

73049-67

3-4-2003

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division (7511C)
1200 Pennsylvania Avenue NW
Washington, DC 20460

EPA Reg. Number:

73049-67

Date of Issuance:

3/4/03

Term of Issuance:

Conditional

Name of Pesticide Product:

DiTera DF Biological
Nematicide

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Valent BioSciences
870 Technology Way
Libertyville, IL 60048

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA Sec. 3(c)(7)(A) provided you:

1. Submit and/or cite all data required for registration/ reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the following label change listed below before you release the product for shipment:
Change your EPA Identifying Symbol to EPA Reg. No. 73049-67.
3. You must provide information on how nematicidal bioactivity is determined for "killed" vs master vs working stocks. It is unclear what nematicidal bioactivity is determined to be acceptable for a master stock prior to approval for production fermentation. The requested information to fill in the table for *Myrothecium* inactivation and microbial contamination must be provided. Additional information must be supplied concerning how the results of the mouse safety tests are analyzed.
4. You must submit this above requested information within 6 months of the date of the registration of this product.

Signature of Approving Official:

JZH see next page
(See second page for signature)

Date:

3/4/03

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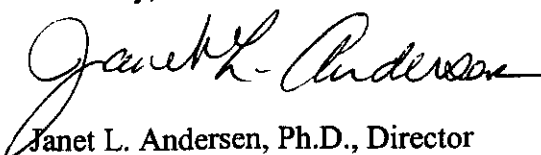
EPA Form 8570-6

5. Submit five(5) copies of the revised final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,



Janet L. Andersen, Ph.D., Director
Biopesticides and Pollution
Prevention Division (7511C)

Enclosure

CONCURRENCES

SYMBOL	7511C						
SURNAME	COLE						
DATE	3/3/03						

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ACCEPTED

MAR 4 2003

Under the Federal Insecticides, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 73049-67

DiTera DF
BIOLOGICAL NEMATICIDE
DRY FLOWABLE

ACTIVE INGREDIENT (1):

Myrothecium verrucaria *strain AARC-0255 fermentation solids and solubles.....90% w/w
 INERT INGREDIENTS.....10% w/w
 TOTAL.....100% w/w

(1) "Non-viable"/"killed" microbial composition

*U.S. Patent No. 5,051,255

POTENCY:

91,600 RKU (Root-knot Units) per gram of product.

Potency units should not be used to adjust use rates.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 73049-XX

EPA Est. No.

Registrant:

Valent BioSciences Corporation
 870 Technology Way
 Libertyville, IL 60048
 1-(800) 323-9597

FIRST AID	
If in eyes	--Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. --Call a poison control center or doctor for treatment advice.
If on skin or clothing	--Take off contaminated clothing. --Rinse skin immediately with plenty of water for 15-20 minutes. --Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, you may also call toll-free 1-877-315-9819 for treatment information.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard under certain circumstances allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- *Coveralls.
- *Waterproof gloves.
- *Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries.

Keep unprotected persons out of treated areas until sprays have dried.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by improper storage or disposal.

Pesticide Storage: Keep containers tightly closed when not in use. Store in a cool, dry place. Avoid extreme temperatures.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water when disposing of equipment washwaters.

Container Disposal: Completely empty container into applicable equipment. Then dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

DiTera DF suppresses the following plant nematodes parasitizing food, fiber and ornamental crops: *Meloidogyne* spp. (root-knot nematodes), *Heterodera* and *Globodera* spp. (cyst nematodes), *Pratylenchus* spp. (lesion nematodes), *Tylenchulus semipenetrans* (citrus nematode), *Trichodorus* spp. (stubby-root nematodes), *Longidorus* spp. (needle nematodes), *Paratylenchus* spp. (pin nematodes), *Rotylenchulus* spp. (reniform nematodes), *Xiphinema* spp. (dagger nematodes), *Belonolaimus* spp. (sting nematodes), *Criconeoides* spp., *Criconebella* spp. and related genera (ring nematodes), *Tylenchorhynchus* spp. (stunt nematodes), *Hoplolaimus* spp. (lance nematodes), *Rotylenchus* spp., *Helicotylenchus* spp. (spiral nematodes), *Radopholus* spp. (burrowing nematodes) and other plant parasitic nematodes.

GENERAL INSTRUCTIONS

DiTera DF may be applied to the soil as a pre-plant, at planting or post-plant treatment on annual and perennial crops using ground equipment (refer to commodities listed in Table 1). Pre-plant applications should preferably be close to the actual planting times. The optimal application time should be determined based on the cultural practices and the nematode population dynamics. For perennial crops, apply DiTera DF just prior to a root flush to protect young roots. Multiple applications may be required for crops with multiple root flushes. DiTera DF must be incorporated into the soil for optimum results. Incorporation may be accomplished by mechanical equipment, irrigation or rainfall. For applications made at planting, the action of some planters may provide sufficient incorporation. When using planters which do not provide adequate incorporation of DiTera DF into the soil, equipment designed for incorporation may be used behind the planter.

The rates provided are for broadcast applications. Due to the nature of the active ingredient and the distribution of nematodes in agricultural soils, in-row or band application may be suitable for adequate nematode suppression. If banding or side-dressing, the corresponding rates need to be calculated based on the actual surface area of soil to be treated (Refer to conversion table for band applications). Use of the higher rates and/or multiple applications may be required in coarse (light) soils with less than 1% organic matter. Maximum benefits may not be realized in agricultural fields containing non-decomposed plant materials, including infected roots from a previous crop, or in fields with very high nematode infestations.

DiTera DF may be spread as a dry granule, applied using ground sprays, or using approved irrigation systems (refer to Chemigation Use Directions), with quantities of water sufficient to provide coverage of the root area of the plants. The amount of water needed per acre will depend on the plant species, biology of the nematode species to be controlled, stage of crop, weather, soil moisture conditions, level of nematode infestation, etc. Do not apply by mist sprayer or aerial spray equipment

COMPATIBILITY

The DiTera DF application directions refer to the use of the product alone. Data concerning the compatibility of DiTera DF with other agricultural products are not available. Valent does not assume responsibility for unexpected, adverse results due to the tank mixing or simultaneous applications of DiTera DF with other agricultural products including fertilizers.

CHEMIGATION

MIXING AND APPLICATION INSTRUCTIONS

To ensure complete mixing of DiTera DF, spray equipment having an agitation system is recommended.

A thoroughly mixed DiTera DF suspension can be applied through irrigation systems described under Chemigation Use Directions, so as to treat the soil around the crop root-zone. It is recommended that the material be used immediately after mixing in order to avoid settling. DiTera DF must be applied as a dedicated irrigation between normal irrigations or at the end of a scheduled irrigation. To minimize excessive dilution or leaching of product from root zone, DiTera DF must be applied in the highest concentration over the shortest time span possible.

Pre-mix product in a mix tank having both mechanical and by-pass agitation. Fill tank with 1/2 to 3/4 of the desired amount of water. Start mechanical and hydraulic systems to provide maximum agitation. Add an agricultural wetting agent prior to adding DiTera DF. Add 1/3 to 1/2 of DiTera DF and allow to mix until thoroughly suspended. Add the remaining material slowly while bringing water to the desired volume. Continue agitation. If a concentration greater than 1 lb. DiTera DF per 2 gallons of water is desired, the material should be added in smaller increments with sufficient agitation following each addition. To avoid excessive leaching of product, flush irrigation lines for the minimum time period at the end of the application. Do not mix more DiTera DF than can be used in a 24-hour period. Rinse and flush spray equipment thoroughly following each use. Use a strainer no finer than 50 mesh in conventional spray systems.

CHEMIGATION USE DIRECTIONS

Apply this product only through the following types of irrigation systems: sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move; flood (basin); furrow; border; or low pressure (including drip/trickle, minisprinklers, drip tape, strip tubing and jets).

Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact local state extension personnel, equipment manufacturers or other experts.

Do not connect irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

Systems utilizing sprinkler chemigation, a pressurized water and pesticide injection system, or drip/trickle chemigation, must meet the following requirements.

- * The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- * The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- * The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- * The system must contain functional controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- * The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- * Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- * For sprinkler chemigation, do not apply when wind speed favors drift beyond the area intended for treatment.

CROP GROUPS/REPRESENTATIVE COMMODITIES	NEMATODE	BROADCAST*RATE (pounds/acre/appl)
<u>BERRIES</u> such as blackberry, raspberry, blueberry	Burrowing	13-100
<u>CITRUS FRUITS</u> such as sweet orange, lemon, grapefruit	Citrus	
<u>CUCURBIT VEGETABLES</u> such as cucumber, melon, squash	Cyst	
<u>FLOWERING, BEDDING PLANTS, ORNAMENTALS</u> , such as fern and hosta	Dagger	
<u>FRUITING VEGETABLES</u> such as eggplant pepper, tomato	Lance	
<u>HERBS AND SPICES</u> such as basil, black pepper, chive, celery seed, dill seed	Lesion	
<u>LEAFY VEGETABLES AND COLE CROPS</u> such as celery, head & leaf lettuce, spinach, broccoli, cabbage	Needle	
<u>LEGUME VEGETABLES</u> such as bean, pea, soybean	Pin	
<u>POME FRUITS</u> such as apple, pear	Reniform	
<u>ROOT AND TUBER VEGETABLES</u> such as carrot, potato, radish, sugar beet, ginseng	Ring	
<u>STONE FRUITS</u> such as peach, plum, prune	Spiral	
<u>TREE NUTS</u> such as almond, pecan, walnut	Root-knot	
<u>MISCELLANEOUS CROPS</u> : asparagus, avocado, banana, cacao bean, coconut, coffee, cotton, cranberry, date, fig, globe artichoke, grape, hops, kiwi fruit, mango, mushroom, okra, papaya, pawpaw, peanut, persimmon, pineapple, plantain, strawberry, sugarcane, tobacco, turf, water chestnut	Sting	
	Stubby-root	
	Stunt	

*Refer to accompanying table for band application rates.

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DiTera DF

CONVERSION TABLE FOR BAND APPLICATIONS

Band Width Inches	Pounds of DiTera per 1,000 Feet of Row at Equivalent Broadcast Rate of Indicated Pounds per acre			
	<u>13</u>	<u>25</u>	<u>50</u>	<u>100</u>
12	0.31	0.60	1.2	2.4
18	0.47	0.91	1.8	3.6
24	0.63	1.20	2.4	4.8
30	0.79	1.51	3.0	6.0
36	0.94	1.82	3.6	7.2
48	1.26	2.40	4.8	9.6
60	1.58	3.0	6.0	12.0

NOTICE TO USER

Seller makes no warranty, express or implied, of the merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

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