

Chemical Factsheet

Imazethapyr

General Information

- Product Names:
 - Authority** (FMC)
 - Clearpath** (BASF)
 - Lightning** (BASF)
 - Optill** (BASF) formulated with Saflufenacil
 - Pursuit** (BASF)
 - Camo** (Albaugh) formulated with Fomesafen Sodium
- Chemical Class: Imidazole compound
- Uses: Controls grasses and broadleaved weeds including barnyardgrass, crabgrass, cocklebur, panicums, pigweeds, nightshade, mustard, smartweed, velvetleaf, jimsonweed, foxtails, seedling johnsongrass, lambsquarters, morningglory and others.
- Alternatives: [Organic agriculture](#)
- Beyond Pesticides rating:

Health and Environmental Effects

See citations at end of document.

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

Additional Information

- Supporting information:
 - [Extoxnet Imezthapyr Factsheet](#) (Extension Toxicology Network)
 - [PAN Pesticides Database: Imezthapyr](#) (Pesticide Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [A weight-of-evidence review of colorectal cancer in pesticide applicators: the agricultural health study and other epidemiologic studies.](#) Alexander DD, Weed DL, Mink PJ, Mitchell ME. 2012. Int Arch Occup Environ Health. 85(7):715-45.
 - [Heterocyclic aromatic amine pesticide use and human cancer risk: results from the U.S. Agricultural Health Study.](#) Koutros, S., et al. 2009. Int J Cancer 124(5):1206-1212.
 - [The effect of microplastics on behaviors of chiral imidazolinone herbicides in the aquatic](#)

[environment: Residue, degradation and distribution](#). Hu, M., Hou, N., Li, Y., Liu, Y., Zhang, H., Zeng, D., & Tan, H. (2021). The effect of microplastics on behaviors of chiral imidazolinone herbicides in the aquatic environment: Residue, degradation and distribution. *Journal of hazardous materials*, 418, 126176.

<https://doi.org/10.1016/j.jhazmat.2021.126176>

- [Association between pesticide exposure and colorectal cancer risk and incidence: A systematic review](#). Matich, E. K., Laryea, J. A., Seely, K. A., Stahr, S., Su, L. J., & Hsu, P. C. (2021). Association between pesticide exposure and colorectal cancer risk and incidence: A systematic review. *Ecotoxicology and environmental safety*, 219, 112327. <https://doi.org/10.1016/j.ecoenv.2021.112327>

Gateway Health and Environmental Effects Citations

1. Extension Toxicology Network (EXTOXNET) Pesticide Information Profiles. <http://extoxnet.orst.edu/pips/ghindex.html>

Factsheet generated on July 7, 2026