Pest Management Regulatory Agency
Agence de réglementation de la lutte antiparasitaire

Re-evaluation Note REV2006-03

Re-evaluation of Carbendazim

The purpose of this document is to inform registrants, pesticide regulatory officials and the Canadian public that Health Canada's Pest Management Regulatory Agency (PMRA) has re-evaluated carbendazim. The risk assessment indicates that the use of carbendazim as a fungicide to control Dutch elm disease (*Ophiostoma ulmi* and *Ophiostoma novo-ulmi*) in elm species (including American, English, slippery, Chinese and Siberian) presents minimal risk to workers and the environment.

The PMRA has determined that this active ingredient is acceptable for continued registration. Mitigation measures to further protect workers are specified in this Re-evaluation Note. The registrants have been informed by letter of the specific requirements affecting their product registrations and the regulatory options available to comply with this decision.

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1.0 Chemical Identification

Active substance:	Carbendazim
Chemical name:	
IUPAC:	Methyl benzimidazol-2-ylcarbamate
CAS:	Methyl 1H-benzimidazol-2-ylcarbamate
Chemical class:	Benzimidazole
CAS number:	10605-21-7

Carbendazim is also a metabolitic by-product of thiophanate-methyl; this aspect will be discussed in a separate re-evaluation document.

2.0 Uses and Application Methods

In Canada, carbendazim is registered for use as a fungicide to control Dutch elm disease (*Ophiostoma ulmi* and *Ophiostoma novo-ulmi*) in elm species (including American, English, slippery, Chinese and Siberian). Carbendazim is a systemic fungicide with protective and curative action. There is only one end-use product containing carbendazim, which was first registered in 1994. Its method of application is by root flare injection and the process of application is essentially a closed application system. It is being used by trained arborists and others trained in the identification of Dutch elm disease and injection techniques.

3.0 Health and Environmental Assessment

Publicly available information and registrant-supplied data were considered in the re-evaluation of carbendazim.

Minimal exposure and risk to workers can be expected from the current registered use of carbendazim. This use is not expected to result in significant exposure of others.

Carbendazim is not registered for use on food crops; therefore, dietary exposure and risk are not expected.

An environmental risk assessment was not conducted because the currently registered use pattern is not expected to result in significant environmental exposure.

4.0 Regulatory Action

The PMRA has concluded that the use of carbendazim and its end-use product is acceptable for continuing registration with the implementation of the mitigation measure described in this document.

The "**PRECAUTIONS**" section of the label should be upgraded to include the following statement regarding baseline personal protective equipment (PPE):

> "Applicators handling carbendazim during mixing, loading and application of the product must wear long pants, a long-sleeved shirt and chemical-resistant gloves".

The implementation of this label change will conclude the re-evaluation of carbendazim.