



Forest Invasives

Home & Garden / T&O

Phyllom BioProducts

Protecting Forests, Farms and Landscapes®

Target the Pest, Not the Rest!®

With A Leader in Safe, High-Performing, Targeted
Beetle, Weevil and Borer Controls

2025 Product Catalog

www.phyllombioproductions.com



AG Crops

v. 9/20/24

Poultry Farming



RECLAIM YOUR YARD & GARDEN

Natural. Effective. Targeted.

Our patented strain of Bt is:

- Highly effective at controlling grub, beetle, weevil & borer invaders.
- Safe for kids, pets, bees, butterflies, ladybugs, birds, fish & earthworms.
- Used in organic farming; so use beetleGONE! in your fruit and vegetable garden too!

grubGONE![®]G

Spread Granule. Irrigate into Turf.

Use grubGONE! during springtime to control grubs that have overwintered & are now feeding on the roots of your turf.



Apply beetleGONE! on foliage in order to control beetles feeding on fruits, vegetables, roses & other ornamental flowers, plants & trees.



beetleGONE![®]tlc FOR ORGANIC GARDENING

Mix With Water. Apply to Foliage, Soil or Turf.

Apply grubGONE! midsummer or fall to control newly hatched grubs & prevent turf damage caused by secondary foragers while also reducing the grub population before next year.



grubGONE![®]G

beetleGONE![®]tlc

grubGONE![®]G

Spring Through Late June

Late June to Mid August

July to Mid October

The New Standard for PERFORMANCE & SAFETY

- Target grubs with the High-Performing, Natural Protein BTG & kill grubs within days.
- Adding to the power of BTG are 1000x more spores per pound than Milky Spore[®] Products.
- Does not contaminate soil or groundwater nor put your children and pets at risk.
- Controls the grubs of all Scarab beetles & other listed turf insects, not just Japanese beetle.
- No need to sacrifice the high performance of leading chemicals for safety.
- Much higher performance than oils, nematodes & milky spore products.
- Better than GrubEx[®] (chlorantraniliprole) in the Summer and Fall.



Target the Pest . . . Not the Rest![®]

APPLY EVEN WHEN BEES AND OTHER BENEFICIALS ARE ACTIVE



INTERESTED?

In Becoming A Retailer



beetleGONE.com/pages/retailer

Growers, Landscapers & Arborists

Effectively target devastating insects such as: all Scarab Grubs & Beetles, Annual Bluegrass Weevils, Billbugs, Leaf & Darkling Beetles, Weevils like Alfalfa & Rice Water, Borers like Emerald Ash & Oak and more!!



beetleGONE![®]ag

FOR ORGANIC PRODUCTION

Kills a variety of agricultural crop insect pests.

FOR PRICING CALL: 650-296-2574



To help Our Valued Distributor and Retailer Customers strive to successfully close a higher rate of sales while also maintaining a high level of End User Customer satisfaction, we have included the next 3 documents in this Catalog to show You some of the digital & print marketing content we will provide for You if requested (digital ads, videos, in-store posters, tech sheets, articles, etc) and Market Analysis to describe the Value of Our Products including details of why Homeowners and Pros Landscapers & Growers alike are enthusiastic about our Product Offering. We also provide a Competitive Product Analysis based on the criterion, Performance-Safety-Price, to help the Sellers of PBC Products better guide their Customers to purchase the products that suit their needs best. We hope you find the following information helpful. Good Luck with business in 2025!

John Libs, Owner/Co-Founder Phyllom BioProducts (PBC)

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Natural. Effective. Targeted.



grubGONE!®G is the only nonchemical that effectively controls turf grubs from spring through fall, grubGONE! works not only against first-instar grubs but also against larger and hardier second- and third-instar grubs. **Harness the Power of Mother Nature with BTG: The BioPesticide Inside®.** grubGONE! therefore reduces populations of destructive grubs during spring-summer and helps to reduce secondary foraging in summer-fall. This easy-to-apply granule is **highly effective in controlling all types of scarab beetle grubs (such as chafers and Japanese beetles), billbugs, and bluegrass weevils in lawns without harming homeowners, pets, pollinators, earthworms, or wildlife. grubGONE! does not contaminate the soil or groundwater such as wells, streams, ponds, and lakes whereas the leading chemical products do.**



beetleGONE!®tlc Spray is used for highly effective organic control of adult beetles, weevils and borers without harming bees, butterflies or ladybugs. **Target the Pest, Not the Rest!®** For organic gardening. Mix in water and spray on edible garden plants, ornamental plants, trees or turf. beetleGONE! can also be mixed into or sprayed on potting or garden soil to control beetle grubs. With a zero-day preharvest interval you can treat for beetles and harvest your food the same day. And there are no label restrictions for use around bees or flowering plants; therefore, **beetleGONE! can be safely used while pollinators are active. This is the only non-chemical spray product on the market that performs at a high level like the leading chemicals but is safe for homeowners and pollinators alike.**

Based on our analysis, there are 3 types of Retail and Pro Channel Customers who purchase insecticides, two of whom have a strong history of purchasing **grubGONE!® G, beetleGONE!® tlc, and beetleGONE!® ag.**

#1 Customer Type: The Non-chemical, Natural, “Organic” Customer: Industry Market Research over the past 20 years concludes that the percentage of Consumers/Homeowners who state that they will purchase only non-chemical Lawn & Garden Products has grown from less than 5% to 12%+. Connecting this increase in customer base with the increased use of L&G insecticides by 200-300% over the past 10-15 years means that there is now a huge opportunity to capture profits in selling high-performing, non-chemical insecticides. **Our products fit this profitable and growing opportunity. Explaining the facts - Natural. Effective. Targeted. - to Your Homeowner Customers will lead to Your success in taking early advantage of this market trend as You make much higher ROI selling Our Products vs the Competitors.** PBC’s Non-chemical “Biological” Products are the Safest products in the Market that also work at the level of the Chemicals. None of the other non-chem products (ie Milky Spore® or Nematodes) work half as well as ours. And our products are price competitive if not less expensive than these inferior non-chem products.

CONTROL BEETLES & GRUBS ORGANICALLY



AS EFFECTIVE AS THE CHEMICALS



WITHOUT HARMING POLLINATORS



TARGET THE PEST, NOT THE REST!®

<p>For Gardeners:</p> <p>beetleGONE!® tlc</p>	<p>For Growers:</p> <p>beetleGONE!® ag</p>
<p>Pick & Pack Same Day With A Zero Day Preharvest Interval</p>	

Who are Your Potential Customers for PBC Products besides Homeowners? Lawn Care Operators/Landscapers offering “Organic” or “Green” Landscape Care Services, and Growers/Farmers who grow Organic feed and produce (ie grapes, berries, nuts, stone fruit, alfalfa, etc), and Organic Wine Makers. They seek the type of attributes that Our Products offer:



“Targeted” means Safety for Your Customers

- **SAFETY:** grubGONE! G turf grub product is certified OMRI; while beetleGONE! is certified as National Organic Program Compliant by USDA/EPA.
- **SAFETY:** Safer for You, Your Kids & Pets, Field Workers, Garden Center/Nursery Workers, Landscapers, Wildlife (food chain water invertebrates, fish, birds, mammals) and even beneficial insects such as bees, butterflies, ladybugs and earthworms.
- **SAFETY:** The Chemical Products contaminate soil and ground water such as wells, aquifers, ponds, lakes, creeks, rivers and even oceans. The market leading chlorantraniliprole-based products (such as Acelepryn®, GrubEx®, Durentis®) take years to break down in soil and water to the level that safety has been restored for your kids, pets and wildlife. In stark contrast, our products do not contaminate soil nor water.



“Natural” means No toxic chemicals, No GMO

- **NATURAL:** PBC Products are “Natural”: No genetic engineering, No GMO. This bacterium is a natural soil microbe which will not negatively impact the ecosystem of Homeowner yards and other landscapes.

“Effective” means High Performance to address Your Customers’ Needs

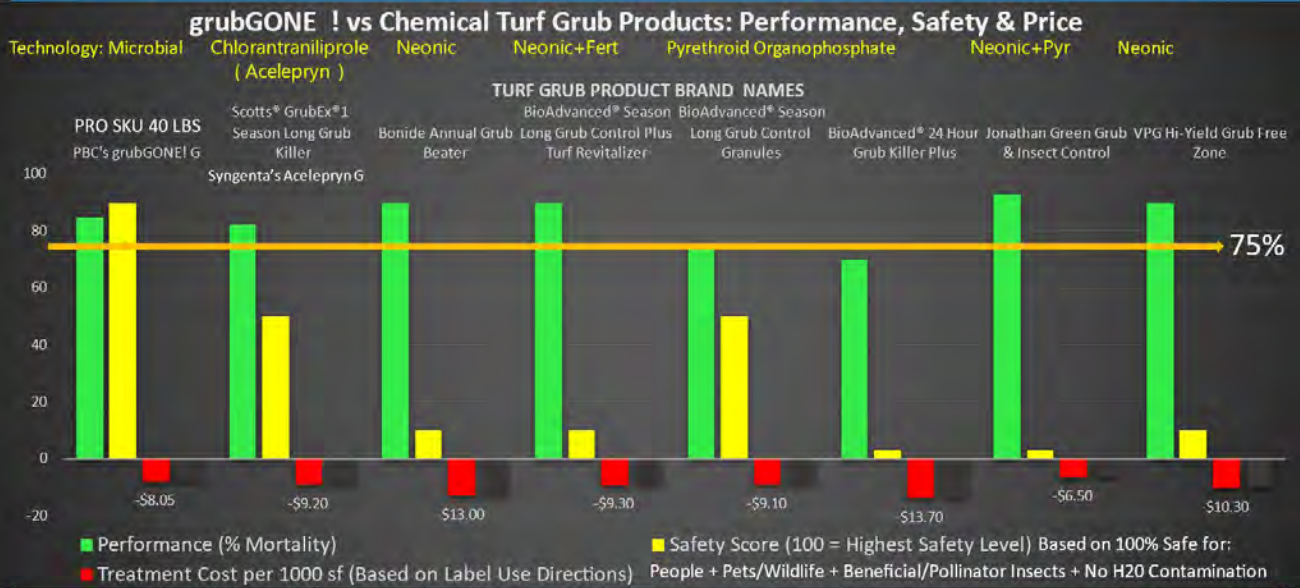
- **PERFORMANCE:** grubGONE! G performs at the level of the market leading turf grub chemical granular products in the Spring: Scott’s Retail GrubEX®, Syngenta’s Pro Acelepryn® and FMC’s Durentis® (aka chlorantraniliprole, Chemical Class: anthranilic diamide). And outperforms all of these products from mid-Summer through the Fall.
- **PERFORMANCE:** None of the other Non-chem, “biological” products rival grubGONE! G in terms of performance level. See Chart next page: grubGONE! = average 80+% effectiveness vs all beetle grubs (large and small, all species). In addition, grubGONE! performs at this high level all season long – Spring, Summer & Fall – as a preventative or curative treatment. grubGONE! G even outperforms Acelepryn®/ GrubEX®/ Durentis® by a wide margin as a mid-late season curative product against larger grubs: see data summary chart Scarab Grub Trial p.4.
- **PERFORMANCE:** beetleGONE! performs at the level of a variety of popular sprayable chemicals: chlorantraniliprole, imidacloprid and permethrin. beetleGONE! = average 80+% effectiveness vs adult beetles & borers and some weevils.
- **PRICE:** grubGONE! is far less expensive (\$8.06 to \$15.75/1000ft² treatment) than the market leading non-chem turf grub insecticide, Milky Spore (\$64.27/1000ft²). See analysis below: grubGONE! vs Pro Channel Chemical Products and vs Retail Channel Biological / “Natural” Products. grubGONE! is also cost competitive per treatment of 1,000 square feet of turf compared to the other non-chem, biological products: nematodes, Bavaria bassiana fungus, etc.

If Your Customer seeks insecticides that kill beetles, weevils and borers but the Customer also expresses concern, conscientiousness and enthusiasm about safety for his/her Animals and the Environment, PBC Products are the best product fit available for Your Customer.

We are an American-founded, owned and operated company. Our top chemical competitors such as Bonide® Brand (in the Retail Market) and Syngenta® Brand (in the Professional Market and in the Retail Market as GrubEx® Product) are owned by **China’s Government** and continue to sell 100s of millions of pounds of **unsafe chemicals** into the US Markets annually, polluting our environment and killing our beneficials including pollinators. We hope you will choose an alternative to dangerous, destructive chemicals and consider award winning products like ours for Your Customers.

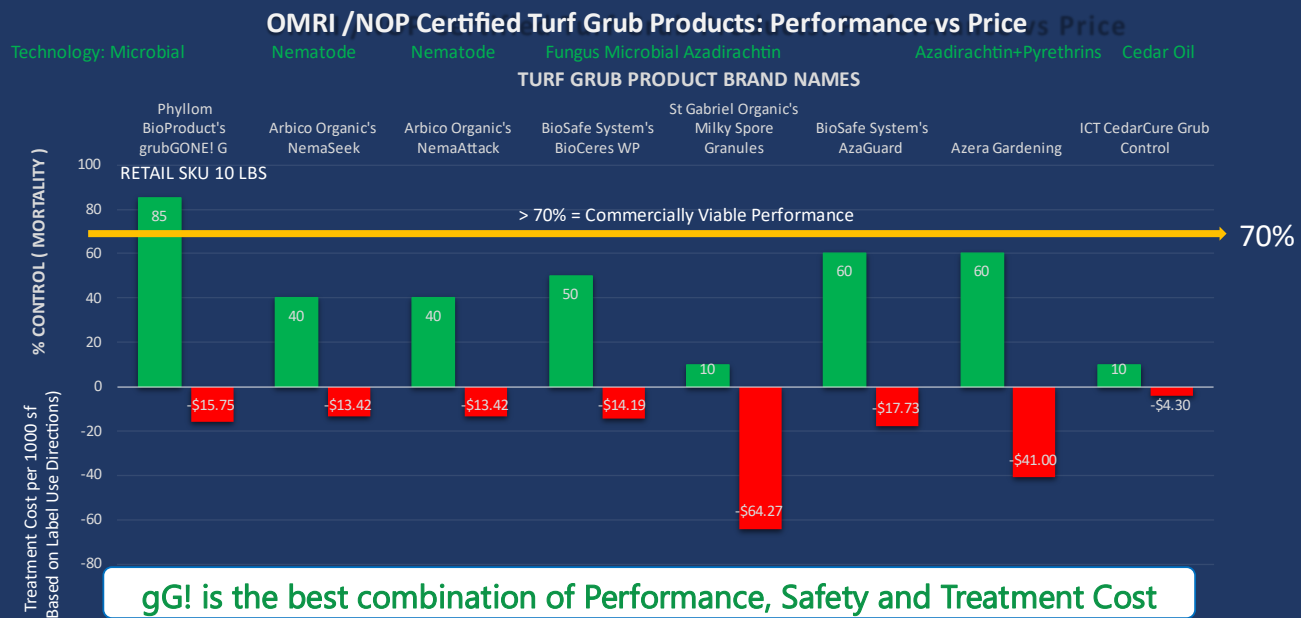
- Industry award-winning products  Environmentally Safe  National Organic Program 
- Support America and American-owned businesses by purchasing PhylloM's BioProducts 

Competitive Landscape: grubGONE! (gG!) vs the Chemicals



gG! is the Safest Product with Industry Standard Performance (>75% Control)

Competitive Landscape: grubGONE! vs the other "Biological"/"Natural" Products



gG! is the best combination of Performance, Safety and Treatment Cost

#2 Customer Type: The “IPM” (Integrated Pest Management) Customer: *This is a great opportunity for large volume sales if You can identify these Pro Channel or large landowner Homeowner Customers.* These Customers seek products like PBC Products that are the Safest Non-chemical “Biological” Products that work at the level of the Chemicals. See Field Trial Chart below. However, product pricing is also a prime consideration; therefore, the relatively inexpensive Chemical Products with relatively “safer” tox profiles are also used by these Customers. Communicating to these Customers an IPM Program in which PBC Biological Products are used in combination with Chemical Product(s) is a tried-and-true insect control regimen that performs better than either type of product used as a stand-alone, reduces toxic chemical load on the environment, while also reduces the possibility of insect resistance building in populations of target insect pests. The products when mixed can also be utilized successfully at very low application rates; therefore, reducing costs compared to an all-organic solution. IPM Programs have been used with great success in Agriculture since the 1950s.

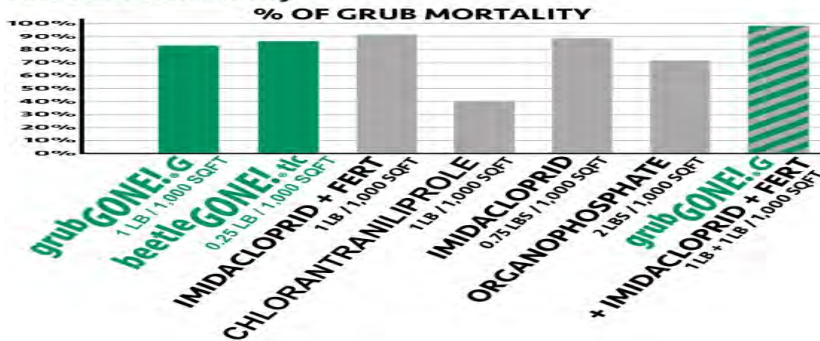
These Customers include: Homeowners with large properties, Schools with Sports Fields, Pro Sports Fields, Lawn Care Operators/Landscapers offering “Greenwash” Landscape Care Services, Arborists, Traditional Growers/Farmers who grow forage/feed and produce (ie grapes, berries, nuts, stone fruit, alfalfa, etc), Wine Makers and Poultry Growers. They seek the type of attributes PBC Products offer:

- **SAFETY:** Safer for You, Kids, Athletes, Landscapers, Field Workers, Garden Center/Nursery Workers and Animals.
- **PERFORMANCE:** PBC Products perform at the level of the market leading chemical products.
- **PRICE & UTILITY:** PBC Products are based on the microbial technology *Bacillus thuringiensis (Bt)* which is the #1 non-chemical insecticidal technology used worldwide in Agriculture, Forestry and Mosquito Abatement. Bt-based products have been successfully used in IPM Programs to control caterpillars, weevils and mosquito for 50+ years. PBC has made this type of Bt technology available through its Products for the control of grubs, beetles, borers and some weevils.

Field Trial Data: gG! and bG! vs the Chems

Scarab Grub Trial

NC State University



Trial versus 2nd instar grub @ 19.2 grubs/ft².

- Chafer
- Green June Bug
- Japanese Beetle


Label Application Rates per 1000sf

- grubGONE!®G = 2.6 – 3.4 LBS
- Bayer Advanced®G = 2.4 – 3 LBS
- Syngenta Acelepryn®G = 1.15 - 2.3 LBS

- grubGONE!®G = 82% Control at < 50% of low application rate.
- beetleGONE!®tlc = 84% Control at 100% low rate.
- Bayer Advanced®G = 90% Control at < 50% low rate.
- Syngenta Acelepryn®G = 40% Control at 75% low rate.
- **Mixed = 100% Control → Integrated pest Management**

#3 Customer Type: Lowest Price Customer: This Customer is focused on purchasing a product that has a decent level of performance, is low in price with little or no concern with safety or environmental stewardship. With a lackluster economy in 2024, this type of Customer will likely increase in number. **Not as good a Customer fit as #1 and #2 for PBC products at this time.** However, PBC continues to improve product production and is now competing head-to-head versus the leading chemicals in terms of **Performance**, outperforming them in terms of **Safety**, but also, **NOW competes head-to-head on Price per acre treatment.**

Examples of digital marketing content we will provide for You if requested - digital ads, videos, in-store posters, tech sheets, articles, etc - for Your print, digital & social media advertising.



grubGONE!.g
Natural. Effective. Targeted.
BTG Active Ingredient
80-90% Grub Control
Safe For Beneficials
Safe For Your Turf

CONTROL BEETLES & GRUBS ORGANICALLY


AS EFFECTIVE AS THE CHEMICALS

WITHOUT HARMING POLLINATORS

TARGET THE PEST, NOT THE REST!®

Video

- Get rid of Japanese Beetle Grubs and Adults with Organic Products
- Get rid of Japanese Beetle Grubs and Adults with Organic Products
- How Would grubGONE! Benefit a Golf Course Insect Control Program
- What Makes grubGONE! A Gamechanger
- Phylom's grubGONE! Saving CT Playgrounds
- grubGONE! vs The Chemical & Biological Competition
- Phylom's grubGONE! & beetleGONE! Product Overview
- Get rid of Japanese Beetle Grubs and Adults with Organic Products
- Customer Interviews | R&D | Product Value Proposition | Changing Market | Resistant...



beetleGONE!.tlc
Natural. Effective. Targeted.
BTG Active Ingredient
80-100% Beetle Control
Safe For Beneficials
Safe For Your Garden

THE TIME IS NOW
CONTROL BEETLES & GRUBS NATURALLY!



grubGONE!.g
Natural. Effective. Targeted.
Stop Grubs.
Save Beneficials.
Love Your Turf.



WITHOUT HARMING POLLINATORS
TARGET THE PEST, NOT THE REST!®



beetleGONE!.tlc
Natural. Effective. Targeted.
Stop Beetles.
Save Beneficials.
Love Your Garden

THE TIME IS NOW
CONTROL BEETLES & GRUBS NATURALLY, WITHOUT HARMING POLLINATORS



grubGONE!.g
CONTROL TURF GRUBS WITH 1 APPLICATION
HOW DO YOU WANT TO SPEND YOUR TIME OUTDOORS?
THE CHOICE IS CLEAR
THE NEW STANDARD FOR PERFORMANCE & SAFETY



beetleGONE!.tlc
SELECTIVELY TARGETS SCARAB INSECTS
ON FRUIT, FLOWERS & FOLIAGE
NON-TOXIC TO POLLINATORS
TARGET THE PEST, NOT THE REST!®

TARGET THE PEST, NOT THE REST!®

- The Best Combination of Performance, Safety & Price.
- Target grubs with High-Performing, Natural Protein BTG & kill turf grubs within days.
- Adding to the power of BTG are 1000x more spores than Milky Spore® Products.
- Does not contaminate groundwater, ponds or creeks.
- Does not put your children and pets at risk like the chemical products do.
- Controls the grub (larva) of all Scarab beetles, not just Japanese beetle.
- No need to sacrifice the high performance of leading chemicals for safety.
- Much higher performance than oils, nematodes & milky spore products.
- Better than GrubEx® (chlorantraniliprole) in the Summer and Fall.

Identifying & Treating for Grubs (and Beetles) in Your Yard. . . Naturally and Organically!

What are the keys to controlling Turf Grubs? The first step is identifying that you have a problem. The larvae of Beetles (Turf Grubs) are typically ½ – 1 ¼ inch, worm-like, C-shaped insect pests that spend the majority of their life underground. They look somewhat like shrimp living in the soil. **Despite being small, when left untreated they can cause some BIG, expensive problems:**



1. Killing your grass by feeding on the roots.
2. Encouraging secondary foragers such as crows and racoons to dig up your turf as they search for and feed on the tasty morsels.
3. And finally, by mid-summer the grubs will turn into voracious foliar and flower-feeding beetles that can destroy ornamental plants, trees and fruit & vegetable gardens, which in some cases is more destructive to your yard than the grubs.



During the spring when ground and air temperatures start to warm up, grubs that retreated deep into the soil during the cold winter will move up near the surface of lawns to feed on the roots. Areas of your turf that look dead or thinning among an otherwise healthy lawn may be a sign of grub damage. Additionally, if you had turf damage from secondary foragers (discussed below) or an infestation of adult beetles the prior year then you likely have a grub problem this spring. To confirm the presence of grubs, use a shovel to peel up a section of unhealthy or browning lawn to identify whether grubs are present 1-2 inches below the surface. Typically, 5-10 grubs per square foot is enough to cause noticeable damage.

Preventative Maintenance



Whether or not you actually decide to dig up a small patch of your turf to positively identify the presence of grubs, **a well thought out preventative maintenance plan can save you both time and money down the road.** Proper watering and fertilizer treatments at regular intervals are keys to your turf's health. Healthy turf will be able to withstand (or mask) a grub infestation better than turf that has not been maintained. Part of your

springtime preventative maintenance should include an application of grub control treatment to keep any suspected grub populations under control. Springtime treatments can also help reduce populations of destructive beetles during mid-summer: it will be easier for you to control these pests while they are localized and relatively stationary in the turf before they turn into adults and take flight. **grubGONE!®G is an organic granular product that can be spread on your turf** with a spreader and watered by irrigation or rain into the root zone to control grubs. Based on a naturally occurring bacteria (*Btg*), **grubGONE! specifically targets scarab pests without harming the ecosystem in your yard.**



Beetle Infestations



Damage from Japanese Beetles in the United States amounts to millions of dollars in losses per year with most damage occurring in the Midwest and East Coast. However, the problem is no longer isolated to the eastern half of the country. Japanese beetles continue to move westward and south and now have become a big nuisance in Colorado, and even in isolated areas in California, Washington and Oregon. The beetles are adult stages of the grub larva that emerge from the ground during the summer months. Once the beetles emerge from the ground they will feed on a wide variety of fruits & vegetables, ornamental plants and trees.



beetleGONE!®tlc is a high-performing product to use once these scarab insects take flight. Mix the product with water and spray on foliage every 7 – 10 days where the beetles are actively feeding. Most foliar-feeding Scarabs will be very active for approximately 2 - 4 weeks during peak infestation. Based on the same naturally occurring bacteria (*Btg*) as grubGONE!, **beetleGONE! is safe to use while pollinators and other beneficial insects are active.** And an EPA allowed ZERO DAY Preharvest Interval means you can pick, pack and enjoy your veggies & fruits on the day of treatment. . . Of course, it's ALWAYS good practice to wash off any residual spray before consuming your harvest.



Beginning of the Grub Life Cycle

Within 2 weeks of peak flight, adult beetles begin to lay their eggs. Soon, grubs will hatch and begin the cycle all over again. Most professional lawn care operators find that this is the best time to treat for grubs; when they are in their early stages of development and most susceptible to grub control treatments. Typically, this is during mid-summer; July to early August.



Grubs & Secondary Foraging



Most homeowners don't even realize they have a grub problem until their well-manicured yard is visited by pigs, skunks, raccoons or crows that dig up yards in search of fattened-up grubs that continue to grow into the



fall. Unfortunately, secondary foraging usually causes A LOT more damage than the grubs do. It's not uncommon for these animals to destroy entire yards! Traditionally, harsh chemical products were the best products to use in the fall against these larger, more mature grubs. But not anymore! **Not only is grubGONE! a great alternative to chemicals against the smaller 1st instar grubs, but it outperforms the most popular Chlorantraniliprole-based chemical products in controlling the more mature 2nd & 3rd instar grubs***: making it a great fall rescue treatment option as well as a high-performing spring preventative product. *See Trial Graph below. Chlorantraniliprole-based chemical products: Scotts GrubEx, Syngenta Acelepryn, FMC Durentis, Dupont products.

What is BTG? And what makes it Safe?

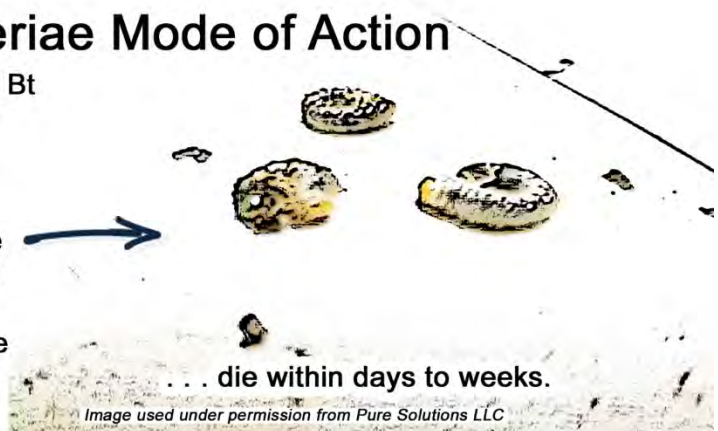
The active ingredient BTG that the experts at PhylloM BioProducts discovered and developed is a protein contained in the microbe *Bacillus thuringiensis* subsp. *Galleriae* (**Btg**): **a naturally occurring soil bacterium that was found to be highly toxic to Scarab Beetles (and their larva) when ingested.** Through specialized expertise and technology, the PhylloM BioProducts Team was able to replicate and produce this unique bacterium and its active ingredient protein (BTG) for use in residential lawn & garden settings as well as in farms and forests to target destructive scarab beetle, weevil and borer invaders. The BTG proteins from this microbe selectively bind to the receptors in the gut of the targeted scarab pest, causing the pest to stop feeding and eventually die. **And since people, pets, birds, fish and other wildlife and even non-target beneficial insects do not have these gut receptors, they are unaffected by the BTG protein.**

PhylloM's Patented Bt galleriae Mode of Action

Target beetles or grubs eat PhylloM's powerful Bt crystal protein sprayed on treated foliage or irrigated into the root zone of turf.



The crystal dissolves in the gut of the target pest, activating the insecticidal protein and causing disruption of the gut lining. The targeted pests become inactive, stop feeding and . . .



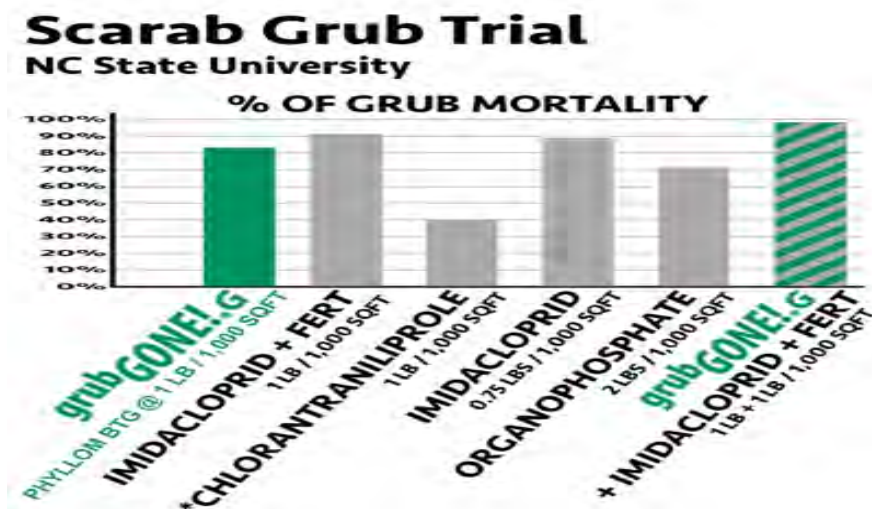
. . . die within days to weeks.

Image used under permission from Pure Solutions LLC

... And what about the Chemical Competition?*

There exists a much different situation with **chlorantraniliprole-based chemical products.** Chlorantraniliprole is an insecticide in the chemical class of anthranilic diamides which has a very unique mode of action. It targets an insect's ryanodine receptors, disrupting muscle function and leading to paralysis and eventual death. This chemical may seem safer than previous market-leading chemicals. Unfortunately, people, pets and wildlife also have these ryanodine receptors in muscles (ie heart muscle); therefore, this chemical can be harmful at a high enough exposure based on concentration or level of exposure, length of time or repeated exposure and size of the exposed. For example, as with any chemical, children and smaller animals are more susceptible to toxic levels of exposure than adults and large animals. And with this chemical (and its metabolites) being relatively very persistent in the environment, the chances of repeated exposure in turf, soil and groundwater environments is substantially increased.

Benefits of Integrated Pest Management (IPM) Programs



Are you still skeptical and do not want to try an organic solution for your turf grub and beetle problems? Integrated Pest Management (IPM) may be your answer to help gain the confidence to eventually switch to an all organic solution. **IPM is an approach to pest management that relies on a combination of practices, including utilizing a proven chemical product at very low rate of use in combination with a powerful non-chemical,**

biological product. grubGONE! routinely demonstrates 80-90% control against Scarab Grubs. These results are similar to the leading grub control brands based on the chemical imidacloprid and better than those products using the chemical acelepryn. Using a regimen that includes BOTH grubGONE!'s Naturally occurring BTG and a low rate of a product with the chemical imidacloprid results in close to 100% control against Scarab Grubs: better level of control than either product used alone. This would be an effective regimen for homeowners looking to reduce chemical loads while still achieving very high results during times of high infestations. In addition, a successful IPM process includes proper maintenance, watering and feedings to ensure your turf is healthy.

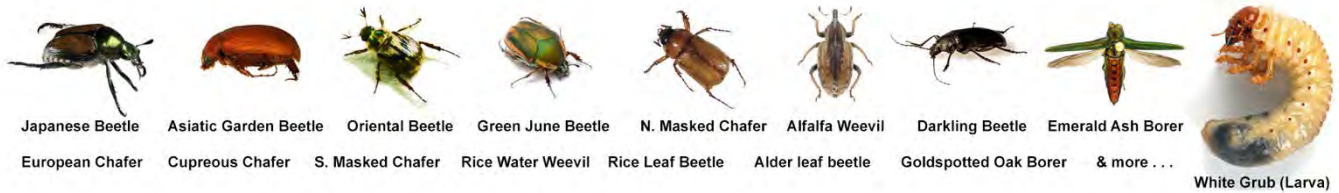
Similarly, IPM programs can be used to combat Japanese Beetles. Beetle traps have mixed results – they trap lots of beetles, but attract many from surrounding areas. So, by using them near your garden you may actually be doing more harm than good. During unusually high Japanese Beetle infestations, it may be good practice to place traps far away from your gardens in an effort to lure some beetles away from your plants. Then you can control the lower populations of beetles on your plants organically with beetleGONE!. In addition, **beetleGONE! can be mixed with other products to increase effectiveness, increase adhesion to foliage, decrease UV degradation and increase performance.** Some products that have been successfully used with beetleGONE! by homeowners and farmers include Neptune's Harvest Rose & Flowering 2-6-4 Organic Fertilizer, kaolin clay-based product (ie Surround® WP), Miller Chemical's Nu Film® P and even diatomaceous earth**.

**NOTE that diatomaceous earth is toxic to bees, so this would not be a solution for flowering plants or for use while bees are active.

But Japanese Beetles Don't Inhabit My Area

It is true that these colorful creatures of iridescent green and red, capture the most headlines but Japanese Beetles are just one species in the Scarab Family that is present across North America that cause damage to lawns and gardens. **Other damaging Scarab Beetle grubs and adults, weevils and borers that are controlled by the products developed by Phyllo BioProducts include:**

Asiatic Garden Beetle, European Chafer, Rose Chafer, May or June Beetle, Northern Masked Chafer, Southern Masked Chafer, Black Turfgrass Ataenius, Green June Beetle, Oriental Beetle, Leaf Beetles such as Rice and Alder Leaf, Weevils such as Annual Bluegrass, Sweet Potato, Pepper, Pecan, Citrus / Strawberry Root and other Root Weevils, Flea Beetle, Borers such as Emerald Ash Borer, Gold Spotted Oak Borer and Soap Berry Borer, and Darkling Beetles.



Unlike other organic options, grubGONE! & beetleGONE! control ALL of the above listed pests – Not only Japanese Beetles. Target the Pest, Not the Rest!

Natural. Effective. Targeted.

Discovered and developed by a team of experts over a span of 15 years, Phyllom BioProducts' patented strain of *Bacillus thuringiensis* (Bt) is the first bio insecticide powerful enough to effectively control susceptible beetles, weevils, borers and grubs. *And unlike the chemical products, Phyllom's line of products do not pose a risk to non-target beneficial insects such as earthworms and lady bugs nor to pollinators such as bees and butterflies.* **The New Standard for High Performance & Safety™. You can now achieve a high level of control (>85%) like the chemical insecticides without doing harm to the natural ecosystem in your yard.**



grubGONE!®G is the only nonchemical that effectively controls turf grubs from spring through fall, grubGONE! works not only against first-instar grubs but also against larger and harder second- and third-instar grubs. ***Harness the Power of Mother Nature with BTG: The BioPesticide Inside®.*** grubGONE! therefore reduces populations of destructive grubs during spring-summer and helps to reduce secondary foraging in summer-fall. This easy-to-apply granule is **highly effective in controlling all types of scarab beetle grubs (such as chafers and Japanese beetles), billbugs, and bluegrass weevils in lawns without harming homeowners, pets, pollinators, earthworms, or wildlife. grubGONE! does not contaminate the soil or groundwater such as wells, streams, ponds, and lakes whereas the leading chemical products do.**



beetleGONE!®tlc Spray is used for highly effective organic control of adult beetles, weevils and borers without harming bees, butterflies or ladybugs. ***Target the Pest, Not the Rest!®*** For organic gardening. Mix in water and spray on edible garden plants, ornamental plants, trees or turf. beetleGONE! can also be mixed into or sprayed on potting or garden soil to control beetle grubs. With a zero-day preharvest interval you can treat for beetles and harvest your food the same day. And there are no label restrictions for use around bees or flowering plants; therefore, **beetleGONE! can be safely used while pollinators are active. This is the only non-chemical spray product on the market that performs at a high level like the leading chemicals but is safe for homeowners and pollinators alike.**



www.beetlegone.com

v. 6/1/2024

Defend Your Yard In The Spring **grubGONE!® G**

Protect Your Garden In The Summer **beetleGONE!® tlc**

Rescue Your Yard In The Fall **grubGONE!® G**



The Problem Turf grubs spent last fall feeding on the roots of your turf before going below the frost line. Now they're back, ready to become beetles.

The Solution grubGONE!, a natural bio-control that targets the pest without harming kids, pets, bees or the natural ecosystem in your yard.



Spread 3 lbs per 1,000 sq.ft. onto your turf or ornamental landscape with any conventional spreader and irrigate it into the soil. Apply spring to fall; anytime grubs are active.

Available in 10 & 40 LB Bags



The Problem Turf grubs have invaded your lawn, feeding on the roots all spring before turning into beetles. Now they are hungry for dessert.

The Solution beetleGONE!, a natural bio-control that targets pests without harming kids, pets, bees or the natural ecosystem in your yard.



Mix 2 - 4 oz of powder for every gallon of water and apply to your garden, ornamental landscape or trees with a sprayer. Prevent rinsing the product off foliage after application. 2 - 3 treatments one week apart is advised.

Available in 8 oz, 1 & 5 LB Bags



The Problem Invasive beetles have invaded your fruit & veggie garden while scavengers dig up your turf looking for the grub larva to feed on.

The Solution grubGONE!, a natural bio-control that targets the pest without harming kids, pets, bees or the natural ecosystem in your yard.

Phyllom's Patented Strain of Bt is:

- Highly effective at controlling destructive grub and beetle invaders.
- Safe for kids, pets, birds, fish and beneficial insects (honeybees, butterflies and ladybugs).
- Is OMRI approved.
- Used by Organic Farmers & Growers.

Spring Through Late June

Late June to Mid August

August to Mid October *

* Apply while grub or beetle invader is feeding. Consult with your local nursery, cooperative extension service or local pest control professional for precise timing of application in your region.

Phyllom BioProducts Corporation | For Pricing & Ordering Information: sales@phyllom.com (408) 691-4741 | For Technical Questions: info@phyllom.com (650) 296-2574

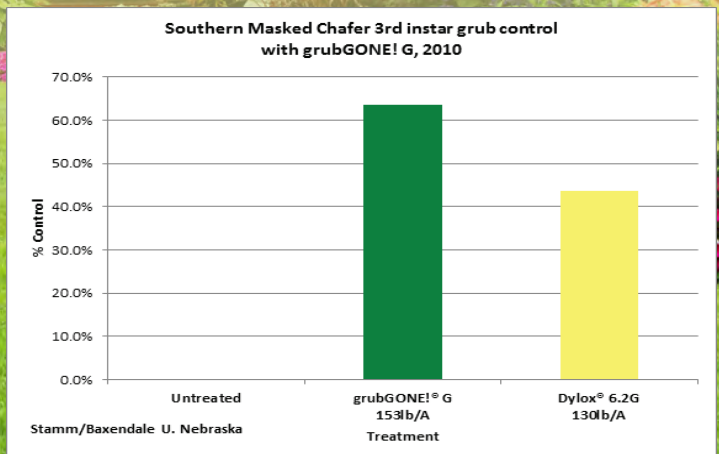
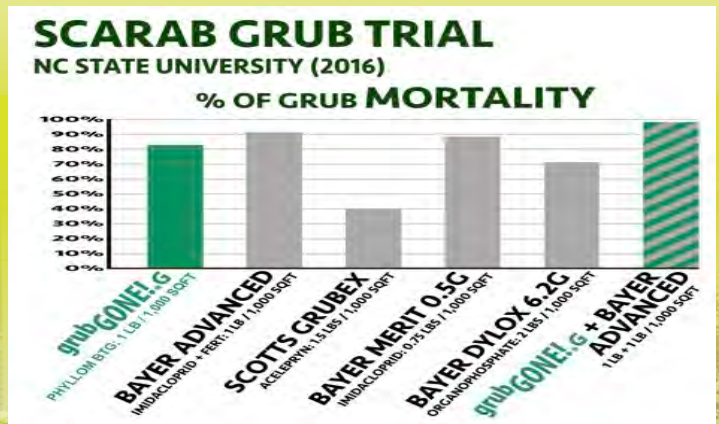
grubGONE!® G

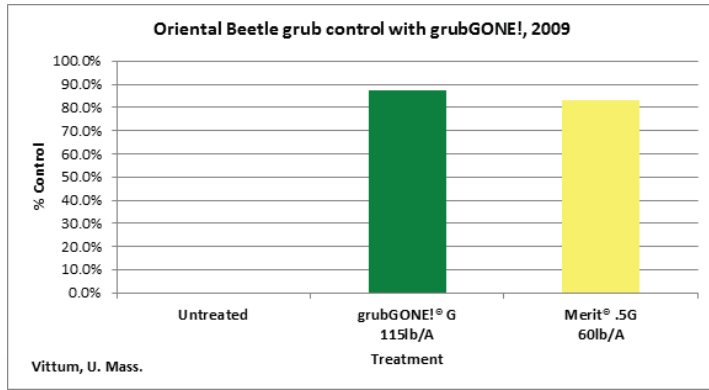
Target the Pest, Not the Rest!®

A market proven BioInsecticide from **Phyllom BioProducts Corp.** that helps protect the quality and value of landscape and recreational turf grasses and ornamental plants with the novel active ingredient, *Bacillus thuringiensis (Bt) galleriae*. It effectively controls susceptible white grubs (beetle larvae), annual bluegrass weevils and billbugs upon ingestion of the Bt toxin. It is the first Bt insecticide powerful enough to be applied as a spreadable granule against 1st - 3rd instar grubs. Yet, **grubGONE!** demonstrated no adverse risks to beneficials and other non-targets tested (earthworms, bees, butterflies, ladybugs). grubGONE! is registered for use on landscape and recreational turf grasses and ornamental plants. Potential use sites include golf courses, residential lawns, commercial grounds, parks, athletic fields, pet care facilities, cemeteries, sod farms or interior plant scape, greenhouses, nurseries, fields, and other turf grass-covered or landscape ornamental-planted areas.

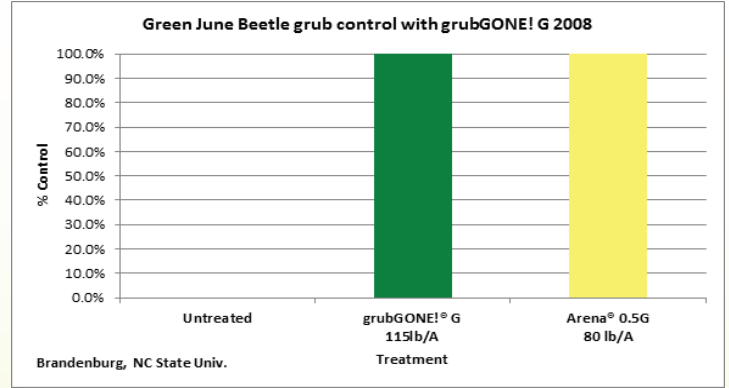
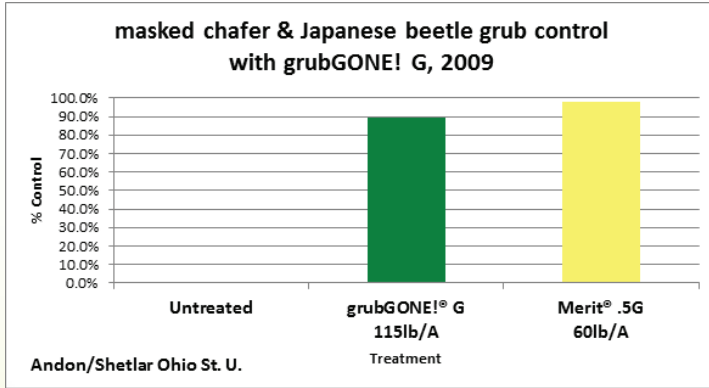
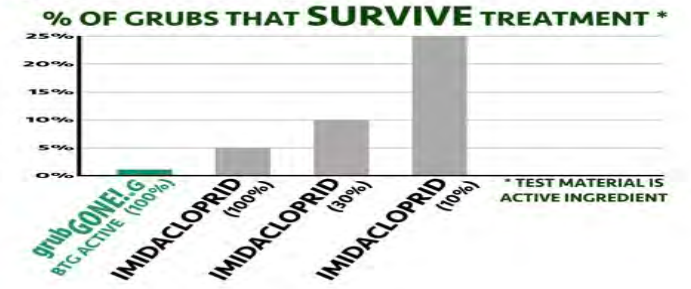
grubGONE! advantages:

- Protects the value of turf landscapes and ornamental plants by effectively controlling susceptible white grubs, billbugs and annual bluegrass weevils in the season of application.
- Helps manage resistance to chemistries with a new mode of action for IPM programs.
- Can be mixed with chemical grub controls with increased synergistic performance of both products.
- grubGONE! and Bt bioinsecticides provide a positive public perception.
- Shelf life is 18 months when stored as directed.
- No label restrictions for bees or flowering plants.
- OMRI Certified.





JAPANESE BEETLE GRUB STUDY
RUTGERS UNIVERSITY (2022)



Phyllom BioProducts “Target the Pest, Not the Rest”[®] proven Bioinsecticides grubGONE![®], beetleGONE![®] and boreGONE![®] protect the beauty, health and value of forests, farms and landscapes from beetle, weevil and grub attacks without harm to bees and other beneficials and non-targets. Phyllom’s suite of bio-insecticides are protected by issued and pending patents.

Grubs controlled by grubGONE!	
Common Name	Latin Name
Japanese beetle	<i>Popillia japonica</i>
Oriental beetle	<i>Anomala orientalis</i>
Asiatic Garden Beetle	<i>Maladera Castenea</i>
European Chafer	<i>Rhizotrogus majalis</i>
Cupreous Chafer	<i>Anomala cuprea</i>
N. Masked Chafer	<i>Cyclocephala borealis</i>
S. Masked Chafer	<i>Cyclocephala lurida</i>
June beetle	<i>Cotinis nitida</i>

Phyllom BioProducts Corp.

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tel. 650-296-2574

beetleGONE! is a registered trademark of Phyllom BioProducts, Corp.; Arena is a registered trademark of Sumitomo Chemical Company, Ltd.; Dylox and Merit are registered trademarks of Bayer



NEW grubGONE!® G

Target the Pest, Not the Rest!®

grubGONE! controls Annual Bluegrass Weevil (ABW), including pyrethroid resistant, with a powerful new Group 11 Mode of Action (MOA). And that's not all, **grubGONE!** provides preventative or curative control of white grubs all season long.

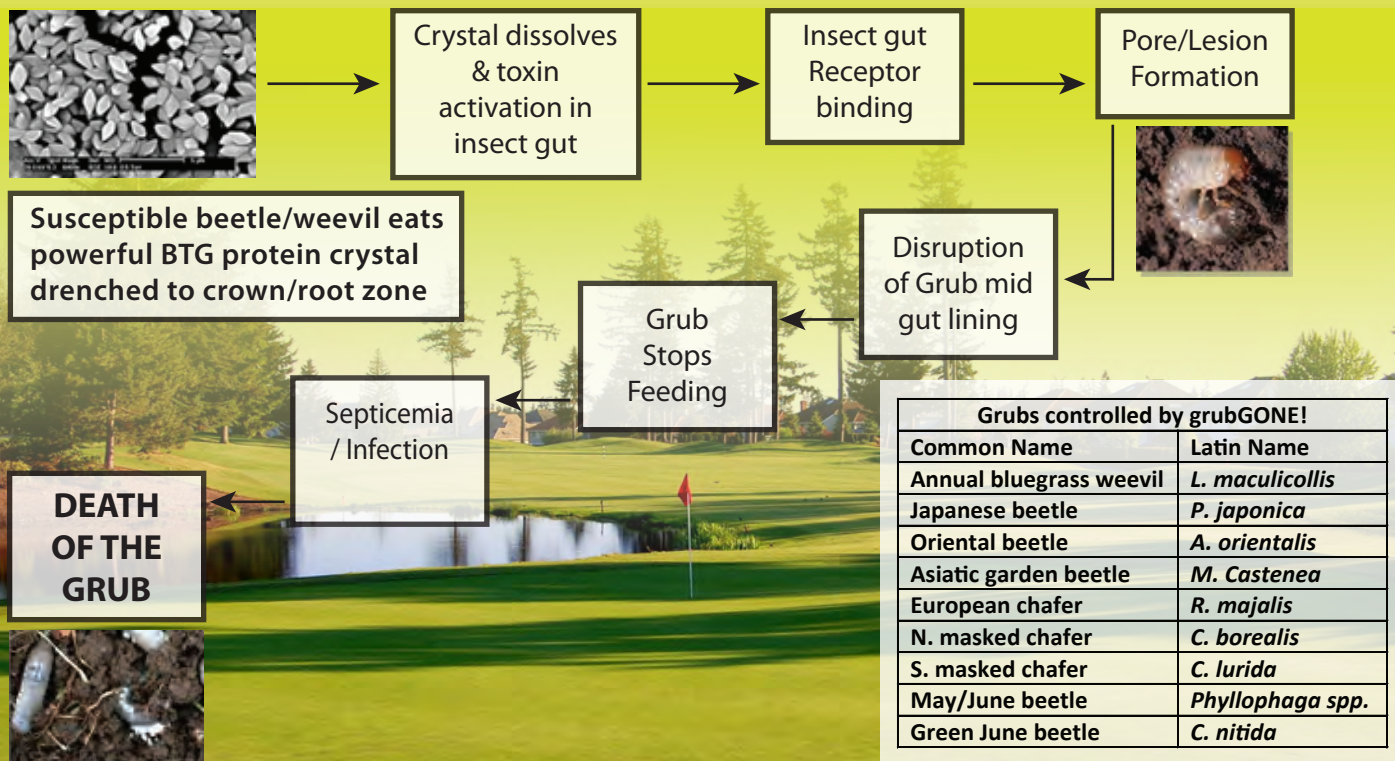
grubGONE! benefits:

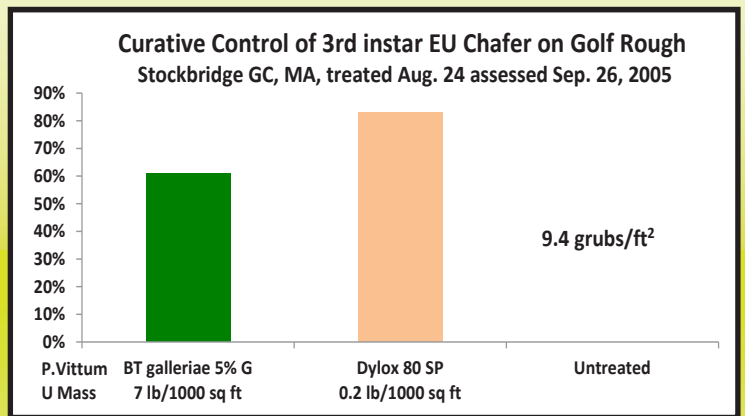
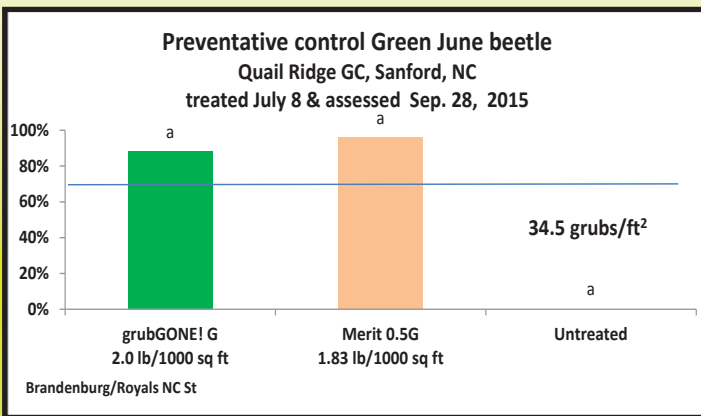
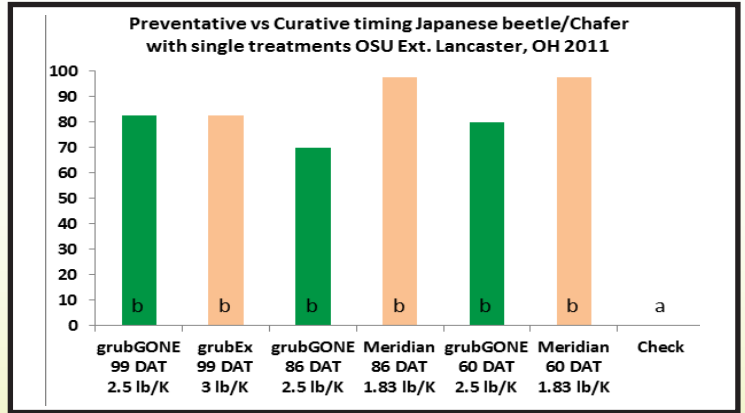
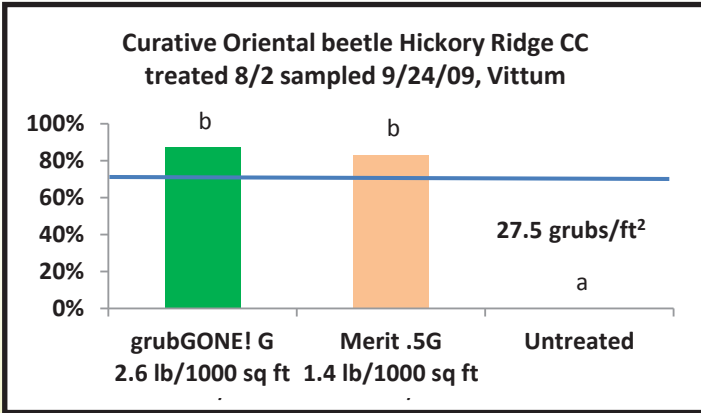
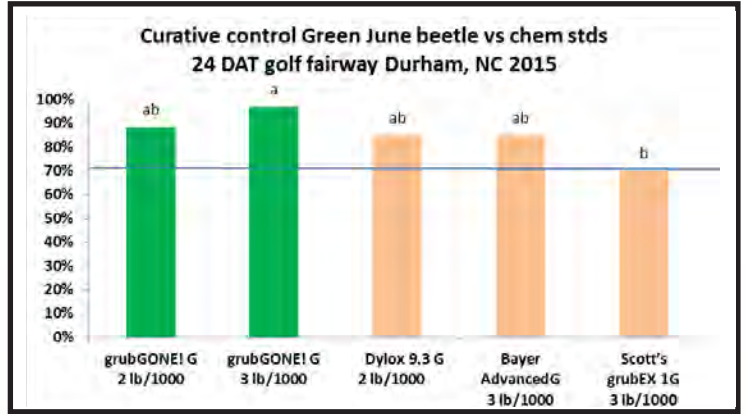
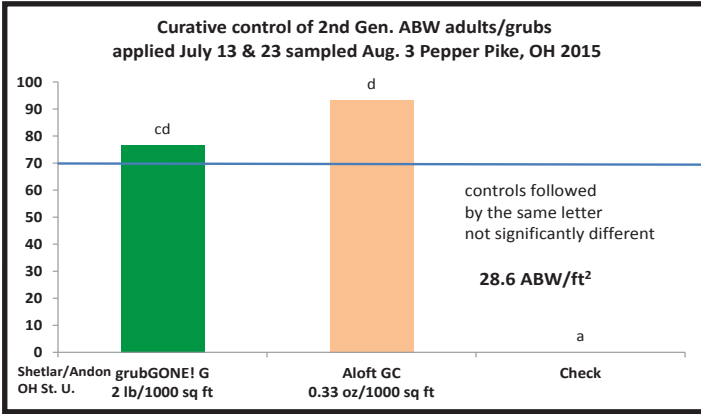
- Protects the value of turf grass and ornamentals by control of susceptible beetle & weevil grubs.
- New Group 11 mode of action helps manage ABW resistance to chemistries.
- No application restrictions around bees, flowering plants or near waterways.
- A smart choice for cool season and transition turf: Preserves grub parasitoids: *Tiphia pygidialis* (wasp), *Solenopsis molesta* (ant) and insect parasitic nematodes providing a 2nd layer of ABW/grub defense.
- Application flexibility, apply as a preventative or curative treatment for grubs.
- Can be mixed with chemical grub controls with increased synergistic performance of both products.
- Shelf life is 18 months
- OMRI Certified

grubGONE! is powered by the novel active ingredient, *Bacillus thuringiensis galleriae*, (BTG). It is the first Bt insecticide for application as a spreadable granule.

How grubGONE! works:

Bacillus thuringiensis galleriae (BTG) Group 11 mid gut disruption Mode of Action





Phyllom BioProducts Corp.

www.phyllombioproducts.com • sales@phyllom.com

Tel. 650.296.2574

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Phyllom BioProducts

Protecting Forests, Farms and Landscapes®

beetleGONE!® tlc

Target the Pest, Not the Rest!®

A market proven BioInsecticide from **Phyllom BioProducts Corp.** that helps protect the quality and value of fruits & vegetables gardens, ornamental plants & trees, and turf with the novel active ingredient, *Bacillus thuringiensis (Bt) galleriae*. It effectively controls susceptible beetles, weevils, borers and grubs upon ingestion of the toxin. It is the first Bt insecticide powerful enough to control both adult and larva stage of susceptible beetles. Yet, **beetleGONE! tlc** demonstrated no adverse risks to non-targets and beneficial insects (bees, butterflies, ladybugs) tested. beetleGONE! is EPA registered for use on gardens (flower and herb/edible), ornamentals (trees and shrubs) and turf found in and/or adjacent to residential and commercial grounds, parks, playgrounds, nurseries, greenhouses and agricultural fields.

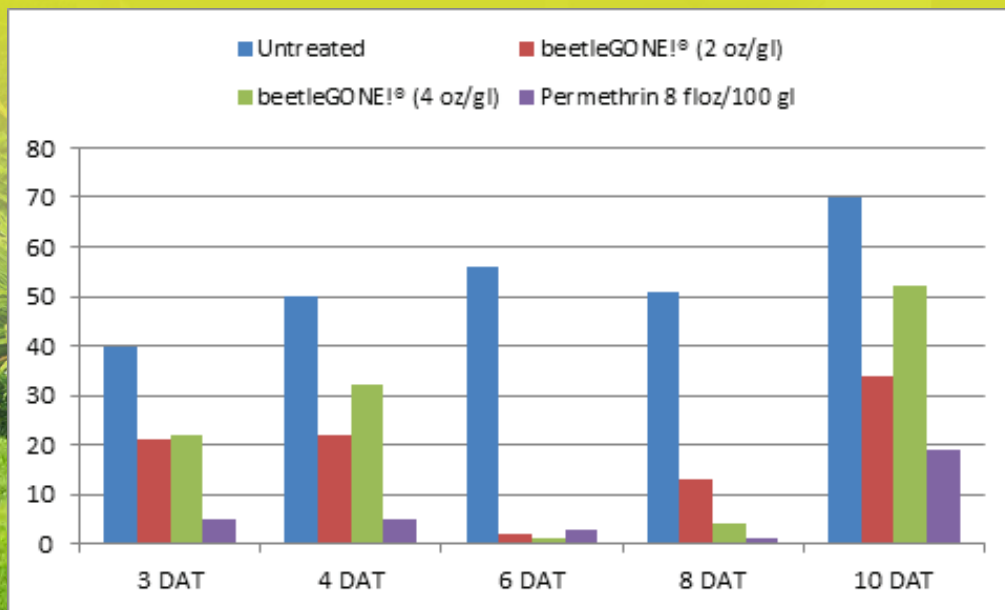
beetleGONE! tlc benefits:

- Protects the value of plants by effectively controlling susceptible beetles, weevils and billbugs.
- Helps manage resistance to chemistries with a new mode of action for IPM programs.
- No label restrictions for bees or flowering plants (may be used while bees are foraging).
- Less management stress with no worries about MRLs, 0 day PHI, 4 hour REI for agricultural uses.
- Compliant with the USDA National Organic Program for use in organic crop production.
- Versatile product: can be sprayed on plants to protect foliage/fruit or on turf /soil to protect turf or to reduce the grub pressure in soil/turf before grubs become foliar-feeding adult beetles.
- For ornamental uses, keep unprotected people out of treated area until spray is dry.

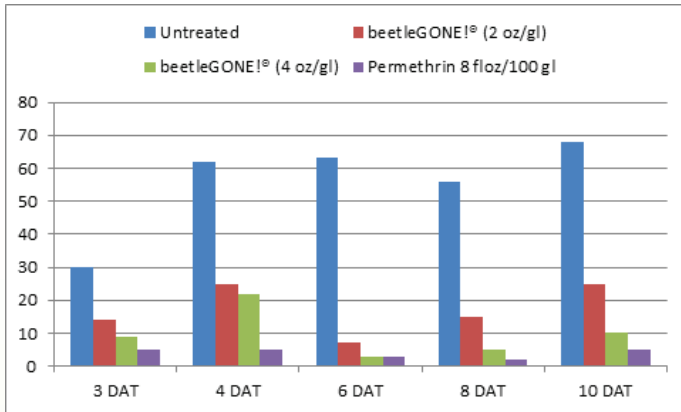


For Organic Landscaping/Production

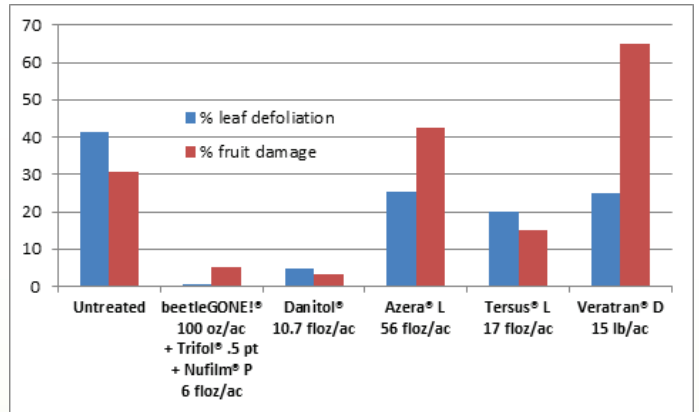
Japanese beetle adult on Rose mean % leaf damage at intervals post treatment assessed 72 hours exposure to beetleGONE!, Madison, Wisconsin, 2014



Japanese beetle adult on Little Leaf Linden mean % leaf damage at intervals post treatment assessed 72 hours exposure to beetleGONE!, Madison, Wisconsin, 2014



Japanese beetle adult % damage to blueberry foliage & fruit, Michigan State, 2014



Phyllom BioProducts “Target the Pest, Not the Rest” New bio-insecticides grubGONE!®, beetleGONE!® and boreGONE!® protect the beauty, health and value of forests, farms and landscapes from beetle, weevil and grub attacks without harm to bees and non-targets. Phyllom’s suite of bio-insecticides are protected by issued and pending patents.

Phyllom BioProducts Corp.

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tel. 650-296-2574

Pests with confirmed control by beetleGONE!		
Common Name	Latin Name	Stage
Japanese beetle	<i>Popillia japonica</i>	adult & grub
Oriental beetle	<i>Anomala orientalis</i>	adult & grub
Asiatic Garden Beetle	<i>Maladera Castenea</i>	adult & grub
European Chafer	<i>Rhizotrogus majalis</i>	adult & grub
Cupreous Chafer	<i>Anomala cuprea</i>	adult & grub
N. Masked Chafer	<i>Cyclocephala borealis</i>	adult & grub
S. Masked Chafer	<i>Cyclocephala lurida</i>	adult & grub
June beetle	<i>Cotinis nitida</i>	adult & grub
Alfalfa Weevil	<i>Hypera brunneipennis</i>	larva
Rice Water Weevil	<i>Sitophilus oryzae</i>	larva
Rice Leaf Beetle	<i>Oulema oryzae</i>	adult
Alder leaf beetle	<i>Agelastica alni</i>	adult
Darkling beetle	<i>Alphitobius diaperinus</i>	adult & grub
Emerald Ash Borer	<i>Agrilus planipennis</i>	adult
Goldspotted Oak Borer	<i>Agrilus auroguttatus</i>	adult

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Target the Pest, Not the Rest!®

A market proven BioInsecticide from **Phyllom BioProducts Corp.** that helps protect the quality and value of agricultural crops with the novel active ingredient, *Bacillus thuringiensis (Bt) galleriae*. It effectively controls susceptible beetles, weevils, borers and grubs upon ingestion of the toxin. It is the first Bt insecticide powerful enough to control both adult and larva stages of susceptible beetles. Yet, **beetleGONE! ag** demonstrated no adverse risks to non-targets and beneficial insects (bees, butterflies, ladybugs) tested. beetleGONE! ag is exempt from the requirement of a tolerance (testing food crops prior to packing and shipping) and beetleGONE! is EPA registered for preharvest food and animal feed crops.

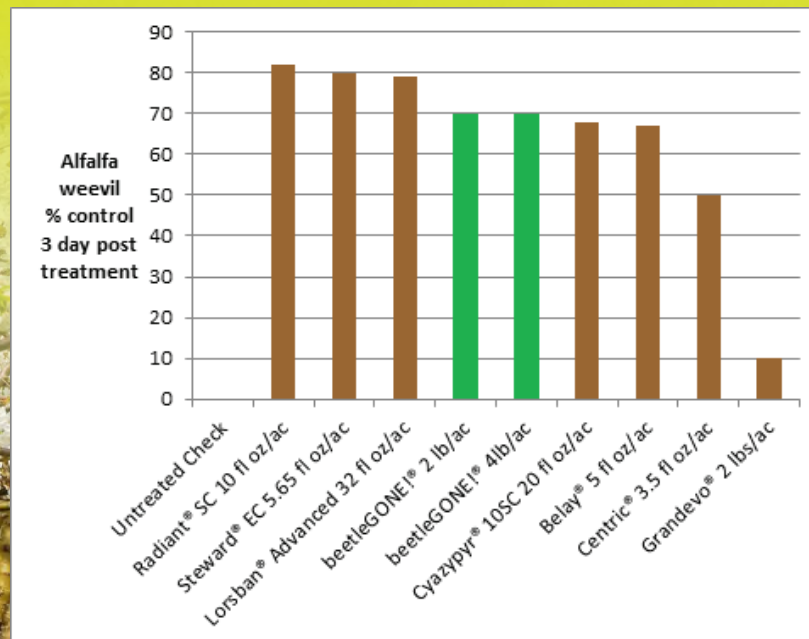
beetleGONE! ag benefits:

- Protects the value of crops by effectively controlling susceptible beetles and weevils.
- Helps manage resistance to chemistries with a new mode of action for IPM programs.
- No label restrictions for bees or flowering plants (may be used while bees are foraging).
- Less management stress with no worries about MRLs, 0 day PHI, 4 hour REI for agricultural uses.
- Compliant with the USDA National Organic Program for use in organic crop production.
- For non crop uses, keep unprotected people out of treated area until sprays dry.

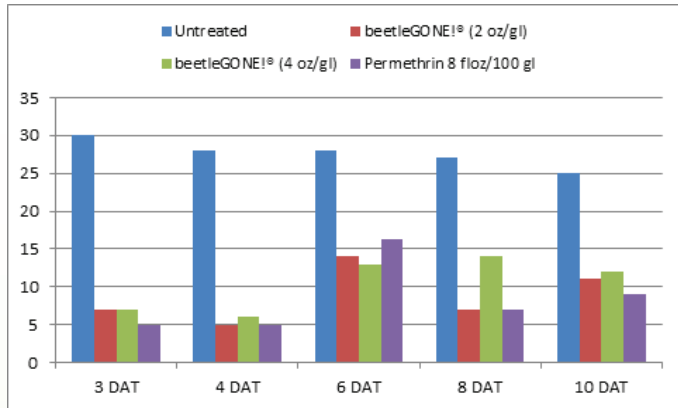


For Organic Production

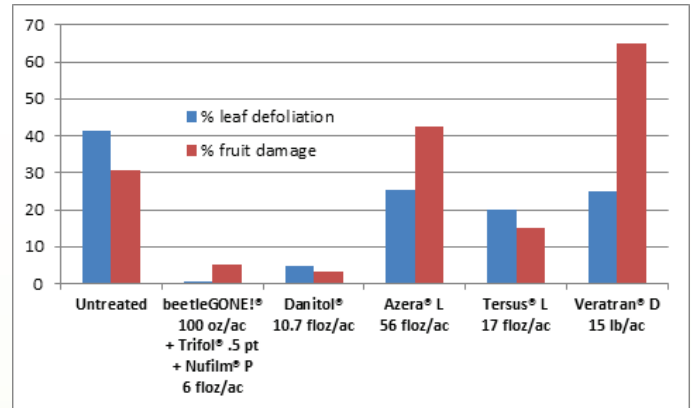
Alfalfa weevil IPM study, UC Davis Research Farm, Davis, CA 2014



Japanese beetle adult on wine grape mean % foliage damage at intervals post treatment with 72 hours exposure to beetleGONE!, Wollersheim Winery, Prairie du Sac, WI, 2014



Japanese beetle adult % damage to blueberry foliage & fruit, Michigan State, 2014 Leaves & fruit clusters picked 5 days post spray, JB added and assessed 7 days later



Phyllom BioProducts “Target the Pest, Not the Rest” New bio-insecticides grubGONE!®, beetleGONE!® and boreGONE!® protect the beauty, health and value of forests, farms and landscapes from beetle, weevil and grub attacks without harm to bees and non-targets. Phyllom’s suite of bio-insecticides are protected by issued and pending patents.

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Pests with confirmed control by beetleGONE!		
Common Name	Latin Name	Stage
Japanese beetle	<i>Popillia japonica</i>	adult & grub
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Rice Water Weevil	<i>Sitophilus oryzae</i>	larva
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Emerald Ash Borer	<i>Agrilus planipennis</i>	adult
Goldspotted Oak Borer	<i>Agrilus auroguttatus</i>	adult

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grubGONE!® G

SPREADER SETTINGS & APPLICATION GUIDE

Apply grubGONE! G at a rate of 3 lbs per 1,000 sq.ft.



Spreader Type	Speed	37 oz (2.3 lb) per 1,000 sq ft	55 oz (3.4 lb) per 1,000 sq ft	Swath	Pattern / Cone
Agrifab Rotary	3 mph	4	4.5	?	n/a
Anderson's Rotary Model 2000 SR	3 mph	K	L	11	8
Anderson's Model 2000 Rotary Spreader	3 mph	K	L	11	6
Anderson's SSD Drop Spreader	3 mph	4	4.75	n/a	n/a
Earthway Ev-N-Spred Rotary Model 2170	3 mph	12	14	8	n/a
Gandy Drop	3 mph	19	21	n/a	n/a
LESCO Rotary 020093	3 mph	E	F	7	Open Full
LESCO Rotary 705698	3 mph	12	14	7	Open Full
Prizelawn BF1 Pull behind rotary model	3 mph	H	I	10	n/a
Prizelawn Rotary Model CBR-III	3 mph	H	I	8	n/a
Scotts Precision Green drop	3 mph	4	4.75	n/a	n/a
Scotts R-8A	3 mph	J	K	11	6
Spyker Rotary Model 46-22	3 mph	3.6	3.9	?	n/a
Vicon (03) Series	4.5 mph	19	23	30	-
Lely Models WTR, WFR, HR, 1250 (PTO at 450 rpm)	4.5 mph	4.5	5.25	34	III-C
Scotts® Recommended Spreaders		Setting		Width of Coverage	
Scotts® Rotary Spreaders (EdgeGuard® DLX, EdgeGuard® Mini)		3		5'	
Scotts® Elite Spreader		3 3/4		6'	
Scotts® Hand-Held Spreaders (manual models)		3		N/A	
Scotts® Wizz® Year-Round Spreader (battery-powered)		3 1/2		5'	

Prill size of the pellets is 150 SGN. If you do not see your specific spreader on this chart, refer to the spreader's product guide using the grubGONE! prill size as a reference. Please note: These are estimates only, actual spreader application rate may vary due to spreader wear, operator use and other environmental factors & variables present during application.

Spring & Summer Application

Apply grubGONE! G during springtime (shortly after the ground has thawed) to control overwintering grubs that are coming up near the surface of your lawn to feed on the roots. Applying grubGONE! G during mid-summer is the best time to control newly hatched grub larvae that are in their first weeks of development. Apply within 2 - 3 weeks of peak flight of adult beetles which is typically near the beginning of August.

Fall Application

grubGONE! G is also an excellent product for fall grub control if you miss the mid-summer application window. Beetles spend their summer eating and laying eggs and by August, small (1st instar) grubs appear below the surface of your turf, feeding on the roots. Eventually turf damage becomes noticeable in the fall as these grubs grow into larger 2nd & 3rd instar grubs. The good news is that grubGONE! G is a proven winner against these larger grubs. Meaning you can successfully treat for grubs well into the fall season; thus helping you lessen the impact grubs and beetles have on your yard next year.

If grub infestation is extensive, we recommend applying grubGONE! in 2 of the 3 application windows described above.

No Weeding Required!

Since grubGONE! G is non-toxic to bees, butterflies, ladybugs and other beneficials there is no need to remove dandelions or other flowering weeds from your turf before application.

Warmer Climates May Have Continued Grub Activity *

Warmer Climates May Have Continued Grub Activity *

Spring Through Late June Late June to Mid August August to Mid October *

* Apply while grub or beetle invader is feeding. Consult with your local nursery, cooperative extension service or local pest control professional for precise timing of application in your region.

beetleGONE!® tlc

APPLICATION GUIDE

Ornamentals

Gardens





Turf Grass

Greenhouses

Certified for organic gardening, beetleGONE! tlc is specifically formulated for use on trees, shrubs, fruits, vegetables, ornamental plants and anywhere you have an outbreak of beetles, weevils, borers or other targeted pests.

For Spot Spraying Individual Plants:

In order to control as many target pests as possible, we recommend two or three treatments at intervals of 7 - 10 days when you start to see an infestation. Simply mix 2 - 4 oz (1/2 - 1 cup) of the powder for every gallon of water and apply the mixture with a backpack sprayer, hand held sprayer or spray bottle. Once ingested, the pest will stop feeding and eventually die. While working, periodically shake or stir the mixture to keep a uniform ratio of beetleGONE! to water. In order to keep the product on the foliage where beetles are feeding it is best to apply when rain is not in the forecast for a few days or to mix in a commercial sticker¹ if rain is expected.

<p>Mix the beetleGONE! powder at a rate of 2-4 oz per gallon of water.*</p> 	<p>Apply to foliage where beetles are feeding every 7-10 days.</p> 	<p>Do not allow irrigation or rain to wash beetleGONE! off foliage.</p> 	<p>Store in a cool, dry place. Dry powder has a shelf life of 18 months.</p> 
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*Only mix the amount you plan to use that day. Any extra should be used within 7-10 days

For Turf Grub Control:

beetleGONE! tlc can also be used as a ground spray on your turf from spring to fall to control beetle larvae (grubs). Make sure the mixed application gets irrigated into the root zone where the grubs are feeding. Mix as indicated above using 2 - 4 oz of beetleGONE! per gallon of water & spray the mixture over 1000 sqft.

A hose end sprayer¹ may be appropriate for application to turf. Depending on the model, mix a concentrated solution of up to 4 oz of beetleGONE! per 16 oz of water. Once again, deliver 2 - 4 oz of beetleGONE! per 1000 sqft. Multiple applications are not required, but may be desired depending on infestation.

Potting or Garden Soil Mix Application:

Grubs may be controlled from Spring through Fall in soils by spraying the soil to drench with beetleGONE! tlc at a rate of 2 - 4 oz per gallon of water or mixing/tilling dry beetleGONE! tlc directly into the soil to a depth of 6 inches at a rate of 2 - 4 oz per cubic foot of soil.

Plant Root Dip Application:

Roots of plants may be treated prior to planting or storing over winter. Simply mix beetleGONE! tlc with water in a container at a rate of 2 - 4 oz per gallon of water and dip the root ball of the plant into the suspended solution.

beetleGONE! tlc Benefits:

- Treated fruits, vegetables & herbs may be eaten the day of application
- Preserves bees, butterflies, ladybugs & other non-targets in the garden
- Specifically targets certain species of beetles, weevils & borers
- Compliant with the USDA National Organic Program for use in organic crop production
- Non phytotoxic to plants



¹ See the beetleGONE! Sprayer Guide at <http://phyllombioproducts.com/sprayers.html> for more information on stickers & hose end sprayers

beetleGONE!® tlc



Recommended Rate: 3 oz (1/2 cup loosely packed) per Gallon per 1,000 sqft

For all applications we recommend a rate of 2 - 4 oz (about 3/8 - 3/4 cups) of beetleGONE! per gallon of water which will allow you to treat 1,000 sqft. Generally, if you are treating for beetles on foliage we recommend using manual pump sprayers which allow you to easily control the amount of product delivered to the foliage of the plant; your favorite one in the shed will probably work just fine. To treat for grubs feeding on the roots of your turf or garden, BOTH manual pump sprayers and hose end sprayers will work; although, hose end sprayers may be preferred (see below section 'For Ground Spraying Applications').

For Application to Trees, Ornamentals, Fruits & Vegetables (Adult Beetles)

For foliar application, we recommend the use of handheld pump sprayers. Hose end sprayers often do not deliver enough product and due to increased flow of water, considerable amounts of product may end up on the ground. With pump sprayers, getting the right mix of beetleGONE! is easy; simply mix 2 - 4 oz (3/8 - 3/4 cups) of beetleGONE! per gallon of water. Depending on the sprayer, and the size of the tank opening, it may be easier to mix the beetleGONE! with water in a separate bucket before transferring the mixture to the sprayer. Once inside the sprayer, tighten the lid and shake vigorously to ensure the solution is well mixed. Continue to gently mix the solution while working to keep the beetleGONE! suspended in water. We prefer a mist setting during application which provides uniform coverage on the foliage while limiting product run off. For best results, do not allow irrigation or rain to wash beetleGONE! off the leaves after application.

Sticker-Spreaders and IPM (Integrated Pest Management):

For foliar applications, we recommend adding a sticker-spreader at label rates to the beetleGONE!-water mix. A sticker-spreader is typically used by growers, farmers and foresters in their applications of microbial products to the foliage of plants to enhance adhesion when light rain or morning dew is forecast. Based on customer feedback, PBC recommends three products that are working well with beetleGONE! These products will maintain organic status.

Miller Chemical's Nu Film® P is a superior spreader sticker adjuvant with non-ionic properties designed to improve the contact, wetting and adhesion of pesticides onto the plant surface. Nu Film P forms a soft film, which polymerizes. This film reduces the effects of rainfall erosion, volatility and ultraviolet (UV) degradation on pesticide spray deposits. NOP (EPA National Organic Program) and OMRI compliant for use on organic crops.

Our customers have also reported success in using Neptune's Harvest Rose & Flowering 2-6-4 32 oz. (1 qt.) Organic Fertilizer which is a rose & flowering fertilizer. This product was uniquely formulated for flowering plants to increase their vigor during flowering and to increase the volume and density of buds that produce healthy, vibrant flowers. Made with fresh fish, molasses, yucca extract, seaweed and humic acids Neptune's Rose & Flowering formula will ensure that your plants are healthy and happy, produce lush foliage and maximize their flowering ability.

For an extremely bad infestation of Japanese Beetles, one can also add 1 cup of a kaolin clay-based product (Surround WP) per gallon of beetleGONE! / water mixture. The kaolin clay will work with beetleGONE! to control the beetles. This kaolin clay product will, however, leave a light white film on the foliage of the plant.



For Ground Spraying Applications (Grub Larvae)

beetleGONE! may be used as a ground spray in order to control grubs feeding beneath the surface of your lawn or garden bed. Manual pump sprayers can be used, but may be inefficient if a large area needs to be treated. For treating large areas a hose end sprayer is preferred. The use of a hose end sprayer will require you to make a concentrated solution of beetleGONE! by mixing 2 - 4 oz (3/8 to 3/4 cup)* of beetleGONE! with 16 fl oz of water. Add the concentrated solution to the sprayer tank, tighten the lid and shake vigorously to ensure a uniform mixture with no clumps. Deliver the concentrated solution over 1,000 sqft. Whichever type of sprayer you use, make sure 2 - 4 oz of beetleGONE! is used per 1,000 sqft and irrigate the product into the root zone of the soil where grubs are feeding.

Sprayer Guide | Phyllom beetleGONE!® tlc

*NOTE: Various hose end sprayers deliver the concentrated beetleGONE! solution at different rates; please see sprayer recommendations below. For foliar application with a hose end sprayer, consider mixing 1 cup of beetleGONE! per 16 fl oz of water.

Manual (Pump) Sprayers	Application		Rate
	Foliar	Ground	
Scotts® Multi Use 1 Gallon Sprayer	Yes	Yes	Mix 2 - 4 oz (3/8 - 3/4 cups) of beetleGONE! per gallon of water.
Chapin® Pump Sprayer Model #1002	Yes	No	Mix 2 - 4 oz (3/8 - 3/4 cups) of beetleGONE! per gallon of water.
Zep® Professional Sprayer	Yes	No	Mix 2 - 4 oz (3/8 - 3/4 cups) of beetleGONE! per gallon of water.
Other Pump Sprayers Tested: Flow Master® Model 56HD - Uneven application. Likely due to design of sprayer Chapin® Mister Model 5002 - Uneven application. Likely due to design of sprayer			
Hose End Sprayers	Foliar	Ground	Rate
Hudson® Hose End Sprayer Model 2204 Ace® Hardware Model 2204 Chapman® Wet or Dry Hose Sprayer	Yes	Yes	Using the 'Acid Loving Plant' Setting: Mix 1/2 - 1 cup of beetleGONE! with 16 fl oz of water to deliver 2 - 4 oz of beetleGONE! per gallon.
Chameleon® Hose End Sprayer	No	Yes	Using the 8 oz Setting: Mix 1 cup of beetleGONE! with 16 fl oz of water to deliver 1 oz of beetleGONE! per gallon. Multiple passes required.
Other Hose End Sprayers Tested: Chapin® Hose End Sprayer Model G362D - Does not deliver at the desired rate Ortho® Dial N Spray Multi Use Hose End Sprayer - Does not deliver at the desired rate			

Application to Trees, Ornamentals, Fruits & Vegetables (Adult Beetles)

Zep® Professional Sprayer (Spray Bottle)

Mix beetleGONE! at a rate 2 – 4 oz (approx. 3/8 to 3/4 cups) per gallon of water. Set adjustable nozzle to almost closed (mist) position and make 2-3 passes over foliage to ensure uniform coverage without allowing beetleGONE! mixture to drip off leaves. Recommended for treating small areas of foliage. Sprayer delivers a light mist which provides uniform application.

Scotts® Multi Use 1 Gallon Sprayer

Mix beetleGONE! at a rate 2 – 4 oz (approx. 3/8 to 3/4 cups) per gallon of water. Adjustable cone nozzle: Set to fully closed (mist) position and make 2-3 passes over foliage to ensure uniform coverage without allowing beetleGONE! mixture to drip off leaves. Optional Multi nozzle: Set to 'Fan' or 'Cone' setting and make 2-3 passes over foliage to ensure uniform coverage without allowing beetleGONE! mixture to drip off leaves. Recommended for treating small to large areas as a foliar application or small to medium areas as a ground spray. Sprayer delivers a medium spray which provides a uniform application without excess product run off. For ground spray applications you will need to irrigate the product into the root zone where grubs feed.

Chapin® Pump Sprayer Model #1002

Mix beetleGONE! at a rate 2 – 4 oz (approx. 3/8 to 3/4 cups) per gallon of water. Set adjustable nozzle to fully closed (mist) position and make 2-3 passes over foliage to ensure uniform coverage without allowing beetleGONE! mixture to drip off leaves. Recommended for treating small to medium areas of foliage. Pump sprayer delivers a light mist which provides uniform application.



For Ground Spraying (Root Zone) Applications (Grub Larvae)

Hudson® Hose End Sprayer Model 2204 | Ace Hardware® Model 2204 | Chapin® Wet or Dry Hose Sprayer

Mix 1/2 - 1 cup of beetleGONE! with 16 fl oz of water to create 20 fl oz of concentrated beetleGONE! solution. Leave the sprayer supply tube attached and set the sprayer to the 'Acid Loving Plants' setting. Sprayer output will be approx. 2 - 4 oz of beetleGONE! per gallon, allowing you to cover 1,500 sqft. This sprayer is an excellent choice to control turf grubs feeding on the roots of your turf or garden - make sure product gets irrigated into the root zone. For foliar application this product will deliver at the high label rates; however, be advised that considerable amounts of the sprayed solution will end up on the ground. For foliar application we recommend the higher concentrated rate of 1 cup beetleGONE! to 16 fl oz of water.

Chameleon® Hose End Sprayer

Mix 1 cup of beetleGONE! with 16 fl oz of water to create 20 fl oz of concentrated beetleGONE! solution. Set sprayer to the 8 oz setting. Sprayer output will be about 1.5 oz of beetleGONE! per gallon. Make multiple passes to achieve desired rate of application. This sprayer is a good choice to deliver the low label rate (1-2 passes) or high rate (multiple passes) of beetleGONE! to turf or garden beds. Make sure product gets irrigated into the root zone. For foliar application this product will deliver at the low label rates; however, be advised that considerable amounts of the sprayed solution will end up on the ground. For this reason, we only recommend this sprayer for ground spraying.



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Phyllom BioProducts Corp. (PBC) discovers, develops and markets novel insect controls with low eco impact that protect the beauty, health and value of forests, farms and landscapes from devastation by beetle, weevil and grub invaders. PBC is now in growth stage with its brands beetleGONE!®, grubGONE!® and boreGONE!®. This suite of proprietary products and technologies are protected by several issued and pending patents. As we like to say "Target the Pest, Not the Rest!®". More information is available at www.phyllombioproducts.com