough.
- One or two summer ploughings after pre-monsoon rain during April-May and ploughing before sowing makes the soil to a fine tilth.



Panicles of CR Dhan 409

## SEED TREATMENT

- Use 45-50 kg seeds/ha for direct seeding. Use 30 kg seeds/ha for transplanting.
- Treat the seeds with Agrosan GN or Ceresan (dry) or Bavistin at the rate of 2gm/Kg of seed before sowing.

## TIME AND METHOD OF SOWING

- For direct-seeding, optimal time is during the first fortnight of June.
- For transplanting, sow the seeds in nursery by the 2nd week of June.

## FERTILIZER MANAGEMENT

- Apply N: P: K @ 80:40:40 kg/ha in case of poor soil fertility status (based on soil test results).
- Apply  $1/3^{\text{rd}}$  N, full P and three fourths K as basal in the furrows in the line sown rice with farm yard manure at the rate of 5t/ha.
- Apply  $1/3^{\text{rd}}$  N as top dressing at beushening in broadcast rice and after weeding in line sown rice and rest N&K fertilizers at panicle initiation stage, if water recedes.

## WEED MANAGEMENT

- Weeding operations are to be completed which is around 45-60 days after seeding.
- Spray herbicide Bispyribac Sodium at the rate of 30g a.i/ha in direct seeded rice for control of major grasses, sedges and broad leaf weeds.
- This is a post-emergence herbicide and it can be applied after 12 days of sowing.

## WATER MANAGEMENT

- It is a rainfed crop. Rain waterer should be managed with proper field bunding and drainage facility.

## PEST AND DISEASE MANAGEMENT

### Insect Pests

- For controlling the insect attack, spray is not feasible due to deepwater situation.
- Use of bio-control method is preferable. Release of *Trichogramma japonica*, an egg parasite at the rate of 50,000 numbers/ha is recommended for control of the pest.

- If water level reduces apply Monocrotophos at the rate of 0.5Kg a.i/ha or apply granular insecticides Carbofuran 3G at the rate of 33 Kg/ha or Cartap 4G at the rate of 25 Kg/ha on the basis of Economic Threshold Level (ETL) (One egg mass/ $\text{m}^2$  or 5% dead heart).

### Diseases

- Apply Streptocyclin (150mg) + Copper Oxychloride (1g) in one litre of water for controlling bacterial leaf blight disease. For controlling sheath rot disease, soak the seeds in 0.05%-0.1% Bavistin for 30 minutes before sowing.
- After raising the crop, minimize the disease by foliar spray of 0.05%-0.1% Bavistin or 0.4% Dithane M-45 or 0.1% Hinosan.

## HARVESTING

- Harvest the crop at 25-30 days after flowering.
- Thresh immediately after harvesting and dry gradually under shed up to 12% grain moisture content for seed purpose and up to 14% moisture for milling.

