

Definition: provide optimum seed bed for planting rice.



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Definition:

Manipulation of soil under water with tools and implements to break down the soil segregates is called puddling.

Objective:

i. To provide optimum seed bed for planting rice. ii. To create impervious layer below the surface to reduce deep percolation losses of water. iii. Weed control.

Method of Operation:

i. 5-10 cm of water is applied and first ploughing is carried out.
ii. After 3-4 days, another 5cm of water is applied and second ploughing is carried out. iii. Within 3-4 days, another 4-5cm of water is given and third ploughing is done in both direction.

Formation of Impervious Layer:

i. Unlike other tillage operations, puddling aims at destroying soil structure. The individual soil particles viz., sand, silt and clay are separated during this operation.

The impervious layer are formed over compacted soil. ii. The sand particle reach the bottom, over which silt particle settle and finally clay particles fill the pores.

Implements Used:

Depending upon the availability of equipment and nature of the land, different implements are used. 1. Wet land puddler 2. Cage wheel 3. Helical blade puddler 4.

Green manure trampler 5. Rotovator

Advantage:

i. Avoid percolation loss of water. ii. Minimization of leaching loss of nutrients.

iii. Uniform and soft seed bed preparation. iv. Incorporation of weeds, stubbles, green manure and green leaf manure is possible. v. To some extent, perennial weeds can be managed.