



AGRICROP

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Steri-maX cane smut 07/06-01

Using Steri-maX Biocide to control

Sugarcane Smut*

on equipment and appliances



Introduction

Sugarcane smut is one of the most serious diseases of sugarcane. Affected cane is severely stunted and production losses of 30-100% are common in susceptible varieties. The disease is caused by a fungus, *Ustilago scitaminea* Sydow. The fungus infects plants through the buds on standing stalks or germinating buds in the soil. The fungus grows in the plant in close association with the growing points or meristems.

Symptoms

Sugarcane smut is easily identified by the black whip-like structure that forms from the growing point of the sugarcane plant. This whip replaces the spindle leaf.

Spread

Sugarcane smut is primarily spread by wind dispersal of the spores or by planting infected or contaminated cane cuttings. The spores usually spread only a short distance, 10-15 m. However in gale force winds or cyclones spores can travel many kilometers. Movement of spores on machinery and shoes is also possible.

Control

Resistant varieties are widely used for control in countries where the disease is present. Hot water treatment of cane can be used to eliminate smut from infected planting material. For further information on these forms of control see the BSES information sheet ISO6006.

Hygiene

Equipment and appliance hygiene are also essential to prevent the spread of spores to surrounding fields or properties. Smut spores are microscopic and where there is dust there may be spores. Spores can be trapped in inaccessible parts of a machine and freed to infect during transport, use or repairs in the field. Spores can remain viable for up to a year. Therefore all plant material, sugarcane smut spores and soil should be removed before transporting sugarcane equipment

Once cleaned the equipment should then be sprayed with a 1% solution of **Steri-maX Biocide**.

Efficacy Trials

Trials conducted by the BSES concluded that Steri-maX Biocide is 100% effective in killing sugarcane smut spores when applied at a rate of 1% solution with water. Further studies are being conducted to ascertain whether contact times of less than 5 minutes are as effective.

Acknowledgment:-

AgriCrop wishes to acknowledge the above material was referenced from the BSES Information sheet on Sugarcane smut (ref.—ISO6006).

*The APVMA have granted an emergency use permit (PER9440) for the use of Steri-maX Biocide in controlling the spread of sugarcane smut spores on equipment and appliances.

STERI-MAX BIOCIDES—CONDENSED DIRECTIONS FOR USE:



SITUATION	RATE	CRITICAL COMMENTS
For control of the spread of Sugarcane Ratoon Stunting Disease	100 mL/10L water (1% solution)	Clean equipment of all debris, soil and sugar sap. Immerse or spray with solution for a minimum of 5 minutes making sure equipment is completely covered. Dispose of unwanted solution safely – refer to disposal statements as shown on the product label.
General disinfection of cold rooms, packing sheds, tunnels, seed trays & other hard surfaces.	100 mL/100L water (0.1% solution)	First remove all organic matter from surfaces and keep wet with Steri-max solution for over 10 minutes for best results.
Aid in the control of the spread of Sugarcane smut <i>(Ustilago scitaminea)</i> In sugarcane production areas	APVMA Permit Number PER9440	All uses appearing in shaded section (below) have been approved under APVMA Permit Number PER 9440
Appliances (Any vehicle, machinery, equipment or apparatus of any kind)	100 mL/10L water (1% solution)	Apply to appliances that have been cleaned of all soil and plant material and are free of detergent. Apply to all parts of the appliance and keep the surfaces wet for a minimum of 5 minutes
Prior to leaving a property Equipment <i>includes</i> hats, plastic bags (used to enclose, for example, GPS equipment and folders), footbaths, immersion containers, spray equipment	100 mL/10L water (1% solution)	Apply to appliances that are clean and free of detergent. Apply by spraying a 1% solution on all parts of the equipment. Keep the surfaces wet for a minimum of 5 minutes. Alternatively, immerse the equipment in the solution (e.g. a footbath) for a minimum of 5 minutes
General hygiene measures for vehicles	100 mL/10L water (1% solution)	Remove visible soil and plant material from vehicle and tyres. Spray tyres with a 1% solution to run-off.
Disposal		Dispose of used treatment solutions (from footbaths/immersion containers) on to ground before leaving the property.

NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER, CONTRARY TO THE LABEL OR THIS PERMIT UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

GENERAL INSTRUCTIONS:

- Effective against a range of fungi and bacteria pathogens.
- Stays active as long as it is in solution (does not oxidize).
- Under heavy agitation, foam may form and a defoaming agent (food grade) may be useful.
- Steri-max has wetting characteristics, so a wetting agent does not need to be added.

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