



“The most deadly ‘animal’ in the world is the mosquito. It might seem impossible that something so minuscule can kill so many people, but it’s true. According to the World Health Organization, mosquito bites result in the deaths of more than 1 million people every year. The majority of these deaths are due to malaria and estimates that between 300 and 500 MILLION cases of malaria occur each year...and a child dies from malaria every 30 seconds.”

The World Health Organization





GarbageBags+

Natural Botanical Formula Insect & Rodent Repellent Garbage Bags, Can Liners and Table Covers

- Repels dangerous virus carrying mosquitoes, ticks & other insects
- Repels small rodents attracted to garbage
- Safe for food-handling area, children and animals
- 100% DEET FREE, chemical and artificial fragrance FREE
- Prevents dangerous mold, mildew and airborne spores
- Allergen free, odor reducing formula
- Natural antimicrobial, antibacterial properties
- Time-release formula guarantees extended effect
- Zonal effect expands repellent protection outward
- Protects pollinating insects especially bees
- Sturdy 3-ply bags & liners
- 70% recycled content
- EPA exempt ingredients
- Made in the USA





About Virus Carrying Mosquitoes:

Recently, the Zika epidemic began a worldwide campaign to consider all forms of protection against being bitten by the female *Aedes aegypti* mosquito carrying the Zika, dengue, west Nile and other viruses.

Current forms of so-called protection include aerial spraying and fogging with dangerous pesticides and insecticides. As you will read, they are proving unstable, dangerous and not highly effective. The Zika female doesn't operate like a 'normal' biting female.

This is a long-term situation requiring careful consideration regarding effects treatments using toxic substances. How this ultimate affects people, especially children and the unborn, our loving pets and our delicate environment, depends on what is done now.

Consider the value of repelling insects instead of attempting to destroy them. The food-chain, despite including dangerous insects, requires balance. Protecting our environments using safe, repellent products offers a beneficial method of handling the situation, now and in the future.

Incorporating safe, repellent product into our everyday lives is one step in the right direction. Using repellent products for service environments protects staff and work environments and homes. Protecting pollinators has become a serious imperative we must all consider. Current processes being used to manage virus carrying mosquitoes is destroying bee colonies and killing other necessary pollinators.





Product Intro

Garbage Bags Plus

**Mother Nature laid the groundwork for this successful method of insect and spore control.
We just borrowed it...**

Our naturally repellent formula targets insects and small rodent attracted to garbage odors.
Specific scents we perceive as pleasant are repulsive to insects.
These repellent scents are micro-encapsulated and infused into recycled:

TRASH & GARBAGE BAG LINERS PROTECTIVE TABLECLOTHS & GROUND COVERS

**Naturally Repellent to Insects and Rodents, with Antimicrobial - Anti-Fungal - Anti-Bacterial Properties
Reduces Odors & Dangerous Air-Born Spore Growth & Bacterial Spread
100% NON-TOXIC, NON- DEET FORMULA**

Food safe, kid safe, pet safe.
Protects against flying and crawling insects, dangerous virus carrying mosquitoes
including the Zika virus mosquito and other virus carrying insects.
Kills germs and prevents mold, mildew and dangerous spore growth

**Safe for use in food service areas, parks, homes, offices, schools, hospitals and more.
The Garbage Bags Plus product is part of the White House initiative
to preserve vital pollinators**

GB+ represents that this product qualifies for exemption from registration under the
Federal Insecticide, Fungicide and Rodenticide Act (exempted under FIFRA Section 25(b))





Product History

The original formula was successfully introduced as commercial garbage bag product line. One of the initial customers, Sysco Food Services began distribution in 2004 and continued until 2011. It was product tested on-site by Sysco Industries in San Francisco CA and Jacksonville FL. Following this initial test, the program expanded to include 10 OPCO's ultimately expanding into Sysco's full distribution system. Regional Albertsons and Fred Meyer food stores were part of this expansion.

However, following a detailed review of changes in approved exempt ingredients and guidelines, the formula affecting the fragrance required a modification to comply fully with revised regulations.

Following re-testing of the revised formula's efficacy, the new program, designed for both commercial distributors and retailers, was re-developed by Dream Green Productions. The revised product line includes additional products, such as a repellent-shield tablecloth and other new products utilizing the confined formulation.

The product line integrated other important aspects such as the White House directive to prevent killing pollinating insects, which is a key feature of a naturally repellent product.

Although the product line has a long, successful history, the revised formula is the ideal blend to repel both flying and crawling insects. The additional introduction of mint oil offers an additional layer of repellent effect targeting small rodents. Although the EPA does not review exempt ingredient products, our formula is proprietary and conforms to all EPA and FDA requirements.





Part of the Zika Max Defense Program

In conjunction with a unique program offered by Hawkeye Global Technologies called Zika Max Defense, GB+ products and processes will be incorporated into their protection program. Primary offered to the Americas where the Zika and other mosquito viruses are currently an epidemic, the same products of garbage bags, trash liners, tablecloths or ground covers offered here in the US will be used to protect families in afflicted countries.



Hawkeye Global considers these two main products instrumental as part of a complete line of repellent and protective products to combat the Zika epidemic. It is part of the Zika Max Defense Property Protection Program and the Zika Max Defense product line.

Garbage areas draw in insects including mosquitoes, putting employees, family members and the general public at risk unnecessarily. Mosquitoes love aromas we consider disgusting! Garbage and food odors attract, while botanical oils, pleasant to humans, is offensive to mosquitoes (as well as flies and other pests). Even honeybees will fly in to check out garbage. We can't selectively kill mosquitoes without destroying necessary pollinators. Repelling all of them allows natural insect-eaters to contribute their skills. Other repellent processes offered by the Zika Max Defense program handle most areas where the problem begins - the egg-laying cycle.

The public is aware of the issues of toxicity coming to light as the Zika epidemic spreads to the US and other countries. Being pro-active by offering safe protection using repellent products while considering the environment actively demonstrates your interest in being part of a workable solution.

For more information about the Zika Max Defense Property Protection Program, contact us to learn more about safely managing your property or environment.





The Formula

Each non-toxic botanical oil used in the GB+ formula contributes to repellency, maximizing the effect:

- **Geranium:** An antimicrobial (a substance that destroys or suppresses the growth of microorganisms, including bacteria and fungi). Repels mosquitos, bed bugs, house / stable / horn flies, roaches, fire ants, ticks and small flying insects.
- **Clove:** medicinally used as a natural a natural insect repellent and antiseptic, antimicrobial and anti-fungal and contributes to fragrance.
- **Citronella:** contains natural limonene, the most effective mosquito repellent, especially in a diffused form (compared to candles or other integrated compounds) even compare to DEET.
- **Lemongrass:** effective as a mosquito and flying insect, ant and crawling insect repellent and contributes to fragrance.
- **Mint:** also used as a rodent and raccoon repellent, natural mint repels most flying insects, contributes to fragrance. Especially repellent to crawling insects such as beetles or ticks.
- **Soybean:** Acts as a booster extending longevity of the other ingredients especially as a time released micro encapsulated pellet.
- Inert ingredient: No less than 70% **Recycled** LLDPE AND LDPE

Encapsulation of the oils for time-release once the bag is 'engaged' means longevity of active ingredients and a collective 'zonal' effect when in proximity of multiple, active GB+ bags, expanding the repellency range.





Product Summary

Current crisis situations worldwide are key opportunities to launch our useful, helpful, preventative product line: the Zika mosquito virus crisis, the destruction of over 44% of our pollinating bee hives, spore-related health concerns especially in children creating reactive airway disease. (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1566224/>) All GB+ products offer natural insect repellent properties using essential oils proven to repel flying and crawling insects.

Time-released nanotechnology / micro-pellets are impregnated into the polyethylene material at the time of extrusion. The botanical formula, released during use, is completely non-toxic. It is harmless to pets, children and the environment including beneficial pollinating insects.

- **USA made of up to 70% recycled content.** Unopened inventory remains active (indefinite shelf life).
- **Sturdy 3-ply construction concentrates repellency into the outer layer for maximum effectiveness.**
- 100% botanical oil **non-toxic** formula. 100% **DEET FREE, artificial fragrance and chemical free.**
- **Naturally repels virus carrying mosquitoes including the Aedes aegypti, the transmitter of the Zika, dengue, west nile and chikungunya, common house and other flies, wasps, hornets, bees, yellow jackets, roaches, ants, ticks, other crawling & flying insects & small rodents.**
- **Anti-fungal, anti-bacterial, antimicrobial;** a natural germicide. Retards fungi growth of mold and mildew.
- Environment and food handling **safe.** Made from fully compliant **EPA exempt GRAS** (Generally Regarded as Safe) ingredients. FDA approved.
- **Long lasting** formula remains effective (exposure dependent) once removed from packaging creating a **ZONAL EFFECT** or protected radius extending outward, individually and collectively.
- Repelling insects instead of killing them **reduces organic debris** normally created by dead insects, a leading cause of bacterial and fungal growth and contributing to airborne health issues.
- Pleasantly fragranced (for humans!), **reduces odor** by eliminating odor causing decay.
- **Protects valuable pollinating insects.**





Processes

- The GB Plus formula's fully botanical oils are the active ingredients incorporated a time released micro-encapsulation system.
- The micro-capsules are impregnated into the shell material, made of up to 70% recycled LDPE and LLDPE as the inert ingredients.
- The 3-ply layers concentrate the repellent formula in the outside layer, increasing potency.
- The motion of opening the bag creates an initial release of the formula. The time-release process creates a **zonal effect**. This becomes the invisible 'barrier', about 6 to 10 feet from the source. The strongest effect is closest to the material, then extends outward.
- Since garbage is normally disposed of or picked up at least once a week for residences and every one to three days for commercial properties, the formula is designed to be highly effective for 8-10 days, then continues as a secondary effect for approximately 4-7 additional days, sometimes much longer depending on environmental exposure. The encapsulated oil is unaffected by rain.
- Multiple bags stacked together continue to release the formula for longer periods of time because areas touching other bags will release more slowly.
- Collectively, the bags create an expanded zonal effect; the more bags clustered tor stacked together, the more expanded the effective range and longevity. This is ideal for commercial environments, such as food service areas, but also for home use.
- Unopened bags do not degrade or loose formula strength offering an unlimited shelf-life.
- Multi-ply bags reduce cost and concentrate the repellent material into the outer layer where it is most effective.





The EPA “Pesticide” Exemption List



<http://www2.epa.gov/minimum-risk-pesticides/active-ingredients-allowed-minimum-risk-pesticide-products>

Active Ingredients Allowed in Minimum Risk Pesticide Products:

The following active ingredients can be used in pesticide products that are exempt from the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act under the minimum risk exemption regulations in 40 CFR 152.25(f).

They can be used alone or in combination with other substances listed in this paragraph, provided that all of the criteria for minimum risk exemption are met.

The list contains all the eligible active ingredients under 40 CFR 152.25(f)(1).

United States Environmental Protection Agency

List of ingredients / GRAS: <http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=21:3.0.1.1.13>

- Eligible Active Ingredients
- Castor oil (U.S.P. or equivalent)*
- Cedar oil
- Cinnamon* and cinnamon oil*
- Citric acid*
- **Citronella and citronella oil**
- **Cloves* and clove oil***
- Corn gluten meal*
- Corn oil*
- Cottonseed oil*
- Dried blood
- Eugenol
- Garlic* and garlic oil*
- Geraniol*
- **Geranium oil**
- Lauryl sulfate
- **Lemongrass oil**
- Linseed oil
- Malic acid
- **Mint* and mint oil***
- Peppermint* and peppermint oil*
- Potassium sorbate*
- Putrescent whole egg solids*
- Rosemary* and rosemary oil*
- Sesame (includes ground sesame plant)* and sesame oil*
- Sodium chloride (common salt)*
- Sodium lauryl sulfate
- **Soybean oil***
- Thyme* and thyme oil*
- White pepper*
- Zinc metal strips (consisting solely of zinc metal and impurities)





Repellent Trash Bags

Indoor & Outdoor Protection

GB+ trash and garbage bags naturally repel insects attracted to garbage.

Botanical oils infused into the outer layer of the 3-ply bags safely retard fungal growth, mold spores and other harmful airborne spores.

Helpful mint repels small rodents and other garbage-seeking animals and repels them. Multiple bags in one area create a zonal effect, expanding the range of repellency.

Necessary pollinating insects, also attracted to garbage, are protected from chemicals used to kill insects instead of repelling them.

Available in commercial sizes folded into cartons. The repellent formula maintains indefinite shelf-life by closing the bulk package liner. Retail programs are available. Information is available upon request.



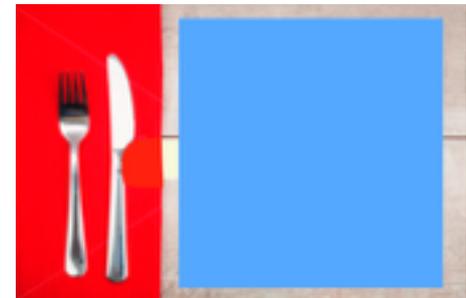
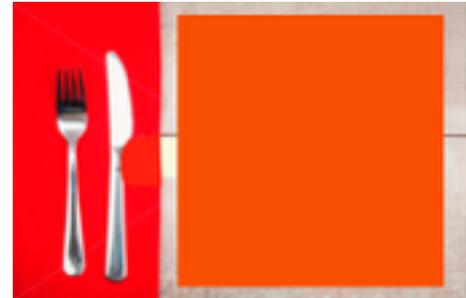


Repellent Tablecloths & Ground Covers

Indoor & Outdoor Protection

GB+ Tablecloths and ground cover shields create a zone of protection safely repelling dangerous virus carrying mosquitoes, flies, ticks and other biting insects.

Natural botanicals infused into recycled plastic sheets create a table cover or ground cover, or indoor table covers. Solid colors work well with any decor or home environment.





Market Overview

- As markets are inundated with 'green' and 'Eco' products, it become more important that a specific approach is taken to avoid being associated with 'green-washing'. Complicated chemical formulations listed on box ingredients act as purchaser-repellent.
- Purchasers drawn to an Eco-product will review ingredients and benefits derived from formulations. They are highly attracted to botanical oil formulas, where there is no 'bad press' to consider and ingredients are common and easily understood.
- The MADE IN THE USA labeling lends credibility that formula claims and advertised benefits are RELIABLE. Imported products may create skepticism that product claims are false.
- Made in the USA and recycled content contribute to acceptance of the product line.
- A natural insect repellent associated with a necessity product such as garbage bags, is readily accepted in both residential and commercial markets especially if well-priced.
- The addition of mint to repel small rodents expands product appeal.
- It's easy to understand a garbage bag product featuring natural germicidal, spore growth retardant properties as part of anti-fungal and anti-bacterial features.
- Mold and spore releasing mildew are among the categories most understood to be dangerous. A growth retardant surface created by anti-fungal botanical oils has great appeal.
- Antimicrobial oil properties mitigate the growth of microorganisms on the surface area, an appealing feature for both the garbage bags and the tablecloths.
- Compared to chemical solutions, little is offered in the way of safe, natural or organic insect repellents suitable for trash or garbage areas, the most difficult areas for pest control aside from sewage or decay.
- Concerns of ozone degeneration and environmental contamination from pesticides also promotes interest in natural solutions and are commonly understood.





Insights

- Botanical products are already integrated into many areas of retail. The purchaser may cross over into new segments of the market based on familiarity of natural ingredients, now well understood and 'common'.
- The Zika mosquito virus epidemic focuses attention on safe solutions to avoid contact with virus carrying insects including ticks causing Lyme's disease.
- Internal segmentation data based on sales of products targeting Eco, organic, environmentally friendly, botanical or other 'safe' ingredients, even if the products are not identical or relatively close, is an overall indicator the product will be well received.
- A Made in the USA product offers assurance the claims made are not false.
- Increased awareness of environmental concerns and attention on the decline of pollinating insects as a catastrophic possibility guide consumers towards a more earth-friendly decision if given the option.
- Engaging customers interactively to obtain feedback on product use and results can be used to collect data for analysis.





Competitive Overview

- Although the concept of bug repellents being used where insects congregate is not new, it has **previously been limited to chemicals formulas**. All pesticides are toxic and include neurotoxicants*, immunotoxins** and allergens, all of which are dangerous carcinogens.
- **Artificial fragrances** incorporated into repellents (and many other products used daily) especially those containing zinc oxide***, are particularly harmful to animals and children. Odor masking substances don't repel insects, they are only masking orders for humans. These additives don't kill germs, prevent fungus or mildew growth and are dangerous when inhaled. **Fragrance masking products** do not offer a natural solution to eliminate odor or repel insects, but disguise odors by inhaling dangerous chemicals.
- Chemical toxicity, mold and mildew contamination, spore related illness and other toxic effects from chemicals and artificial fragrances are now the new **issues joining asbestos, lead paint and fiberglass as carcinogens documented** as causing health problems and related deaths.
- **Public awareness of toxic chemical effects are our best ally**. There's nothing complicated about selecting an environmentally safe product if given the option!
- **Antimicrobial and other growth retardant features**, in conjunction with the natural insect repellent properties, have never been offered by other botanical repellent companies. They are mostly targeting body repellents. In our market, these retardant aspects are one of our **key features** especially for success in the food service industry while remaining environmentally safe as a botanical formulation.
- Repelling insects instead of killing them, in conjunction with retardant properties, **reduces decaying organic material so** spores have no foundation from which to multiply. Insect decay is a main contributor to asthma and other respiratory illnesses especially in children.

*Neurotoxicants: alters the normal activity of the nervous system and brain signals in the brain...a result of exposure to substances used in... pesticides, industrial and/or cleaning solvents.

(http://www.ninds.nih.gov/disorders/neurotoxicity/neurotoxicity.htm#What_is)

** Immunotoxicity: adverse effects on the functioning of the immune system that result from exposure to chemical substances..may lead to... infectious diseases or cancer...environmental & industrial chemicals...exposure to ...halogenated aromatic hydrocarbons(PBBs)...pesticide dieldrin.

(http://scorecard.goodguide.com/health-effects/explanation.tcl?short_hazard_name=immun)

*** Zinc Oxide: acute health effects after exposure..."metal fume fever"...causes...headache, fever, chills, aches, cough, chest tightening...may damage the developing fetus...long term effects have not been tested.

(<http://nj.gov/health/eoh/rtkweb/documents/fs/2037.pdf>)





Product Testing vs. Competitors

Compared to Insecticide Based or Odor Masking Products:

- Our repellent formula doesn't kill pollinating insects although they can be considered 'pests' (bees primarily). This becomes more important as the government mandates companies initiate programs and products to protect pollinating insects.
- Insects killed by pesticides creates organic decay around garbage areas, a spawning ground for fungus, mold, mildew and odors, as well as microbes and bacteria. Odor masking products, in themselves potentially toxic, allow airborne decay to go undetected. Decaying insect feces and organic materials are a leading cause of asthma in children, exacerbated by artificial odor masking.
- Environmental effects of pesticides and insect repellents are well documented and under scrutiny more so now that pollinating insects are protected and almost half our bee colonies died last year.

Compared to Other Botanically Based Products:

- Other companies offering the **PestGuard** brand are contracting the use of this formula but do not own or control production during the very critical moment of impregnation into the polyethylene, crucial for proper time release. This includes the **STOUT** product line, which is not compliant; ingredients are not listed on the cartons and EPA approval claims are misstated.
- The **Bug Away / Lymonessa** formula proved to contain non-FDA exempt ingredients and is currently inactive for use in the United States.
- **Dream Green Productions** owns its own formula and oversees all production with our manufacturing partners.
- GB+ **super-encapsulation resin process** offers a highly effective time-release 'zone', extending 6 to 10 feet or more, creating an effective coverage zone.
- The effectiveness of our product is demonstrated by Sysco Food Service's extended use of our original formula, even prior to improved production processes.





How Pesticides Kill Social Insects

<http://www.buzzaboutbees.net/how-do-neonicotinoids-work.html>

How Neonicotinoids Work By Hampering Grooming To Increase Susceptibility To Mites & Fungi

The following information represents a parallel between another social insect, the termite, and honeybees. Pesticides creates the same effect on honeybees who also groom to prevent accumulation of fungus spores. By hampering the insect's ability to groom itself, this ultimately kills it, because it means the insect cannot clean away harmful fungal spores it comes into contact with via the environment.

Source: BayerCropScience from their leaflet for Premise 200SC:

*“Low doses of Premise 200SC such as the edge of the Treated Zone, disorientate the termites and cause them to cease their natural grooming behavior. Grooming is important for termites to protect them against pathogenic soil fungi. When termites stop grooming, the naturally occurring fungi in the soil attack and kill the termites. Premise 200 SC makes fungi 10,000 times more dangerous to termites. Nature assists Premise in giving unsurpassed control. This control is Premise 200SC plus Nature. Premise 200 SC is a **systemic insecticide which acts as a contact and stomach poison**. When termites come in contact with this **non-repellent product** in the treated zone, they stop.... grooming and they become disoriented, they will be infected by soil fungi and die. The termite are susceptible to disease and fungi found in soil. A principle part of their defense system is their grooming habits, allows the termites to get rid of the fungal spores before these spores germinate and cause disease of death. Premise 200SC interferes with this natural process by lowering defense to nature's own weaponry.”*

Tests of both Imidacloprid and Fipronil, using dose levels 70 TIMES LOWER than the 50% lethal dose concentration found that the ability of honey bees to forage was severely impaired. (Sub lethal doses are tiny doses that may not kill immediately, but, for example, through impairment of physical function or ability to fight off parasites and diseases, they do ultimately result in death).



Loss of Bee Colonies, an Urgent Problem

There is some controversy about honey bee deaths, and whether they are linked to a group of pesticides known as neonicotinoids. Neonicotinoid pesticides include:

Imidacloprid, Acetamacloprid, Clothianidin, Thiacloprid, Thiamethoxam, Dinotefuran and Nitenpyram. There is also Fipronil, a systemic pesticide, which works in a very similar way to neonicotinoids.

How Do Neonicotinoid Pesticides Work?

Neonicotinoids are **neurotoxins** that act on information processing (and hence ability to function or perform tasks), by affecting a specific neural pathway common in invertebrates. In other words, the **nervous system is attacked**. Treated insects may exhibit leg tremors, rapid wing motion, disoriented movement, paralysis and **ultimately death**.

These pesticides are systemic in that they permeate the whole plant, being dispersed into plant tissues. This means that insects sucking on the plant will **ingest the pesticide** and may suffer some of or all of the effects described above.

In other words, neonicotinoids **create a toxic plant**, thereby killing insects which feed on them.



Loss of Bee Colonies, an Urgent Problem

To an extent, it depends on the country where sold. However:

- Pesticides are used in seed dressings, as root drenches and soil treatments for agricultural crops (such as Poncho®, Gaucho®, Merit®)
- **In home and garden pesticides, for use by the general public** (such as in some Provado® and Ultimate Bug Killer® products).

As termite treatment

As a lawn treatments (such as Bayer Advanced Lawn Care products) for use, in gardens, on golf courses and may be used in public amenity areas.

Neonicotinoids have also been sold in compost products to kill vine weevils, and may be used in horticulture.

They may be used in pet products as flea treatments.

Neonicotinoid pesticides are also sometimes used in GM crops such as Smartstax Corn, which is treated with Clothianidin, a neonicotinoid, rendering the claim that GM crops resulting in less pesticide use by farmers as disingenuous, I think.

Farmers not having to apply pesticide themselves does not mean less pesticide is used if they are already incorporated into the crop as a prophylactic measure!
(Source: I-SIS: “SmartStax Corn: Corporate War on Bees”). [Read more here](#) (opens a new window)

Finally, neonicotinoids may also be used in some wood preservatives and animal flea treatments.

Loss of Bee Colonies, an Urgent Problem

The table indicates level of toxicity to bees of various neonicotinoids, in comparison with DDT.

Do Neonicotinoids Cause CCD?

The term 'CCD' is complex, and not clear cut. It appears to have been used originally to define a set of symptoms, but there are variations of definitions and symptoms described.

The term CCD first appeared in 2006, following a dramatic rise in the number of disappearances in honey bee colonies in North America. Literally tens of thousands of bees were disappearing from hives each day, with some beekeepers reporting losses of 50% of their hives.

Yet the phenomenon of honey bee deaths and disappearance in such a dramatic manner certainly began sooner than 2006, in Europe.

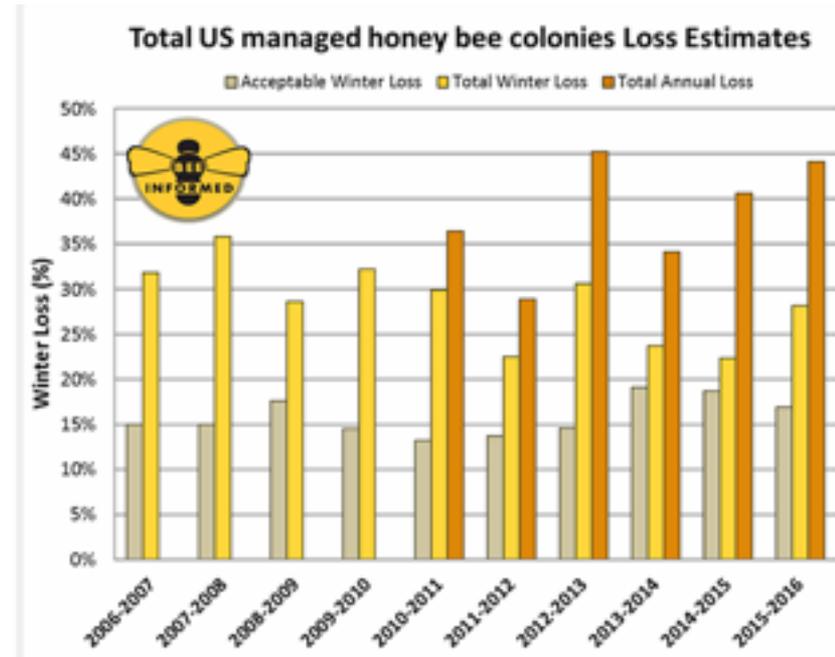


Figure 1: Summary of the total overwinter colony losses (October 1 – April 1) of managed honey bee colonies in the United States across nine annual national surveys. The acceptable range is the average percentage of acceptable colony losses declared by the survey participants in each year of the survey.

<https://beeinformed.org/2016/05/10/nations-beekeepers-lost-44-percent-of-bees-in-2015-16/>

Aerial Application of Mosquito Killer Linked to Higher Rates of Autism

June 07, 2016

Up to this point, the warfare against pests has involved chemicals, and this too has been shown to have devastating side-effects. According to recent research, higher rates of autism are found in areas exposed to annual aerial spraying of pyrethroids, a type of larvicide that kills mosquitoes, compared to areas where mosquito control is done primarily through pellets distributed on the ground.

"The authors report that kids living in areas where the spraying was done each summer had around a 25 percent higher risk of an autism diagnosis or developmental problem compared to kids living in areas without the aerial spraying," Time Magazine writes.

According to Dr. Steve Hicks, assistant professor of pediatrics at Penn State College of Medicine: "Several studies have previously reported links between pesticide and autism risk. Our data suggests the way in which pesticides are applied might play some role."

Previous research has found that pregnant women who are exposed to pyrethroids in their third trimester are more likely to give birth to autistic children, and animal studies suggest it causes neurological, immune, and reproductive damage. Some pyrethroids also act as endocrine disruptors by mimicking estrogen. Such hormone-disrupting chemicals can raise your levels of estrogen, thereby promoting the growth of estrogen-sensitive cancers such as breast cancer.

Besides the occasional aerial disbursement by your local mosquito control, there are more than 3,500 commercial products containing this insecticide. This includes items like roach sprays, flea bombs, and dog flea or tick collars and medicated shampoos. (Compounds that end in "thrin," such as bifenthrin, permethrin and cypermethrin, are all pyrethroids.) As noted in a recent article by The Atlantic, history is rife with pest control experiments gone terribly wrong.



This is an excerpt from a more detailed article published by the environmental health organization EHANS.
<http://www.environmentalhealth.ca/spring03hazards.html>

These facts speak for themselves. Unlike Canada, the US is promoting toxic DEET instead of warning about the effects.

DEET is a registered pesticide. It is a member of the toluene chemical family, a solvent used in rubber and plastic cements and paint removers. DEET is absorbed through the skin and passes into the blood. The Medical Sciences Bulletin, published by Pharmaceutical Information Associates Ltd. reports, "Up to 56% of DEET applied topically penetrates intact human skin and 17% is absorbed into the bloodstream." Blood concentrations of about 3 mg per liter have been reported several hours after DEET repellent was applied to skin in the prescribed fashion. DEET is also absorbed by the gut.

The most serious concerns about DEET are its effects on the central nervous system. Dr. Mohammed Abou-Donia of Duke University studied lab animals' performance of neuro-behavioral tasks requiring muscle coordination. He found that lab animals exposed to the equivalent of average human doses of DEET performed far worse than untreated animals.

Abou-Donia also found that combined exposure to DEET and permethrin, a mosquito spray ingredient, can lead to motor deficits and learning and memory dysfunction. DEET repellents should not be inhaled. Repellent-treated clothes should be washed, or kept outside living areas to reduce exposure. Following all these precautions reduces risk, but does not eliminate it.

An emergency medicine bulletin notes that DEET may have significantly greater toxicity when combined with ethyl and isopropyl alcohols and freon which are components of some DEET repellents. In 1998, the US EPA made it illegal for any product containing DEET to make any child safety claims. Products with DEET are required to carry instructions that they should not be used at all for children under 6 months.

Health Canada has now banned products with DEET concentrations over 30%, citing health risks. Health Canada has also banned two in one products which combine sunscreen and DEET. a recent article by The Atlantic, history is rife with pest control experiments gone terribly wrong.



Controlling Zika Mosquitoes May Be ‘Lost Cause’ May 3, 2016

The female *Aedes aegypti* — the ones that bite — hang out in your house, preferably under your bed. If door and window screens block her entrance into your house, she will settle down under your patio furniture. Unlike the mosquitoes that most cities target for destruction each summer, the *Aedes aegypti* doesn't swarm or bite at night. With the prospect of Zika spreading the continental U.S. this summer, experts say the country must map exactly where the species lives and urgently rethink its standard operating procedures for controlling mosquitoes.

"There is no good method for killing these mosquitoes that's being used on a widespread basis," said Michael Doyle, executive director of the Florida Keys Mosquito Control District.

Recent efforts to kill the *Aedes aegypti*, which also transmits the viral diseases dengue and chikungunya, "don't give us much reason for optimism," said S. Weaver, director of the Institute for Human Infections and Immunity at the University of Texas Medical, Galveston. "In the near term, it's a lost cause." Many communities are using mosquito-killing methods that don't work on the *Aedes aegypti*, Doyle said.

While aerial spraying or fogging from a truck after can kill the *Culex* mosquitoes that can spread West Nile virus and or the "nuisance" mosquitoes that annoy people but don't spread disease, these methods have no effect on the *Aedes aegypti*, Doyle said.

"We cannot spray our way out of this," said Shah, executive director of Harris County, Texas, Public Health and Environmental Services, at a national summit on Zika preparedness in April. Aerial spraying won't "get to the mosquito that's sitting on the wall of your bedroom," said David Dyjack, executive director of the National Environmental Health Association.

In Brazil, which is contending with a widespread outbreak of Zika, officials have tried a number of approaches to controlling the *Aedes aegypti*, said Mauro Martins Teixeira of the Federal University of Minas Gerais. "We haven't done anything to dramatically change their numbers," he said. So what's the best way to kill the *Aedes aegypti*? "The bottom line is that we don't know how," said Peter Hotez, dean of the National School of Tropical Medicine at Houston's Baylor College of Medicine.

Pyrethroids: This Common Insecticides May Be Linked to Kids' Behavior Problems November 14, 2013

<http://articles.mercola.com/sites/articles/archive/2013/11/14/pyrethroid-insecticide-health-effects.aspx>

- Pyrethroids—synthetic chemicals derived from natural chemicals found in chrysanthemums—have risen in popularity over the past decade. There are currently more than 3,500 commercial products containing this insecticide
- Animal studies suggest pyrethroids cause neurological, immune, and reproductive damage. Now, Canadian research suggests pyrethroids may be associated with behavior problems in children
- A 10-fold increase in urinary levels of one specific pyrethroid breakdown product doubled the child's risk of scoring high for parent-reported behavioral problems, such as inattention and hyperactivity
- A previous study found that toddlers who had been exposed to pyrethroids while in utero had lower development scores compared to unexposed children
- Safer alternatives to roach sprays, mosquito sprays, and flea and tick treatments include the use of essential oils and extracts, boric acid, minor dietary adjustments

Now, Canadian research suggests pyrethroids may be associated with behavior problems in children. As reported by Scientific American:

"The findings raise some questions about the safety of the compounds, which have replaced other insecticides with known risks to children's brain development.

Exposure to pyrethroids, which kill insects by interfering with their nervous systems, is widespread because they are used inside homes and schools, in municipal mosquito control and on farms."

Common Insecticide May Have Adverse Effects on Your Child's Development

97 percent of the children (tested) had pyrethroid breakdown products in their urine. Ninety-one percent also had traces of organophosphate pesticides. "A 10-fold increase in urinary levels of one pyrethroid breakdown product, cis-DCCA, was associated with a doubling in the odds of a child scoring high for parent-reported behavioral problems, such as inattention and hyperactivity," the featured article reports.

A previous study found that toddlers who had been exposed to pyrethroids while in utero had lower development scores compared to unexposed children. (see article link for more information and the complete article)



A Special Point for Consideration...from the President:

Garbage Bags Plus offers a unique product to help protect pollinating insects, such as honey bees and butterflies. Excerpts from the **White House** blog, June 20, 2014:

*“Today, President Obama issued a memorandum **directing U.S. government agencies to take additional steps to protect and restore domestic populations of pollinators, including honey bees, native bees, birds, bats, and butterflies** – critical contributors to our nation’s economy, food system, and environmental health. Pollinators contribute substantially to the sustainability of our food production systems, the economic vitality of the agricultural sector, and the **health of the environment**. Honey bee pollination alone adds more than \$15 billion in value to agricultural crops in the United States each year, and pollination by other species adds another \$9 billion. In addition, pollinators help wild flowering plants grow, making ecosystems stronger and more resilient.”*

Repelling valuable bees and butterflies, as opposed to **killing** them as they are drawn in with other insects by the ‘fragrance’ of food debris, at its own level **contributes to the new White House objective** as new studies reveal the environmental and harmful side effects of simple killing ALL insects (around trash and garbage areas). GBPlus **actively campaigns** to repel instead of kill; to **educate** industry and the public on safer alternatives to our current reaction to kill anything we consider a pest, the good with the bad, reducing the unnecessary extermination **valuable pollinators** such as bees and butterflies.

<https://www.whitehouse.gov/blog/2014/06/20/new-steps-protect-pollinators-critical-contributors-our-nation-s-economy>





Read the whole blog!

*“The President’s memorandum directs federal agencies to... calling for the Secretary of Agriculture (USDA) and the Administrator of the Environmental Protection Agency (EPA) to co-chair a new **Pollinator Health Task Force**, which will be responsible for focusing federal efforts to research, **prevent**, and recover from pollinator losses. These efforts include a **public education campaign to teach people about ways they can help pollinators in their own communities**. The memorandum also requires federal agencies to **lead by example**, taking specific measures to substantially expand pollinator habitat on federal lands, and to **build on federal efforts with public-private partnerships**.*

*The **Department of Interior and USDA** have joined **45 state** governors in issuing Pollinator Week Proclamations, publicly acknowledging the vital services that pollinators provide. **The EPA released guidance designed to help scientists accurately assess the potential risks that different pesticides may pose to bees.***

As part of its Conservation Reserve Program, the USDA has announced an \$8 million initiative to provide funding to farmers and ranchers who will establish new pollinator habitats on agricultural lands.

*Healthy pollinator populations are essential to the U.S. economy and environment, and these are just some of the steps being taken to protect a vital national asset. We look forward to continuing our work across the government and with **partners in states, communities, and the public and private sectors** to better understand and address this important economic challenge.”*





GarbageBags+

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