



We're glad you care about bees. We do too.

What are neonicotinoids?

Neonicotinoids are a class of EPA approved insecticides that are similar in structure to nicotine and a *significant improvement* over earlier insecticides used in the past because they are more targeted and less harmful to humans and non-targeted insects including bees or earthworms. This class of insect control is used to protect crops from Whitefly, Japanese beetles, Emerald Ash Borer, Aphids and other insects.

A brief timeline:

- Honey Bee (non native introduced from Europe) decline began in the early 1950's (see graph next page) Remember in the 50's controls like DDT, organophosphates and Chlordane were being used and of course are no longer used.
- A sharp decline was noted when parasitic mites were introduced to the U.S. around 1987.
- The decline has continued since 1995, when the neonicotinoid class of insecticides was put into use, (see graph) but the rate of decline did not change. Availability of food (we endorse planting of trees and flowers as a bee friendly practice), new virus diseases and varroa mite are the most limiting factors for honey bees with the role of pesticides still uncertain.
- Up to 50,000 bees were accidentally killed in an Oregon parking lot in 2013 causing the current concerns for activists. This was an ill advised foliar application made in June to Linden trees in full flower (label directions were not followed). Many trees are important pollinators and it is only common sense not to apply any insect control to a tree when in the flowering stage.
- Studies show mixed results with the conclusion that insect controls like neonics may have some impact on bee decline, but the primary causes are the varroa mite, lack of food, environmental/weather changes and other factors.
- Michigan State University conducted specific research in 2014 and continues to research so recommendations can be made to growers who supply product to Flowerland stores and other stores.

In response:

- We always recommend following label directions. Directions are there for a reason. The EPA has new and strengthened labeling to protect pollinators and Flowerland endorses and recommends always following these guidelines. This applies to any control applied....not just neonics. We follow and advise our customers to follow the new EPA Bee Advisory guidelines on product labels.
- We recommend NOT drenching or spraying flowering trees during their blooming period. We can help advise you on timing. Trees without showy blooms or wind pollinated trees are of less concern because they are less appealing to pollinators. Imidicloprid (a common neonicotinoid) is most commonly used to control Emerald Ash Borer on Ash trees or as control for the concern of Asian Longhorned Beetle on other hardwood trees.
- We work with our growers to follow MSU recommendations to avoid spraying open flowers during the last few weeks of production prior to shipping and avoid drenching during the last 5 weeks of

production prior to shipping. Flowerland does not spray neonicotinoids on its plant materials indoors or out while at our facilities so there is not residue on the flower tissue when on display.

- We endorse integrated pest management which includes preventative scouting and maintaining weed free facilities.
- We endorse the use of “natural solutions” including but not limited to Horticultural Oil products, Insecticidal soap, Neem products or Spinosad. These products tend to have a very short term residual but are effective in a well managed well timed application. You will find these products available at Flowerland stores.
- Our plants are bee friendly and research has shown that bees and other pollinators benefit from having flowers as a food source. Planting our annual flowers, perennial flowers, flowering trees and shrubs should help bees by providing more food for them. We encourage you to plant....the addition of few trees for example can greatly improve the food available to bees. Happy healthy flowers planted in the right location benefits both us and the bees! Don't forget that herbs are wonderful easy to grow aromatic plants that are wonderful pollinators too!

