# **Mechanical weed control**



## What is Mechanical Weeding?

Weeds are controlled using a rotating hoe (rotary or conical weeder) to cultivate, uproot and bury emerging young weeds between rows of rice plants. Mechanical weeding is a part of integrated weed management that refers to the integrated use of cultural, manual, mechanical and/or chemical control methods.

# More Weeds equals Less PROFIT!

#### Why control weeds?

- Prevent yield loss due to weed competition.
- Maintain purity and/or quality and market price of harvested grain.
- · Prevent buildup of weed seeds in soil.
- Prevent weeds that may attract insects or rodents (rats) or act as a host for diseases.
- Prevent clogging of field irrigation channels to facilitate water flow.
- Reduce time and cost of land preparation and weeding operations.

### Why mechanically weed?

- Nonchemical and ecologically sound.
- Less labor needed and costs less than hand weeding.
- Less drudgery and stress than in hand weeding.

# Limitations of Mechanical weeding:

- Only suitable for row planted crops.
- Difficult in hardened soil or where water is limited.
- Difficult to remove weeds within crop rows.
- Only effective with young weeds (2 to 4leaf stage).
- Needs more labor (68 person days per ha per weeding) than chemical weed control.
- Still some drudgery and stress on labor (if rotating hoe is motorized, it will help).

#### How to mechanically weed?

- 1. Weeds need to be controlled from planting until the crop canopy closes.
- 2. With 23 cm of water in the field, start using a rotating hoe when emerged weeds are young (3 to 4leaf stage).
- 3. Repeat the hoeing one to two more times at 20 22 and 3032 DAT or 3032 and 4042 DAS.
- 4. Remove the weeds near the plants by hand.
- 5. Generally hoeing follows the row direction up the field and back. If the field is uniformly transplanted on a regular square pattern, it may be possible to hoe in perpendicular directions.
- 6. Use good land leveling and standing water to reduce weeds.
- 7. Plant in straight rows for mechanical weeding.







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