Nursery

- Drain the water 18 to 24 hrs after sowing
- Care must be taken to avoid stagnation of water on the seedbed.
- Allow enough water to saturate the soil from 3rd to 5th day. From 5th day onwards,
- increase the water depth to 1.5 cm depending on the height of the seedlings.
- Thereafter maintain 2.5 cm depth of water.

Main field

- Puddling and leveling minimizes the water requirement
- Plough with tractor drawn cage wheel to reduce percolation losses and to save water requirement up to 20%.
- Maintain 2.5cm of water over the puddle and allow the green manure to decompose for a minimum of 7 days in the case of less fibrous plants like
- sunnhemp and 15 days for more fibrous green manure plants like Kolinchi (Tephrosia purpurea).
- At the time of transplanting, a shallow depth of 2cm of water is adequate since high depth of water will lead to deep planting resulting in reduction of tillering.
- Maintain 2 cm of water up to seven days of transplanting.

Days after disappearance of ponded water at which irrigation is to be given

Soil type	Summer	Winter
Loamy	1 day	3 days
Clay	1Just before/immediately after disappearance	1 - 2 days

- Moisture stress due to inadequate water at rooting and tillering stage causes poor root growth leading to reduction in tillering, poor stand and low yield.
- Critical stages of water requirement in rice are a) panicle initiation, b) booting, c) heading and d) flowering.
  During these stages, the irrigation interval should not exceed the stipulated time so as to cause the depletion of moisture below the saturation level.
- During booting and maturity stages continuous inundation of 5cm and above leads to advancement in root decay and leaf senescence, delay in heading and reduction in the number of filled grains per panicle and poor harvest index.
- Provide adequate drainage facilities to drain excess water or strictly follow irrigation schedule of one day after disappearance of ponded water. Last irrigation may be 15 days ahead of harvest.

Precautions for irrigation

- The field plot size can be 25 to 50 cents depending on the source of irrigation.
- Field to field irrigation should be avoided. Field should be irrigated individually from a channel.
- Small bund may be formed parallel to the main bund of the field at a distance of 30 to 45 cm within the field to avoid leakages of water through main bund crevices.
- In water logged condition, form open drains, about 60 cm in depth and 45 cm width across the field.
- Care should be taken not to allow development of cracks.
- In canal command area, conjunctive use of surface and ground water may be resorted to for judicious use of water.

Alternate Wetting and Drying Irrigation (AWDI)

- Safe Alternate Wetting and Drying Irrigation (AWDI) is to monitor the depth of ponded water on the field using ‘Field Water Tube’ (FWT) which is made of 40 cm long plastic pipe with a diameter of 15 cm so that water table is easily visible.

- Tube is perforated with 0.5 cm diameter holes in the bottom and the top 15 cm portion is non-perforated.
- One Field Water Tube is required for adopting the AWDI in an area of 1 acre. The FWT is installed in the field using mallet and it is inserted upto the perforated portion buried inside the soil. The soil inside the tube is to be removed.

- FWT to be installed near the field levies so that the water level inside the FWT could be monitored easily.
- Safe AWDI of 10 cm depletion in light soils and 15 cm depletion in heavy soils was found to improve the water use efficiency in rice.