



ITCH GRASS

Background

Itch grass *Rottboellia cochinchinensis* is widespread in tropical countries and grows along roadsides, cane fields and in wet places. The grass survives in fields fully exposed to sun, moderate shade and full shades.

Biology

Itch grass flowers all year and a single plant is capable of producing several thousands of seed which remain dormant for 5-7 months after maturity and germinate in the season after dispersal or in the following year and the seeds remain viable up to 4 – 5 years.

Seed production begins 6-7 weeks after emergence and continues throughout the growing season. The seeds fall from the plant as they mature and are broadcast over the soil thus there is a continuous supply of new seeds on the ground. Seeds are generally spread by water, animals, contaminated crop seeds, harvesters and through transport that is used on farms to cart seedcane, fertilizer and water tanks.

Itch grass stems are cylindrical, hollow and branch from upper nodes and grow upto 4 metres high. The leaves and leaf sheath are covered in stiff hairs. The leaves are upto 50 cm long and 5-15 mm wide.

Itch grass is spreading rapidly across the cane growing belt and is further compounded by the farms that have been abandoned. It is also known as "daula".

Economic Impact

Itch grass has for some time invaded sugarcane farms in different sectors. It is difficult to manage once well established in cane farms as it is an aggressive weed that thrives under various environmental conditions. If not controlled it has a devastating effect on cane yields due to its size and vigorous growth pattern since it competes with sugarcane and heavy infestation can cause severe loss of crop yields.

The biggest concern about this weed is its spread from one farm to the next and the most successful prevention would be to prevent the spread.



Figure 1 Dense stand of vigorously growing itch grass



Figure 2 Sugar cane field infested with Itch Grass

....always control weeds when it is in the early stage of its growth.....

Managing *Itch* grass in cane farm

A long-term integrated approach and repeated awareness program is required to bring this grass under control.

Cultural control

Itch grass can be controlled by a combination of cultivation followed by long fallowing. The following steps are recommended:

- The infested site should be burnt to destroy the seeds on the surface.
- After burning, shallow ploughing can be done to stimulate germination of seeds in the top soil layer.
- After the seeds have germinated, deep ploughing should be done to bury the germinated seedlings and the land should be left fallow.
- During the fallow period some seeds will continue to germinate and this can be pulled out or spot sprayed with glyphosate.

Chemical control

Itch grass can be chemically controlled with pre and post emergence weedicides.

Pre emergence

- Velpar K4 or Diuron can be used at the rate of 4 kg per hectare.
- These weedicides will be effective if there is moisture in the soil or if there is some rain after application.
- The preferred time for applying Velpar or Diuron is early morning.
- Caution must be exercised and the sprayed field must not be entered for at least 4 weeks.
- The above application rate will only be effective for 4 weeks after which weeds will emerge.

Post emergence

- Velpar K4 can be used at the rate of 4 kg per hectare and will be most effective when the weeds are in the 2-3 leaf stage.
- The weedicide must be applied carefully to ensure good coverage.
- The above application rate will act as both post and pre emergence and will be effective for 4 weeks.
- Glyphosate can be used at the rate of 3-4 litres per hectare but only on headlands and fallow land.

Combination weed control

An integrated approach will involve the use of pre emergence weedicide followed by post emergent mechanical and manual cultivation, fertilization and post emergence weedicide in cane fields. Trash blanketing can be used on ratoon fields.



Figure 3 prop roots, sharp sheath hairs & seeds

Summary

- Itch grass reproduces and survives from seeds in the soil.
- A new plant develops from each seed.
- 90% of the seeds are in the 0-15cm depth.
- No single *one-off* treatment will control itch grass.
- Repeated treatments are the only way of controlling itch grass.
- Post weed control monitoring to be adopted and spot weeding undertaken whenever necessary.
- An integrated weed management system will reduce the cost of weed control.

"Early weed control" must be practiced to increase and sustain production.