Neonicotinoides "Neo-nics"

Do not buy plants treated with neo-nics or allow your property to be sprayed with:

IMIDACLOPRID, ACETAMIPRID, THIAMETHOXAM, THIACLOPRID, CLOTHIANIDIN or DINOTEFURAN.

Neonics are a class of synthetic, neurotoxic insecticides that are used on agricultural crops, lawns, gardens, golf courses, and in flea and tick pet treatments. Developed in the mid-1990s, neonics are now the **single-most popular insecticide** class in the United States. Their effects on bees and other insects can be lethal, but even at nonlethal doses, neonics can weaken an insect's immune system, navigation, stamina, memory, and fertility.

Many studies show that neonics have had a **devastating impact on bee populations**, both honeybees and native bees. Bees are essential to not only food production but also to the health of entire ecosystems.

Neonics are some of the deadliest pesticides ever created. The problem is that they **kill indiscriminately**, exterminating not only "pest" insects but also countless bees, butterflies, beneficial insects, and other wildlife. In fact, since their introduction, neonics have made U.S. agriculture **nearly 50 times more harmful to insect life.**

Neonics have several characteristics that make them particularly problematic. They are **systemic**, meaning that the whole plant, including nectar, pollen, leaves, stems, and fruit, is contaminated. They are also **water soluble**, allowing them to be transported over distances, polluting streams and water bodies and the ecosystems they serve. They are **persistent**, lasting active for years. And unfortunately, they are very widely used.

Since Connecticut passed the Pollinator Protection Act in 2017, neonics are **available only to those with a pesticide application permit**, taking them off the commercial market. However, if you employ a lawn service, **please check to determine what is being applied to your lawn.** You will need to ask specifically using the chemical names and making sure that they check that against any brand names. Neonics are often used on lawns for control of grubs and other insects. **Alternatives** do exist:

CHEMICAL SUBSTITUTES: According to recent study from Cornell, 2020, "Acelypryn and Ference, based on chlorantraniliprole and cyantraniliprole respectively, are effective non-neonicotinoid alternatives". These chemicals may be more expensive than imidacloprid. They also are not available in Long Island (high water table) due to potential of groundwater contamination.

BIOLOGICAL SUBSTITUTES:

1) Nematodes are microscopic worms that are effective against all types of grubs. The strain *Heterohabdis ssp* is the most effective strain. In fact, the Cornell Report as referenced above says "Nematodes are the most reliable non-chemical treatment for white grubs in turfgrass."
2) *Milky spore* is a Japanese beetle grub killing bacterium best applied in late summer. (Less effective in cold climates.)
3) A parasitic wasp called *Spring Tiphia* can be very effective at control of Japanese beetles as reported by the University of Connecticut.
4) A bio-insecticide, Grub-Gone, employs *Btg (Bacillis thuringiensis gallerias*) has been available since 2018.