

# Killed *Myrothecium verrucaria*: Fermentation Solids and Solubles (119204) Fact Sheet

## Summary

This pesticide active ingredient is a mixture of the killed fungus, *Myrothecium verrucaria*, and the liquid in which the fungus was grown. This dead fungus kills specific parasitic microscopic pests called nematodes, which attack plants, usually through their roots. The active ingredient is specific, being effective only against nematodes that parasitize plants; it does not harm free-living nematodes. Because the mixture may be toxic to aquatic organisms, it is not approved for use in or near bodies of water. No harmful effects to humans are expected as long as applicators protect their eyes and skin from contact with pesticide products that contain this active ingredient.

### I. Description of the Active Ingredient

The active ingredient is the mixture of substances that are in suspension and in solution when the fungus, *Myrothecium verrucaria*, is grown in the laboratory. To prepare the active ingredient as a dry powder, water is removed from the culture mixture, and the fungus is killed by exposure to high temperatures. The pesticidal activity is apparently not due to a single identifiable component, but requires the entire mixture. Researchers do not know the mechanism of action.

### II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** All food, fiber, and ornamental crops.
- **Target Pests:** Various specific parasitic nematodes, which are microscopic worm-like creatures that parasitize plants, usually through the roots. Nematodes reduce the quality and yield of the plants they infect. The active ingredient is specific for parasitic nematodes; it is not active against free-living nematodes, which do not cause plant diseases.
- **Application Methods:** The pesticide product is incorporated into the upper 3 to 6 inches of soil as a dry powder or as a ground spray. It can be applied any time in the plant's life cycle--before planting, during planting, or after planting.

### III. Assessing Risks to Human Health

Mild, reversible skin and eye irritation were seen when the active ingredient was tested on laboratory animals; based on results of standard toxicity tests, no other human health problems are expected. The labels of products containing the fungus tell users to take precautions to avoid skin and eye exposure. Virtually no human exposure occurs after the pesticide product is mixed with the soil.

### IV. Assessing Risks to the Environment

The only known risk to the environment from use of products containing this active ingredient concerns possible toxicity to aquatic organisms. To minimize this risk, the product label tells the user not to use the pesticide in or near bodies of water. Furthermore, there should be little or no exposure to organisms that do not live in soil because products containing killed *Myrothecium verrucaria* are not concentrated at the soil surface. Although the **living** fungus causes plant disease, the active ingredient does not contain living *Myrothecium verrucaria*, and therefore cannot infect plants. To further protect the environment, EPA requires the manufacturer to maintain data showing that the active ingredient does not contain any live *Myrothecium verrucaria*, or other living organisms or spores of concern. In addition, only low levels of certain toxins that the fungus can produce are permitted in the active ingredient.

## **V. Regulatory Information**

*Myrothecium verrucaria* was registered (licensed for sale) as a pesticide active ingredient in 1996. As of October 1999, there were four registered products.

## **VI. Producer Information**

Abbott Laboratories  
Chemical and Agricultural Products Division  
North Chicago, IL 60064

## **VII. Additional Contact Information**

[Ombudsman, Biopesticides and Pollution Prevention Division](#) (7511P)  
Office of Pesticide Programs  
Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460