



Potamogeton distinctus (Normal leaves)



Potamogeton distinctus (14 days after
Sunrice application)

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**National Plant Protection
Centre
Department of Agriculture
Semtokha: Thimphu**

***Ethoxysulfuron* 15% WDG
(Sunrice)**



Produced by:

*Weeds and Vertebrate Pest Management Unit
National Plant Protection Centre
Semtokha, Thimphu
2020*

***Ethoxysulfuron* 15% WDG (Sunrice)**

Background

- ♦ It is a post-emergent broad spectrum selective herbicide effective against sedges and broad-leaf weeds in transplanted rice.
- ♦ It contains *Ethoxysulfuron* as an active ingredient (a.i.) which belongs to sulfonyl urea group of herbicides.
- ♦ In Bhutan, it is recommended for controlling *Potamogeton distinctus* (shochum), *Monochoria vaginalis*, *Cyperus iria*, and *Cyperus difformis* in transplanted rice.

Mode of action

- ♦ *Ethoxysulfuron* is systematically taken up by leaves and translocated within the whole plant.
- ♦ In about a week after application, chlorotic patches develop on leaves. The whole plant eventually collapses and die within 3 to 4 weeks after application.
- ♦ *Ethoxysulfuron* inhibits synthesis of acetolactate which is required for normal growth of weeds.

Toxicity level

- ♦ *Ethoxysulfuron* is moderately toxic (Blue label)
- ♦ LD50 in rats (mg/kg): > 3270 orally; >4000 dermally (Hacker).

Method of application

1. Spraying

- ♦ Formulated 50g (1 bottle) Sunrice should be diluted in 250 liters of water **OR** 1g in 5 liters of water.
- ♦ It should be well dissolved in the water before application.
- ♦ Formulated 50g Sunrice, supplied through the National Plant Protection Centre (NPPC) is adequate for 1 acre of transplanted paddy field.

2. Granular application

- ♦ Mix formulated 50g (1bottle) Sunrice with 25 kg of sand **OR** 1g of Sunrice with 0.5 kg of sand.
- ♦ The mixture should be broadcast uniformly.
- ♦ The mixture of formulated 50g Sunrice and 25 kg sand is adequate for 1 acre of transplanted paddy field .

Note: Sunrice is not effective in controlling grasses.

Water level in the field during Sunrice application

- ♦ The water level in the transplanted paddy field should be kept at 1-2 cm during Sunrice application (i.e. for both application method).
- ♦ Drain out the excess water before Sunrice application.
- ♦ Keep the field water stagnant for about 24 hours after application of Sunrice.
- ♦ Do not irrigate or flood the field for 24 hours after the application of Sunrice.

Time of application

- ♦ Sunrice herbicide should be applied within 10 to 15 days after transplantation (DAT) of paddy or when weeds, particularly *Potamogeton distinctus* (shochum) are at 2-3 leaf growth stage.
- ♦ Herbicide should not be applied on rainy days.

Note: Spraying is found more effective than the granular application in controlling the target weeds.