



The

# OPRAtive Word

Technical Note 3

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## RECOMMENDATIONS FOR APPLYING AND HANDLING METHAMIDOPHOS

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### APPLICATION

Methamidophos is used for oil palm trunk injection against sexava, bagworms and *Zophiuma lobulata* (the causal agent of *Finschhafen disorder*).

### TREATMENT AUTHORISATION

The Department of Environment & Conservation approves the importation of methamidophos under the strict conditions that: a) it is for the sole purpose of controlling oil palm pests by trunk injection, b) that the treatment is carried out by supervised and trained treatment teams, and c) that the treatment is in strict accordance with authorised PNG OPRA recommendations.

### DETAILS OF TREATMENT

The current recommendation for trunk injecting is to place 10ml of methamidophos (60% w/v SL) per palm into a single 1.5cm diameter hole, 15cm deep and drilled at a 45° angle into the trunk, 1m above ground. The hole is plugged with a wooden stake to prevent rainfall trunk-flow from flushing the insecticide from the injection hole and also to avoid infections getting into the palm.

A drench gun, or similar enclosed applicator, should be used to apply a consistent dosage per palm and avoid contamination of the operator and the environment.

### HANDLING

#### *Hazard.*

Methamidophos is poisonous to insects. It can also, if used carelessly, kill or poison people and non-target organisms including domestic and wild animals, birds, fish, or beneficial insects, and damage the environment.

#### *Protection.*

Always wear protective clothing when handling or applying methamidophos.

In the tropics, gloves, overalls, respirators, face masks and goggles (*the recommended range of protective clothing*) may be uncomfortable and unpleasant in hot and humid conditions. An uncomfortable operator can become a dangerous or careless user unless rest periods are taken during prolonged activities. The selection of protective clothing can be made with reference to the degree of protection required for safe practice and the comfort of the wearer.

All protective clothing must be free from holes, and made from materials which should be as light as possible.

- Respirators and goggles/visors are essential for the operators who handle methamidophos. The fumes are noxious and should not be inhaled for prolonged periods. Methamidophos fumes can also cause slight irritation to the eyes.
- Overalls made of cotton fabric are preferable, but a long-sleeved shirt and long trousers (*without turn-ups*) may be sufficient. All clothing should be washed thoroughly after use, and kept separate from other items being washed. If they do have to be washed at the same time as other clothing, they should be put through the water last, to avoid contaminating ordinary clothes. Clothing used in control operations should be hung in full sunshine to dry so that the UV light can speed up the breakdown of any remaining pesticide, and should be stored separately from everyday clothing.

- Gloves should be worn when handling methamidophos. They should be made of nitrile or some other material that is not damaged by methamidophos and is impervious. Heavy-duty PVC gloves may be used as an alternative in the absence of nitrile. Do not wear cotton or leather gloves. Long sleeves should be worn outside the gloves so that if there is spillage the insecticide cannot get inside the gloves. Gloves should be washed with soap and water after use.



- Boots (*not sandals*) should always be worn. It is particularly important to wear rubber boots when handling methamidophos and to have the overall or trouser legs outside the boots (*not tucked in*) so that if there is spillage it cannot enter the top of the boot.

Always have plenty of soap and clean water available near the site where methamidophos is handled and always wash thoroughly after handling or using.

- Methamidophos should never be transported in open or leaky containers.
- Methamidophos should never be transported with foodstuffs.

## Safe Disposal of Methamidophos

There are three important steps to dealing with a spillage: Clear up; Clean up; Disposal.

**Clear up.** Methamidophos spills should be covered with suitable absorbent material such as sawdust, sand, or soil, which should then be swept up and placed in a clearly labelled container for disposal. Supplies of containers and absorbent material should always be kept in store.

The waste should then be disposed of (*see below*).

**Wear full protective clothing when dealing with methamidophos spills.**

**Clean up.** The affected area should be scrubbed with detergent, or strong soap and water, not hosed down, as this merely disperses the spill. Dispose of the contaminated cleaning water in the same way as the pesticide (*see below*).

**Disposal.** A practical method of disposal of a few litres of methamidophos is by burying it, preferably at least half a metre deep. Burial sites should be permanently fenced and marked. In choice of burial site, which should be well away from watercourses or dams, take care to avoid problems with public health and environmental contamination, especially of the water table.

Empty methamidophos containers must never be used for domestic or agricultural purposes. If they are not going to be recycled for insecticide use, they should be perforated and buried.

## Code of conduct for methamidophos users

### 1. Mixing, decanting and applying methamidophos:

- 1.1 Wear appropriate protective clothing:- overalls, gloves, boots, respirator and goggles/visor.
- 1.2 Have plenty of soap and water immediately available for washing.
- 1.3 Read the instructions on the label and follow them.
- 1.4 Avoid contamination by pouring methamidophos carefully without splashing.
- 1.5 Never eat, drink or smoke and avoid touching the eyes, mouth or any bro-

ken skin when handling methamidophos.

- 1.6 Never work alone when handling methamidophos.
- 1.7 Keep unauthorised people (*especially children*) and animals away from methamidophos.
- 1.8 Never leave opened containers of methamidophos unattended.
- 1.9 Do not apply methamidophos if weather conditions (*i.e. heavy rain*) are unsuitable for application
- 1.10 Ensure that operators are adequately instructed and supervised and have sufficient rest periods
- 1.11 Only use methamidophos in strict accordance with instructions or approved recommendations.
- 1.12 If an operator, through accident or misuse, does become contaminated, immediately take him away from the pesticide spillage, remove his contaminated clothing and make sure the whole body is washed thoroughly with soap and water, and that clean clothing is put on.
- 1.13 If anyone becomes contaminated with pesticide, seek medical advice as soon as possible, giving the doctor full details which are described on the label of the pesticide container.
- 1.14 Have all regular users of methamidophos checked regularly for blood cholinesterase levels.
- 1.15 Do not continue to work or remain in contact with methamidophos if blood tests show that your cholinesterase level is below normal.
- 1.16 Always wash thoroughly after handling methamidophos.

### 2. After applying methamidophos:

- 2.1 Return unused methamidophos to the store and keep it locked away from unauthorised people and out of reach of children.
- 2.2 Never transfer methamidophos into bottles used for drinks (*e.g. soda, beer bottles or edible oil cans/drums*).
- 2.3 Make all empty containers unusable (pierce those which are plastic and metal), and safely dispose of them by

burying or burning. Keep well clear of any smoke. It is impossible to clean a pesticide container well enough to make it safe for storing food or water, or for use as a cooking vessel or for distilling alcoholic beverages.

- 2.4 Clear up any spillage as soon as possible.
- 2.5 Remove and wash protective clothing.
- 2.6 Wash thoroughly and put on clean clothing.
- 2.7 Keep an accurate record of methamidophos usage, including details of workers and the number of hours each was exposed to pesticide during the operation.

For Further Information Contact:

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