

# Chemical Factsheet

## Isoxaben

### General Information

- Product Names:
  - Preen Pro** (Lebanon Seaboard), formulated with [Trifluralin](#)
  - Weed-Free One Eleven** (Harrell's) Trifluralin
  - Isoxaben 75DF** (Specialty Loveland Products)
  - Snapshot 80 DF** (Dow), formulated with [Oryzalin](#)
  - Showcase** (Dow), formulated with [Oryzalin](#), [Trifluralin](#)
- Chemical Class: Amide herbicide
- Uses: Rights-of-way, landscape, nurseries
- Alternatives: [Least toxic rights-of-way management](#), [organic lawn care](#), [least-toxic pest management](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

*See citations at end of document.*

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

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

- [Dandelions](#)
- [Plantains](#)

### Additional Information

- Regulatory Status:
  - [EPA Chemical Landing - Isoxaben](#)
- Supporting information:
  - [PAN Pesticides Database:Isoxaben](#) (Pesticide Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Enhanced resistance to the cellulose biosynthetic inhibitors, thaxtomin A and isoxaben in Arabidopsis thaliana mutants, also provides specific co-resistance to the auxin transport](#)

[inhibitor, 1-NPA](#). Tegg, R. S., Shabala, S. N., Cuin, T. A., Davies, N. W., & Wilson, C. R. (2013). Enhanced resistance to the cellulose biosynthetic inhibitors, thaxtomin A and isoxaben in *Arabidopsis thaliana* mutants, also provides specific co-resistance to the auxin transport inhibitor, 1-NPA. *BMC plant biology*, 13, 76.

<https://doi.org/10.1186/1471-2229-13-76>

- [Isoxaben soil biodegradation in pear tree orchard after repeated high dose application](#). Rouchaud J, Neus O, Bulcke R, Callens D, Dekkers T. Isoxaben soil biodegradation in pear tree orchard after repeated high dose application. *Arch Environ Contam Toxicol*. 1997 Oct;33(3):247-51. doi: 10.1007/s002449900250. PMID: 9353201.

## Gateway Health and Environmental Effects Citations

1. EPA weight-of-evidence category, "possible human carcinogen." US EPA, 2004. Office of Pesticide Programs. List of Chemicals Evaluated for Carcinogenic Potential. July 29, 2004.

<http://www.epa.gov/pesticides/carlist/>

2. US EPA. Integrated Risk Information System Database. <http://www.epa.gov/iris/>.

3. US EPA, Office of Prevention, Pesticides and Toxic Substances, Reregistration Eligibility Decisions (REDs), Interim REDs (iREDs) and RED Factsheets.

<https://archive.epa.gov/pesticides/reregistration/web/html/status.html>.

4. The Pesticide Management Education Program at Cornell University. Pesticide Active Ingredient Information. <http://pmep.cce.cornell.edu/profiles/index.html>.

5. Briggs, S.A. 1992. Basic Guide to Pesticides: Their Characteristics and Hazards. Washington, DC: The Rachel Carson Council, 98. <https://www.cabdirect.org/cabdirect/abstract/19932334845>

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