

352-372

03/25/2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

3/25/2008

Jonathan Janis
E.I. du Pont de Nemours & Company
Crop Protection, PO Box 30
Newark, DE 19714-0030

Re: DuPont Vydate L, EPA Reg # 352-372
label amendment submitted 1/30/2008
accepted

Dear Mr. Janis:

The revised labeling reference to above, submitted in connection with the registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is **ACCEPTABLE**. This label adds a change to the application method for pepper weevils on peppers.

Submit two (2) copies of your final printed labeling incorporating the above changes prior to releasing your product for shipment. If the above provision is not complied with the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

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

Yours truly,

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Thomas C. Harris
Insecticide / Rodenticide Branch
Registration Division (7505C)
Office of Pesticide Programs
(703) 308-9423
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enclosure



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DuPont™ Vydate® L

insecticide/nematicide

ACCEPTED

MAR 25 2008

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

352-372



“..... A Growing Partnership With Nature”

RESTRICTED USE PESTICIDE

Due to Acute Toxicity And Toxicity to Birds and Mammals.

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.



DuPont™ Vydate® L

insecticide/nematicide

Water Soluble Liquid

1 GALLON CONTAINS 2 LBS. ACTIVE INGREDIENT

Active Ingredient	By Weight
Oxamyl [Methyl N'N'-dimethyl-N-[(methyl carbamoyl)oxy]-1-thiooxamimidate]	24%
Inert Ingredients	76%
TOTAL	100%

Contains Methanol
EPA Reg. No. 352-372

GROUP I A INSECTICIDE

KEEP OUT OF REACH OF CHILDREN

DANGER  **POISON**
PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

Contains an N-methyl carbamate that inhibits cholinesterase.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

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.

ATROPINE IS AN ANTIDOTE -- SEEK MEDICAL ATTENTION AT ONCE IN ALL CASES OF SUSPECTED POISONING

If symptoms appear (see SYMPTOMS), get medical attention.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

(cont'd next column)

FIRST AID (cont'd)

SYMPTOMS--Oxamyl poisoning produces effects associated with anticholinesterase activity which may include weakness, blurred vision, headache, nausea, abdominal cramps, discomfort in the chest, constriction of pupils, sweating, slow pulse, muscle tremors.

NOTE TO PHYSICIAN

TREATMENT--Atropine sulfate should be used for treatment. Administer repeated doses, 1.2 to 2.0 mg intravenously every 10 to 30 minutes until full atropinization is achieved. Maintain atropinization until the patient recovers. Artificial respiration or oxygen may be necessary. Allow no further exposure to any cholinesterase inhibitor until recovery is assured.

Do not use 2-PAM for exposure to VYDATE® L alone. However, for exposure to combinations of VYDATE® L and organophosphorous insecticides, 2-PAM may be used as required to supplement the atropine sulfate treatment. Do not use morphine.

For medical emergencies involving this product, call toll-free 1-800-441-3637.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER-POISON! Fatal if swallowed. May be fatal if inhaled. Do not breathe spray mist. Causes moderate eye irritation. Avoid contact with eyes or clothing. Contains methanol which may cause blindness.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or neoprene rubber or polyvinyl chloride (PVC) or viton or nitrile rubber.
- Chemical-resistant footwear plus socks.
- Protective eyewear.
- Chemical-resistant headgear for overhead exposure.
- Chemical-resistant apron when cleaning equipment, mixing or loading.

A respirator with an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix (TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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PRECAUTIONARY STATEMENTS (cont'd)

ENGINEERING CONTROL STATEMENTS

Human flaggers must be in enclosed cabs.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Pilots must not assist in the mixing and loading operations. Mixers and loaders supporting use on cotton in California and Arizona must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. The system must be designed by the manufacturer to remove a liquid pesticide from its container and transfer it through connecting hoses, pipes, and/or couplings that are sufficiently tight to prevent dermal or inhalation exposure of any person to the pesticide concentrate, use dilution, or rinse solution and must be provided and have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown: coveralls, chemical-resistant footwear, and the type of respirator required for handlers on this labeling. In addition, handlers:

- may wear long-sleeved shirt and long pants, socks and shoes, chemical resistant gloves and a chemical resistant apron, instead of the PPE required for mixers and loaders on this label,
- must wear protective eyewear if the system operates under pressure.

When handlers use closed systems, or enclosed cabs, in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms (fish and invertebrates) and extremely toxic to birds and mammals. Cover or disc spill areas. Birds and mammals in treated areas may be killed. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or disposing of equipment waste waters.

This product can contaminate surface water through ground spray applications. Under some conditions, it may also have a high potential for runoff into surface water after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, area overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water; areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

ENVIRONMENTAL HAZARDS (cont'd)

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops or weeds if bees are visiting the treatment area.

GROUND WATER ADVISORY--Residues of DuPont™ VYDATE® L can seep or leach through soil and can contaminate ground water which may be used for drinking. Users are advised not to apply VYDATE® L where the water table is close to the surface and where soils are very permeable, i.e., well-drained soils such as loamy sands. Local agricultural Agencies can provide information on the soil type in your area and the location of the ground water.

PHYSICAL AND CHEMICAL HAZARDS

Flammable. Keep away from heat, sparks, and open flame. Keep container closed. Use with adequate ventilation.

DIRECTIONS FOR USE

Restricted Use Pesticide

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Pilots must not assist in the mixing and loading operations.

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 interval. 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 48 hours.

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.
- Chemical-resistant gloves made of any waterproof material.
- Socks and shoes.

VYDATE® L insecticide/nematicide should be used only in accordance with recommendations on this label or in separate DuPont recommendations available through local dealers.

DuPont will not be responsible for losses or damages resulting from use of this product in any manner not specifically recom-

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mended by DuPont. User assumes all risks associated with such non-recommended use.

GENERAL INFORMATION

DuPont™ VYDATE® L is a water-soluble liquid that can be used to control many important insects, mites, and nematodes. VYDATE® L is diluted with water for application.

For nematode suppression, VYDATE® L should be used where nematode populations are low to moderate. Application may be made via foliar spray, drip irrigation, shank or other soil injection system, soil surface band followed immediately by overhead irrigation, or via sprinkler chemigation. For nematodes, the use of a registered soil fumigant or contact nematicide prior to or at planting is recommended for most crops. VYDATE® L application timing and treatment schedules depend on the crop and life cycle of the nematode. See the specific crop directions for use of this label for more information.

Use only in commercial and farm plantings. Not for use in home plantings. Not for use during any period after a commercial crop site is opened for public entry as a "U-Pick", "Pick Your Own" or similar operation; in no case shall preharvest applications be made after first public entry. The restricted entry interval stated elsewhere on this label must be followed.

Do not formulate this product into other End-use products without written permission from DuPont.

Do not plant crops other than those with registered VYDATE® L or VYDATE® C-LV uses within 4 months after the last application. Cover crops for soil building or erosion control may be planted anytime, but do not graze or harvest for food or feed.

Do not use in Suffolk and Nassau Counties, Long Island, New York.

Seed piece treatments of tuberous crops are prohibited.

All applications to soil must be incorporated by water or mechanical means.

The maximum aerial application rate for all crops except cotton is 1.0 lb ai/A per application. The maximum chemigation rate for all crops except cotton is 2.0 lb ai/A per application. The maximum soil application rate for all crops except mint and pineapples is 4.0 lb ai/A per application.

INTEGRATED PEST MANAGEMENT

DuPont supports the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an IPM program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, rotation of insecticides with different modes-of-action, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

RESISTANCE

For resistance management, VYDATE® L is a group 1A insecticide. Repeated exclusive use of VYDATE® L or other group 1A insecticides may lead to the buildup of resistant strains of

insects in some crops. Not all members of this group have been shown to be cross-resistant. Different resistance mechanisms that are not linked to target site of action, such as enhanced metabolism, are common for this group of chemicals. Alternation of compounds from different sub-groups within this group may be an acceptable part of an integrated pest management program.

Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, this product may be used as part of resistant management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternate method of control for your area. For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>.

COMPATIBILITY

Since formulations may be changed and new ones introduced, it is recommended that users premix a small quantity of a desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.). Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use VYDATE® L with bordeaux mixture, lime sulfur, or in highly alkaline mixtures. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

SPRAY PREPARATION

Spray equipment must be clean and free of previous pesticide deposits before applying VYDATE® L.

Fill spray tank with water 1/4 - to 1/2- full. Add VYDATE® L directly to the tank. Mix thoroughly while adding remaining water. Do not store the spray mix in a spray tank overnight.

Buffering of spray solution to a pH of 5 to 7 is recommended.

APPLICATION

Apply at the recommended rates when insect populations reach locally determined thresholds. Consult the cooperative extension service, professional consultant or other qualified authorities to determine appropriate threshold levels for treatment in your area.

Refer to crop specific directions for use in the crop tables for information on treatment intervals.

Use sufficient water to obtain thorough, uniform coverage. For aerial applications use a minimum of 2 gallons per acre of water for vegetables and row crops and 10 gallons per acre of water for fruit crops, except where otherwise noted in the crop specific directions for use. For ground foliar applications use a minimum of 5 gallons per acre of water and 10 gallons per acre of water

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for fruit crops, except as otherwise noted in the crop specific directions for use.

SPRAY TANK CLEANOUT

Immediately following application of DuPont™ VYDATE® L, thoroughly clean all mixing and spray equipment. Flush the tank, pump, hoses and boom with several changes of water after removing nozzle tips and screens. Clean nozzle tips and screens separately. Take all necessary safety precautions when cleaning equipment. Do not clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather - related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150- 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may effect how an applicator balances drift control and coverage. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!** See Wind, Temperature and Humidity, and Temperature Inversions sections of this label.

CONTROLLING DROPLET SIZE -GENERAL TECHNIQUES

Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**

Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

CONTROLLING DROPLET SIZE - AIRCRAFT

Nozzles must never be pointed downward more than 45 degrees.

Number of nozzles - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.

Nozzle Orientation - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will provide larger droplets than other orientations.

Nozzle Type - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

Boom Length - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.

Application Height - Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment-Aircraft - When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID GUSTY OR WINDLESS CONDITIONS.**

Note: Local terrain can influence wind patterns, Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Application should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud(under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

This product should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

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AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

AIR ASSISTED (AIR BLAST) TREE AND VINE SPRAYERS

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. These sprayers are not suitable for applying herbicides. In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- *Adjust deflectors and aiming devices so that spray is only directed into the canopy.*
- *Block off upward pointed nozzles when there is no overhanging canopy.*
- *Use only enough air volume to penetrate the canopy and provide good coverage.*
- *Movement of spray that goes beyond the edge of the cultivated area may be minimized by practices such as spraying the outside row only from outside the planting.*

CHEMIGATION

The following types of irrigation equipment may be used for chemigation applications: center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, mini (micro) sprinkler, hand move, drip (trickle), or strip tubing irrigation systems. To avoid exposure to birds, use drip irrigation where feasible. Do not apply this product through any other type of irrigation system.

Application should be in sufficient water and of sufficient duration to apply the recommended rate evenly to the entire treated area.

It is recommended to buffer the injection solution containing DuPont™ VYDATE® L to approximately pH 5.

Do not allow irrigation water to collect or run-off during chemigation.

Do not apply when wind speed favors drift beyond the area intended for treatment.

VYDATE® L should not be applied at the same time that a drip/irrigation line clean out product is being used as performance may be reduced.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact state extension service specialists, equipment manufacturers, or other experts.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the respon-

sible person, shall shut the system down and make necessary adjustments should the need arise.

Wear personal protective equipment as defined in the PPE section of the label for applicators and other handlers when making adjustments or repairs on the chemigation system when VYDATE® L is in the irrigation water.

When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

A pesticide supply tank is recommended for the application of VYDATE® L in chemigation systems. VYDATE® L is a water soluble liquid. Once in solution, no further agitation is required. VYDATE® L is compatible with most commonly used plant protectants with the exception of Bordeaux mixtures, lime sulfur and spray oils. Highly alkaline water should be buffered so that the pH of spray solution is in the range of neutral to slightly acidic.

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

Public water system means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

REQUIRED SYSTEM SAFETY DEVICES

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. 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.
7. Chemigation systems connected to public water systems must contain a functional, reduced- pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

SPRINKLER CHEMIGATION

- 1. End guns must be turned off during the application, if they irrigate non target areas.
- 2. It is recommended that nozzles in the immediate area of control panels, chemical supply tanks and system safety devices be plugged to prevent contamination of these areas.
- 3. Do not apply when wind speed favors drift beyond the area intended for treatment.
- 4. Do not apply when system connections or fittings leak or when nozzles do not provide uniform distribution.

DRIP (TRICKLE) CHEMIGATION

- 1. The system should provide uniform waterflow and should have no leaks.
- 2. Irrigate crop in a manner to wet the root zone first, then introduce DuPont™ VYDATE® L for a period to distribute the material uniformly to the crop being irrigated. Discontinue use of VYDATE® L long enough to purge the system with fresh water and allow the VYDATE® L to remain in the root zone of the crop.

See crops on label for recommended treatment rates and additional use information.

POSTING OF AREAS TO BE TREATED

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, daycare centers, hospitals, in - patient clinics, nursing homes, or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to public such as golf courses or retail greenhouses.

Posting must conform to all the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in ENGLISH. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words "KEEP OUT", followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word "STOP". Below the symbol shall be the words "PESTICIDE IN IRRIGATION WATER".

Posting required for chemigation does not replace other posting and reentry requirements for farm worker safety.

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SPECIFIC USES—FRUITS

Where not otherwise specified, DuPont™ VYDATE® L should be applied in sufficient water to obtain uniform coverage.

Crop	Insect	Application Rate	Application Timing and Method	Last Application (days to harvest)	Further Use Information
Apples	Rosy Apple Aphid	4 to 8 pt/A	Apply by ground at pink (before bloom—no open petals) when aphids are present in significant numbers.	14	<ul style="list-style-type: none"> Do not apply at bloom or within 30 days after bloom, as fruit thinning may occur. Do not apply more than 8 pt (1 gal) VYDATE® L per acre per season. Do not make more than 4 applications per season to apples (total for insect control and thinning uses combined). Do not graze livestock in treated orchards. Do not apply in excess of 400 gal water or in less than 50 gal water per acre, except for spotted tentiform leafminer control in the state of Washington, where one aerial application may be made at the rate of 1 to 2 pts/a in 5 to 15 gallons of water per acre. Additional applications can be made with ground equipment.
	Apple Aphid	4 to 8 pt/A	Apply by ground when 50% of terminals are infested.		
	Spotted Tentiform Leafminers	2 to 4 pt/A	Make all applications using ground equipment, except in the State of Washington where one aerial application may be made. <i>To control 1st Brood Leaf Miner:</i> Apply at 1/2" green stage to early pink stage. Do not apply after the blossom clusters have separated <i>To control 2nd Brood Leaf Miner:</i> Apply when an average of two or more larvae per leaf are present in the sap-feeding stage. For best results, apply before the larvae enter the tissue-feeding stage. If necessary, repeat application 7 to 14 days after the first application.		
	European Red Mite and Two-Spotted Spider Mite	2 to 4 pt/A	Apply by ground when mite populations reach 2 to 4 mites per leaf. Repeat applications at 7- to 14-day intervals.		
	White Apple Leafhoppers	2 to 4 pt/A	Apply by ground when pests are present in significant numbers. Repeat applications at 10- to 14-day intervals.		
Apple Thinning (NJ, PA, VA, WV)		2 to 4 pt/A (1 to 2 pt/100 gallon dilute, not to exceed 4 pt/A)	Apple thinning applications should be made using ground equipment. Apply 1 to 2 full dilute sprays between 5 to 30 days after full bloom (petal fall / 5 mm to 20 mm fruit diameter). A spray oil or surfactant such as Tween 20, LI 700, Regulaid or their equivalent may be added to enhance the thinning effect. Tank mix combinations of VYDATE® L and "Ethrel", "Accel", or Naphthalene Acetic Acid (NAA) have successfully thinned several heavy setting and hard to thin varieties. Consult "Ethrel", "Accel" or Naphthalene Acetic Acid (NAA) labels for rates and use instructions. Lower rates of "Ethrel", "Accel" or NAA may be desirable when less thinning is needed.	N/A	<ul style="list-style-type: none"> Do not apply more than 8 pt (1 gal) VYDATE® L per acre per season. Do not graze livestock in treated orchards. Do not apply in excess of 400 gal. water or in less than 50 gal. water per acre. Factors such as tree age, variety, previous crop, pruning, bloom, high temperature, rainy and cloudy weather and degree of set favor excessive fruit thinning with this product. Rates may vary depending on variety and local orchard conditions. Do not make more than 4 applications per season to apples (total for insect control and thinning uses). VYDATE® L may cause increase in russet on those varieties prone to russet (i.e. golden delicious, stayman, etc.). Consult with your County Extension Service or other experts for advice on the proper use of VYDATE® L.
Bananas, Plantains (Puerto Rico only)	Nematodes (<i>Radopholus similis</i> , and species of <i>Pratylenchus</i> , <i>Meloidogyne</i> , <i>Roylienichulus</i> , <i>Helicotylenchus</i>), and Banana Corm Borer (<i>Cosmopolites sordidus</i>)	<i>Planting Treatment:</i> 5 to 10 mL undiluted VYDATE® L/corm (or "seed") in the planting hole. <i>Post-planting Treatment as Extension of Planting Treatment:</i> 5 to 10 mL undiluted VYDATE® L/corm.	Apply only with the specially designed VYDATE® L spotgun applicator with a coarse spray nozzle. Apply and cover the treated corm with soil. Two to three months after planting, repeat the application at the same rate. If the developing pseudostem is 1 ft tall or shorter, apply the pesticide directly over the top, wetting the leaves and leaf axils; if the pseudostem is higher, apply the pesticide to the soil in a semicircular pattern, directing the product as close as possible to the developing pseudostem. For high infestations, use a high rate and shorten the interval between applications. At 3- to 4-month intervals, reapply the product using the same application regimen as in the 2- to 3-month regimen When a sucker or "follower" has been selected for the production of the ratoon crop, apply the product to the selected sucker at the same rate and frequency.	1	<ul style="list-style-type: none"> VYDATE® L is most effective when ground applications are made at the beginning of the rainy season, or when the soil moisture is adequate. Before ground applications, remove weeds and leaf trash from the treatment area. Do not permit animals to graze or forage in treated areas. If applied to soil surface around pseudostem then incorporate product into soil by water or mechanical means. Do not apply more than 16 pt (2 gal) VYDATE® L per acre per year. Do not apply more than 8 applications per season.
Citrus	Citrus Rust Mite	1/4 to 1 pt/100 gal water; spray to runoff using up to 400 gal water/A Do not apply more than 4 pts product per acre.	Apply by ground when significant infestations are found. For light to moderate infestations, apply at 4- to 6-week intervals; for moderate to heavy infestations, apply at 2- to 3-week intervals as long as the infestation continues.	7	<ul style="list-style-type: none"> Do not make more than six applications per year. Do not apply more than 24 pt (3 gal) VYDATE® L per acre per year. Do not apply more than 8 pt/A (1 gal) in any 30 day period. Do not graze livestock in treated orchards. This product is toxic to bees and should not be applied when bees are in the crop area. Crops can be treated during bloom if applications are made between one hour before sunset and one hour after sunrise, or when the ambient temperature is below 55° F.
	Citrus Thrips	2 to 4 pt/A; to give uniform coverage, use from 100 to 500 gal water/A by ground or 10 to 20 gals water/A by air	Apply by ground or air in early spring before bloom when new growth is 3" to 4" long. Applications are recommended at petal fall (to prevent fruit scarring) and during midsummer (to protect new growth on young trees).		

continued on next page

Crop	Insect	Application Rate	Application Timing and Method	Last Application (days to harvest)	Further Use Information
Citrus (continued)	(CA) Citrus Nematode suppression	2 to 8 pt/A by drip chemigation; use 2 to 4 pt/A at 14 day intervals or 4 to 8 pt/A at 30 day intervals.	Initiate treatment in the spring when soil temperatures at 12 inches depth have reached 50 F. Continue treatments until soil temperature drops below 50 F. Treatments in April, May & June and continued through August, September and October have usually given good response. Adjust flow from injection equipment to use contents over a period of not less than 1 hour.	7	<ul style="list-style-type: none"> For drip and microsprinkler applications, best results occur when DuPont™ VYDATE® L is introduced into the irrigation water during the last third of the irrigation cycle. Irrigation systems should run a sufficient amount of time prior to VYDATE® L injection to have all emitters functioning properly. Following injection, the system should be flushed for a minimum of 10 minutes and a maximum of 20 minutes after the last emitter contains VYDATE® L.
	(FL) Citrus & Sting Nematode suppression	4 to 8 pts by microsprinkler chemigation per grove acre; use 30-45 day intervals. Make 3 to 6 applications per year.	Initiate treatments in early spring and/or early fall for optimal response.		
Nonbearing Fruit* Apple, Cherry, Citrus, Peach, Pear	Mites, Insects (including Aphids, Leafhoppers, Leaf-miners, Thrips)	<i>Foliar Treatment:</i> 2 to 4 pt/A in 100 gal water/A or 4 to 8 pt/A in a maximum of 600 gal water/A	Apply by air or ground when insect infestations are at an economic level.	—	<ul style="list-style-type: none"> Do not exceed 4 pints per acre per application when applied by air. Since varieties are numerous, continually change, and may respond differently to VYDATE® L, test the product on a small scale before proceeding to large-scale application. Varietal response may also vary if VYDATE® L is mixed with other products Do not apply more than 32 pt (4 gal) VYDATE® L per acre per season. Do not make foliar applications to plants under water stress or to plants not actively growing. Include a spreader sticker. Do not make more than 8 applications per season. Use only on commercial plantings; do not use on home plantings.
	Nematodes (including Root Knot (except Javanese), Sting Lesion, and Burrowing Nematodes)	<i>Preplant Soil Incorporated Treatment:</i> 2 gal/A in at least 20 gal water/A If the preplant soil incorporated treatment is applied as a band treatment, use proportionately less material.	Apply by ground within 24 hr before transplanting and thoroughly incorporate to a depth of 4 to 8 inches immediately after application.		
		<i>Foliar Treatment Alone or as Supplement to Earlier Soil Treatment:</i> 2 to 4 pt/100 gal water applied as a diluted spray; do not exceed 8 pt/A	Apply by ground four times on a 2- to 3-week schedule. Apply the first spray at first full leaf or when plant is in active growth phase.		
* Non-bearing trees that will not bear fruit within 12 months after application.					
Pears	European Red Mite, McDaniel Mite, Two-spotted Spider Mite, Pear Rust Mite	6 to 8 pt/A in 100 to 600 gal water/A; for best results, use a dilute application.	Apply when mites first appear. For light infestations, use a low rate; for heavy infestations, use a high rate. Use ground application only.	14	<ul style="list-style-type: none"> NOT REGISTERED FOR USE IN CALIFORNIA. Do not apply at bloom or within 30 days after full bloom, as fruit thinning may occur. This product has been tested on Bartlett and d'Anjou varieties of pears without russetting. Its use on other varieties should be on a small scale until the possibility of russetting has been evaluated. Do not graze livestock in treated orchards. Do not apply more than 8 pt (1 gal) VYDATE® L per acre per season. Do not make more than 1 application per season.
Pineapple	Reniform and Root Knot Nematodes	<i>Planting Treatment:</i> 1/2 to 1 gal/A by drip chemigation or 1 gal/A as a broadcast ground application	Apply within 1 week after planting. Soil broadcast treatments must be incorporated into soil by water or mechanical means.	30	<ul style="list-style-type: none"> NOT REGISTERED FOR USE IN CALIFORNIA. Do not apply more than 32 pt (4 gal) VYDATE® L per acre per year. Do not make more than 8 applications per season. Do not graze treated fields within 30 days of application. Supplemental foliar and drip applications are most effective if crops were treated at planting with VYDATE® L or soil was treated before planting with a standard fumigant. Best results occur under optimum soil moisture conditions.
		<i>Foliar (Ground) Treatment as Extension of Planting Treatment:</i> 1/2 to 1 gal/A in sufficient water	Apply at 2- to 4-week intervals. Begin applications when pineapple roots begin to grow following planting.		
		<i>Drip Chemigation:</i> 1/4 to 1 gal/A	Apply at 2-, 4-, or 8-week intervals. Begin applications when pineapple roots begin to grow following planting.		

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SPECIFIC USES—VEGETABLES

Where not otherwise specified, DuPont™ VYDATE® L should be applied in sufficient water to obtain uniform coverage.

Crop	Insect	Application Rate	Application Timing and Method	Last Application (days to harvest)	Further Use Information
Carrots	Root Knot (Except Javanese), Lesion, Sting, Spiral and Stunt Nematodes	<i>Pre/post plant Soil Treatment:</i> 2 gal/A in at least 20 gal water/A as a soil broadcast treatment	Apply within 1 week of planting if applied preplant or before emergence if applied post plant. Thoroughly incorporate into the soil.	14	<ul style="list-style-type: none"> • NOT REGISTERED FOR USE IN CALIFORNIA. • Do not apply more than 32 pt (4 gal) VYDATE® L per acre per season. • Do not make more than 8 applications per season.
		<i>Chemigation:</i> 1 gal/A in sufficient water to ensure uniform coverage	Apply before crop emergence.		
		<i>In-Furrow Treatment:</i> 1 to 2 gal/A in at least 20 gal water/A	Apply in the seed furrow during planting.		
	Carrot Weevil	2 to 4 pt/A as a soil directed spray in 20 gal water/A	Apply up to three times at 2- to 3-week intervals beginning when insects appear in damaging numbers. Soil applications must be incorporated into soil by water or mechanical means.		
Celery (AZ, CA, FL)	Serpentine Leafminers (except <i>Liriomyza trifolii</i>)	2 to 4 pt/A as a foliar spray; use at least 10 gal water/A for aerial application	Apply by ground or air when insects first appear. Repeat at 5- to 7- day intervals. Use a low rate for light infestations; an intermediate rate for heavy infestations; and a high rate for severe infestations.	21	<ul style="list-style-type: none"> • Do not apply more than 24 pt (3 gal) VYDATE® L per acre per season. • Do not make more than 8 applications per season.
		<i>Foliar Ground Treatment:</i> 2-4 pints/A as a 1-2 inch band directly over or near base of celery plants.			
	Root Knot Nematode (<i>Meloidogyne Hapla</i>) and Pin Nematode	<i>Transplant Treatment:</i> 1/2 to 1 gal/A in at least 100 gal water/A	Apply by ground immediately after transplanting celery seedlings in the field.		
		<i>Foliar Treatment:</i> 1 gal/A in at least 100 gal water/A as a directed spray	Apply by ground first spray 3 weeks after transplanting; apply second spray 3 weeks after first treatment.		
		<i>Preplant Row Soil Treatment:</i> 2 gal/A in 20 gal water/A applied in an 8" to 16" wide band <i>Foliar Treatment as Extension of Preplant Treatment:</i> 4 pt/A as a directed spray in at least 20 gal water/A	Thoroughly incorporate to a depth of 4" in soil. Apply by ground two sprays 2 to 3 weeks apart beginning 2 to 3 weeks after transplanting.		
	Carrot Weevil	<i>Foliar Treatment Alone or as Extension of Preplant Nematode Treatment:</i> 4 pt/A as a soil directed spray in at least 20 gal water/A	Apply by ground two sprays 2 to 3 weeks apart beginning 2 to 3 weeks after transplanting. Incorporate into soil using water or mechanical means.		<ul style="list-style-type: none"> • Soil applications must be incorporated into soil by water or mechanical means.
(CA)	Root Knot and Stubby Root Nematodes	<i>Band Treatment or Soil Injection:</i> 4 pt/A as a 1-2 inch band directly over plant line(s) or near base of transplants.	Apply by ground after seeding or transplanting. Apply as a band spray or by shank injection of 1 to 2 inches depth at 21 to 30 day intervals after the initial treatment.		<ul style="list-style-type: none"> • If furrow irrigation is to be used following application, the VYDATE® L should be applied as two bands of 1 to 2 inches width each directed to the bed shoulders. Bands should be placed a few inches below the anticipated water line when furrows are full. • Each application of VYDATE® L must be followed by irrigation (sprinkler or furrow) or soil incorporation by mechanical means. • Do not apply narrow band concentrated spray directly over young celery plants unless treatment is followed by sprinkler irrigation.
Cucumber, Cantaloupe, Honeydew Melon, Watermelon, Squash, Pumpkin	Root Knot (Except Javanese), Lesion, Ring, Sting, and Stunt Nematodes.	<i>Preplant and Planting Soil Treatment:</i> 1 to 2 gal/A as a broadcast; for band treatment, use proportionately less	Following application, but before planting, thoroughly incorporate 2" to 4" into soil. Use the low rate for light infestations.	1	<ul style="list-style-type: none"> • Do not apply more than 24 pt (3 gal) per acre per season. • Do not make more than 8 applications per season. • Under very high nematode populations, other effective soil treatments at or before planting may be necessary. These can be followed by foliar sprays, drip irrigation or soil injection of VYDATE® L to extend or maintain control. (See Supplemental Control section). • Drip: For best results, introduce the VYDATE® L into the irrigation water during the middle one-third of the irrigation cycle. Adjust the flow from the injection equipment to apply the VYDATE® L over a period of 30 minutes to one hour. Allow at least 24 hours between the VYDATE® L drip application and the next irrigation cycle. • Soil injection: Application must be made to moist soil and must be followed as soon as possible with either sprinkler or furrow irrigation water to activate the VYDATE® L.
		<i>Foliar Treatment Alone or as Extension to Preplant and Planting Treatment:</i> 2 to 4 pt/A	Apply by air or ground with the first spray 2 to 4 weeks after planting; apply second spray 2 to 3 weeks after first spray. Use the low rate for light infestations. Best results follow usage of VYDATE® L as a soil treatment as described above.		
	<i>Liriomyza spp.</i> Leafminers, Aphids, Thrips	<i>Foliar Treatment:</i> 2 to 4 pt/A	Where Leaf Miner infestations occur annually, initiate air or ground treatment schedule 2 to 4 weeks after planting and repeat weekly. Apply when insects first appear. Repeat weekly. Apply a low rate for light infestations; apply a high rate for severe infestations.		
East of Rockies	Root Knot (Except Javanese) Nematode - supplemental control	<i>Supplemental Control - Drip Chemigation and Soil Injection Systems:</i> 2 to 4 pints/A of plant bed *Refer to the rate table at the end of the vegetable section.	For supplemental control of Root Knot Nematodes (<i>Meloidogyne incognita</i>) following a labeled preplant application of a soil fumigant, such as, "Telone" II, "Telone" C-17 or "Telone" C-35, or a fumigant product containing methyl bromide, metam sodium or metam potassium. Treatments should be initiated either at the time of transplanting or within 14 days of transplanting. Sequential applications should be made on a 10 to 14 day interval.		

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Crop	Insect	Application Rate	Application Timing and Method	Last Application (days to harvest)	Further Use Information
Cucumber, Cantaloupe, Honeydew Melon, Watermelon, Squash, Pumpkin	East of the Rockies <i>Liriomyza</i> spp. Leafminers (suppression)	Drip Chemigation and Soil Injection Systems: 2 to 4 pints/A of plant bed *Refer to the rate table at the end of the vegetable section.	Treatments should be initiated either at the time of transplanting or within 14 days following transplanting. Sequential applications should be made at 10 to 14 day intervals.	1	<ul style="list-style-type: none"> Do not make more than 8 applications per season. Do not apply more than 24 pt (3 gal) per acre per season. See previous page for further use information on nematodes, drip and soil injection applications.
	West of the Rockies	Root Knot (Except Javanese), Lesion, Ring, Stung and Stunt Nematodes	Supplemental Control - Drip Chemigation Systems and Soil Injection Systems: 2 to 4 pints/A of plant bed. *Refer to the rate table at the end of the vegetable section.	Treatments should be initiated either at the time of seedling emergence or transplanting, or within 14 days of seedling emergence or transplanting. Sequential applications should be made on a 14 to 21 day interval.	
Eggplant	Aphids, Colorado Potato Beetle, Leafminers, Mites	Foliar Treatment: 2 to 4 pt/A	Apply by ground equipment when insects first appear. Repeat application at 1- to 3-week intervals.	1	<ul style="list-style-type: none"> Do not apply more than 24 pt (3 gal) DuPontTM VYDATE[®] L per acre per season. Do not make more than 8 applications per season. NOT REGISTERED IN CALIFORNIA FOR USE ON NEMATODES. Under very high nematode populations, other effective soil treatments at or before planting may be necessary. These can be followed by foliar sprays, drip irrigation or soil injection of VYDATE[®] L to extend or maintain control. (See Supplemental Control section). Drip: For best results, introduce the VYDATE[®] L into the irrigation water during the middle one-third of the irrigation cycle. Adjust the flow from the injection equipment to apply the VYDATE[®] L over a period of 30 minutes to one hour. Allow at least 24 hours between the VYDATE[®] L drip application and the next irrigation cycle. Soil injection: Application must be made to moist soil and must be followed as soon as possible with either sprinkler or furrow irrigation water to activate the VYDATE[®] L.
	Nematodes	Soil Treatment: 1 gal/A as a band treatment plus Foliar Treatment: 4 pt/A as a foliar spray	Apply 2 to 3 weeks after transplanting. Repeat application 4 weeks after first application. Soil applications must be incorporated into soil by water or by mechanical means. Apply twice by ground equipment at 1- to 2-week intervals 2 to 4 weeks after the second soil treatments.	7	
	Root Knot (Except Javanese) Nematode - supplemental control	Supplemental Control - Drip Chemigation and Soil Injection Systems: 2 to 4 pt/A of plant bed *Refer to the rate table at the end of the vegetable section.	For supplemental control of Root Knot Nematodes (<i>Meloidogyne incognita</i>) following a labeled preplant application of a soil fumigant, such as, "Telone" II, "Telone" C-17 or "Telone" C-35, or fumigant product containing methyl bromide, metam sodium or metam potassium. Treatments should be initiated either at the time of transplanting or within 14 days of transplanting. Sequential applications should be made on a 10 to 14 day interval.		
Garlic (OR & CA - Modoc & Siskiyou counties)	Onion Thrips, Western Flower Thrips	2 to 4 pt/A (min 5 gal water/A by air)	Apply by ground, chemigation or air before populations start to build when there are 1 to 3 thrips per plant. Repeat applications on a 7-10 day schedule may be needed. VYDATE [®] L may not provide adequate control of higher populations. Add a wetting agent to improve coverage.	14	<ul style="list-style-type: none"> Do not apply more than 18 pts (2 1/4 gal) VYDATE[®] L per acre per season. Do not make more than 8 applications per season. May not be effective on infested seed or bulb pieces used for planting. Soil applications must be incorporated into soil by water or mechanical means.
	(CA)	Stubby Root, Stem, and Bulb Nematodes	4 to 8 pt/A as an in-furrow spray Postemergence: 4 to 8 pt/A in 20 to 40 gal water/A as a 1 - 2 inch band placed on soil surface at base of plants. or 4 to 8 pt/A as a soil shank injection application or 4 to 8 pt/A via chemigation in pressurized sprinkler systems.		
	(OR)	Stubby Root Nematode (suppression)	At Planting: 3/4 to 1 gal/A as a ground in-furrow drench in 100 to 150 gal water /A or 1 1/2 to 2 gal /A as a ground in-furrow band spray in 20 to 50 gal water/A. Postemergence: broadcast or band by ground at 1 gal /A in 20 to 50 gals. water /A or broadcast by air at 4 pts/A. or 1 gal/A via chemigation in pressurized sprinkler systems.		
Ginger Root (HI)	Root Knot, Stung, Lesion and Burrowing Nematodes.	Preplant soil treatment: apply 1 to 2 gal/A (broadcast); for in-furrow band treatment use proportionately less based on treated area. Postplant treatment: apply 2 to 4 pts/A by ground in a band application along the sides of the ginger row or as a foliar application to the ginger plants.	Following application incorporate 2 to 4 inches into the soil before planting. Apply at monthly or every other month intervals.	30	<ul style="list-style-type: none"> Do not apply more than 5 gals. VYDATE[®] L per acre per season. Do not apply by chemigation. Do not make more than 8 applications of VYDATE[®] L per acre per crop.

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Crop	Insect	Application Rate	Application Timing and Method	Last Application (days to harvest)	Further Use Information
Onions [dry bulbs only] (MI, NM, TX) (CA - Modoc & Siskiyou counties, OR, ID, WA.) (MI, TX) (ID, OR, WA) (CA)	Onion Thrips, Western Flower Thrips	1 to 2 pt/A in at least 5 gal water/A	Apply by ground or air before population start to build when there are 1 to 3 thrips per plant. Repeat applications at 5 - 7-day intervals. For light infestations, use a low rate, increasing the rate as the infestation increases.	14	<ul style="list-style-type: none"> Do not harvest tops of treated onions. Do not use on green onions.
	Onion Thrips, Western Flower Thrips	2 to 4 pt/A (min 5 gal water/A by air)	Apply by ground, chemigation or air before populations start to build when there are 1 to 3 thrips per plant. Repeat applications on a 7-10 day schedule may be needed. VYDATE® L may not provide adequate control of higher populations. Add a wetting agent to improve coverage.		<ul style="list-style-type: none"> Do not apply more than 18 pts (2 1/4 gal) DuPont™ VYDATE® L per acre per season.
	Stubby Root, Stem, and Bulb Nematodes	3/4 to 1 gal/A as an in-furrow drench in 100 to 150 gal water/A or 1-1/2 to 2 gal/A as an in-furrow band spray in 20 to 50 gal water/A or 1/2 to 1 gal/A as an in-furrow spray followed by 1 to 2 postemergence band treatments at 1/2 to 1 gal/A in a minimum of 20 gal. water per acre.	<p>Apply by ground at planting.</p> <p>Apply by ground at planting.</p> <p>Apply by ground at planting.</p> <p>Postemergence Apply by ground at flag leaf and 14 to 21 days later. Water is required to move VYDATE® L into the root zone. For best results, the postemergence applications should be followed by overhead irrigation or rainfall (1/4 to 1 acre inch) as soon as possible after application.</p>		<ul style="list-style-type: none"> Do not make more than 8 applications per season. May not be effective on infested seed or bulb pieces used for planting. Soil applications must be incorporated into soil by water or mechanical means.
	Stubby Root Nematode (suppression)	At Planting: 3/4 to 1 gal/A as a ground in-furrow drench in 100 to 150 gal water /A or 1 1/2 to 2 gal /A as a ground in-furrow band spray in 20 to 50 gal water/A. Postemergence: ground broadcast or band in the crop row at 1 gal /A in 20 to 50 gals water/A or broadcast by air at 4 pts/A, or 1 gal/A by chemigation in pressurized sprinkler systems.	<p>VYDATE® L ground or air applications should be incorporated with 1/2 to 1 inch of moisture as soon as possible after application.</p> <p>Crop response is usually better from application made to seedling plants (flag leaf to 2 to 3 true leaf).</p> <p>VYDATE® L can be applied in sequential treatments as long as the total rate per acre per crop does not exceed 2 1/4 gallons</p> <p>Sprinkler Chemigation: VYDATE® L may be applied by center pivot, linear move, wheel-line or solid set sprinkler systems. Use a minimum of 0.75 acre inch of water to thoroughly incorporate the VYDATE® L into the crop root zone. For solid set or wheel line systems, inject the appropriate amount of VYDATE® L during the middle third of the irrigation cycle.</p>		
Stubby Root, Stem, and Bulb Nematodes	4 to 8 pt/A as an in-furrow spray Postemergence: 4 to 8 pt/A in 20 to 40 gal water/A as a 1 - 2 inch band placed on soil surface at base of plants. or 4 to 8 pt/A as a soil shank injection application or 4 to 8 pt/A via chemigation in pressurized sprinkler systems.	<p>Apply by ground at planting.</p> <p>Postemergence : Make 2 to 3 applications by ground or chemigation at 14 to 21 day intervals. VYDATE® L can be applied in sequential treatments as long as the total rate per acre does not exceed 2 1/4 gallons. For solid set and wheel-line systems, inject the appropriate amount of VYDATE® L in the middle of the irrigation cycle and adjust metering rate so all the VYDATE® L is applied during the middle third of the cycle. Shank: Application must be made to moist soil and must be followed as soon as possible with either sprinkler or furrow irrigation water to activate VYDATE® L.</p>			
Peppers, (Bell & Non-Bell)	Root Knot (except Javanese), Sting, Ring, Stubby Root and Stunt Nematodes	Transplant Water Treatment: 2 pt/A in at least 200 gal of transplant water/A Drip Chemigation as a Supplement to Transplant Treatment: 2 to 4 pts /A in 40 to 200 gal of water /A.* Foliar Treatment as Supplement to Transplant Treatment: 2 to 4 pt/A *Refer to the rate table at the end of the vegetable section.	<p>Apply by ground during transplanting operation.</p> <p>When nematode populations are low to moderate, begin with a transplant water treatment and supplement with drip irrigation or foliar sprays by ground or air. Apply first drip irrigation or foliar spray 14 days after transplant. Repeat at 1- to 2- week intervals to control nematodes and insects. If nematodes are not present, drip irrigation or foliar sprays may be used to control insects.</p>	7	<ul style="list-style-type: none"> NOT REGISTERED FOR USE IN CALIFORNIA ON NEMATODES. Do not apply as a transplant water treatment during periods of slow plant growth, such as when temperatures fall below 45°F, or crop injury may result. Do not apply more than 24 pt (3 gal) VYDATE® L per acre per season. Do not make more than 8 applications per season. Under very high nematode populations, other effective soil treatments at or before planting may be necessary. These can be followed by foliar sprays, drip chemigation or soil injection of VYDATE® L to extend or maintain control. (See Supplemental Control section). Drip: For best results, introduce the VYDATE® L into the irrigation water during the middle one-third of the irrigation cycle. Adjust the flow from the injection equipment to apply the VYDATE® L over a period of 30 minutes to one hour. Allow at least 24 hours between the VYDATE® L drip application and the next irrigation cycle. Soil injection: Application must be made to moist soil and must be followed as soon as possible with either sprinkler or furrow irrigation water to activate the VYDATE® L.
	Green Peach Aphid, <i>Liriomyza</i> spp. Leafminer (suppression), Pepper Weevil** and Thrips	Foliar Treatment: 2 to 4 pt/A Drip Chemigation or Soil Injection Systems: 2 to 4 pt/A of plant bed. *Refer to the rate table at the end of the vegetable section.	<p>Apply by ground or air when insects first appear. Repeat at 1- to 2-week intervals. Or apply by drip chemigation or soil injection systems. Treatments should start immediately after transplanting or within 14 days after transplanting. Repeat at 1 to 2 week intervals. Use a low rate for light infestations; use the highest recommended rates at shorter intervals for severe infestations. ** - use only foliar air or ground applications for control of pepper weevil.</p>		
	Root Knot (except Javanese) Nematode - supplemental control	Supplemental Control - Drip Chemigation and Soil Injection Systems: 2 to 4 pints/A of plant bed *Refer to the rate table at the end of the vegetable section.	<p>For supplemental control of Root Knot Nematodes (<i>Meloidogyne incognita</i>) following a labeled preplant application of a soil fumigant such as, "Telone" II, "Telone" C-17 or "Telone" C-35, or fumigant product containing methyl bromide, metam sodium or metam potassium. Treatments should be initiated either at the time of transplanting or within 14 days of transplanting. Sequential applications should be made on a 10 to 14 day interval.</p>		

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Crop	Insect	Application Rate	Application Timing and Method	Last Application (days to harvest)	Further Use Information
Potatoes Northeast & Mid-Atlantic States (CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA & VT) U.S. (Except Northeast & Mid Atlantic States)	Aphids, Colorado Potato Beetle, Flea beetle, Potato Leafhopper, & Tarnished Plant Bug	Foliar Treatment: 2 to 4 pt/A, 1 to 4 pt/A can be used for Colorado Potato beetle; use at least 4 gal water/A for aerial application.	Apply by ground or air when insects first appear. Repeat at 5- to 7- day intervals to maintain control. Use a low rate for light infestations; use a high rate for severe infestations.	7	Do not apply more than 24 pts (3 gal) DuPont™ VYDATE® L per acre per season. Do not make more than 8 applications of VYDATE® L per crop.
	Root Knot (except Javanese), Sting, Lesion & Ring Nematodes (suppression), Aphids, Colorado Potato Beetle, Flea Beetle, Potato Leafhopper, and Tarnished Plant Bug	Preplant In-Furrow Soil Treatment: 1 to 2 gal/A in at least 20 gal water /A. Foliar Treatment: 2 to 4 pt/A; 1 to 4 pt/A can be used for Colorado Potato Beetle. Use at least 4 gal water/A for aerial application.	Apply by ground to seed furrow at planting. Begin ground, chemigation or air foliar applications only after it has been determined by scouting that the early season control has diminished. Repeat at 5- to 7- day intervals to maintain control. Use a low rate for light infestations; use a high rate for severe infestations.		Do not apply more than 36 pt (4 1/2 gal) VYDATE® L per acre per season. Do not make more than 8 applications of VYDATE® L per acre per crop. Nematodes: Consult your local DuPont representative to receive the most current information on nematodes in potatoes in your area.
Sweet Potatoes	Root Knot (Except Javanese) and Spiral Nematodes	Preplant Soil Treatment: 2 gal/A in at least 20 gal water/A as a soil broadcast treatment; for band treatments, use proportionately less. or In-Furrow Soil Treatment: 1 to 2 gal/A in at least 200 gal water/A in the transplant water	Apply within one week of planting. Thoroughly incorporate 4" to 6" into the soil. Apply during planting of slips.	—	• NOT REGISTERED FOR USE IN CALIFORNIA. • Do not apply as a transplant water treatment during periods of slow plant growth, such as when temperatures fall below 45°F, or crop injury may result. • Do not apply more than 24 pt (3 gal) VYDATE® L per acre per season.
Tomatoes	Root Knot (Except Javanese), Sting, Stubby Root, Stunt, and Reniform Nematodes	Soil Injection (CA only): 3 to 5 pt/A	Using an injection shank during the planting operation, apply 3 pt/A immediately adjacent to the plant row. A second application (side dress) should be made at 5 pt/A 3 to 4 weeks after the initial application. A third application (side dress) may be made at 4 pt/A 3 to 4 weeks after the second application.	3	• Under very high nematode populations, other effective soil treatments at or before planting may be necessary. These can be followed by foliar sprays or drip irrigation of DuPont™ VYDATE® L to extend and maintain control. Supplemental applications of VYDATE® L should begin when nematode populations begin to recover. This will depend on the longevity of protection offered by the treatment applied to the soil. • Drip: For best results, introduce the VYDATE® L into the irrigation water during the middle one- third of the irrigation cycle. Adjust flow from injection equipment to use contents over a period of 30 minutes to 1 hour. Allow at least 24 hours between the VYDATE® L drip application and the next irrigation cycle. • Soil Injection: Application must be made to moist soil and must be followed as soon as possible with either sprinkler or furrow irrigation water to activate the VYDATE® L. • Do not apply more than 32 pt (4 gal) VYDATE® L per acre per season. • Do not apply more than 8 applications per season.
		Drip chemigation: 2 to 8 pt/A.*	Apply at first irrigation of the field. Use 2 to 4 pt/A every 1 to 2 weeks early in the crop cycle when plants are small. As growth continues and plant roots and tops expand, increase dosage progressively to 8 pt/A at 1 to 2 week intervals.		
		Foliar: 2 to 4 pt/A . Minimum of 10 gal water /A by air *Refer to the rate table at the end of the vegetable section.	Apply by air or ground when plants become established. Repeat at 1 to 2 - week intervals.		
	Root Knot (except Javanese) Nematode - supplemental control	Supplemental Control - Drip Chemigation and Soil Injection Systems: 2 to 4 pints/A of plant bed *Refer to the rate table at the end of the vegetable section.	For supplemental control of Root Knot Nematodes (<i>Meloidogyne incognita</i>) following a labeled preplant application of a soil fumigant, such as "Telone" II, "Telone" C-17 or "Telone" C-35, or fumigant product containing methyl bromide, metam sodium or metam potassium. Treatments should be initiated either at the time of transplanting or within 14 days of transplanting. Sequential applications should be made on a 10 to 14 day interval.		
	Aphids, Colorado Potato Beetle, <i>Liriomyza spp.</i> Leafminers (suppression), silverleaf whitefly (suppression)	2 to 4 pt/A as a foliar spray; use at least 4 gal water/A for aerial applications	Apply by ground or air when insects first appear. Repeat at 5- to 7-day intervals. Apply a low rate for light infestation; a moderate rate for heavier infestation; and the highest recommended rate for severe infestations.		
East of Rockies	<i>Liriomyza spp.</i> Leafminers (suppression)	Drip Chemigation and Soil Injection Systems: 2 to 4 pints/A of plant bed *Refer to the rate table at the end of the vegetable section.	Treatments should be initiated either at the time of transplanting or within 14 days following transplanting. Sequential applications should be made at 10 to 14 day intervals.		
Yams (Dioscorea)— Puerto Rico only	Nematodes	Foliar Treatment 2 pt/A in at least 25 gal water/A	Foliar ground applications of VYDATE® L are to be used only following soil fumigation, or following preplant or at planting soil application of other contact nematicides. Apply when adequate foliage is present to absorb the product (approximately 2 months after planting). Apply at 2-week intervals.	60	• Do not apply more than 16 pts (2 gal) VYDATE® L per acre per season. • Do not apply more than 8 applications per season.

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Rate Table for Drip Irrigation Rates of DuPont™ VYDATE® L to be Applied per 1000 Row Feet in Cucumber, Canteloupe, Honeydew Melon, Watermelon, Pumpkin, Squash, Eggplant, Peppers, and Tomato

Bed Spacing	Linear Ft. of Bed to Equal One Acre	Vydate(r) L 2 pts/acre Rate/1000 Row feet	Vydate(r) L 4 pts/acre Rate/1000 Row Feet
36 inches	14,520 ft.	2.2 fl. oz.	4.4 fl. oz.
48 inches	10,890 ft.	2.9 fl. oz.	5.9 fl. oz.
60 inches	8,712 ft.	3.7 fl. oz.	7.4 fl. oz.
72 inches	7,260 ft.	4.4 fl. oz.	8.8 fl. oz.

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SPECIFIC USES—FIELD CROPS					
Where not otherwise specified, DuPont™ VYDATE® L should be applied in sufficient water to obtain uniform coverage.					
Crop	Insect	Application Rate	Application Timing and Method	Last Application (days to harvest)	Further Use Information
Cotton All states, except CA and AZ	Cotton Leafperforator	In CA/AZ apply 1 to 4 pt/A in sufficient water. In all other states, apply 1 to 2 pt/A in sufficient water.	Apply by ground or air when damaging populations begin to build. Continue on a 6- to 8-day schedule.	14	<ul style="list-style-type: none"> Do not apply more than 12 pts (1.5 gal) VYDATE® L per acre per season. Do not make more than 8 applications per season. Do not graze or feed treated cotton to livestock. Applications by handwand or soil broadcast are prohibited.
	Boll Weevil, Cotton Fleahopper, and Tarnished Plant Bug	1/2 to 2 pt/A in sufficient water	Apply by ground or air when damaging populations appear.		
	Lance, Reniform and Root Knot Nematodes (suppression)	1 to 2 pt/A in sufficient water	Apply by ground or air either the 2 pt /A rate when cotton is in the 1st to 7th true leaf stage. Or apply 1 pt/A at the 2nd to 5th leaf stage and make another 1 pt/A application 14 days later.		
Peppermint and Spearmint (ID, MI, MT, OR, WA, WI)	Root Lesion, Mint Nematode	1/2 to 1 gal/A by ground or chemigation sprinkler systems. For aerial applications, use 1/2 gal/A	Apply as mint breaks winter dormancy and begins active root growth. A second application may be made 3 - 4 weeks later or to regrowth that occurs in the fall. Use lower rate on coarse textured soils and muck soils to control mint and root lesion nematode. Use higher rate on fine textured soils to control mint nematode. Applications to heavy soils to control root lesion nematodes may not result in increased yields.	21	<ul style="list-style-type: none"> Do not apply more than 16 pt (2 gal) VYDATE® L per acre per season. Do not make more than 2 applications per season. VYDATE® L ground or air applications should be incorporated with 1/2 to 1 inch of moisture as soon as possible after application. <i>Sprinkler chemigation application:</i> VYDATE® L may be applied by center pivot, linear move, wheel-line or solid set sprinkler irrigation systems. Use a minimum of 0.75 acre inch of water to thoroughly incorporate the VYDATE® L into the crop root zone. For solid set and wheel-line systems, inject the appropriate amount of VYDATE® L during the middle of the irrigation cycle and adjust the metering rate so that all the VYDATE® L is applied during the middle third of the irrigation cycle.
Peanuts	Root Knot (Except Javanese), Sting, Ring, and Lesion Nematodes, and Thrips	<i>Foliar Ground or Aerial Treatment as Supplement to Preplant or At-Planting Soil Treatment:</i> 2 pt/A in a minimum of 8 GPA of water by ground or 5 GPA of water by air	Foliar applications of VYDATE® L are to be used only following soil fumigation, or following preplant or at planting soil application of other contact nematocides. Apply ground application as a band or broadcast spray. Aerial applications via a broadcast spray. Make the first application 14 to 28 days after emergence. Make the second application 14 days later. For best results, concentrate the spray on the row using three cone-type nozzles positioned over and to each side of the row. Thorough coverage is important.	—	<ul style="list-style-type: none"> NOT REGISTERED FOR USE IN CALIFORNIA. Do not apply more than 20 pt (2-1/2 gal) VYDATE® L per acre per season. Do not make more than 8 applications per season.
Tobacco	Root Knot (except Javanese) and Lesion Nematodes, and Flea Beetles	<i>Soil Treatment:</i> <i>Row Treatment:</i> 1 gal in an 18" to 24" band in at least 20 gal water/A (12,000 row feet of tobacco)	Apply by ground. Thoroughly incorporate 4" to 6" into the soil. Use only treated soil for the beds. Do not transplant tobacco for 48 hours after soil treatment.	—	Do not apply more than 8 pt (1 gal) VYDATE® L per acre per season.
		<i>Broadcast and Bed Treatment:</i> 1 gal/A in at least 40 gal water/A			

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not subject to temperatures below 32 degrees F. Store product in original container only. Not for use or storage in or around the home.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: For Metal Containers (non aerosol): Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **For Plastic Containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For Container Refilling and Disposal (For Containers up to 250 gal): This is a refillable container. Reseal and return the container clean (outside only) and empty to the place of business from which the DuPont™ VYDATE® L was purchased for either refilling or disposal.

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