FRUIT, POME, GROUP 11-10 - SCAB AND POWDERY MILDEW

General Information

PRODUCT INFORMATION
LUNA TRANQUILITY is a broad-spectrum fungicide with preventative, systemic, and curative properties labeled for the control or suppression of certain crop diseases.

LABELED USES
Berry, low growing, except cranberry, subgroup 13-07G; Bushberry subgroup 13-07B; Caneberry subgroup 13-07A; Fruit, pome, group 11-10; Ginseng; Lemons; Onion, bulb, subgroup 3-07A; Onion, green, subgroup 3-07B; Tomato; Vegetable, root, except sugar beet, subgroup 1B; Vegetable, tuberous and corm, subgroup 1C.

RESISTANCE MANAGEMENT
The active ingredients in LUNA TRANQUILITY belong to two different fungicide groups, the pyridinyl-ethyl-benzamides (Group 7) and the anilinopyrimidines (Group 9). 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 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.

Ground Application
For optimum disease control, apply in sufficient water to ensure thorough coverage
of foliage, bloom, and fruit.

Aerial Application
For aerial application equipment, a minimum of 10 gallons of water per acre for tree
crops and 2 gallons of water per acre for field and vegetable crops is required.

Air-Blast Application
Air-assisted or air-blast sprayers move spray droplets into the crop canopy using a
forced-air system. The fan should be set up to deliver only enough air volume to
penetrate the canopy and provide good coverage. Adjust deflectors or other aiming
deVICES to direct spray only to the target area. Equip sprayers with nozzles that
provide accurate and uniform application.

Greenhouse Application
LUNA TRANQUILITY may be used on tomatoes and strawberries and other low-
growing berries (except cranberries) as foliar applied treatment only in greenhouses
with good resistance management programs. See crop-specific use directions. Crop
safety has not been confirmed on all cultivars. Plant compatibility testing is
recommended when first using under your greenhouse conditions. LUNA
TRANQUILITY is physically compatible with most commonly used fungicide,
herbicide, insecticide, and foliar nutrient products. However, the compatibility of
LUNA TRANQUILITY with all potential tank-mix partners has not been fully
investigated. For greenhouse uses apply only in well-ventilated plastic tunnel
houses or glass houses. Ventilate for at least 2 hours after application. Prevent intense sunlight exposure for several hours after application. Solutions should be used within one day of mixing.

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 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.

LUNA TRANQUILITY Fungicide 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 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 may 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) 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.

PRODUCT RESTRICTIONS AND LIMITATIONS
Do not apply more than the maximum yearly rate for each specific crop from any combination of products containing FLUOPYRAM or PYRIMETHANIL.

ROTATIONAL CROP RESTRICTIONS
Areas treated with this product may be replanted immediately following harvest with any crop for which FLUOPYRAM and PYRIMETHANIL tolerances exist. This includes: Almonds; Berry, low growing, except cranberry, subgroup 13-07G; Bushberry subgroup 13-07B; Caneberry subgroup 13-07A; Lemons; Fruit, pome, group 11-10; Fruit, small vine climbing, except fuzzy kiwifruit, subgroup 13-07F; Ginseng; Onion, bulb, subgroup 3-07A; Onion, green, subgroup 3-07B; Pistachios; Peach subgroup 12-12B; Plum subgroup 12-12C; Tomato subgroup 8-10A; Vegetable, root, except sugarbeet, subgroup 1B; Vegetable, tuberous and corm, subgroup 1C. The following crops may be replanted after 30 days after the last application of LUNA TRANQUILITY:

Alfalfa; Brassica, Head and Stem, Subgroup 5A; Brassica Leafy Greens, Subgroup 5B; Carrot; Cherry subgroup 12-12A; Cottonseed subgroup 20C; Dill seed; Fruit, citrus, group 10-10; Grain, cereal, group 15 (except corn and rice) [which include: barley, buckwheat, millet (pearl and proso), oats, rye, sorghum, teosinte, triticale, and wheat]; Corn, field, grain; Corn, pop, grain; Corn, sweet; Herb subgroup 19A; Hop, dried cones; Leafy greens subgroup 4A; Leaf petioles subgroup 4B (except watercress); Legume Vegetables (except cowpea and dried peas); Melon subgroup 9A; Nut, tree, group 14-12; Peanut; Pepper/Eggplant subgroup 8-10B; Rapeseed subgroup 20A; Soybean; Squash/cucumber subgroup 9B; Sugarbeet, roots;
Sugarcane (in region 3), Sunflower subgroup 20B.
Do not rotate to crops other than those listed above.

Limitations, Restrictions, and Exceptions

Product Instructions

Apply at the critical timings for disease control. Refer to University and/or extension guidelines for best application timings. Continue as needed on a 7- to 10-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.

Restrictions:
- Apply using ground, aerial, or chemigation equipment.
- Regardless of formulation or method of application, do not apply more than 0.446 lbs fluopyram or 1.6 lbs pyrimethanil per acre per year, including soil and foliar uses.
- Do not apply LUNA TRANQUILITY within 72 days of harvest.
- To limit the potential for development of disease resistance to these fungicide classes, do not make more than 2 sequential applications of LUNA TRANQUILITY or any Group 7 or Group 9 containing fungicide before rotating with a fungicide from a different Group.

Method
Broadcast/Foliar Air
Broadcast/Foliar Ground

Pre-Harvest Interval

72 days

Restricted Entry Interval

12 hours

Timings
At the critical timings for disease control.