

THE SAD TALE OF GARDEN CENTRE PLANTS AND NEONICOTINOIDS

&

PEST MANAGEMENT STRATEGIES

Whilst working on a newsletter about insects inside & outside the house we came across information we feel you should know about right now, with spring plant-buying, literally, around the corner. This email provides as brief an overview as possible with links for more in-depth information on the demise of bees/pollinators in our own backyards and around the world. The attachment offers guidelines on creating a pest-management strategy.

Butterflies, moths, beetles, flies, bats and hummingbirds also pollinate plants and distribute seeds. Without them, we would lose much of our food supply, wildlife food & habitats, and compromise plants that protect against erosion.

There is much debate and finger pointing regarding the causes of bee decline but most independent experts would agree there are three main reasons: varroa mites, loss of habitat, and neonicotinoids. Independent experts would likely all agree that just one reason is enough for alarm, but all three happening simultaneously is simply too much for the bees and why we must address all three factors to give bees and other pollinators a fighting chance to regroup.

Varroa destructor mite is a serious problem for western honey bees. Furthermore, in response to global bee decline, western honey bees are sold or rented to farmers around the world taking the varroa mite with them, leaving most honey bee colonies infected.

With industrial farming the new norm, there is little-to-no soil left untouched for pollinators to find a place to rest and a place to nest. This issue seems the easiest to address: farmers can give up some land for the good of all.

Homeowners can do the same: leave areas of your garden to naturalize, a corner or back wall where the grass can grow, where native flowers can be planted or allowed to take hold. Remove mulch to allow independent bees a place to nest. Buy local native flowers - *which are the plants our bees instinctively look for*. Do not purchase any seeds or plants unless you are 100% confident it's insecticide free. But first, drop off all insecticides to your local hazardous waste depot.

Neonicotinoids (neonics) are synthetic systemic pesticides applied to crops & plants via seed coatings, sprays, injection, or granules that are absorbed throughout the entire plant: stems, leaves, flowers, pollen & nectar. Even at low levels, exposure to these pesticides impairs a bee's ability to function. And more independent research is coming forward showing the casualty list is much greater than bees.

WHAT NEONICOTINOIDS ARE

Imidacloprid, dinotefuran, clothianidin, thiamethoxam, and acetamaprid are the main players in neonicotinoids. There are also pesticides such as pyridinecarboxamide that

are not neonics but are also indiscriminate killers of beneficial insects. It seems like we need to push for organic plants as there are no safe chemicals. Today's neonicotinoids are yesterday's DDT.

The chemical industry adheres to strict, precise measures when testing their products, focusing on what happens *during application* without stepping back and looking at the bigger picture: the sub-lethal picture - what happens to animals that are not killed outright during, for example, crops being sprayed (acute toxicity). Sub-lethal effects to honey bees include developmental disruptions, such as impaired memory & learning, communication behaviours, reduced foraging, disorientation, and immune suppression.

As bad as acute toxicity is, it is less common than the sub-lethal, or cumulative effects, of these toxins. This toxicity is not only affecting pollinators. Birds are eating these treated seeds. They are eating the worms that live under a treated plant. Rain and water runoffs from farmers' crops and our gardens send contaminated waters to our streams and rivers killing midges and mayflies that our aquatic life feed on and, of course, polluting our drinking water.

It gets worse. Neonicotinoids also have synergistic impacts on pollinators in combination with other chemicals in the field, compounding their effects. The combination of neonicotinoids and, say, fungicides, can increase the potency of neonicotinoids by more than 1,000-fold. It is not uncommon for plants to have more than one chemical applied to them. By not looking at the big picture the chemical industry is side-stepping the true degradation of what neonics and other insecticides are doing to the environment.

Independent reports regarding crop yields in countries that have already banned neonics are showing either no difference or better yields without them. Health Canada has "banned" one neonic, imidacloprid, however, it has "phased" (read delayed) the ban 3-5 years. If you agree this makes no sense, please let them know your thoughts.

We did come across a great idea that's also environmentally friendly: the use of pheromones to disrupt the mating of certain insects. Synthetic pheromones are dispersed to attract males away from the females. A reduction in mating means less eggs hatching, reducing the pest population. No insects harmed and no collateral damage.

WHAT WE CAN DO

[Sign this Petition](#) to tell Home Depot, RONA, Lowes, Walmart, Canadian Tire, Loblaws and many more big and small garden centres to stop selling plants and vegetables with neonics and any other insecticides that are contributing to the degradation of the environment.

[Talk with our money](#) and boycott these vendors this year in favour of the few places you can purchase safe plants. See below.

[Call or write a letter telling these retailers](#) why you're not buying from them this year or any other until you're confident that what you purchase from them won't kill beneficial insects. There are sample letters **[here](#)** from Friends of the Earth (FOE) to use or to inspire.

Call or write all levels of government and pressure them to, *on our behalf*, stop accepting what the chemical industry says and start addressing this environmental problem. We must tell them it is no longer acceptable to pass the buck or turn a blind eye. Feel free to forward this email in your communications with any and all decision makers.

It's also time for our own reality check. Each year North American homes use approximately 136 million pounds of pesticides on lawns, gardens and homes, approximately three times the amount as farmers. Most wildlife poisonings and surface water contamination from pesticides come from single-family homeowners.

There is much we can do at the local level. Beyond making your own gardens environmentally friendly, check out the **[pollinator highway](#)** an Oslo woman started to help ensure these insects can feed as they move in and out of the city. This seems fairly easy to start and could go a long way to helping our migratory and non-migratory insects find enough food and nesting sites. I'm sure our local governments would love to help out in any way they can... if enough of us ask.

It's really up to us to start directing government, suppliers, and nursery buyers to take appropriate action for the sake of this planet. Let's face it, if ordinary citizens like you and me don't do something, we *will* see the end of bees and beneficial insects because those in control aren't truly listening.

WHERE WE CAN GO

Here's a booklet from FOE, **[Gardeners Beware: Bee-Toxic Pesticides Found in "Bee-Friendly" Plants Sold at Garden Centers Nationwide](#)**. Appendix A on page 26 has a (long) list of common pesticides containing neonics plant suppliers use.

We are extremely frustrated with **Proven Winners** and their misleading information, such as citing exposure to neonics being equal to caffeine, wine or ibuprofen in humans, sidestepping that we are talking about neonics killing *pollinators*.

PW's website states they are neonic-free but wrote in a recent email to us, that because they have so many plant providers, they truly have no idea what each individual supplier does, but *"We are confident that our grower-customers, some of who may use neonicotinoids, do everything they can to protect themselves, their staff, their customers, and the environment when using plant protection products. So, no bees should be harmed."* Note the euphemism: plant protection products = pesticides.

Sheridan Nurseries also claims on their website to be 100% neonic-free. We were given verbal confirmation of that last year, however, in an article from NOW magazine (same time period) Sheridan admitted it's possible some of their suppliers may use them. It's absolutely shocking that both state otherwise.

One conversation with a garden centre tried to tell us neonics have not been used in the plant industry for years. Pull the other one. We've been reaching out to independent garden centres across the GTA to confirm claims or check if they sell organic plants. The list is, unfortunately, very short. We, too, have found the need to source a new nursery after a conversation with Valleyview Gardens. Here's our list:

KNOW YOUR HOME • NEONICOTINOIDS • HOMECORE INC.

You can confidently source seeds from many organic seed companies online, such as the cottagegardener.com which has a catalogue and a list of retail locations to purchase directly.

uharvest.ca urban harvest has all kinds of seeds including wildflowers and even an edible wildflower seed mix. They have a pop-up storefront at 1340 Bloor St W and will start selling organic seedlings of flowers, vegetables and herbs early April – June.

[Black Forest Garden Centre](#), 15445 Keele St, King City

[Plant Paradise Country Gardens](#), 16258 Humber Station Rd, Caledon East

[Evergreen Brickworks](#), 550 Bayview Ave, Toronto, has a large selection of native plants; staff can help you determine which plants are best where.

[Humber Nurseries](#), 8386 Highway 50, Brampton, states there are no neonic-treated plants nor gmo products onsite but are not 100% organic.

There is one more nursery worth mentioning with a caveat: most of what it sells is non-neonic, however, we're told there are *odds n sods* from suppliers of which they can't say are neonic-treated or not. If this is your local, we suggest you have a chat with the owner or manager about perhaps sourcing these plants from an organic supplier:

[Woodhill Garden Centre](#), 320 Steeles Av E, Thornhill

We all need to make concessions to help the environment, and we need to start at home. Stop purchasing and using chemicals on our lawns and gardens. And say no to purchasing garden plants that are contributing to pollinator decline. All the garden centres we spoke to that do use chemicals say they do so because **we** expect to see perfect flowers and larger than normal plant sizes.

If you can plan your garden to ensure a steady supply of long-blooming flowering plants from early spring through autumn, you will be rewarded with a natural ecosystem that works together, as nature intended.

We *all* need to care very much about bees/pollinators because they are vital for growing much of our food, livestock food, and for other wildlife. Every third bite of food we eat is thanks to a pollinator.

Let's choose food.

*Your
HomeCore
Team*

PEST MANAGEMENT STRATEGIES

GENERAL:

As in human lives, so too in the insect world: there's a small minority causing most of the damage to our gardens, and the rest that do good. Attracting and encouraging these beneficial animals to your garden should be the biggest part of your integrated pest management strategy.

There's a symbiotic relationship between garden insects that help us and hinder us. Aphids reproduce quickly, but in a healthy garden there will be predators that find them and, as the aphid population grows so will that of the predators until they balance each other out.

A goal of complete annihilation of all destructive bugs will result in more of them, because if you send their predators away because their food source is, temporarily gone, your garden will once again become infested.

The best way to take care of your garden is to create one that can sustain itself without much assistance from us. Plants that are healthy and stress-free are not likely to attract aphids or spider mites. Use organic compost to feed your soil, which will feed your plants without encouraging growth beyond what's normal for them. Excess nitrogen encourages new young stems and leaves that aphids love to feed on. If you've provided good soil and the right location, you shouldn't have to do much else for your plants to grow to be healthy and happy. *"A perfect plant is one best adapted to the place where it grows."*

The following information will assist you in your quest for a balanced garden.

THE INSECT BRIGADE:

There are a host of parasitic beneficial insects. Ladybugs and the hoverfly & lacewing larvae are your top three defences against the dark arts of plant-destroying insects.

Hoverflies and lacewing adults are attracted to your garden by umbellifers, such as yarrow, goldenrod, black-eyed susan, and asters. **Adults consume nectar and help in pollination whilst the** larvae voraciously feed on aphids, scales, thrips, cabbageworms, whiteflies, and caterpillars. Ladybugs have strong appetites for aphids, mealy bugs, leafhoppers, mites, and scales. You can purchase them but they'll likely fly off upon release in search of their real home.

Beetles of the ground, rove, tiger and tortoise variety - larvae and adult - eat aphids and other plant-damaging insects and should all be welcome in your garden.

Parasitoid wasps (braconids, chalcids and ichneumon) and yellowjackets target caterpillars. They, too, are attracted to umbels.

Spiders are harmless to us, but trap and kill insects. Leave them and their webs alone and be happy you've got easy, quiet help.

You're better off, however, determining to show these beneficial insects your garden is worthy of being called home. Grow a diversity of nectar-producing flowering plants such as alyssum, cilantro and hyssop near aphid-susceptible plants to attract beneficial insects that prey on soft-bodied insects. Offer long-blooming plants from early spring through autumn and you're well on your way to providing a great ecosystem.

INSECT-REPELLENT PLANTS:

There are plenty of *plants* that can help repel insects. Dill repels aphids, squash bugs, spider mites, cabbage loopers and tomato hornworms. Lavender repels moths, mosquitoes, fleas, and flies. Lemongrass, catnip, rosemary, and lemon balm all repel mosquitoes. Plant them where you tend to hang out the most.

Fennel, oregano, parsley and thyme repel many pests, such as the asparagus beetle, whitefly, cabbage looper, and the tomato hornworm.

Allium plants offer protection to tomatoes, peppers, potatoes, cabbage, broccoli, kohlrabi and carrots. They also repel aphids on rose bushes.

Borage, a self-seeding annual, is a good choice for any plant requiring assistance from invading insects.

Various marigold plants repel aphids, mosquitoes and rabbits.

Petunias are a cheap and cheerful, low-maintenance plant that will help nearby vegetables and herbs such as beans, tomatoes, and peppers to repel aphids, tomato hornworms, asparagus beetles, leafhoppers and squash bugs.

MORE GARDEN FRIENDS:

Birds will happily eat your grubs and insects. To encourage them to stick around plant bushes and trees, especially those with edible fruit. Add a feeder or two and a bird bath: change the water daily using the jet stream on your hose nozzle to dislodge any mosquito eggs; clean the bath with vinegar and a stiff brush weekly or as required. Leave some fallen leaves on the ground to allow birds to hunt in them for insects.

Provide evergreens as nesting options for insect-eating birds, such as warblers, wrens, nuthatches, and titmice. Put out some nest-building materials in the early April through early June for most common Ontario birds.

Frogs and toads are excellent insect consumers. If you've got a pond that can be modified to accommodate their habitats and don't mind the serenading (mostly during mating seasons) you can put these amphibians to work for you as well.

Much research was undertaken to collect the information in this email, and we thank the following sources: Monty Don, various articles for UK's Daily Mail; Wikipedia; Mother Nature Network; local, provincial, and federal government websites; FOE's website and email communications; the American Bird Conservancy 2013 report, *The Impact of the Nation's Most Widely Used Insecticides on Birds*; the Institute for Agriculture and Trade Policy 2015 report, *Unknown Benefits, Hidden Costs: Neonicotinoid Seed Coatings, Crop Yields and Pollinators*.