

HOPS - DISEASE SUPPRESSION

General Information

PRODUCT INFORMATION

VELUM PRIME is a broad-spectrum fungicide and nematicide for use as a soil treatment for suppression of certain crop diseases and suppression of plant pathogenic nematodes.

LABELED USES

Soil uses: Brassica (cole) leafy vegetables (group 5); Citrus (group 10-10); Cucurbits (group 9); Fruiting Vegetables; Hops; Pome fruit (group 11-10); Potato; Stone Fruits (group 12-12); Strawberry and other low-growing berries, except cranberry (subgroup 13-07G); Sweet Potato.

RESISTANCE MANAGEMENT

The active ingredient in VELUM PRIME belongs to the pyridinyl-ethyl-benzamides (Group 7). To maintain long-term effectiveness of this fungicide, follow the specific resistance management guidance listed at the bottom of each crop label. The following practices may delay the development of fungicide resistance.

1. Start spray programs early: Spray programs that begin before pathogens attack keep fungal populations low and reduce the likelihood of resistance. Consult your local extension specialist, certified crop advisor and/or manufacturer representative for recommendations on when to begin spray programs.
2. Alternate products: Use spray programs that include alternation of products from different fungicide groups. Group numbers are listed in a box at the top right of product labels.
3. Use at least the minimum-labeled rate and do not extend spray intervals beyond label specifications: Use of rates below the minimum-labeled rate can shorten the useful life of a fungicide. Furthermore, stretching application intervals too long may leave a crop unprotected, allowing the pathogen population to multiply, and increasing the likelihood for resistance to develop.
4. IPM: Applications of fungicides should be integrated into an overall disease and pest management program. Cultural practices known to reduce disease

development should be followed. Consult your local extension specialist, certified crop advisor and/or manufacturer representative for additional IPM strategies established for your area. This product may be used in Agricultural Extension advisory (disease forecasting or risk assessment) programs, which recommend application timing based on environmental factors favorable for disease development.

APPLICATION INFORMATION

Use sufficient water volume to provide thorough and uniform coverage to obtain the most effective disease control. Do not make applications when conditions favor drift. Avoid spraying when windy, high temperature, drought, dusty, low relative humidity, or temperature inversion conditions exist.

In-furrow at-plant applications

Where permitted by crop specific use directions apply in-furrow during planting operations. Direct applications into the open furrow and cover with soil.

Chemigation Application

Apply this product only through center pivot, motorized-lateral move, traveling gun, solid set or portable (wheel move, side roll, end tow, or hand move) and drip irrigation systems. 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 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 responsible person, shall shut the system down and make necessary adjustments should the need arise. This product has not been sufficiently tested when applied through irrigation systems to assure consistent product performance for all labeled uses. The following application techniques are provided for user reference but do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label prescribed safety devices for public water systems 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 daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone (RPZ), back flow preventer, or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an alternative 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 flow 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. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. Pesticide injection pipeline must 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 systems must contain functional interlocking controls, to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, 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.

Do not apply when wind speed favors drift. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Apply pesticide continuously for the duration of the water application. For mixing instructions, please refer to directions in the “Spray mixing and compatibility” section.

This product can be used through two basic types of irrigation systems as outlined in Sections A and B below. 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 back flow. Determine which type of irrigation system is in place, then refer to the appropriate directions provided below for each type. See crops section on the label for required treatment rates and additional use information.

A. Center Pivot, Motorized-Lateral Move and Traveling Gun Irrigation Equipment

For injections of pesticides, these continuously moving systems must use a positive displacement injection pump of either diaphragm or piston type and be constructed of materials that are compatible with pesticides. They must also be capable of being fitted with a system interlock and capable of injection at pressures approximately 2-3 times those encountered within the irrigation water line. Venturi applicator units cannot be used on these systems. Thoroughly mix required amount of this product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until this product has been cleared from the last sprinkler head.

B. Solid-Set, Portable (Wheel Move, Side Roll, End Tow, or Hand Move) and Drip Irrigation Equipment

With stationary systems, an effectively designed in-line Venturi applicator unit is preferred to support even and quick distribution. However, a positive-displacement pump can also be used. For solid set systems, determine acreage covered by sprinkler. Fill the tank of injection equipment with water and adjust flow to use contents over 30 to 45 minutes. Mix desired amount of this product for acreage to be covered with water so that the total mixture of this product plus water in the injection tank is equal to the quantity of water used during calibration. Provide chemical supply tank agitation sufficient for mixing until chemigation is completed. Operate entire system at normal pressures recommended by the manufacturer of injection equipment used, for amount of time established during calibration. This product can be injected during the irrigation cycle or as a separate application. For drip irrigation systems, introduce fungicide into irrigation solution for a period sufficient to distribute the product uniformly in the crop. Stop injection equipment with any system after treatment is completed and continue to operate irrigation system until this product has been cleared from the last sprinkler head or drip irrigation line.

PRODUCT RESTRICTIONS AND LIMITATIONS

Do not apply more than the maximum yearly rate for each specific crop from any combination of products containing Fluopyram.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and

directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

ROTATIONAL CROP RESTRICTIONS

The following crops can be replanted immediately following the last application of VELUM PRIME:

Artichoke, (Globe); Brassica (cole) leafy vegetables (group 5); Bulb vegetables (group 3-07); Carrot; Cereals (except rice) (group 15); Citrus (group 10-10); Corn, field, grain; Corn, pop, grain; Cotton (subgroup 20C); Cucurbits (group 9); Dill seed; Fruiting Vegetables (group 8-10); Ginseng; Grapes and small vines (except fuzzy kiwifruit) (subgroup 13-07F); Herb (subgroup 19A); Hops; Leafy vegetables (except watercress) (group 4); Legume Vegetables (except cowpea and dried peas); Peanut; Pome fruit (group 11-10); Potato and other root, tuberous and corm vegetables (except sugarbeet) (subgroups 1B and 1C); Rapeseed (subgroup 20A); Small Berries (caneberries and bushberries) (subgroups 13-07A and 13-07B); Soybean; Stone Fruits (group 12-12); Strawberry and other low-growing berries, except cranberry (subgroup 13-07G); Sugarbeet; Sunflower (subgroup 20B); Sweet Corn; Tobacco; Tree Nuts (group 14-12). Alfalfa can be planted after 14 days and sugarcane can be planted after 14 days in Region 3. Do not rotate to crops other than those listed above.

Limitations, Restrictions, and Exceptions

HOPS

Application Instructions

Apply at the critical timings for disease suppression. Refer to University and/or extension guidelines for best application timings. Continue as needed on a 14-day interval.

Drip applications are effective for suppression of this disease.

Restrictions:

- Do not apply more than 13.7 fl oz of VELUM PRIME (0.446 lbs Fluopyram) per acre per year, regardless of formulation or method of application (soil or foliar).
- Apply using chemigation equipment.
- Do not apply VELUM PRIME within 7 days of harvest.

- For soil application, to limit the potential for development of disease resistance to this chemical class, the first foliar fungicide application after VELUM PRIME should be a product from a different FRAC group.

Method

[Soil Treatment](#)

[Drip](#)

Pre-Harvest Interval

7 days

Restricted Entry Interval

12 hours

Timings

[At the critical timings for disease suppression.](#)