

Purely Green Bio-Pesticide Introduction

Agri-Nanotechnology turbocharges phytochemical pest control performance known for more than a millennium. Now all-natural programs replace problem synthetic chemical programs. This is just in time for oil seed hemp harvests to meet new product purity requirement to be offered for sale in the largest markets.

Nanotech is used in our proprietary process to blend oil seed and plant extracts at specific time intervals, temperatures, and sequences. This transforms them into nano sized colloidal micelles. Trillions of these micelles control pests without product contamination. They penetrate and demobilize harmful insects, bacteria, and fungi. And they reach eggs and spores in the smallest crevices to stop infection of future plantings. The following pages introduce Purely Green Bio-Pesticide.

Contents

- Product Data Sheet – P. 2 of 7
- Proof of Performance – Nematodes P. 3 of 7
- Value – Mosquito Control without Poison P. 4 of 7
- Tech – Bee Kill by Soil Pesticides P. 5 of 7
- Safety Data Sheet PP. 6-7

<https://www.greensafeworldwide.com/sds-and-literature-page> to order and to learn about the rest of the GreenSafe™ System for reducing and replacing harsh chemicals for all growing and hygienic cleaning.



Grow With Us

Purely Green Bio-Pesticide

Super Concentrate and Ready to Spray



Purely Green Biopesticides are broad-spectrum contact and systemic bactericide, fungicide, and insecticide. The products are exempt from EPA (FIFRA 25b) as a minimum risk pesticide. Refer to Table 2 for the States permitting sale and use. They replace hazardous synthetic chemicals. Purely Green can be used on all crops, turf, ornamentals, pets, livestock and in and around structures. Pest control is essential to protect food supplies, people, animals, and property. However, synthetic pesticides are hazardous for shipping, storage, and application. Once used, their residuals are a risk to people, animals, beneficial insects, and the environment. Purely Green Bio-Pesticide meets the essential need for control without risk from handling, residuals, and pollution. Processed plant and oil seed extracts known to be beneficial for millennium are combined into colloidal micelles using a modern proprietary process blending them at specific time intervals, temperatures and sequences resulting in our breakthrough product system. Purely Green Bio-Pesticide is not a poison. It dissolves harmful insect protective coating (“chitin”). Wings and legs cannot move. The insect has no defense. No immunity is possible. Purely Green Bio-Pesticide complies with EPA regulatory requirements because it is exempt from registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as a minimum risk pesticide. Table 2 lists the States where it is approved for sale and use.

Cost - Value

General: The 1-quart price for Super Concentrate is \$39.00. It is diluted for use at 3-ounces or \$3.65 per gallon. That gallon treats 42 acres for >10¢/acre. Costs will be lower depending on quantity purchased. Growers report synthetic pesticide costs from \$50 to \$70 per acre. (Source: <https://farmdocdaily.illinois.edu/>)

Application

Farm and Garden Pests: Spray top and bottom of leaves, limbs and stem until all targets are wet. Drench the soil and roots well enough to reach all targets. Repeat promptly before newly hatched eggs can reach reproductive stage. Drench roots monthly for uptake into sap and leaves for insect ingestion.

Trees (Fruit, Nut & Berry): Spray leaves, limbs, and trunks. Soak roots until drenched. Apply as a plant spray and soil drench whenever insects or pests are present.

Livestock and Pets: Mist stalls or spray livestock generously. Spray or shampoo pets. Product can be left to dry on animals or rinsed with clean water.

Flying & Crawling Insects: Mist or spray generously on flies, mosquitos, no-seeums, roaches, wasps, etc. Spray wasp nests. Soak ant beds, reaching the queen.

Post-Harvest Preservation: Wash produce and cut flowers with a Purely Green solution to extend freshness, marketability and/or edibility up to 5 days. Spray or dip produce in solution to remove residual chemicals or surface dirt. Rinse thoroughly before consumption.

Ingredients and Handling

Table 1 - Bio-Pesticide Active Ingredients

Soybean Oil	0.16%	Lemon Grass Oil	0.14%
Peppermint Oil	0.16%	Garlic Oil	0.01%
Cinnamon Oil	0.14%	Inert Ingredients	99.39%

All-natural processed extracts of natural plants and soap (Table 1) Purely Green Bio-Pesticide is non-hazardous and biodegradable. Personal protective equipment is not

required. Overspray is not hazardous. Store for up to 3-years in a dry place away from temperature extremes.

Grow With Us – Order: <https://www.greensafeworldwide.com/shop>

Nanotech Supercharges Proven Phytochemical Performance

Table 2 - States Approval

States OK	Super Concentrate	Ready to Spray	States Not OK
AR	X		SD - NM - MS - ME - MD - CT - LA - IN - IL - AL - AK
AZ	X		
CA	X	X	
CO	X		
DE	X		
FL	X	X	
GA	X	X	
HI	X	X	
IA	X		
ID	X		
KS	X		
KY	X		
MA	X		
MI	X		
MN	X	X	
MO	X	X	
MT	X		
NC	X		
ND	X		
NE	X		
NH	X		
NJ	X	X	
NV	X		
NY	X	X	
OH	X		
OK	X		
OR	X		
PA	X		
RI	X		
SC	X		
TN	X		
TX	X	X	
UT	X		
VA	X		
VT	X		
WA	X		
WI	X		
WV	X		
WY	X		

Figure 1 - Nematode Management

Test Design: Bio-Pesticide Super Concentrate was tested against *Meloidogyne incognita* juvenile mortality and egg hatching. Treatments was by soil drench at the following water dilutions: 1, 2, 3, 4 and 5%. Each test was replicated five times.

Results Summary: All nematodes were found dead at 4% concentration 24 hours after treatment. At 3%, 95% were dead after 24-hours and complete mortality took place after 48-hours. At 2% concentration, 62% were dead after 24-hours and 100% after 48-hours. The 1% concentration drench was comparable to the control sample after 48-hours. (See Table 1)

Table 1 - Bio-Pesticide Concentrations in Water Drench

Time Period	4%		3%		2%		1%		Control - Water Alone	
	Dead	Live	Dead	Live	Dead	Live	Dead	Live		
24-Hr.	100%	0%	96%	4%	62%	38%	10%	90%	0%	100%
48-Hr.	100%	0%	100%	0%	100%	0%	90%	10%	0%	100%

Figure 2 – **Nematodes** (*Meloidogyne incognita* (root-knot nematode), also known as the "southern root-nematode" or "cotton root-knot nematode" is a plant-parasitic roundworm in the [family Heteroderidae](#). This nematode is one of the four commonest species worldwide and has numerous hosts. It typically incites large, usually irregular galls on roots as a result of parasitism. Row crops like soybean, maize, tobacco, and cotton. *Meloidogyne incognita* is probably the most economically important plant-parasitic nematode species among the tropical and subtropical regions. This nematode is extremely polyphagous, attacking both monocotyledons and dicotyledons. It is estimated that more than 3,000 plant species can be affected.

Symptoms: Plants affected by *M. incognita* presents above ground symptoms of water and nutrient stress, yellowing, wilting, and stunting. Below ground galling on roots, bulbs, tubers are the typical symptom. Plant death may occur in high infestation level.

Morphology: Females of *M. incognita* are pear-shaped with no posterior protuberance. Their stylet ranges from 15-16 µm long, and knobs are rounded and offset. Perineal pattern is oval to rounded, typically with high dorsal arch, striae usually wavy, and lateral field absent or weakly demarcated. Males have a not offset head with an elevated labial disc without lateral lips (usually). Their stylet ranges from 23-26 µm long, and knobs are rounded to oval and offset. Juveniles second stage body size range from 350-450 µm long. Their tail has rounded tip and range from 43-65 µm in length with 6-14 µm long hyaline region.

Life cycle: Within the egg, the first molt occurs and a juvenile first state (J1) becomes a juvenile second stage (J2). Under favorable conditions (temperature, moisture, host stimulus) the J2 hatches, reaches and penetrates the host root. Root tips are the primary infection court. Once inside the roots, J2 migrate through cortical tissues towards the vascular zone where they establish a permanent feeding site called giant cell. At this point the nematode enlarges acquire a "sausage" shape and becomes sedentary. Three more molts occur, J2 becomes J3, J4 and then adult. *M. incognita* is sexually dimorphic. Females acquire a globose shaped body while males become vermiform and leave the roots. Upon maturity females lay eggs into a gelatinous mass that protect them against unfavorable environmental conditions, and the life cycle is repeated. It takes 37 days at 21 degree Celsius for *M. incognita* to complete its life cycle.

Management: Management of *M. incognita* depends primarily on the crop being affected and relies on multiple strategies such as cultural, biological, and chemical control. Among the cultural control crop rotation with nonhost or resistant varieties can be used to keep the nematode population at tolerable levels. Also, usage of organic amendments and antagonistic crops such as *Crotalaria spectabilis* (Leguminosae) and several *Tagetes* species (Asteraceae) is effective against this nematode. Some fungus that parasites eggs, for example *Paecilomyces lilacinus*, have been using as a biological control.

<https://www.agrogreencropscience.in/products.html>

No Hazards Mosquito Control

Iowa Vegetables Grower: “We always wore special clothing when we harvested because the mosquitoes are unbelievable, they will even bite your eyes. We’ve had NO mosquitoes in the past two years thanks to your product.”

Biological Natural Ingredients Model

SECTION 1 – PRODUCT NAME

Purely Green Bio-Pesticide

Ready to Use / Super Concentrate (Spray 3-oz/gal. water dilution.)

SECTION 2 – HAZARD IDENTIFICATION

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements

Signal Word: **None**

Pictogram - **None**



Synthetic Chemicals Model

SECTION 1 – PRODUCT NAME

Bifenthrin

SECTION 2 – HAZARD IDENTIFICATION

Classification of the substance or mixture

Acute Toxicity: Oral, Fatal if swallowed.

Acute Toxicity: Inhalation, Toxic if inhaled.

Skin Sensitization may cause allergic skin reaction.

Carcinogenicity, suspected of causing cancer.

Specific Target Organ Toxicity (repeated exposure) Causes damage to organs.

Aquatic Toxicity (Acute), Very toxic to aquatic life.

Aquatic Toxicity (Chronic), Very toxic to aquatic life with long lasting effects.

GHS Label elements

Signal Word: **DANGER**

Pictograms: Skull and Crossbones - Health Hazard - Exclamation Mark - Environment



REGULATION - WPS (Chemical pest control requires the costs of time, materials, and risk management to comply with the EPA/State Ag Dept. enforced Worker Protection Standard - Training – Personal Protective Equipment – Storage – Compliance Record Keeping



Florida Department of Agriculture and Consumer Services Bureau of Pesticides, Pesticide Registration Section

85

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JUNE 21, 2021

1ST ENVROSAFETY, INC.
10200 BETSY PARKWAY
ST. JAMES CITY, FL 33854
UNITED STATES

FAID: 0190772001
CO ID: 50772001

THIS IS CONFIRMATION THAT THE FOLLOWING 1 PRODUCT BRAND(S) HAVE BEEN REGISTERED BY FLORIDA.

NOTE: ALL PERMITS AND REGISTRATIONS EXPIRE ON DECEMBER 31ST OF THE EVEN REGISTRATION YEAR AND MUST BE RENEWED FOR THE NEXT REGISTRATION PERIOD BY PAYMENT OF THE APPLICABLE FEES AS REQUIRED UNDER CHAPTER 487, FLORIDA STATUTES.

FLORIDA SECTION 18 EMERGENCY EXEMPTION PETITIONS ARE NOT SUBJECT TO STATE REGISTRATION FEES, BUT ARE LISTED WITH OTHER PRODUCT BRANDS IN THE SYSTEM FOR AUDITING PURPOSES.

PRODUCT BRAND NAME	FLORIDA REG NO	EFFECTIVE DATE	EXPIRATION DATE
PURELY GREEN MOSQUITO CONTROL, SUPER CONCENTRATE	EXEMPT	06/01/2021	12/31/2022

A common soil pesticide cut wild bee reproduction by 89 per cent

Here's why scientists are concerned



When you think of bees, a hive humming with activity probably comes to mind. But most of the world's 20,000 bee species don't call a hive home. These wild species lead solitary lives instead, and around 70% of them build nests underground where they raise their offspring on the nectar they gather from flowers.

Incredibly, almost all scientific understanding of how pesticides affect bees has come from testing domesticated honeybees, and, more recently, bumblebees. That's largely because these species tend to be easier to work with in lab conditions. How non-social bees cope with these chemicals is largely understudied, despite them making up the vast majority of bee species worldwide.

Neonicotinoids are a family of pesticides which have been used in farming across the world. Their chemical structure resembles nicotine and they're designed to kill crop pests by targeting the insect nervous system. Neonicotinoids can be sprayed on plants, but are most commonly used to coat seeds. Since their introduction in the late 1980s, robust scientific evidence has emerged to suggest these chemicals impair learning and memory, foraging behaviour, and pollination in bees. The EU banned neonicotinoids in 2019, and while the UK government pledged to follow suit, it granted a special exemption for sugarbeet farmers to use the neonicotinoid thiamethoxam throughout 2021, and possibly until 2023.

Because honeybees don't spend much time on the ground, environmental risk assessments for neonicotinoids often neglect to consider how exposure to these chemicals in the soil affects all pollinators. But in a landmark study published in *Nature*, researchers have shown how neonicotinoids affect bees not just by accumulating in the plants pollinators visit, but in the ground where most wild bees build their nests.

Down on the farm

Working over three years in Ontario, Canada, the researchers mimicked the conditions on a real farm by growing crops of squash plants in large polytunnels. Before planting, common neonicotinoid pesticides were applied to the seeds

and later the leaves, while one chemical called imidacloprid was applied to the soil. This is used in Ontario to control the striped cucumber beetle.

Mated female bees were introduced when the crop came into bloom. They dug nests in the earth around the plants and began foraging for nectar from the large, yellow squash flowers, which they'd bring back to offspring tucked away in special chambers underground.

These were hoary squash bees – a ground-nesting species found on farmland throughout North America. Squash bees are uniquely suited to pollinating the flowers of squashes, pumpkins and cucumbers thanks to special leg hairs that fit the size and shape of their pollen grains. They tend to forage earlier in the day than most bees too, to match the early morning flowering of these plants.

The researchers studied nest building, foraging and reproduction in these bees and found imidacloprid in particular – one of the most widely used neonicotinoids worldwide – had a devastating effect on all aspects of squash bee life. Compared to insects living on untreated cropland, the hoary squash bees exposed to imidacloprid in the soil created 85% fewer nests, left 5.3 times more pollen unharvested and produced a staggering 89% fewer offspring.

Imidacloprid appeared to rob squash bees of their usual industrious attitude towards the laborious work of building nests, foraging for food and rearing young. These non-social bees lack the support of relatives in big hives, and must face these essential tasks alone. By reducing the amount of pollen they collect, the pesticide could leave squash bees and their offspring with less energy to do so.

But it's not just bees which are in trouble. Pumpkins, squashes and gourds are entirely dependent on pollination by bees to set fruit. Without an influx of new bees or a recovery in their reproduction, farm productivity could suffer too.

Hoary squash bees, like many bee species, are specialists. Unlike generalist honeybees which are comfortable pollinating a wide range of plants, specialists co-evolved with their host plants and are uniquely adapted to pollinating them. Generalists can sometimes step in to do their work, but they're unlikely to manage it with the same kind of skill.

Due to their wild nature, non-social insects are far harder to protect on farmland than domestic species. Honeybees hives can be moved around the countryside if an area is no longer able to support them. Squash bees and other non-social bees build small nests throughout the landscape, making it impossible to pinpoint and protect them all. Protecting honeybees from pesticides is already difficult. For wild bees which forage and nest among a wide variety of crops worldwide, it may be impossible.

Read the original article.

<https://theconversation.com/us/who-we-are>



Purely Green Bio-Pesticide

Safety Data Sheet (SDS)



Approval Ref FAID 070297001

SECTION 1 – PRODUCT AND COMPANY INFORMATION

Manufacturer: 1st EnviroSafety, Inc. – 10200 Betsy Parkway – St. James City – Florida 33956
Product Family: U.S. EPA EXEMPT CHEMICALS
Product Name: PURELYGREEN BIO-PESTICIDE
Product is offered as ready-to-Use and concentrate.

CHEMTREC Emergencies - For Transportation
800.424.9300 or Medical 800.858.7378

SECTION 2 – HAZARD IDENTIFICATION

Classification: Not classified as hazardous according to 29 CFR 1910.1200 (2012)
Clinically documented Genotoxicity Free - Certified Carcinogen Free

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Product may contain some, or all, of the following extracts and ingredients processed from natural sources:

Component (CAS Number*)	Peppermint Oil (8006-90-4)
Cinnamon Oil (8015-91-6)	Soybean Oil (8001-22-7)
Garlic Oil (8000-78-0)	Soap (61789-24-0)
Lemongrass Oil (8007-02-1)	Water (7732-18-5)

SECTION 4 – FIRST AID MEASURES

Skin Contact: First aid not normally required. If contaminated by spilled product remove contaminated clothing and shoes. Wash area of contact with soap and water. Wash clothing and decontaminate shoes before reuse. Get medical attention if irritation occurs and persists.

Eye Contact: Remove contact lenses if present. Flush with water until all traces of material are gone. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation occurs and persists.

Inhalation: Remove affected person from source of exposure to fresh air. Give artificial respiration if breathing has stopped. Call for medical attention

Ingestion: Do not induce vomiting because of danger of aspiration into lungs. If spontaneous vomiting occurs, get medical attention.

Most important symptoms and effects, both acute and delayed: Symptoms relating to use not expected to present a significant hazard under anticipated conditions of normal use.

Indication of any immediate medical attention and special treatment needed: None known.

SECTION 5 – FIREFIGHTING MEASURES

Suitable extinguishing media: Product does not burn. Use water spray, dry chemical, foam or CO₂ as applicable for burning materials. Use a water spray to cool fire-exposed containers, structures and to protect personnel. Exposed firefighters should wear MSHA/NIOSH approved self-contained breathing apparatus with full-face mask and full protective equipment.

Unsuitable extinguishing media: None known.

Surrounding fires: Use water spray or fog for cooling exposed containers.

Special hazards arising from the substance or mixture: Spilled product may cause a slipping hazard. **Hazardous combustion products:** Under fire conditions, hazardous fumes will be present from surrounding fire. **Advice for fire-fighters:** Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Refer to Section 8: Exposure Control and Personal Protection

Emergency Action: For large spills, isolate the release area and keep unnecessary people away. Exercise caution regarding personnel exposure.

Spill/Leak Procedure: Floor and surfaces may be slippery. Dike with sand or other material. Flush area with water provided runoff does not enter drain or sewer; use absorbent material and dispose of properly.

Notification: Any spill or release to navigable water that causes a visible sheen upon the water must be reported immediately to the National Response Center (800/424-8802), as required by U.S. federal law.

SECTION 7 – HANDLING AND STORAGE

Handling: Wear proper protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Do not ingest. For intended use only. Use good hygiene practices when handling product, including changing and laundering work clothes after use. Get medical attention if you are exposed and feel unwell. The shipping and storage container is not designed to be pressurized. Do not use pressure to empty the container as it may rupture. Containers should be completely drained, properly closed, and promptly returned to a drum for recondition or disposed of properly. Empty containers may contain residue or vapors. Do not cut, grind, drill, weld or reuse containers.

Storage: Do not store near incompatible chemicals. When possible, store in a dry place at moderate temperatures (above freezing) away from heat and flames. This material is to be handled and applied according to label directions. Keep this product and all chemicals away from children and pets. Keep containers closed when not in use. Do not eat, drink, or smoke while using this product.

SECTION 8 – EXPOSURE CONTROL AND PERSONAL PROTECTION

Engineering Controls: Use appropriate ventilation to maintain airborne concentration limits below recommended exposure limits.

Eye and Face Protection: Not normally needed when used according to directions.

Skin Protection: Not normally needed when used according to directions

Respiratory Protection: Not normally needed.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

General Information:

Physical State: Liquid

Color: Clear to Opaque

Odor: Nondescript

Important Health, Safety and Environment Info

Boiling Point/Range: >212°F

Flash Point: >212°F (Water Based)

Auto Ignition Temp: ND

Lower Flammability Limit: ND

Upper Flammability Limit: ND

Note: Physical Data is typical values based on material tested, but may vary based on composition. Values should not be accepted as guaranteed for every lot or as specifications for this product.

Vapor Pressure (psi @100°F): Same as Water

Vapor Density: Heavier than air

Freezing Point/Melting Point: NA

Solubility (Water): Complete

Specific Gravity: 1.001 (8.338 lbs./gal.

Evaporation Rate: Same as Water

Viscosity (SSU@ 100°F): NA

pH: 9.5

Other Information:

Volatility: NA

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Does not react under normal conditions of use.

Chemical Stability: Stable under normal conditions of use.

Stability/Incompatibility: Stable. No known incompatibility issues.

Conditions to Avoid: None known.

Hazardous Reactions/Decomposition Products: None known and does not decompose under normal conditions

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes and Skin

Acute Effects: Non-toxic. LD50 and LC50 not determined for this mixture. Excessive inhalation or ingestion of large amounts of this product may cause irritation or discomfort. Refer to Sections 2 and 4 for recommended actions.

Chronic Effects: Any acute symptoms may be aggravated. May cause eye irritation. Avoid contact with eyes. If irritation occurs, get medical attention. Refer to Sections 2 and 4 for recommended actions.

Carcinogenicity: No components of this product are found to be carcinogens by NTP, IARC or OSHA.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Product is not classified as an environmental hazard.

Persistence and Degradability: Product is made from components of the environment that will undergo a natural cycle transforming them into both organic and inorganic products. **Product exceeds EPA standards of readily biodegradable.** No special disposal required.

Bio accumulative Potential: Product is not expected to have bioaccumulation or food chain contamination potential. It will not adhere to particulate matter or surfaces and is expected to have high mobility in soil and sediments.

Other Adverse Effects: None anticipated.

SECTION 13 – DISPOSAL CONSIDERATION

US/RCRA Waste Disposal: Methods: This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

SECTION 14 – TRANSPORT INFORMATION

DOT: Not Regulated

SECTION 15 – REGULATORY INFORMATION

Chemical Inventory Lists: All ingredients are listed on TSCA and DSL. Includes no known cancer-causing chemicals.

SARA (311/312) Reportable Hazard Categories: None

State Right to Know Lists: None

SECTION 16 – OTHER INFORMATION

Disclaimer: The information contained herein is offered only as a guide to the handling of these specific products. Since such information does not relate to use of these products with any other products or in processes, any person using this information must determine for himself its suitability for any particular application. The buyer and user assume all risk and liability of use, storage and/or handling of these products not in accordance with the terms of the product labels. 1st Enviro-Safety Inc. makes no Warranties of any kind, express or implied with respect to this product. 1st Enviro-Safety's obligations are limited to replacement of product for defective material only. 1st Enviro-Safety shall not be liable for any injury, loss or damage directly or consequently arising from the misuse or inability to use the product. Tell a friend about your success with these products.

Prepared for: 1st Enviro-Safety Inc. By: Mg-Help LLC