

# Chemical Factsheet

## Imidacloprid

### General Information

- Fact Sheet: [Imidacloprid.pdf](#)
- Product Names:
  - Advanced Garden Tree & Shrub Insect Control Concentrate** (Bayer)
  - Merit** (Bayer and Environmental Science U.S.)
  - Grubex Season Long Grub Control** (Scotts)
  - K9 Advantix 10** (Bayer), formulated with [Permethrin](#)
  - Quickbayt Fly Bait** (Bayer)
  - Quickbayt Disposable Fly Bait Strip** (Bayer)
  - Fuse** (Control Solutions, Inc.)
- Chemical Class: Chloro-nicotinyl insecticide
- Uses: Agriculture, lawns and landscapes, pet pests, gardening
- Alternatives: [Organic agriculture](#), [Organic lawn care](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

See citations at end of document.

- Cancer: Possible (1, 2)
- Endocrine Disruption: Likely (3, 4)
- Reproductive Effects: Yes (5, 3, 4)
- Neurotoxicity: Possible (6)
- Kidney/Liver Damage: Possible (7, 8)
- Sensitizer/ Irritant: Not documented
- Birth/Developmental: Likely (6)
- Detected in Groundwater: Not documented
- Potential Leacher: Yes (5)
- Toxic to Birds: Yes (9)
- Toxic to Fish/Aquatic Organisms: Yes (9)
- Toxic to Bees: Yes (9)

### Residential Uses as Found in the ManageSafe™ Database

- [Dandelions](#)
- [Tree-boring Caterpillars](#)
- [Fleas](#)
- [Grubs](#)
- [Termites](#)
- [Ants](#)
- [Chinch Bugs](#)
- [Cockroaches](#)
- [Hemlock Woolly Adelgid](#)
- [Bed Bugs](#)

- [Emerald Ash Borer](#)
- [Clover](#)
- [Thrips](#)
- [Whiteflies](#)
- [Aphids](#)
- [Fire Ants](#)

## Additional Information

- Regulatory Status:
  - [Beyond Pesticides' Testimony](#) (03/2025)
  - [Beyond Pesticides' Neonicotinoid Comments \(October 2024\)](#)
  - [Beyond Pesticides' Preliminary Neonicotinoid Ecological Assessments \(non-pollinator\) comments](#) (04/2018)
  - [Imidacloprid Registration Review](#) (04/2018)
  - [Beyond Pesticides' EPA Draft Human Health Risk Assessment comments](#) (11/2017)
  - [Beyond Pesticides' Aquatic Ecological Assessment comments](#) (07/2017)
  - [EPA Actions on Pollinators](#) (01/2017)
- Supporting information:
  - EU Commission: [Neonicotinoids](#)
  - [EFSA consultation for thiamethoxam](#) (2016)
  - [Poisoned Waterways](#) (Beyond Pesticides, 2017)
  - [Net Loss—Economic Efficacy And Costs Of Neonicotinoid Insecticides Used As Seed Coatings: Updates From The United States And Europe](#) (Center for Food Safety, 2016)
  - [Heavy Costs: Weighing the Value of Neonicotinoid Insecticides in Agriculture](#) (Center for Food Safety, 2014)
  - The Xerces Society - [Neonicotinoids and Bees](#)
  - [NCAP Imidacloprid Factsheet](#) (Northwest Coalition for Alternatives to Pesticides)
  - [PAN Pesticides Database: Imidacloprid](#) (Pesticide Action Network)
  - [NPIC Imidacloprid Factsheet](#) (National Pesticide Information Center)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Imidacloprid and chlorpyrifos insecticides impair migratory ability in a seed-eating songbird.](#) Eng, M, Stutchbury, BJM, Morrissey, C. 2017. Scientific Reports7: 15176. DOI:10.1038/s41598-017-15446-x
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