Land preparation is the process of preparing the rice field to provide a soil condition that is favorable for plant growth. Proper land preparation facilitates water, nutrient, and pest management.

**Prepare the rice field properly**
Timeliness and quality of land preparation are critical factors for good growth and yield of rice. Rice fields can be prepared using wetland or dryland tillage, or a combination of both. The method of land preparation to be used depends on water supply, power source, and type of soil.

- **Wetland tillage:** soil is tilled in saturated or flooded condition using a hand tractor or mini tractor.
- **Dryland tillage:** soil is tilled in dry condition usually using a large four-wheel tractor mounted with rotary or multiple disc plow, disc harrow, and other implements.

Below are the steps in preparing rice fields through a combination of dryland and wetland tillage techniques.

1. **Initial land preparation using dryland tillage**
   Plow the field immediately after harvest or after the soil has dried enough using a four-wheel tractor mounted with a rotary or multiple trailing disc plow to aerate the soil, reduce weeds and other pests, and incorporate organic materials into the soil.

2. **Re-plowing/rotavation and side plowing**
   Two days before re-plowing/rotavating, irrigate the field until it is saturated to soften it and allow weed seeds and dropped rice seeds to germinate.
   Re-plow or rotavate the field using a hand tractor or 20-40 hp four-wheel tractor, respectively, 21 days before transplanting/direct-seeding (DBT/S) to break big soil clods. Turn over the soil, and incorporate organic materials into the soil.

Proper leveling of the field facilitates the management of weeds, water, and golden apple snail. It also maximizes efficiency of fertilizer applied in the field.
Conduct side plowing (at least two passes) using a hand tractor or moldboard plow pulled by a carabao after re-plowing or re-rotavating to break and turn over the soil near the dikes.

3. **Harrowing and leveling**

Harrow the field thrice using a hand tractor equipped with a comb harrow to break and puddle clods of soil and incorporate organic materials into the soil thoroughly.

- First harrowing is at 14 days before transplanting/sowing (DBT/S).
- Second harrowing is at 7 DBT/S.
- Third harrowing is at 1-2 DBT/S.

Level the field thoroughly using a wooden plank pulled by a power tiller after the third harrowing to attain uniform water depth. This facilitates water and golden apple snail management, helps suppress weed growth, and maximizes efficiency of fertilizer in the field.

If necessary, construct canalets for proper drainage and irrigation after leveling.

Proper leveling of the field solves more than 50% of the problems in rice production.

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