

Introduction

Land preparation is the disturbance of the soil in preparation for establishing a crop and covers a wide range of practices from zero-tillage or minimum tillage to full field disturbance. It may also include land leveling and bunding.

Objective of land preparation

- Decrease ped or clod size to give good seed soil contact for plant establishment
- Remove, incorporate or modify plant residue
- Manage soil water (both wetting and drying)
- Control weeds
- Mix and incorporate soil amendments such as lime and basal fertilizer
- Control or destroy insects, their eggs, larvae and breeding places



Puddling is the working of the soil in a totally flooded state to realign soil particles in a manner that will reduce the deep water percolation and leave the surface level for crop establishment. It is normally done using tractors and rotavators or animals and peg tooth harrows. In India soils are often puddled using human labor.

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Types of tillage

Primary tillage is the first operation after the last harvest and normally the most aggressive and deepest plowing (15-20cm) and requires the most energy. Implements used include disc plows, mouldboard plows (MB), tined plows and in some instances rotavators



Secondary tillage is any working completed after primary tillage are usually shallower (5-7.5cm) and less aggressive. Normally 1-3 secondary workings are done after primary tillage. Implements used for secondary tillage include disc and peg tooth harrows, tined cultivators, and rotavators.

