Manual removal of weeds

Rogue or remove weeds by pulling them out by hand when sparse population exists. This should be done before seeds are produced.

Field sanitation

Keep meres, dams and water courses weed-free.

Fertilizer application

Apply Urea as top dressing after weed control has been carried out. This will improve fertilizer efficiency.

CHEMICAL CONTROL OF WEEDS

A chemical substance used to control weeds is called a Weedicide or Herbicide. These substances are most efficient when they are applied on seedling weeds. The knapsack sprayer fitted with a fan distribution nozzle is the approved ground equipment for small and medium scale application of herbicides. A total volume of 16 gallons (72.7 litres) of spray solution per acre (180 l/ha) is used when controlling weeds in rice.

The following table shows the type of weed to be controlled using specific Weedicide or Herbicide and the rates per application:

Types of Weeds	Weedicide (Herbicide)	Application Rate (Product/acre)	Comments
Jhussia, Wild clove, Water sedge and Umbrella sedge	2,4-D	284 to 426 ml	Use 4 knapsack sprayers/acre or 70 to 106 ml/knapsack sprayer. Spray when crop is between 3 and 5 weeks old.
Schoonord grass, Monkey tail, Muraina grass, Bird seed grass, along with sedges and some broad leaf weeds	NOMINEE 400 SC	40 to 60 ml	Use 10 to 15 ml/knapsack sprayer with 10 to 15 ml sticker
	DESIGNEE	80 to 100 ml	Use 10 to 15 ml/knapsack sprayer with 10 to 15 ml sticker
	RICE WEED KILLER	60 to 80 ml	Use 16 to 24 g/knapsack sprayer when crop is between 3 and 5 weeks old
Soap bush, along with some sedges and broad leaf weeds	2,4-D + Propanil	240 to 280 ml 2,4-D + 520 to 568 ml Propanil	Use 60 to 70 ml 2,4-D with 130 to 142 ml Propanil as a tank mixture/knapsack sprayer. This mixture is specific for soap bush but it will also control young sedges and other broad leaf weeds.
Duckweed	Ally	4.0 to 5.0 g	Use 1.0 to 1.25 g in one knapsack sprayer of solution.

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WEED CONTROL IN RICE

INTRODUCTION

Weeds reduce rice yields by competing with the rice crop for environmental resources such as sunlight, nutrients and moisture. They may also lower the quality of the harvest, and may also serve as alternate hosts for pests and diseases which affect the rice crop.

Although over 30 species of weeds are associated with the rice crop, only about 10 of these species cause economic losses, thus warranting control measures.

TYPES OF WEEDS

Weeds can be divided into three general types based on their appearance:

Grasses

The main features of grasses are:

- Long, narrow leaves with parallel veins.
- Round hallow stem.
- Leaves occur in two rows along the stem.

Examples of grasses are:

- Schoonord grass, *Echinochloa glaberescens*
- Muraina grass, *Ischaemum rugosum*
- Birdseed grass, *E. colonum*
- Monkey tail, *E. crusgalli*

Sedges

Sedges are similar to grasses in appearance, however, they differ in the following ways:
Stems are usually solid and triangular.
Leaves occur in three rows along the stem.

Examples of sedges are:

- Jhussia, *Fimbristylis miliacea*
- Water sedge, *Cyperus difformis*
- Umbrella sedge, *Cyperus iria*

Broad leaf weeds

The main features of broad leaf weeds are:
The leaves are usually wider than those of grasses and sedges. The leaf may also have various shapes and arrangements of veins.

Examples of broad leaf weeds are:

- Soap bush, *Sphenoclea zeylanica*
- Wild clove, *Ludwigia crecta*
- Duckweed, *Sagittaria guyanensis*

CONTROLLING WEEDS IN RICE

Weeds are controlled most effectively by the use of an Integrated program which combines all of the practices that have a direct or indirect impact on weed population.

Some of these practices are:

Land preparation

Thorough ploughing, harrowing, puddling and leveling destroy the initial weed population before the crop is sown and improve the effectiveness of other control methods.

Clean implements and machinery

Especially when moving from weed infested fields to clean fields.

Keep cattle out of the rice field where possible

Many weed seeds remain viable after passing through the digestive system of cattle.

Choice of variety

Varieties with good seedling vigor develop an early canopy and compete better with weeds for environmental resources.

Use weed-free seeds

Weed-free seeds prevent the introduction of new weeds in your fields as well as the re-infestation with weeds that were satisfactorily controlled.

Use appropriate seed rate

Plant density also contributes to successful weed management. Low plant density encourages weed establishment.

Prudent water management

May non-aquatic weeds are controlled by standing water especially when fields are flooded early or when the rice seedlings emerge through a moderate flood. Fields should be relatively level to avoid areas with too much or too little water.