

264-1090

02-02-2012

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**U.S. ENVIRONMENTAL PROTECTION AGENCY**

**Office of Pesticide Programs  
Registration Division (7505P)  
Ariel Rios Building  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460**

**EPA Registration Number:**

264-1090

**Date of Issuance:**

**FEB 02 2012**

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
(under FIFRA, as amended)

**Term of Issuance:**  
Conditional

**Name of Pesticide Product:**  
Luna Sensation

**Name and Address of Registrant (include ZIP Code):**

Bayer Cropscience LP  
2 T.W. Alexander Drive  
Research Triangle Park, NC 27709

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

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

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

1. Submit/cite all data required for the registration/ reregistration of your product when the Agency requires all registrants of similar products to submit data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. Provide the following as conditions of registration:
  - 830.6317 - storage stability - due May 1, 2013
  - 830.6320 - corrosion characteristics - due May 1, 2013

(Continued)

**Signature of Approving Official:**

Shaja B. Joyner, Product Manager 20  
Fungicide Branch  
Registration Division (7504P)

**Date:**

**FEB 02 2012**

- Seedling emergence, tier II (guideline 850.4225) TEP Fluopyram/Trifloxystrobin SC"; 21.4% Fluopyram and 21.4% Trifloxystrobin
- Vegetative vigor, tier II (guideline 850.4250) TEP Fluopyram/Trifloxystrobin SC"; 21.4% Fluopyram and 21.4% Trifloxystrobin (EPA Reg. No. 264-RNON, 01/24/11)
- Algal toxicity, Tier I or II (guideline 850.5400) TEP Fluopyram/Trifloxystrobin SC"; 21.4% Fluopyram and 21.4% Trifloxystrobin (EPA Reg. No. 264-RNON, 01/24/11)

3. Make the following label changes:

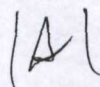
- a. Page 2, under "Personal Protective Equipment," above the paragraph starting with "Follow manufacturer's instructions, add the heading "User Safety Requirements."
- b. Page 2, under "User Safety Recommendations" revise the second bullet to read: Remove clothing/PPE....."
- c. Page 2, under "User Safety Recommendations" add a third bullet to read: "User should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, was thoroughly and change into clean clothing."
- d. Page 3, move the "Storage and Disposal" section to the end of label, prior to the Warranty Statement.
- e. Page 4, under "Application Information," second sentence, remove the words "beyond the target application area. The sentence should read: Do not make applications when conditions favor drift.
- f. Page 5, under "Chemigation Application," second paragraph from the last, please repeat instructions from letter (e) above. The sentence should read: Do not apply when wind speed favors drift.
- g. Page 7, change the word "General" to "Product." The heading should read: Product Restrictions and Limitations.
- h. Page 7, under "Use Directions for Specific Crops," change the second and third column headings to "Application Rate, and Product Instructions, respectively.

4. Submit one (1) copy of the revised final printed label before the product is released for shipment.

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

A stamped copy of the label is enclosed for your records. If you have any questions, contact Lisa Jones of my team at (703) 308-9424 or [jones.lisa@epa.gov](mailto:jones.lisa@epa.gov).

Sincerely,



Shaja B. Joyner  
Product Manager (20)  
Fungicide Branch  
Registration Division (7504P)

Enclosure: Stamped copy of label  
Product chemistry review dated July 27, 2010  
Acute toxicity review dated August 23, 2011  
Ecorisk assessment dated June 13, 2011  
Ecotoxicity reviews dated May 26, 2011  
Drinking water assessment dated May 31, 2011  
Human health risk assessment dated November 30, 2011  
Residue chemistry summary update dated December 5, 2011

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GROUP	7	11	FUNGICIDE
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# LUNA<sup>®</sup> SENSATION

Broad spectrum fungicide for control of plant diseases

**ACTIVE INGREDIENT:**

FLUOPYRAM\*..... 21.4%

TRIFLOXYSTROBIN\*..... 21.4%

**OTHER INGREDIENTS:**..... 57.2%

Contains 2.10 lbs FLUOPYRAM and 2.10 lbs TRIFLOXYSTROBIN per gallon Total 100.0%

\*(CAS Numbers 658066-35-4 and 141517-21-7)

EPA Reg. No. 264-1090

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

**FIRST AID**

<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF ON SKIN:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<p><b>For MEDICAL Emergencies Call 24 Hours A Day 1-800-334-7577.</b></p> <p>In case of emergency call toll free the Bayer CropScience Emergency Response Telephone No. 1-800-334-7577.</p> <p>Have a product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p><b>NOTE TO PHYSICIAN:</b> Treat Symptomatically.</p> <p><b>For PRODUCT USE Information Call 1-866-99BAYER (1-866-992-2937)</b></p>	

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated  
FEB 02 2012**  
 Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act,  
 as amended, for the pesticide  
 registered under EPA Reg. No.  
264-1090

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION**

Harmful if swallowed, absorbed through skin or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment (PPE):**

Applicators and other handlers must wear long-sleeved shirt and long pants, shoes plus socks, and chemical-resistant (such as nitrile or butyl) gloves (if more options are needed, follow the instructions for category C on an EPA chemical-resistance category selection chart).

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENGINEERING CONTROL STATEMENTS:**

When handlers use closed systems, enclosed cabs, or aircraft 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 immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters.

This product may contaminate water through runoff. This product has a high potential for runoff several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

Chemicals associated with this product have properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

**DIRECTIONS FOR USE  
STOP - READ THE LABEL BEFORE USE**

**It is a violation of federal law to use this product in a manner inconsistent with its labeling.  
Read entire label before using this product.**

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.

### 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 12 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 over long-sleeved shirt and long pants, socks and shoes, and chemical-resistant gloves made of any waterproof material such as natural rubber  $\geq$  14 mils.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original container and keep tightly closed when not in use. Store in a cool dry place. Avoid cross-contamination with other pesticides.

**Pesticide Disposal:** Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be disposed of by use according to label instruction, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. After triple rinsing procedure dispose of container.

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## PRODUCT INFORMATION

LUNA<sup>®</sup> SENSATION is a broad-spectrum fungicide with preventative, systemic, and curative properties labeled for the control or suppression of certain crop diseases.

## LABELED USES

Almond, apple, cherry, peanut, pecan, pistachio, potato, sugarbeet, tree nuts, watermelon, and wine grapes.

## RESISTANCE MANAGEMENT

The active ingredients in LUNA SENSATION belong to two different fungicide groups, the pyridinyl-ethyl-benzamides (Group 7) and the QoI or strobilurins (Group 11). 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 requirements:** 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 beyond the target application area. Avoid spraying when windy, high temperature, drought, dusty, low relative humidity, or temperature inversion conditions exist.

### Ground Application

For ground application equipment, a minimum of **50** gallons of water per acre for tree crops and wine grapes and **10** gallons of water per acre for field and vegetable crops is required.

### Aerial Application

For aerial application equipment, a minimum of **15** gallons of water per acre for tree crops and **5** gallons of water per acre for field and vegetable crops is required. Do not apply by aerial application in New York State.

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### **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.

### **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). 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 SENSATION has not been sufficiently tested when applied through irrigation systems to assure consistent product performance for all labeled uses. Sprinkler chemigation is usually most effective via an irrigation of one tenth to one fourth inch. The following application techniques are provided for user reference but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users must check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical 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 beyond the area intended for treatment. 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. This product can be injected during the irrigation cycle or as a separate application.

**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.

**SPRAY MIXING AND COMPATIBILITY**

Begin with clean spray equipment and add one-half of the required amount of water to the spray or mixing tank and start agitation. Add the required quantity of fungicide and the tank-mix partner if applicable to the water and complete filling with water to the required total volume. Follow the recommendations of your State Cooperative Extension Service for tank-mixing with other products. In general, follow the order beginning first with water soluble packaging (wait for it to completely dissolve), wettable powders and water-dispersible granular products, liquid flowables and suspension concentrates, and emulsifiable concentrates last. Maintain agitation throughout spraying. Non-ionic surfactants at a maximum of 0.125% v/v may be added to spray mixtures. Do not allow spray mixture to remain in the tank overnight, or for long periods during the day without agitation. When tank-mixing with other pesticides, observe the more restrictive label limitations and precautions.

LUNA SENSATION is physically compatible with most commonly used fungicide, herbicide, insecticide, and foliar nutrient products. However, the compatibility of LUNA SENSATION with all potential tank-mix partners has not been fully investigated. If tank mixing with other pesticides is desirable, conduct a jar test with the volumes and rates typically used in agricultural application. Using a small container of water, add the proportionate amounts of the products: wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 15 minutes. Look for signs of separation, globules, sludge, flakes, or other precipitates. Physical compatibility is indicated if the combination remains mixed or can be remixed readily.

The crop safety of all potential tank-mixes with LUNA SENSATION has not been tested on all crops. Before applying any tank-mixture not specifically required on this label, safety to the target crop should be confirmed on a small portion of the crop to be treated to ensure an adverse response will not occur.

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**GENERAL RESTRICTIONS AND LIMITATIONS**

Do not apply more than the maximum seasonal rate for each specific crop from any combination of products containing FLUOPYRAM or TRIFLOXYSTROBIN.

**ROTATIONAL CROP RESTRICTIONS**

Areas treated with this product may be replanted immediately following harvest with any crop for which both a FLUOPYRAM and a TRIFLOXYSTROBIN tolerance exist. This includes but not limited to: almond, apple, cherry, peanut, pecan, pistachio, potato, strawberry, sugarbeet, tree nuts, watermelon, and wine grapes. The following crops may be planted into treated areas 30 days after the last application: alfalfa, cotton, and dried beans. Canola, cereal grains (except rice) and soybean may be replanted 30 days following fluopyram application on potato only. Any other crop not specified on the label may not be replanted following fluopyram-treated crops.

**USE DIRECTIONS FOR SPECIFIC CROPS**

ALMOND		
Disease Control	Product Rate	Use Information
Brown rot blossom blight <i>(Monilinia laxa)</i> <i>(Monilinia fructicola)</i>  Shot hole <i>(Wilsonomyces carpophilus)</i>  Anthracnose <i>(Colletotrichum acutatum)</i>  Alternaria <i>(Alternaria alternata)</i>	4.0 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.  <b>Blossom blight:</b> Applications should be made at the critical timings for disease control. Typically this begins at pink bud stage (about 5% bloom). If conditions are favorable for disease development, apply again at full bloom and at petal fall.  Refer to University and/or extension guidelines for best application timings.
Scab <i>(Cladosporium carpophilum)</i>  Rust <i>(Tranzschelia discolor)</i>	5.6 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.
Jacket rot Green fruit rot <i>(Botrytis cinerea)</i>  Powdery mildew <i>(Sphaerotheca pannosa)</i> <i>(Podosphaera tridactyla)</i>	7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 14-day interval. When disease pressure is severe, use the shorter intervals.

**Restrictions:** Do not apply more than 27.1 fl oz of LUNA SENSATION per acre per season. Do not make more than 4 applications per season. Do not apply LUNA SENSATION within 60 days of harvest or after hull split. To limit the potential for development of disease resistance to these fungicide classes, do not make more than 2 sequential applications of LUNA SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

**APPLE**

Disease Control	Product Rate	Use Information
Powdery mildew ( <i>Podosphaera leucotricha</i> )	3.2 to 5.8 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 10- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.
Scab ( <i>Venturia</i> spp.)  Cedar apple rust ( <i>Gymnosporangium juniperi-virginianae</i> )  Sooty blotch ( <i>Gloeodes pomigena</i> )  Flyspeck ( <i>Schizothyrium pomi</i> )	4.0 to 5.8 fl oz/acre	Begin applications preventatively, Applications should be made on 7- to 14-day interval depending upon disease conditions. When disease pressure is severe, use the higher rates and/or shorter intervals.  Refer to University and/or extension guidelines for best application timings.
Disease Suppression	Product Rate	Use Information
Bitter rot ( <i>Glomerella cingulata</i> )	4.0 to 5.8 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 10- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.
White rot ( <i>Botryosphaeria dothidea</i> )	3.2 to 5.8 fl oz/acre + Captan	Begin fungicide applications preventatively. Apply in a tank-mix with 1.2 lbs active ingredient of Captan per acre. Continue as needed on a 10- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.

**Restrictions:** Do not apply more than 21.0 fl oz of LUNA SENSATION per acre per season. Do not make more than 4 applications per season. Do not apply LUNA SENSATION within 14 days of harvest. Do not apply with aerial application equipment. To limit the potential for development of disease resistance to these fungicide classes, do not make more than 2 sequential applications of LUNA SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

**Note:** Do not apply where spray drift may reach Concord grapes or crop injury may occur. Spray equipment should be rinsed after applying before application of other products to Concord grapes or crop injury may occur.

**CHERRY (sweet and tart)**

Disease Control	Product Rate	Use Information
Brown rot blossom blight Fruit rot ( <i>Monilinia</i> spp.)	4.0 to 5.6 fl oz/acre	<p><b>Blossom blight:</b> Begin application preventatively or at white bud on cherry. Apply again at 50% bloom and at petal fall if conditions continue to be favorable for disease development.</p> <p><b>Fruit rot:</b> Begin application at two to three weeks before harvest and continue at 7-day intervals. The blossom and fruit stages must be protected for optimum control of brown rot. Additional cover sprays during the early post-bloom period are also important for preventing quiescent fruit infections.</p>
Powdery mildew Rusty spot ( <i>Podosphaera</i> spp.) ( <i>Sphaerotheca pannosa</i> )  Cherry leaf spot ( <i>Blumeriella jaapii</i> )	3.2 to 5.6 fl oz/acre	<p><b>Powdery mildew/Rusty spot:</b> Follow leaf spot schedule until terminal growth ceases.</p> <p><b>Cherry leaf spot:</b> Begin application at petal fall or when first leaves unfold and continue applications at 7- to 14-day intervals. Applications should be made at 7-day intervals early in the growing season when terminal growth is rapid. A post-harvest application may be made to maintain control and reduce overwintering inoculum.</p>
Scab ( <i>Cladosporium carpophilum</i> )  Jacket rot Green fruit rot ( <i>Botrytis cinerea</i> )  Shot hole ( <i>Wilsonomyces carpophilus</i> )	5.0 to 5.6 fl oz/acre	<p>Begin fungicide applications preventatively. Continue as needed on a 7- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.</p> <p>Refer to University and/or extension guidelines for best application timings.</p>

Anthracnose ( <i>Colletotrichum</i> spp.)		
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**Restrictions:** Do not apply more than 11.2 fl oz of LUNA SENSATION per acre per season on cherry. Do not apply LUNA SENSATION within 1 day 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 SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

**PEANUT**

Disease Control	Product Rate	Use Information
Early leaf spot ( <i>Cercospora arachidicola</i> )  Late leaf spot ( <i>Cercosporidium personatum</i> )  Leaf rust ( <i>Puccinia arachidis</i> )  Web blotch ( <i>Phoma arachidicola</i> )  Leaf scorch and Pepper spot ( <i>Leptosphaerulina crassiasca</i> )	7.0 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 14-day interval.

Disease Suppression	Product Rate	Use Information
Sclerotinia blight ( <i>Sclerotinia minor</i> )  Rhizoctonia limb rot, Peg rot, Pod rot ( <i>Rhizoctonia solani</i> )	7.0 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 14-day interval.

**Restrictions:** Do not apply more than 27.1 fl oz of LUNA SENSATION per acre per season. Do not apply LUNA SENSATION within 14 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 SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group. Do not feed hay or threshings or allow livestock to graze in treated areas.

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**PECAN**

Disease Control	Product Rate	Use Information
Scab <i>(Cladosporium caryigenum)</i>  Anthracnose <i>(Glomerella cingulata)</i>  Powdery mildew <i>(Microsphaera spp.)</i>	4.0 to 7.6 fl oz/acre	Begin fungicide applications at bud break. Continue as needed on a 14- to 21-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.  Refer to University and/or extension guidelines for best application timings.

**Restrictions:** Do not apply more than 27.1 fl oz of LUNA SENSATION per acre per season. Do not make more than 6 applications per season. Do not apply LUNA SENSATION after shuck split or within 30 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 SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

**PISTACHIO**

Disease Control	Product Rate	Use Information
Botryosphaeria panicle and shoot blight <i>(Botryosphaeria dothidea)</i>  Alternaria late blight <i>(Alternaria alternata)</i>  Blossom and shoot blight <i>(Botrytis cinerea)</i>  Septoria leaf spot <i>(Septoria pistaciarum)</i>	4.8 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 14- to 21-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.  Refer to University and/or extension guidelines for best application timings.

**Restrictions:** Do not apply more than 23.0 fl oz of LUNA SENSATION per acre per season. Do not make more than 4 applications per season. Do not apply LUNA SENSATION within 28 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 SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

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POTATO		
Disease Control	Product Rate	Use Information
Early blight <i>(Alternaria solani)</i>  Powdery mildew <i>(Erysiphe cichoracearum)</i> <i>(Leveillula taurica)</i> <i>(Erysiphe spp.)</i>	4.8 to 5.8 fl oz/acre (ground or chemigation)  5.6 fl oz/acre (aerial)	Begin fungicide applications preventatively. Continue as needed on a 14-day interval. When disease pressure is severe, use the higher rates.
White mold <i>(Sclerotinia sclerotiorum)</i>	5.8 fl oz/acre (ground or chemigation)  5.6 fl oz/acre (aerial)	Begin fungicide applications preventatively prior to row closure or at the onset of disease. Make a second application 14 days later if conditions continue to favor disease development.
Botrytis leaf spot <i>(Botrytis cinerea)</i>  Leaf blight / Leaf spot <i>(Alternaria spp.)</i> <i>(Alternaria raphani)</i>  Septoria leaf spot <i>(Septoria spp.)</i>	5.6 to 5.8 fl oz/acre (ground or chemigation)  5.6 fl oz/acre (aerial)	Begin fungicide applications preventatively. Continue as needed on a 14-day interval. When disease pressure is severe, use the higher rates.
Disease Suppression	Product Rate	Use Information
Black dot <i>(Colletotrichum coccodes)</i>  Silver scurf <i>(Helminthosporium solani)</i>  Rust <i>(Puccinia spp.)</i> <i>(Uromyces spp.)</i>	5.8 fl oz/acre (ground or chemigation)  5.6 fl oz/acre (aerial)	Begin fungicide applications preventatively. Continue as needed on a 14-day interval.

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**Restrictions:** Do not apply more than 21.7 fl oz of LUNA SENSATION per acre per season for ground and chemigation applications. If aerial applications are made do not apply more than 5.6 fl oz of LUNA SENSATION per application and 16.8 fl oz total per season. Do not make more than 4 applications per season. Do not apply LUNA SENSATION within 7 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 SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

SUGARBEET		
Disease Control	Product Rate	Use Information
Cercospora leaf spot ( <i>Cercospora beticola</i> )  Powdery mildew ( <i>Erysiphe polygoni</i> )	6.84 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 10- to 21-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.  Refer to University and/or extension guidelines for best application timings.

**Restrictions:** Do not apply more than 13.69 fl oz of LUNA SENSATION per acre per season. Do not apply LUNA SENSATION within 21 days of harvest. Do not apply with aerial application equipment. To limit the potential for development of disease resistance to these fungicide classes, do not make more than 2 sequential applications of LUNA SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.



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**TREE NUTS:**  
**(See separate use directions for: Almonds, Pecan, and Pistachio):**  
 Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Walnut [including black and English (Persian) walnuts].

Disease Control	Product Rate	Use Information
Botryosphaeria panicle and shoot blight ( <i>Botryosphaeria dothidea</i> )	7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 14- to 21-day interval. When disease pressure is severe, use the shorter intervals.
Eastern filbert blight ( <i>Anisogramma anomala</i> )	7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 14-day interval. When disease pressure is severe, use the shorter intervals.
Alternaria late blight ( <i>Alternaria alternata</i> )  Anthracnose ( <i>Colletotrichum acutatum</i> ) ( <i>Glomerella cingulata</i> )  Scab ( <i>Cladosporium carpophilum</i> ) ( <i>Cladosporium caryigenum</i> )  Shothole ( <i>Wilsonomyces carpophilus</i> )	5.6 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.  Refer to University and/or extension guidelines for best application timings.

**Restrictions:** Do not apply more than 15.3 fl oz of LUNA SENSATION per acre per season. Do not apply LUNA SENSATION within 60 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 SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

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**WATERMELON:**

Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

**Note:** A mild yellowing on leaf margins is sometimes seen following application of LUNA SENSATION in watermelon.

Disease Control	Product Rate	Use Information
Powdery mildew ( <i>Sphaerotheca fuliginea</i> / <i>Podosphaera xanthii</i> ) ( <i>Erysiphe</i> <i>cichoracearum</i> )	3.2 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 10-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.
	4.8 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 10- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.
Botrytis gray mold ( <i>Botrytis cinerea</i> )  Alternaria leaf spot ( <i>Alternaria cucumerina</i> )  Anthracnose ( <i>Colletotrichum</i> spp.)	7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 14-day interval. When disease pressure is severe, use the shorter intervals.
Disease Suppression	Product Rate	Use Information
Gummy stem blight ( <i>Didymella bryonae</i> )  Belly rot ( <i>Rhizoctonia solani</i> )	7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 7- to 10-day interval. When disease pressure is severe, use the shorter intervals.

**Restrictions:** Do not apply more than 27.1 fl oz of LUNA SENSATION per acre per season. Do not make more than 4 applications per season. May be applied the day of harvest for spray uses. Do not apply with aerial application equipment. To limit the potential for development of disease resistance to these fungicide classes, do not make more than 2 sequential applications of LUNA SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

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**WINE GRAPE:**

For use on wine grape varieties only such as but not limited to these varieties: Chardonnay, Cabernet sauvignon, Syrah, Merlot, Pinot Noir, and Zinfandel

Do not treat grapes such as Thompson Seedless and Concord which may be used for purposes other than for wine.

Disease Control	Product Rate	Use Information
Powdery mildew ( <i>Uncinula necator</i> )	2.4 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 12- to 14-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.
	3.2 to 7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 14- to 21-day interval. When disease pressure is severe, use the higher rates and/or shorter intervals.
Botrytis bunch rot / Gray mold ( <i>Botrytis cinerea</i> )	4.8 to 7.6 fl oz/acre	Applications should be made at the critical timings for <i>Botrytis</i> control. Typically, first applications are made at early bloom, berry touch to bunch closure, veraison, and pre-harvest. Use sufficient water to ensure penetration of the canopy and coverage of the flowers or bunches. When disease pressure is severe, use the higher rates and/or shorter intervals, but not less than 12 days apart.
Phomopsis cane and leaf spot ( <i>Phomopsis viticola</i> )	4.8 to 7.6 fl oz/acre	Applications should begin at bud break. Continue as needed on a 14- to 21-day interval and before 0.5 inch shoot length and again when shoots are 5 to 6 inches in length. When disease pressure is severe, use the higher rates and/or shorter intervals.
Black rot ( <i>Guignardia bidwellii</i> )	4.0 to 7.6 fl oz/acre	Begin applications when shoots are 1-3 inches in length and continue as needed on a 12- to 14-day interval.
Disease Suppression	Product Rate	Use Information
Downy mildew ( <i>Plasmopara viticola</i> )  Aspergillus rot ( <i>Aspergillus</i> spp.)	7.6 fl oz/acre	Begin fungicide applications preventatively. Continue as needed on a 14- to 21-day interval. When disease pressure is severe, use the shorter intervals.

**Restrictions:** Do not apply more than 27.1 fl oz of LUNA SENSATION per acre per season. Do not make more than 6 applications per season. Do not apply LUNA SENSATION within 14 days of harvest. Do not apply with aerial application equipment. To limit the potential for development of disease resistance to these fungicide classes, do not make more than 2 sequential applications of LUNA SENSATION or any Group 7 or Group 11 containing fungicide before rotating with a fungicide from a different Group.

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**Bayer CropScience**

**Bayer CropScience LP  
P.O. Box 12014, 2 T.W. Alexander Drive  
Research Triangle Park, North Carolina 27709  
1-866-99BAYER (1-866-992-2937)**

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