

84059-6

1/25/2010

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

EPA Reg. Number:
84059-6

Date of Issuance:
JAN 25 2010

Term of Issuance: **UNCONDITIONAL**

Name of Pesticide Product:
Regalia Maxx

NOTICE OF PESTICIDE:

Registration Re-registration
 (under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Marrone Bio Innovations, Inc.
 2121 Second St., Suite B-107
 Davis, CA 95618

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

On the basis of information furnished by the registrant, the above named pesticide is hereby registered 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 unconditionally registered in accordance with FIFRA Sec. 3(c)(5) provided you:

1. Submit and/or cite all data required for registration/ reregistration of your product under FIFRA section 3(c)(5) and section 4 when the Agency requires all registrants of similar products to submit such data.
2. Make the following label change before you release the product for shipment: Revise the EPA Registration Number to read, "EPA Reg. No. 84059-6."
3. Submit three (3) copies of the revised final printed labeling before you release the product for shipment.
4. Provide the Agency with an approved OMRI certificate for this product prior to printing of final printed labels.
5. Submit within 1 year after the Date of Registration acceptable data packages for Guideline Studies: Storage Stability study (OPPTS GLN: 830.6317) and Corrosion Characteristics study (OPTS GLN: 830.6320) for this product.

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.

Signature of Approving Official:

W. Michael McDavit
 W. Michael McDavit, Associate Director
 Biopesticides and Pollution Prevention Division

Date:

JAN 25 2010

2010

Marrone Bio Innovations
Regalia® Maxx
Biofungicide Concentrate
Can Be Used in Organic Production



A plant extract to boost the plants' natural defense mechanisms against certain fungal and bacterial diseases.

Active ingredient: Extract of *Reynoutria sachalinensis* 20 %
Other ingredients: 80 %
Total 100 %

EPA Reg. No. 84059-A

EPA Est. No. 085970-FL-001
EPA Est. No. 61842-CA-001

KEEP OUT OF REACH OF CHILDREN
CAUTION

First Aid Statement	
IF SWALLOWED:	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
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.
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.
Have the product container or label with you when calling a poison control center or doctor, or if going for treatment.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear goggles or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves
- Protective eyewear

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

USER SAFETY RECOMMENDATION
Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Net Contents:

Marrone Bio Innovations, Inc. 2121 Second St. Suite B-107, Davis, CA 95618

ACCEPTED
JAN 25 2010

Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for
the pesticide registered under
EPA Reg. No. 84059-6

ENVIRONMENTAL HAZARDS

Do not apply directly to water, 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 washwater or rinsate.

DIRECTIONS FOR USE

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.

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 exemptions pertaining to the statements on this label about personal protective equipment (PPE) and the restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

GENERAL INFORMATION

Regalia® Maxx is an extract from the plant *Reynoutria* spp. for use on ornamental plants, turf and edible crops. Regalia Maxx applied to actively growing plants (see DIRECTIONS FOR USE) will help make the treated leaf area resistant to certain plant diseases. Use Regalia Maxx as a preventative rather than a curative application. Apply prior to disease infestation to protect the growing leaf tissue. The principle diseases controlled in treated plants are Powdery Mildew, Downy Mildew, Anthracnose, Botrytis Gray Mold, Rust, Bacterial Canker, Bacterial Blast, Bacterial Leaf Spot, Target Spot, Alternaria Leaf Spot, and Bacterial Speck. See specific information for use rates on ORNAMENTAL PLANTS, TURF, AND EDIBLE CROPS.

MODE OF ACTION

The extract obtained from *Reynoutria* spp. plant material contains the active chemical compounds. The extract, when applied to the host plant, increases the plant's natural defense system due to a five-fold increase in phenolics. This induced resistance against some important diseases is not systemic, but there is some translaminar protection. Repeat applications at 7- to 14-day intervals to protect new plant growth. The resistance induction takes place in one to two days. Light is required for best results.

Use Regalia Maxx, therefore, as a preventative treatment.

MIXING AND APPLICATION INSTRUCTIONS

- SHAKE WELL PRIOR TO USE -

Regalia Maxx Biofungicide is a micro-emulsion concentrate consisting of certain natural ingredients extracted from Knotweed (*Reynoutria* spp.). Use 50-mesh nozzle screens or larger.

See **CHEMIGATION** section for chemigation use directions.
See **AERIAL APPLICATION** section for aerial application use directions.

Only the treated green tissues develop resistance and although there is some translaminar movement, thorough coverage of foliage is important.

GROUND APPLICATIONS: When applied alone or as an alternate spray, the use rate for Regalia Maxx is 16-32 fl.oz. in 50-100 gallons of water per acre (or a 0.125-0.25% v/v dilution of Regalia Maxx concentrate). When tank mixed with another fungicide, the use rate for Regalia Maxx is 8-32 fl.oz. in 50-100 gallons of water per acre. See **SELECTED CROPS** for additional details.

Use higher water volumes with larger sized crops and extensive foliage to secure thorough coverage.

If mechanical mixing is available when preparing the spray solution, keep the agitators running. Regalia Maxx can be tank mixed in the spray tank with pesticides and adjuvants to enhance disease control. Do not exceed application rates. Regalia Maxx cannot be mixed with another product with a prohibition against mixing. Use of the tank mix must be in accordance with the more restrictive label limitations and precautions.

DILUTE APPLICATIONS: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 100-400 gallons of water. Apply Regalia Maxx at 16-32 fl.oz. per acre in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material. Regalia Maxx can be applied at 8 fl.oz. per acre when tank mixed with another fungicide.

Compatibility: Do not combine Regalia Maxx in the spray tank with pesticides, adjuvants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective, and non-injurious under your use conditions.

Regalia Maxx is compatible with many commonly used pesticides, fertilizers, adjuvants, and surfactants, but has not been evaluated with all potential combinations. To ensure compatibility of the tank mix combinations, evaluate prior to use as follows: Using a suitable container, add the proportional amounts of product to water. Add wettable powders first, then water dispersible granules, then liquid flowables and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the mix on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of the application.

CHEMIGATION USE DIRECTIONS

Apply Regalia Maxx at 8-32 fl.oz. per acre according to the instructions below

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other types of irrigation systems. Do not connect an irrigation system (including greenhouse systems) used for pesticide applications to a public water system.

Spray preparation

First prepare a suspension of Regalia Maxx in a mix tank. Fill tank $\frac{1}{2}$ to $\frac{3}{4}$ the desired amount of water. Start mechanical or hydraulic agitation. Add the required amount of Regalia Maxx, and then the remaining volume of water. Then set the sprinkler to deliver a minimum of 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of Regalia Maxx into the irrigation water line so as to deliver the desired rate per acre. Inject the suspension of Regalia Maxx with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. Direct any questions on calibration to your State Extension Service Specialists, to equipment manufacturers, or to other experts.

Do not combine Regalia Maxx with pesticides, surfactants, or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective, and non-injurious under conditions of use. Regalia Maxx has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if a mixture with adjuvants or surfactants is planned.

GENERAL PRECAUTIONS FOR APPLICATIONS THROUGH SPRINKLER IRRIGATION SYSTEMS

Maintain continuous agitation in the mix tank during mixing and application to ensure a uniform suspension. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume for a more dilute solution per unit time. Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. 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. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation waters.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution, or when lines containing the product must be dismantled and drained.

AERIAL APPLICATION INSTRUCTIONS

Apply Regalia Maxx by aerial application according to the specific instructions in the "APPLICATION RATES FOR SELECTED CROPS - AGRICULTURAL USE" section.

AERIAL DRIFT REDUCTION ADVISORY INFORMATION

GENERAL: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Where states have more stringent regulations, they should be observed. Note: This section is advisory in nature and does not supersede the mandatory label requirements.

INFORMATION ON DROPLET SIZE: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply largest droplets that will provide sufficient coverage and control. 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).

CONTROLLING DROPLET SIZE: Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure. Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage. Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential. 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM WIDTH: For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3-10 mph as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.

APPLICATION HEIGHT: Do not make application 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 to droplets to evaporation and wind.

SWATH ADJUSTMENT: When applications are made with a crosswind, the swath will be displaced downward. 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.).

WIND: Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. 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 low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS: Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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: The pesticide 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). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

APPLICATION RATES FOR SELECTED CROPS

ORNAMENTAL PLANTS

The following plant species have been treated with Regalia Maxx to prevent disease. The disease most prominently controlled is Powdery Mildew (*Oidium* spp.), but Regalia Maxx can also be used for treatment against Gray Mold (*Botrytis cinerea*) and Rust (*Puccinia antirrhini*). Additional diseases controlled by Regalia Maxx include Black Spot of Rose (*Diplocarpon rosae*), Leaf Spots (*Alternaria* spp., *Cercospora* spp., *Entomosporium* spp., *Myrothecium* spp., *Septoria* spp.), Scab (*Venturia* spp.) and Anthracnose (*Colletotrichum* spp.).

Plants investigated:

Annual and Perennial Flowering Plants

Begonias, Freesias, Gerbera, Lisianthus, Petunias, Poinsettias, Roses, Salvias, Snapdragons, Zinnias

Trees and Shrubs

Crape Myrtle, Azalea, Indian Hawthorne, Photinia, Boxwood, Japanese Maple, Rhododendron, *Ligustrum japonicum*, *Rosaceae* spp., Dogwood, Lilac, Soft Touch Holly, Jumbo Azalea, Loropetalum, Spirea

Tropical Foliage

Aglaonema, Leatherleaf Fern, *Dieffenbachia*, *Spathiphyllum*, *Dracaena* spp., English Ivy, *Hibiscus*

Concentrations of 0.25% Regalia Maxx (32 fl.oz. per 100 gallons) applied to very small, tender plants may produce plant injury. Do not use on Gerbera and Lisianthus plugs. Wait for two weeks after transplanting.

Since it is not possible to test all ornamental species or varieties grown in the greenhouse, test Regalia Maxx on a few plants prior to large-scale usage.

Application Rates and Timing for Ornamental Plants

Mix Regalia Maxx concentrate with water at a concentration of 16-32 fl.oz. Regalia Maxx per 100 gallons water when used alone or 8-32 fl.oz. per 100 gallons water when tank mixed with another fungicide. Begin applications preventatively (before disease symptoms become visible) at the 4 to 6-leaf stage and treat at 7- to 14-day intervals as needed prior to sale or harvest. Spray until just before point of runoff.

TURF

Regalia Maxx aids in control of turf diseases. For improved performance under moderate to severe disease pressure, reduce spray intervals or use Regalia Maxx in a tank mix or rotational program with other registered fungicides.

Turf, Sod, Lawns, Greens (Bluegrass, Bentgrass, Bermuda grass, Dichondra, Fescue, Orchard grass, *Poa annua*, St. Augustine, Ryegrass, Zoysia mixtures and other grasses or ornamental turf). Brown patch (*Rhizoctonia solani*), Dollar Spot (*Lanzia* spp., *Moellerodiscus* spp. formerly *Sclerotinia homeocarpa*), Powdery Mildew (*Erysiphe graminis*), Rust (*Puccinia* spp.) and Anthracnose (*Colletotrichum graminicola*).

Application Rates and Timing for Turf

Mix Regalia Maxx concentrate with water at a concentration of 16-32 fl.oz. of Regalia Maxx in 100 gallons of water per acre when used alone or 8-32 fl.oz. in 100 gallons of water when tank-mixed with another fungicide. Begin applications preventatively (before disease symptoms become visible) and treat at 7-14 day intervals as needed. Spray water volumes must be of at least 2 gallons of water per 1000 sq. ft. Under moderate to high disease pressure, tank mix, or rotate with other registered fungicides.

EDIBLE CROPS

Regalia Maxx used as specified will induce the natural defense system of the treated plants listed below towards the diseases specified below.

The general recommended use rate for Regalia Maxx applied alone or as an alternate spray is 16-32 fl.oz. in 50-100 gallons of water per acre (or a 0.125-0.25% v/v dilution of Regalia Maxx concentrate). When tank mixed with another fungicide, the use rate for Regalia Maxx is 8-32 fl.oz. in 50-100 gallons of water per acre. Use higher water volumes with larger sized crops and extensive foliage in order to secure thorough coverage. See specific application recommendations for corn and soybeans.

For greenhouse application against the crops and diseases listed, the recommended use rate for Regalia Maxx is 16-32 fl.oz. in 50-100 gallons of water, (or a 0.125-0.25% v/v dilution) sprayed until just before point of runoff. When tank mixed with another fungicide, the use rate for Regalia Maxx is 8-32 fl.oz. in 50-100 gallons of water. Repeat at 7- to 14-day intervals as needed.

Regalia Maxx has a pre-harvest interval (PHI) of zero days.

Application Rates and Timing for Edible Crops

Artichokes

Powdery Mildew (*Leveillula taurica* and *Erysiphe cichoracearum*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre when the first disease symptoms are visible and reapply every 7- to 14-days.

Asparagus-

Botrytis Blight (*Botrytis cinerea*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre when the first disease symptoms are visible and reapply every 7- to 14-days.

Bushberries and Caneberries such as Blueberry, Blackberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Loganberry, Red and Black Raspberry, Salal, and other Berry Crops.

Mummy Berry (*Monilinia vaccinii-corymbosi*), Botrytis Blight (*Botrytis cinerea*), and Bacterial Canker (*Pseudomonas* spp.), Anthracnose Fruit Rot (*Colletotrichum acutatum*) and Alternaria Fruit Rot (*Alternaria* spp.)

Mummy Berry – Initiate application at bud break stage of development. Apply Regalia Maxx preventatively in 50 to 100 gallons of water per acre and repeat on a 7- to 10-day interval or as needed. For best performance, tank mix Regalia Maxx with other registered fungicides for Mummy Berry control.

Botrytis Blight – Apply Regalia Maxx preventatively in 50-100 gallons of water per acre when the first disease symptoms are visible and reapply every 7- to 14-days.

Bacterial Canker – Apply Regalia Maxx prior to Fall rains and repeat applications during dormancy before spring growth. Apply Regalia Maxx in 50-100 gallons of water per acre. Regalia Maxx can be tank mixed with another registered fungicide for improved control of bacterial canker.

Anthraxnose Fruit Rot (*Colletotrichum acutatum*) and Alternaria Fruit Rot (*Alternaria* spp.) on blueberries- Initiate application at green tip and continue applications on a 7- to 10- day interval until 10% blue fruit.

Bulb Vegetables such as Onion (Bulb and Green), Garlic, Leeks, and Shallots

Botrytis Neck Rot (*Botrytis* spp.), Botrytis Leaf Blight (*Botrytis squamosa*), Onion Purple Blotch (*Alternaria porri*), Onion Downy Mildew (*Peronospora destructor*), Downy Mildew (*Peronospora* spp.), and Powdery Mildew (*Erysiphe* spp.), and Rust (*Puccinia porri*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre. Repeat applications at 7- to 14-day intervals. Under moderate to heavy disease pressure, tank mix Regalia Maxx with another fungicide.

Cereal Grains such as Barley, Buckwheat, Grain Amaranth, Milo, Oats, Pearl Millet, Proso Millet, Rice, Rye, Sorghum, Triticale, and Wheat

Powdery Mildew (*Erysiphe graminis*), Rust (*Puccinia* spp.), Blast (*Pyricularia oryzae*), Sheath Spot and Blight (*Rhizoctonia oryzae* and *Thanatephorus cucumeris*), Smut (*Tilletia barclayana*), Bacterial Blight and Streak (*Xanthomonas* spp.), Stem Rot (*Sclerotium oryzae*), Rice Blast (*Magnaporthe* spp.), Brown Rot, Leaf Spots and Smuts (*Cercospora* spp., *Entyloma* spp., *Dreschlera* spp., *Cochliobolus* spp., and *Ceratobasidium* spp.), and Septoria Leaf Spot (*Septoria* spp.).

Apply Regalia Maxx preventatively in 50-100 gallons of water per acre when the first disease symptoms are visible. When the plants are under high disease pressure, tank mix Regalia Maxx with another registered fungicide for more effective control. Repeat applications in 7- to 14-day intervals depending upon crop growth and disease pressure.

Citrus Crops such as Orange, Grapefruit, Lemon, Tangerine, Tangelo, and Pummelo

Bacterial Canker (*Xanthomonas* spp.), Bacterial Blast (*Pseudomonas syringae*), Greasy Spot (*Mycosphaerella citri*), Alternaria Leaf Spot (*Alternaria alternata*), Scab (*Elsinoe fawcettii*), and Melanose (*Diaporthe citri*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre. For improved performance, use Regalia Maxx in a tank mix or rotational program with other registered fungicides. Repeat applications at 7- to 14-day intervals.

Dilute applications: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 100-400 gallons of water. Apply Regalia Maxx at a rate of 16-32 fl.oz. per acre when applied alone, or at 8-32 fl.oz. per acre when tank mixed with another fungicide in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material.

For aerial application apply Regalia Maxx at 8-16 fl.oz. per acre in 5-10 gallons of water per acre.

Cole Crops (Brassicas) such as Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Chinese Broccoli, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens, and Turnip

Powdery Mildew (*Erysiphe cruciferarum*), Downy Mildew (*Peronospora parasitica*), Xanthomonas Leaf Spot (*Xanthomonas campestris*), and Alternaria Leaf Spot (*Alternaria* spp.). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre. Repeat applications at 7- to 14-day intervals. Under moderate to heavy disease pressure, tank mix Regalia Maxx with another fungicide.

Corn including Field Corn, Sweet Corn, Popcorn, and Seed Corn

Common Rust (*Puccinia sorghi*), Northern Leaf Blight (*Exserohilum turcicum*, *Helminthosporium turcicum*), and Southern Leaf Blight (*Bipolaris maydis*, *Helminthosporium maydi*, *Cochliobolus heterostrophus*). For ground application on corn, apply 8-16 fl.oz. of Regalia Maxx preventatively in 15-40 gallons of water per acre using sufficient volume for thorough coverage. For aerial application, apply 8-16 fl.oz. of Regalia Maxx in 5-10 gallons of water per acre. For improved performance, apply 4-16 fl.oz. Regalia Maxx in a tank mix with another registered fungicide. Consult your local Extension Specialist or Crop Consultant regarding the optimum timing of fungicide applications.

Cucurbits such as Cantaloupe, Cucumber, Pumpkin, Zucchini, Watermelon, Melon, Muskmelon, and Squash

Powdery Mildew (*Sphaerotheca fuliginea* and *Erysiphe cichoracearum*), Downy Mildew (*Pseudoperonospora cubensis*), Anthracnose (*Colletotrichum lagenarium*), Gummy Stem Blight (*Didymella bryoniae*), and Phytophthora Blight (*Phytophthora capsici*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre or when the first symptoms of disease are visible. Repeat applications in 7- to 14-day intervals depending upon crop growth and disease pressure. When greenhouse cucurbits are under high disease conditions, use the shorter spray interval. For control of downy mildew, tank-mix Regalia Maxx with another fungicide labeled for downy mildew control.

For suppression of *Phytophthora capsici*, apply Regalia Maxx at 8-32 fl.oz. per acre in combination with labeled rates of a copper fungicide.

Fruiting Vegetables such as Peppers, Tomato, Eggplant, Ground Cherry, Tomatillo, and Okra

Powdery Mildew (*Sphaerotheca* spp., *Leveillula taurica* and *Erysiphe* spp.), Bacterial Blight (*Xanthomonas* spp.), Bacterial Canker (*Clavibacter michiganensis* and *Xanthomonas* spp.), Bacterial Leaf Spot (*Xanthomonas* spp.), Target Spot (*Corynespora cassiicola*), Bacterial Speck (*Pseudomonas syringae*), Gray Mold (*Botrytis cinerea*), Tomato Late Blight (*Phytophthora infestans*), and Early Blight of Tomato (*Alternaria solani*), and Phytophthora Blight (*Phytophthora capsici*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre. Repeat applications at 7- to 10-day intervals. Tank mix Regalia Maxx at 8-32 fl.oz. per acre with other registered fungicides for improved disease control under heavy pressure.

For suppression of *Phytophthora capsici*, apply Regalia Maxx at 8-32 fl.oz. per acre in combination with labeled rates of a copper fungicide.

Grapes

Powdery Mildew (*Uncinula necator*), Gray Mold (*Botrytis cinerea*), Downy Mildew (*Plasmopara viticola*), Phomopsis Fruit Rot (*Phomopsis viticola*), Black Rot (*Guignardia bidwellii*), Sour Rot (*Aspergillus niger*, *Alternaria tenuis*, *Botrytis cinerea*, *Cladosporium herbarum*, *Rhizopus arrhizus*, *Penicillium spp.*, and others), and Eutypa (*Eutypa lata*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre or when the first disease symptoms are visible. Under high disease pressure, use in a tank mix with another registered fungicide for more effective control. Repeat applications in 7- to 14-day intervals depending upon crop growth and disease pressure.

Dilute applications: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 150-400 gallons of water. Apply Regalia Maxx at a rate of 16-32 fl.oz. per acre when applied alone or at 8-32 fl.oz. per acre when tank mixed with another fungicide in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material.

Hops

Powdery Mildew (*Sphaerotheca macularis*), and Downy Mildew (*Peronospora spp.*). Apply Regalia Maxx preventatively when disease symptoms are first visible or when environmental conditions are conducive to rapid disease development. Continue sprays at 7-day intervals or as needed.

Minimum spray volumes for hop growth stages are as follows:

Emergence to Training: Apply 8-16 fl.oz. Regalia Maxx per acre using a minimum spray volume of 20 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage.

Training to Wire-Touch: Apply 8-16 fl.oz. Regalia Maxx per acre using a minimum spray volume of 50 gallons per acre. Coverage will vary with the size of the vines and the type of spray equipment. Apply adequate spray volume to achieve complete spray coverage.

Wire-Touch through Harvest: Apply 16-32 fl.oz. of Regalia Maxx using a minimum of 100 gallons of water per acre. Higher water volumes may be necessary to achieve thorough coverage after side arms develop. Do not apply more than 32 fl.oz. of product per acre per application. Apply adequate spray volume to achieve complete spray coverage. Use the higher rates when moderate to high disease pressure is present or expected.

Leafy Vegetable Crops such as Arugula, Beets, Celery, Chervil, Cilantro, Corn Salad, Cress, Dandelion, Dock, Edible Chrysanthemum, Endive, Fennel, Garden Peas, Head Lettuce, Leaf Lettuce, Parsley, Purslane, Radicchio, Rhubarb, Spinach Swiss Chard, and Watercress

Powdery Mildew (*Erysiphe cichoracearum*), Bacterial Blight/Rot (*Xanthomonas spp.*), Downy Mildew (*Bremia lactucae*, *Peronospora spp.*), White Rust (*Albugo occidentalis*), Sclerotinia Head and Leaf Drop (*Sclerotinia minor* and *Sclerotinia sclerotiorum*), and Pink Rot. Apply Regalia Maxx preventatively in 50 gallons of water per acre. Repeat applications at 7- to 14-day intervals.

For aerial application apply Regalia Maxx at 4-8 fl.oz. per acre in 5-10 gallons of water per acre.

Legumes/Vegetables such as Beans, Green Beans, Snap Beans, Shell Beans, Dry Beans, Garbanzo Beans, Lima Beans, Peas, Chick Peas, Split Peas, and Lentils

Powdery Mildew (*Erysiphe spp.*), Rust (*Uromyces appendiculatus*), White Mold (*Sclerotinia sclerotiorum*), Grey Mold (*Botrytis cinerea*), and Rust (*Puccinia spp.*). Apply Regalia Maxx preventatively in 20-100 gallons of water per acre. For improved performance, use Regalia Maxx in a tank mix or rotational program with another registered fungicide. Repeat applications at 7- to 14-day intervals.

Mint and Other Herbs/Spices such as Angelica, Balm, Basil, Borage, Burnet, Camomile, Catnip, Chervil, Chive, Clary, Coriander, Costmary, Cilantro, Curry, Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage, Marjoram, Nasturtium, Parsley (dried), Peppermint, Rosemary, Sage, Savory (summer and winter), Sweet Bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, and Wormwood

Rust (*Puccinia menthae*), Powdery Mildew (*Erysiphe spp.*), and Downy Mildew (*Peronospora spp.*). Apply Regalia Maxx preventatively in 50 gallons of water per acre. Repeat applications at 7- to 14-day intervals.

Olives

Olive Knot (*Pseudomonas savastanoi*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre. Repeat applications at 7- to 14-day intervals.

Dilute applications: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 150-400 gallons of water. Apply Regalia Maxx at a rate of 16-32 fl.oz. per acre when applied alone, or at 8-32 fl.oz. per acre when tank mixed with another fungicide in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material.

Peanuts

Early Leafspot (*Cercospora arachidicola*), Late Leafspot (*Cercospora personatum*), and White Mold (*Sclerotium rolfsii*). Apply Regalia Maxx preventatively in 20-50 gallons of water per acre. Repeat applications at 7- to 14-day intervals. Under moderate to heavy disease pressure, tank mix Regalia Maxx with another fungicide.

Pome Fruits such as Apple, Crabapple, Pear, Quince, and Mayhaw

Powdery Mildew (*Podospaera leucotricha*), Sooty Blotch (*Peltaster fructicola*, *Geastrumia polystigmatis* and *Leptodontium elatius*), Cedar-Apple Rust (*Gymnosporangium juniperi-virginianae*), Fire Blight (*Erwinia amylovora*), Scab (*Venturia spp.*), Brooks Spot (*Mycosphaerella pomi*), Bot Rot (*Botryosphaeria dothidea*), Bitter Rot (*Colletotrichum spp.*), Bull's Eye Rot (*Neofabraea spp.*), and Flyspeck (*Zygophiala*

jamaicensis). Apply Regalia Maxx in 50-100 gallons of water per acre. Begin application at petal fall, if conditions are conducive to disease development. Repeat applications on 7- to 10-day intervals. Additional sprays beyond second cover may be needed on susceptible varieties, or when environmental conditions are conducive to rapid disease development. Use high label rate and shorter spray intervals when conditions are conducive to rapid disease development.

Use caution when selecting spray adjuvants. Select only those adjuvants which through prior experience do not affect fruit finish when combined with Regalia Maxx.

Dilute applications: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 150-400 gallons of water. Apply Regalia Maxx at a rate of 16-32 fl.oz. per acre when applied alone, or at 8-32 fl.oz. per acre when tank mixed with another fungicide in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material.

Root, Tuber and Corm Crops such as Carrot, Potato, Sweet Potato, Beets, Ginger, Horseradish, Radish, Ginseng, and Turnip
Powdery Mildew (*Erysiphe* spp.), Downy Mildew (*Peronospora* spp.), Gray Mold (*Botrytis* spp.), and Bacterial Leaf Blight (*Xanthomonas campestris*). Apply Regalia Maxx in 50-100 gallons of water per acre sufficient to provide thorough coverage. Begin application soon after emergence or transplant, and when conditions are conducive to disease development. Repeat on a 7- to 10-day interval or as needed. Use shorter intervals when conditions are conducive to rapid disease development.

Early Blight (*Alternaria solani*), Black Root Rot/Black Crown Rot (*Alternaria* spp.), and Late Blight (*Phytophthora infestans*). For suppression, begin application of Regalia Maxx in 50-100 gallons of water per acre soon after emergence when conditions are conducive to disease development. Repeat on a 5- to 7-day interval or as needed. For improved performance, use Regalia Maxx in a tank mix with other registered fungicides.

Soybeans

Cercospora Blight (*Cercospora kikuchii*), Septoria Brown Spot (*Septoria glycines*), Frog-eyed Leaf Spot (*Cercospora sojina*), Asian Soybean Rust (*Phakopsora pachyrhizi*), and White Mold (*Sclerotinia* Stem Rot) (*Sclerotinia sclerotiorum*). For ground application on soybeans, apply 8-16 fl.oz. of Regalia Maxx preventatively in 15-40 gallons of water per acre. For aerial application on soybeans, apply 8-16 fl.oz. of Regalia Maxx in 5-10 gallons of water per acre. For improved performance, apply 4-16 fl.oz. Regalia Maxx in a tank mix with another registered fungicide. Consult your local Extension Specialist or Crop Consultant regarding the optimum timing of fungicide applications.

Stone Fruits such as Apricot, Cherry, Nectarine, Peach, Plum, and Prune

Anthraxnose (*Colletotrichum* spp.), Powdery Mildew (*Sphaerotheca pannosa*, *Podosphaera clandestina*, *Podosphaera* spp.), Rusty Spot (*Podosphaera leucotricha*), Bacterial Canker (*Pseudomonas* spp.), Alternaria Spot/Fruit Rot (*Alternaria alternata*), Scab (*Cladosporium carpophilum*), Brown Rot/Blossom Blight (*Monilinia laxa*), Fruit Brown Rot (*Monilinia fruticola*), Gray Mold (*Botrytis cinerea*), and Shot Hole (*Wilsonomyces carpophilus*, *Xanthomonas pruni*, *Blumeriella jaapii* and *Cercospora* spp.).

Apply Regalia Maxx preventatively in 50-100 gallons of water per acre.

Brown Rot/Blossom Blight – Begin application of Regalia Maxx in 50-100 gallons of water per acre at early bloom, and repeat through petal fall on a 7-day interval or as needed.

Scab – Begin application of Regalia Maxx in 50-100 gallons of water per acre at petal fall, and repeat on a 7- to 10-day interval or as needed.

Bacterial Blight – Apply Regalia Maxx in 50-100 gallons of water per acre postharvest before Fall rains.

Powdery Mildew – Begin application of Regalia Maxx in 50-100 gallons of water per acre at popcorn stage, and repeat on a 7-day interval or as needed. For improved performance, use Regalia Maxx in a tank mix or rotational program with other registered fungicides for powdery mildew control.

For all other diseases – Begin application prior to disease development when environmental conditions and plant stage are conducive to rapid disease development, and repeat on a 7- to 10-day interval or as needed. Use in a tank mix or rotational program when disease conditions are severe.

Dilute applications: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 150-400 gallons of water. Apply Regalia Maxx at a rate of 16-32 fl.oz. per acre when applied alone, or at 8-32 fl.oz. per acre when tank mixed with another fungicide in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material.

Strawberries

Powdery Mildew (*Sphaerotheca* spp.), Leaf Spot (*Mycosphaerella fragariae*), Botrytis (*Botrytis cinerea*), Anthracnose (*Collectotrichum acutatum*), and Phomopsis Leaf Blight (*Phomopsis obscurans*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre at 7- to 14-day spray intervals or as soon as first symptoms of disease appear.

For suppression of anthracnose – Apply Regalia Maxx preventatively in 50 to 100 gallons of water per acre and repeat on a 7- to 10-day interval or as needed. For best performance, tank mix Regalia Maxx with other registered fungicides for anthracnose control.

Tree Nut Crops

Almond, Pistachio, Pecan, Filbert, Chestnut, Cashew, Beechnut, Butternut, Macadamia

Anthraxnose (*Collectotrichum gloeosporioides*, *C. ananas*, and *C. acutatum*), Scab (*Sphaceloma perseae* and *Cladosporium carpophilum*), Bacterial Canker (*Pseudomonas syringae*), Brown Rot (*Monilinia* spp.), Alternaria Leaf Spot (*Alternaria* spp.), and Botryosphaeria Blight

(*Botryosphaeria dothidea*). Apply Regalia Maxx in 50-100 gallons of water per acre. Regalia Maxx can be tank mixed at the lower rate with another registered fungicide under heavy disease pressure.

Walnuts

Bacterial Blight (*Xanthomonas campestris*), Anthracnose (*Gnomonia leptostyla*), Bacterial Canker (*Erwinia nigrifluens*), and Shothole (*Wilsonmyces carpophilus*, *Xanthomonas pruni*, *Blumeriella gaapi*, *Cercospora spp.*). For preventative control, apply Regalia Maxx in 50-100 gallons of water per acre. Repeat applications at 7- to 10-day intervals. Under conditions of heavy disease pressure, tank mix Regalia Maxx with a copper-based fungicide.

Dilute applications: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 150-400 gallons of water. Apply Regalia Maxx at a rate of 16-32 fl.oz. per acre when applied alone, or at 8-32 fl.oz. per acre when tank mixed with another fungicide in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material.

Tropical Fruits such as Avocado, Mango, Papaya, Plantain, Pineapple, Banana, Pomegranate, and Kiwi

Botrytis Fruit Rot (*Botrytis cinerea*), Bacterial Blight (*Pseudomonas viridiflava* and *Pseudomonas syringae*), Sigatoka (*Mycosphaerella fijiensis*), Anthracnose (*Colletotrichum gloeosporioides*), Scab (*Elsinoe mangiferae*), and Bacterial Canker (*Xanthomonas campestris*). Apply Regalia Maxx preventatively in 50-100 gallons of water per acre. Repeat applications at 7- to 14-day intervals.

Dilute applications: Regalia Maxx can be applied by ground equipment to vine and tree crops in dilute applications of 150-400 gallons of water. Apply Regalia Maxx at a rate of 16-32 fl.oz. per acre when applied alone, or at 8-32 fl.oz. per acre when tank mixed with another fungicide in dilute applications to the point of runoff. Avoid excessive amounts of water that result in the runoff of spray material.

INTEGRATED PEST MANAGEMENT (IPM)

Many conventional fungicides have been tested in an IPM regime with Regalia Maxx with very satisfactory results. One of the major objectives of IPM has been to reduce the probability of disease resistance development to a particular active ingredient.

The alternate use of Regalia Maxx (1-2 sprays) followed by a conventional, registered fungicide (1-2 sprays) has been successfully used in many crops. In addition, the use of tank mixes with a conventional fungicide has been successful.

Follow label instructions of the particular registered product: Do not exceed amounts or treatment intervals on the label.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place. Avoid freezing.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Disposal: Non-refillable container. Do not reuse or refill this container.

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 ¼ 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.

**Marrone Bio Innovations
WARRANTY**

To the extent permitted by applicable law, the seller makes no warranty, expressed or implied, of merchantability, fitness or otherwise concerning use of this product. The user assumes all risks of use, storage or handling that are not in strict accordance with the accompanying directions.

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