

# beetle **GONE!** *Target the pest!* **tlc** **WATER DISPERSIBLE FORMULA**

**BIOLOGICAL INSECT CONTROL**

## Selectively Controls Japanese Beetle and other Invaders in Residential, Commercial, Public Landscapes or Farms including on Edible Plants

**ACTIVE INGREDIENT:** Bacillus thuringiensis subsp. galleriae, Strain SDS-502 fermentation solids, spores, and insecticidal toxins\* .....76.5% w/w  
**OTHER INGREDIENTS:** .....23.5% w/w  
**TOTAL:** .....100.0% w/w  
 \*Contains a minimum of 0.85 x 10<sup>10</sup> CFU per gram.



**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

See additional panels for precautionary statements.

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
If on skin or clothing:	<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>
If swallowed:	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. For emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm. Pacific Time (NPIC website: <a href="http://www.npic.orst.edu">www.npic.orst.edu</a> ). During other times, call your poison control center at 1-800-222-1222.	



Net Weight 5 lbs.

Batch Number:

**EPA Reg No.:** 88347-3

**EPA Est. No.:**  70051-CA-001,  87448-OH-01,  48498-CA-2,  002375-WI-002,  63416-MN-1,  084544-MI-1,  0669431-OH-001,  84760-LA-1

**Manufactured by:**  
**Phyllom BioProducts**



Phyllom BioProducts Corp.  
 484 Lake Park Ave #23  
 Oakland, CA 94610  
 Tel: 650.322.5000  
 Email: [products@phyllom.com](mailto:products@phyllom.com)

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## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS **CAUTION**

Causes moderate eye irritation. Harmful if absorbed through the skin or swallowed. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and handlers must wear: • Long-sleeved shirt and long pants • Waterproof gloves • Shoes plus socks

Mixers/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from laundry.

## USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

For terrestrial uses: 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 washwaters or rinsate. This product must not be applied aerially within ¼ mile of any habitats of threatened or endangered Lepidoptera or Coleoptera. No manual application can be made within 300 feet of any threatened or endangered Lepidoptera or Coleoptera.

## 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 State or Tribal agency responsible for pesticide regulation.

Read the entire label before use.

## 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 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

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Applications to plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or parks, on golf courses, or on public or private lawns or grounds are not within the scope of the Worker Protection Standard.

Keep unprotected persons, children, and pets out of treated area until sprays have dried.



# Target the pest!

## PRODUCT INFORMATION

**beetleGONE!® tlc** is a water dispersible formula with a high level of activity against certain beetle pests, including those in the families Buprestidae, Scarabaeidae, Chrysomelidae and Curculionidae. The active ingredient of **beetleGONE!® tlc** will control certain beetles upon ingestion. Susceptible beetles will cease feeding within hours of ingestion of the active ingredient and typically die within 5 days

**Application:** Apply **beetleGONE!® tlc** by pressurized backpack, ground, chemigation, or aerial application equipment with quantities of water sufficient to provide thorough coverage of plant foliage to be protected without excessive runoff. The amount of water needed per acre will depend upon the site, amount of foliage, weather, spray equipment, and local experience. Avoiding spray drift at the application site is the responsibility of the applicator.

**Mixing:** Fill sprayer or mixing tank half full of water. Begin agitation, and pour **beetleGONE!® tlc** into water while maintaining continuous agitation. Add other compatible spray materials (if any) and balance of water. Agitate as necessary to maintain suspension. When mixing **beetleGONE!® tlc** with any other registered pesticide products, always read and follow all use directions, restrictions, and precautions of both **beetleGONE!® tlc** and the mix partner(s). The resulting mix must be in accordance with the most restrictive label limitations and precautions. Do not exceed label dosage rates. Do not allow diluted mixture to remain in the sprayer or tank for more than 24 hours.

To improve dispersion and adhesion of the spray deposits for difficult-to-wet foliage or plant surfaces, consider using an approved spreader-sticker. Combinations with commonly used adjuvants are generally not deleterious to **beetleGONE!® tlc**, if the mix is used promptly. Before mixing in the sprayer or tank, identify possible problems with physical compatibility by mixing all components in a small container in proportionate quantities.

## AERIAL DRIFT REDUCTION INFORMATION

**General:** Avoiding spray drift at the application site is the responsibility of the applicator. The interactions 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.

Do not apply directly to aquatic habitats (such as, but not limited to: lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

**Information on Droplet Size:** Use only medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a larger droplet size. The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the 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:** **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher tayed flows produce larger droplet. **Pressure** - Do not exceed the nozzle manufacturer's specified 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.

**Application Height:** Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.

**Swath Adjustment:** When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind 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:** Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph. 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.

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## **AERIAL DRIFT REDUCTION INFORMATION** (continued)

**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., 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).

## **CHEMIGATION APPLICATION INSTRUCTIONS**

**beetleGONE! tlc** may be used alone or in combination with other spray materials. Fill mixing tank half full of water. Begin agitation, and pour **beetleGONE! tlc** into water while maintaining continuous agitation. Add other compatible spray materials (if any) and balance of water. Agitate as necessary to maintain suspension. When mixing **beetleGONE! tlc** with any other registered pesticide products, always read and follow all use directions, restrictions, and precautions of both **beetleGONE! tlc** and the mix partner(s). The resulting mix must be in accordance with the most restrictive label limitations and precautions. Do not exceed label dosage rates. Do not allow diluted mixture to remain in the mixing tank for more than 24 hours.

To improve dispersion and adhesion of the spray deposits for difficult-to-wet foliage or plant surfaces, consider using an approved spreader-sticker. Combinations with commonly used spray tank adjuvants are generally not deleterious to **beetleGONE! tlc**, if the mix is used promptly. Before mixing in the spray tank, identify possible problems with physical compatibility by mixing all components in a small container in proportionate quantities.

### **General Chemigation Requirements**

- 1) Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move, or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
- 2) Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
- 3) If you have questions about calibration, you should contact your State Extension Service specialists, equipment manufacturers or other experts.
- 4) 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.
- 5) 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.

### **Specific Requirements for Chemigation Systems Connected to Public Water Systems**

- 1) 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.
- 2) Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the 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.
- 3) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 4) 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.
- 5) The system 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.
- 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.



# Target the pest!

## CHEMIGATION APPLICATION INSTRUCTIONS (continued)

### Specific Requirements for Sprinkler Chemigation

- 1) The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- 2) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5) The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.

### Specific Requirements for Drip (Trickle) Chemigation

- 1) The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- 2) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5) The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### Application Instructions for All Types of Chemigation

- 1) Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues, may cause product to lose effectiveness or strength.
- 2) Determine the treatment rates as indicated in the directions for use and make proper dilutions.
- 3) Prepare a solution in the chemical tank by filling the tank with the required water and then adding product as required. Utilize agitation to keep solution in suspension.

### Application Instructions for Sprinkler Chemigation

- 1) Set the sprinkler to deliver a minimum of 0.1 to 0.3 inch of water per acre.
  - 2) Start the sprinkler and uniformly inject the suspension of **beetleGONE!® tlc** into the irrigation water line so as to deliver the desired rate of **beetleGONE!® tlc** per acre.
- Inject the suspension of **beetleGONE!® tlc** with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. **beetleGONE!® tlc** is to be metered continuously for the duration of the water application.

### Application Instructions for Drip Chemigation

- 1) Check to be sure that the system provides a uniform water flow.
- 2) Irrigate crop with sufficient water to wet the root zone. Then, begin flow of the solution containing product from the chemical tank for a period to uniformly distribute the material. Discontinue flow of the **beetleGONE!® tlc** mixture, and let the system continue to run only as necessary to purge the line with fresh water. Let the **beetleGONE!® tlc** solution remain in the root zone of the crop.

# beetle **GONE!**® tlc

## APPLICATION TO ORNAMENTAL PLANTS AND TURF GRASS

**Sites of Application:** **BeetleGONE!® tlc** can be used for applications to the foliage of ornamental plants (e.g., trees and shrubs) to control adult beetles and to turf grass to control beetle larvae found in, on and/or adjacent to golf courses, residential and commercial grounds (e.g., office and shopping complexes and airports), parks, playgrounds, nurseries, greenhouses, and agricultural fields. **BeetleGONE!® tlc** can also be used for drench, media mixing and plant root ball applications to the soils or growing media of potted plants to control beetle larvae.

**Apply BeetleGONE!® tlc** by pressurized backpack, ground or aerial application equipment with quantities of water sufficient to provide thorough coverage of plant foliage to be protected without excessive runoff. The minimum amount of water needed per acre will depend upon the site, amount of foliage, weather, spray equipment, and local experience. Avoiding spray drift at the application site is the responsibility of the applicator.

**Spot Spray and Application to Individual Plants:** Use 0.25 to 1.5 pounds of **BeetleGONE!® tlc** per gallon of water to spray the foliage of plants.

**Ground Spray Application:** Apply 2.5 to 17.5 pounds of **BeetleGONE!® tlc** per acre per application in up to the following amounts of water:

High volume hydraulic sprayers: up to 100 gallons of water per acre.

Low volume mist blowers: up to 30 gallons of water per acre.

**Soil Drench Application to Potted Plants:** Apply 0.125 to 0.5 pounds of **BeetleGONE!® tlc** per gallon of water. Drench the soil of the potted plant with a volume of BeetleGONE tlc - water solution equal to 1/5 container volume.

**Media Incorporation Application:** Apply 0.125 to 0.5 pounds of **BeetleGONE!® tlc** per gallon of water. Apply a volume of BeetleGONE tlc - water solution equal to 1/5 soil (growing or potting media) volume in the soil mixer.

**Plant Root Dip Application:** Mix a BeetleGONE!® tlc – water slurry inside a plastic bag or other container by kneading until all clumps are thoroughly mixed with water. Stir the slurry into a larger volume of water in a 30 gallon vessel which will be used for dipping the plants. The final concentration of **BeetleGONE!® tlc** to be in the range of: 1 ounce (0.0625 pounds) to 4 ounces (0.25 pounds) per gallon of water. Periodically stir the contents of the dipping vessel to re-suspend the **BeetleGONE!® tlc** in the dip solution. Following dipping, plants can be planted or stored over winter by covering with an overwintering blanket to protect roots from freezing weather during the winter months in accordance with standard nursery plant handling procedures.

**Ground Application to Turf Grass:** Apply 0.25 to 0.75 pounds of **BeetleGONE!® tlc** per 1000 ft<sup>2</sup> per application in up to 5 to 10 gallons of water. Excessively wet or dry conditions may impact the performance of **BeetleGONE!® tlc** against annual white grubs, bluegrass weevils and billbugs. **BeetleGONE!® tlc** must move to the site of insect pest infestation, such as in the root zone of the host plant. Sprinkler irrigation of about 0.5 inch or moderate rainfall shortly after application improves performance for all applications by moving **BeetleGONE!® tlc** into the root zone where annual white grubs, bluegrass weevils and billbugs feed. Do not mow the turf until the treated area has been irrigated or moderate rainfall has occurred so that the product is not removed from the treated area.

**Aerial Application:** Apply 1.5 to 10 pounds of **BeetleGONE!® tlc** per acre per application in 1 to 10 gallons of water per acre.

**Mixing:** Fill sprayer or mixing tank half full of water. Begin agitation, and pour **BeetleGONE!® tlc** into water while maintaining continuous agitation. Add other compatible spray materials (if any) and balance of water. Agitate as necessary to maintain suspension. When mixing **BeetleGONE!® tlc** with any other registered pesticide products, always read and follow all use directions, restrictions, and precautions of both **BeetleGONE!® tlc** and the mix partner(s). The resulting mix must be in accordance with the most restrictive label limitations and precautions. Do not exceed label dosage rates. Do not allow diluted mixture to remain in the sprayer or tank for more than 24 hours.

To improve dispersion and adhesion of the spray deposits for difficult-to-wet foliage or plant surfaces, consider using an approved spreader-sticker. Combinations with commonly used adjuvants are generally not deleterious to **BeetleGONE!® tlc**, if the mix is used promptly. Before mixing in the sprayer or tank, identify possible problems with physical compatibility by mixing all components in a small container in proportionate quantities.

**Application Timing on Ornamental Plants, Trees and Bushes to control Adult Beetles:** To help manage populations of adult beetles, begin **BeetleGONE!® tlc** applications after adult emergence but in advance of the peak of adult flight for the target insect species as determined by degree day models, pest surveys or pest trapping programs. Repeat applications as often as necessary to reduce beetle populations to threshold levels through the season. Consult with local, state and federal specialists or your state cooperative extension service to access information related to predictive models and/or surveys that predict the best timing of applications against target insect pests.

# Target the pest!

Insect Pests	Application Timing of BeetleGONE!® tlc	Application Rate of BeetleGONE!® tlc
<p><b>Beetle Adults of:</b></p> <ul style="list-style-type: none"> <li>• Asiatic garden beetle (Maladera castanea)</li> <li>• Gold spotted oak borer (Agrilus coxalis auroguttatus)</li> <li>• Green June beetle (Cotinis nitida)</li> <li>• Japanese beetle (Popillia japonica)</li> <li>• May or June beetle (Phyllophaga sp.)</li> <li>• Oriental beetle (Anomala orientalis)</li> <li>• Soap berry-borer (Agrilus prionurus)</li> </ul>	<p>Begin applications when adult beetles emerge and reach threshold levels on susceptible plants.</p> <p>For optimum control, repeat applications as often as necessary to reduce beetle populations to threshold levels through the season.</p>	<p><b>Ground Application:</b> Apply 2.5 - 17.5 pounds of BeetleGONE!® tlc per acre per application in up to 30 gallons (for low volume mist blowers) or 100 gallons (for high volume hydraulic sprayers) of water per acre.</p> <p><b>Aerial Application:</b> Apply 1.5 - 10 pounds of BeetleGONE!® tlc per acre per application in 1 - 10 gallons of water per acre.</p> <p><b>Spot Spray to Individual Plants:</b> Apply 0.25 - 1.5 pounds of BeetleGONE!® tlc per gallon of water.</p> <p>For all applications, apply in an adequate amount of water to obtain thorough coverage of plant foliage without excessive runoff</p>

**Application Timing on Turf Grass and Potted Plants to control Beetle Larvae:** BeetleGONE!® tlc is effective when applied at label rates (see table directly below) to control annual white grubs, bluegrass weevils and billbugs. To prevent their damage to turf and potted plants. To control annual white grubs, bluegrass weevils and billbugs, apply BeetleGONE!® tlc when target insects are present. For optimum control, apply BeetleGONE!® tlc from peak adult flight through peak egg hatch of the primary insect species being targeted. For specific information about developmental stages of the target insect pest, associated damage, and action thresholds to properly time applications, consult with your State Cooperative Extension Service.

Insect Pests	Application Timing of BeetleGONE!® tlc	Application Rate of BeetleGONE!® tlc
<p>Larvae (annual white grubs) of:</p> <ul style="list-style-type: none"> <li>• Annual blue grass weevil (Listronotus maculicollis)</li> <li>• Asiatic garden beetle (Maladera castanea)</li> <li>• European chafer (Rhizotrogus majalis)</li> <li>• Green June beetle (Cotinis nitida)</li> <li>• Japanese beetle (Popillia japonica)</li> <li>• May or June beetle (Phyllophaga sp.)</li> <li>• Northern masked chafer (Cyclocephala borealis)</li> <li>• Oriental beetle (Anomala orientalis)</li> <li>• Southern masked chafer (Cyclocephala lurida)</li> <li>• Billbug (Curculionioidea)</li> </ul>	<p>Apply when insects of the insect species being targeted are present.</p> <p>For optimum control, apply from peak adult flight to peak egg hatch of the primary insect species being targeted.</p> <p>Additional applications may be made no earlier than 7 days after the preceding application as long as the annual maximum restriction on BeetleGONE!® tlc used (i.e., 17.5 pounds per acre is not exceeded).</p>	<p><b>Ground Application to Turf Grass:</b> Apply 0.25 to 0.75 pounds of BeetleGONE!® tlc per 1000 ft<sup>2</sup> per application in up to 5 to 10 gallons of water.</p> <p><b>Soil Drench Application to Potted Plants:</b> Apply 0.125 to 0.5 pounds of BeetleGONE!® tlc per 1 gallon water per application. BeetleGONE!® tlc - water solution volume equals 1/5 plant container volume.</p> <p><b>Media Incorporation Application:</b> Apply 0.125 to 0.5 pounds of BeetleGONE!® tlc per 1 gallon water per application. BeetleGONE!® tlc - water solution volume equals 1/5 soil (growing or potting media) volume.</p> <p><b>Plant Root Dip Application:</b> Dip plant root ball in a suspension of BeetleGONE!® tlc of 1 ounce (0.0625 pounds) to 4 ounces (0.25 pounds) per gallon of water. Following dipping, plants can be planted or stored over winter by covering with an overwintering blanket to protect roots from freezing weather during the winter months in accordance with standard nursery plant handling procedures.</p>

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## APPLICATION TO FOOD AND ANIMAL FEED CROPS

**beetleGONE!® tlc** may be used for insect control on preharvest food and animal feed crops; 40 CFR § 180.1011 exempts the viable spores of *Bacillus thuringiensis* from the requirement of a tolerance.

**beetleGONE!® tlc** is a pesticide product based on the active ingredient, *Bacillus thuringiensis* subsp. *galleriae*, Strain SDS-502. The active ingredient must be ingested by insects to be effective. To ensure maximum effectiveness of **beetleGONE!® tlc**, time applications so that insect larvae or adults feeding on the surface of the foliage or fruit come in contact with and eat the product. Repeat applications as necessary until insect pest pressure is below economic threshold levels.

**beetleGONE!® tlc** must be used at the application rates specified in the table ("Application Rates for Selected Crops") directly below. Fill your sprayer or mixing tank partially with water. Next, add the specified amount of **beetleGONE!® tlc** to the sprayer or mixing tank while vigorously agitating and/or recirculating the spray solution to ensure a uniform dispersion of **beetleGONE!® tlc** in the solution. Apply in sufficient water to thoroughly wet the crop foliage and avoid excessive runoff. Repeat as often as necessary to maintain control through the season. Consult with local crop specialists or your cooperative extension service to access information related to predictive models that predict the best timing of applications against beetle and/or weevil insect pests.

**beetleGONE!® tlc** may be used in integrated pest management (IPM) programs with other insect control products, as long as prior use or experience has demonstrated compatibility. Spray tank pH should be maintained near neutral. 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 of these factors when making decisions

### Application Rates for Selected Crops

**beetleGONE!® tlc Pre-harvest Interval (PHI) = 0 days for all crops on this label**

Crop or Crop Group	Insect Pests: Certain Coleoptera Beetles or Weevils	Application Rate of beetleGONE!® tlc (lb/A)
<u>Root and tuber vegetables group:</u> arracacha, arrowroot, Chinese artichoke, Jerusalem artichoke, garden beet, sugar beet, edible burdock, edible canna, carrot, bitter and sweet cassava, celeriac, chayote (root), turnip-rooted chervil, chicory, chufa, dasheen (taro), ginger, ginseng, horseradish, leren, turnip-rooted parsley, parsnip, potato, radish, Oriental radish (daikon), rutabaga, salsify, black salsify, Spanish salsify, skirret, sweet potato, taniel, turmeric, turnip, yam bean, true yam.	Sweet potato weevil, Japanese beetle, Asiatic garden beetle	2.5 - 17.5
<u>Leaves of root and tuber vegetables group (human food or animal feed):</u> garden beet, sugar beet, edible burdock, carrot, bitter and sweet cassava, celeriac, turnip-rooted chervil, chicory, dasheen (taro), parsnip, radish, Oriental radish (daikon), rutabaga, black salsify, sweet potato, taniel, turnip, true yam.	Sweet potato weevil, Japanese beetle, Asiatic garden beetle	1 - 17.5
<u>Leafy vegetables (except brassica) group:</u> amaranth (Chinese spinach), arugula (rocket), cardoon, celery, celtuce, chervil, edible-leaved and garland chrysanthemum, corn salad, garden and upland cress, dandelion, dock (sorrel), endive (escarole), Florence fennel, head and leaf lettuce, orach, parsley, garden and winter purslane, radicchio (red chicory), rhubarb, New Zealand and vine spinach, Swiss chard.	Japanese beetle	1 - 17.5
<u>Brassica (cole) leafy vegetables group:</u> broccoli, Chinese broccoli (gai ion), broccoli raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), cauliflower, cavalo broccolo, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.	Japanese beetle	1 - 17.5
<u>Legume vegetables (succulent or dried) group:</u> bean ( <i>Lupinus</i> spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin), bean ( <i>Phaseolus</i> spp.) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), bean ( <i>Vigna</i> spp.) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), broad bean (fava), chickpea (garbanzo), guar, jackbean, lablab bean, lentil, pea ( <i>Pisum</i> spp.) (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea), pigeon pea, soybean, soybean (immature seed), sword bean.	Japanese beetle, Asiatic garden beetle	1 - 17.5





# Target the pest!

Crop or Crop Group	Insect Pests: Certain Coleoptera Beetles or Weevils	Application Rate of beetleGONE® tk (lb/A)
<p><u>Foliage of legume vegetables group:</u> Any cultivar of bean (<i>Phaseolus</i> spp.) and field pea (<i>Pisum</i> spp.) and soybean (<i>Glycine max</i>).</p>	Japanese beetle, Asiatic garden beetle	1 - 17.5
<p><u>Fruiting vegetables (except cucurbits) group:</u> African eggplant, bush tomato, bell pepper, cocona, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, martynia, naranjilla, okra, pea eggplant, pepino, nonbell pepper, roselle, scarlet eggplant, sunberry, tomatillo, tomato, tree tomato (includes cultivars, varieties, and/or hybrids of these fruiting vegetables).</p>	Japanese beetle, Pepper weevil	1 - 17.5
<p><u>Cucurbit vegetables group:</u> Chayote (fruit), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkin, edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Momordica spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), muskmelon (includes cantaloupe), pumpkin, summer squash, winter squash (includes butternut squash, calabaza, Hubbard squash, acorn squash, spaghetti squash), watermelon.</p>	Japanese beetle	1 - 17.5
<p><u>Citrus fruits group:</u> calamondin, citron, citrus hybrids (includes chironja, tangelo, tangor), grapefruit, kumquat, lemon, lime, mandarin (tangerine), sour and sweet orange, pummelo, Satsuma mandarin.</p>	Citrus root weevil	5 - 17.5
<p><u>Pome fruits group:</u> apple, azarole, crabapple, loquat, mayhaw, medlar, pear, Asian pear, quince, Chinese and Japanese quince, tejocote (includes cultivars, varieties, and/or hybrids of these pome fruit).</p>	Japanese beetle	1 - 17.5
<p><u>Stone fruits group:</u> apricot, sweet and tart cherry, nectarine, peach, Chickasaw plum, Damson plum, Japanese plum, plumcot, prune (fresh).</p>	Japanese beetle	1 - 17.5
<p><u>Berry and small fruits group:</u> amur river grape, aronia berry, bayberry, bearberry, bilberry, blackberry (<i>Rubus</i> spp.) (includes Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora, and cultivars, varieties and/or hybrids of these), highbush and lowbush blueberry, buffalo currant, buffaloberry, the, Chilean guava, chokecherry, doudberry, cranberry, highbush cranberry, black and red currant, elderberry, European barberry, gooseberry, grape, edible honeysuckle, huckleberry, jostaberry, Juneberry (Saskatoon berry), fuzzy and hardy kiwifruit, lingonberry, maypop, mountain pepper berries, mulberry, muntries, native currant, partridgeberry, phalsa, pincherry, black and red raspberry, riberry, salal, schisandra berry, sea buckthorn, serviceberry, strawberry, wild raspberry (includes cultivars, varieties, and/or hybrids of these berries and small fruit).</p>	Strawberry root weevil, Japanese beetle, Oriental beetle	1 - 17.5
<p><u>Tree nuts group:</u> almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert (hazelnut), hickory nut, macadamia nut, pecan, black and English walnut.</p>	Pecan weevil, Filbert weevil	5 - 17.5
<p><u>Cereal grains group:</u> barley, buckwheat, corn, pearl and proso millet, oats, popcorn, rice, rye, sorghum (milo), teosinte, triticale, wheat, wild rice.</p>	Rice water weevil, Japanese beetle, Asiatic garden beetle	1 - 17.5
<p><u>Forage, fodder and straw of cereal grains group:</u> Forage, fodder and straw of all commodities included in the cereal grains group.</p>	Japanese beetle, Asiatic garden beetle	1 - 17.5
<p><u>Grass forage, fodder and hay group:</u> any grass, Gramineae family (either green or cured), except sugarcane and those included in the cereal grains group, that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage.</p>	Japanese beetle, Asiatic garden beetle	1 - 17.5

# beetle **GONE!**® tlc

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<i>Nongrass animal feeds (forage, fodder, straw and hay) group:</i> alfalfa, velvet bean, clover (Trifolium spp., Melilotus spp.), kudzu, lespedeza, lupin, sainfoin, trefoil, vetch, crown vetch, milk vetch.	Alfalfa weevil, Clover weevil, Asiatic garden beetle, Japanese beetle	1 - 17.5
<i>Herbs and spices group:</i> allspice, angelica, anise, star anise, annatto (seed), balm, basil, borage, burnet, camomile, caper buds, caraway, black caraway, cardamom, cassia bark, cassia buds, catnip, celery seed, chervil (dried), chive, Chinese chive, cinnamon, clary, clove buds, coriander leaf (cilantro or Chinese parsley), coriander seed (cilantro), costmary, culantro (leaf), culantro (seed), cumin, curry (leaf), dill (dillweed), dill (seed), fennel (common), Florence fennel (seed), fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage (leaf), lovage (seed), mace, marigold, marjoram, mustard (seed), nasturtium, nutmeg, parsley (dried), pennyroyal, black and white pepper, poppy (seed), rosemary, rue, saffron, sage, summer and winter savory, sweet bay, tansy, tarragon, thyme, vanilla, wintergreen, woodruff, wormwood.	Japanese beetle	1 - 17.5
<i>Oilseed group:</i> borage, calendula, castor oil plant, Chinese tallowtree, cottonseed, crambe, cuphea, echium, euphorbia, evening primrose, flax seed, gold of pleasure, hare's ear mustard, jujoba, Jesquerella, lunaria, meadowfoam, milkweed, mustard seed, niger seed, oil radish, poppy seed, rapeseed, rose hip, safflower, sesame, stokes aster, sunflower, sweet rocket, tallowwood, tea oil plant, vermonia (includes cultivars, varieties, and/or hybrids of these oilseeds).	Japanese beetle	1 - 17.5
Avocado, papaya, star apple, black sapote, mango, sapodilla, canistel, mamey sapote.	Tea shot-hole borer	5 - 17.5
Banana and plaintain	Root weevil	5 - 17.5
Guava, fejoa, jaboticaba, wax jambu, starfruit, passionfruit, acerola.	Root weevil	5 - 17.5
Lychee, longan, Spanish lime, rambutan, pulasan, sugar apple, cherimoya, atemoya, custard apple, ilama, soursoop, biriba.	Root weevil	5 - 17.5
Sugarcane	Sugarcane beetle	5 - 17.5
Coffee	Coffee berry borer	2.5 - 17.5
Peppermint and spearmint	Strawberry root weevil	1 - 17.5

## STORAGE AND DISPOSAL

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

<b>PESTICIDE STORAGE</b>	Store in a cool, dry place inaccessible to children.
<b>PESTICIDE DISPOSAL</b>	Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
<b>CONTAINER HANDLING</b>	Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then, offer for recycling if available, dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## WARRANTY AND LIMITATION OF DAMAGES

Phyllom BioProducts Corporation warrants that the material contained in this package conforms to the description on this label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in use of this product are beyond the control of the seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage, or handling of this material not in accordance with the directions on this label. To the extent consistent with applicable law, buyer assumes all risks. Phyllom BioProducts Corporation makes no other express or implied warranty of the fitness or merchantability of this product.



*Target the pest!*

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