

Pythium oligandrum DV 74 (028816) Fact sheet

Summary

Pythium oligandrum DV 74 is a well characterized, naturally occurring fungus which acts as a hyperparasite by colonizing other pathogenic fungi in and around seeds and the rhizosphere of treated plants, thereby suppressing the growth of at least 20 soil-born pathogenic fungi, including Alternaria, Botrytis, Fusarium, Gaeumannomyces, Ophiostoma, Phoma, Pseudocercospora, Pythium, Sclerotinia and Sclerotium in or around growing plants. The active ingredient has been formulated into one manufacturing use product, Technical DV 74 and one end use product, Polyversum®. Based on available information, P. oligandrum appears to have no adverse effects on humans or the environment.

I. Description of the Active Ingredient

The active ingredient, Pythium oligandrum DV 74 (PC Code 028816, ATCC No. 38472) (also referred to in this document as P. oligandrum), is one of four mycoparasites found in the Pythium family. The DV 74 strain was originally isolated in the Czech Republic; however, this mycoparasite is widely distributed throughout the world, including the United States. Pythium oligandrum is common in soil and in or on plants.

P. oligandrum DV 74 acts as a hyperparasite by colonizing other pathogenic fungi in and around seeds and the rhizosphere of treated plants, thereby suppressing the growth of at least 20 soil-born pathogenic fungi, including Alternaria, Botrytis, Fusarium, Gaeumannomyces, Ophiostoma, Phoma, Pseudocercospora, Pythium, Sclerotinia and Sclerotium in or around growing plants. P. oligandrum produces the namesake protein oligandrin and other compounds that stimulate plants cell walls to fend off pathogen invasion, and also stimulates natural plant defense mechanisms called pathogenesis-related (PR) proteins which help plants resist disease, without harming the plant.

II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** Food crops, ornamentals, and turf.
- **Target Pests:** Alternaria, Ascochyta, Botrytis cinerea, Fusarium, Peronosplasmopara, Phoma, Phytophthora infestans, Plasmopara viticola, Puccinia, Pythium, Rhizoctonia solani, Sclerotinia sclerotiorum, Unicula necator, and Verticillium species.
- **Application Methods:** Smolder G: Granules are applied to moist soil at a rate of 50 pounds (1 bag) per acre at, or immediately prior to, dodder emergence.
- **Smolder WP:** This liquid sprayable product should be applied when dodder vines are beginning to reach the top of the crop canopy.

III. Assessing Risks to Human Health

EPA's determination of whether a substance poses a risk to humans or other organisms depends on two factors. First, the Agency considers the toxicity of the test substance. Second, EPA considers the amount of test substance that an organism may be exposed to. The EPA considers each of these factors when making a risk determination for a pesticide.

No harmful health effects to humans are expected from use of Pythium oligandrum DV 74. Appropriate tests found no evidence that the fungus is toxic to humans or other mammals. No toxicological or pathogenic effects of P. oligandrum in mammals have been reported in available public literature or in the submitted data. In addition, certain biological characteristics of P. oligandrum, which include its moisture and temperature requirements during infection, are further indications that this microbial pest control agent would not be pathogenic to mammals.

IV. Assessing Risks to the Environment

Available studies show that no adverse environmental effects are expected when products containing Pythium oligandrum DV 74 are used in accordance with label instructions. Pythium oligandrum has not been reported in public literature to infect any organism other than the target pests listed above.

V. Regulatory Information

Pythium oligandrum DV 74 was registered (licensed for sale) on May 7, 2007. Two products, Polyversum® and Technical DV 74 , were registered at that time (EPA Reg. Nos. 82606-1 and 82606-2). .

VI. Registrant Information

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VII. Additional Contact Information

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