

Chemical Factsheet

Alachlor

General Information

- Fact Sheet: [Alachlor.pdf](#)
- Product Names:
 - Bullet** (Monsanto), formulated with [Atrazine](#)
 - Lasso** (Monsanto)
 - Lariat** (Monsanto), formulated with [Atrazine](#)
 - Freedom** (Monsanto), formulated with [Trifluralin](#)
 - Ala-Scept** (BASF), formulated with Imazaquin
- Chemical Class: Acetanilide herbicide
- Uses: Preplant, preemergent, at plant herbicide for corn and soybeans, post-transplant, postemergent, and at ground crack herbicide for peanuts only, broadleaf weeds and grasses
- Alternatives: [Organic agriculture](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects

See citations at end of document.

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

Additional Information

- Regulatory Status:
 - [EPA Reregistration Eligibility Decision \(RED\)](#) signed (9/1998)
- Supporting information:
 - [Daily News Blog entries](#) (Beyond Pesticides)
 - [Exttoxnet Alachlor Factsheet](#) (Extension Toxicology Network)
 - [PAN Pesticides Database: Alachlor](#) (Pesticide Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [Incident Diabetes and Pesticide Exposure among Licensed Pesticide Applicators: Agricultural Health Study, 1993–2003](#). Montgomery et al. American Journal of Epidemiology 2008 167(10):1235-1246
 - [High Pesticide Exposure Events and Dream-Enacting Behaviors Among US Farmers](#). Yuan,

- Y., Shrestha, S., Luo, Z., Li, C., Plassman, B.L., Parks, C.G., Hofmann, J.N., Beane Freeman, L.E., Sandler, D.P. and Chen, H. (2022), High Pesticide Exposure Events and Dream-Enacting Behaviors Among US Farmers. *Mov Disord*, 37: 962-971. <https://doi.org/10.1002/mds.28960>
- [Pesticide Use and Relative Leukocyte Telomere Length in the Agricultural Health Study](#). Andreotti G, Hoppin JA, Hou L, Koutros S, Gadalla SM, et al. (2015) Pesticide Use and Relative Leukocyte Telomere Length in the Agricultural Health Study. *PLOS ONE* 10(7): e0133382. <https://doi.org/10.1371/journal.pone.0133382>
 - [Occurrence of Current-Use Pesticides in Paired Indoor Dust, Drinking Water, and Urine Samples from the United States: Risk Prioritization and Health Implications](#). Xie, Y., Li, J., Salamova, A., & Zheng, G. (2025). Occurrence of Current-Use Pesticides in Paired Indoor Dust, Drinking Water, and Urine Samples from the United States: Risk Prioritization and Health Implications. *Environmental science & technology*, 59(25), 12507–12519. <https://doi.org/10.1021/acs.est.5c00961>
 - [Monitoring of pesticides in surface water, pesticides removal efficiency in drinking water treatment plant and potential health risk to consumers using Monte Carlo simulation in Behbahan City, Iran](#). Rezaei Kalantary, Roshanak et al. "Monitoring of pesticides in surface water, pesticides removal efficiency in drinking water treatment plant and potential health risk to consumers using Monte Carlo simulation in Behbahan City, Iran." *Chemosphere* vol. 286, Pt 1 (2022): 131667. doi:10.1016/j.chemosphere.2021.131667
 - [Incident diabetes and pesticide exposure among licensed pesticide applicators: Agricultural Health Study, 1993-2003](#). Montgomery, M. P., Kamel, F., Saldana, T. M., Alavanja, M. C., & Sandler, D. P. (2008). Incident diabetes and pesticide exposure among licensed pesticide applicators: Agricultural Health Study, 1993-2003. *American journal of epidemiology*, 167(10), 1235–1246. <https://doi.org/10.1093/aje/kwn028>
 - [Multidecadal Change in Pesticide Concentrations Relative to Human Health Benchmarks in the Nation's Groundwater](#). Stackpoole, S., Lindsey, B. and Nell, C. (2025) National Water Quality Program: Multidecadal Change in Pesticide Concentrations Relative to Human Health Benchmarks in the Nation's Groundwater, U.S. Geological Survey. Available at: <https://pubs.usgs.gov/sir/2025/5081/sir20255081.pdf>.
 - [Carcinogenicity of atrazine, alachlor, and vinclozolin](#). Cattley, R. C., De Roos, A. J., Mandrioli, D., Pearce, N., Pronk, A., Soshilov, A., Abarikwu, S. O., Baldi, I., Barr, D. B., Freeman, L. E. B., Bortoli, S., Connolly, A., Dalvie, M. A., Ferreira, M. J., Genter, M. B., Le Hégarat, L., Lorenzetti, S., McLaughlin, J. R., Møller, P., Montagner, C. C., ... Schubauer-Berigan, M. K. (2025). Carcinogenicity of atrazine, alachlor, and vinclozolin. *The Lancet. Oncology*, S1470-2045(25)00702-8. Advance online publication. [https://doi.org/10.1016/S1470-2045\(25\)00702-8](https://doi.org/10.1016/S1470-2045(25)00702-8)
 - [Pesticide Prioritization by Potential Biological Effects in Tributaries of the Laurentian Great Lakes](#). Oliver, S.K., Corsi, S.R., Baldwin, A.K., Nott, M.A., Ankley, G.T., Blackwell, B.R., Villeneuve, D.L., Hladik, M.L., Kolpin, D.W., Loken, L., DeCicco, L.A., Meyer, M.T. and Loftin, K.A. (2023), Pesticide Prioritization by Potential Biological Effects in Tributaries of the Laurentian Great Lakes. *Environ Toxicol Chem*, 42: 367-384. <https://doi.org/10.1002/etc.5522>

Gateway Health and Environmental Effects Citations

1. EPA weight-of-evidence category, "Likely to be carcinogenic to humans (high dose); Not likely to be carcinogenic to humans (low doses)." US EPA, 2005. Office of Pesticide Programs. List of Chemicals Evaluated for Carcinogenic Potential. May 10, 2005. <http://www.epa.gov/pesticides/carlist/>

2. Illinois EPA, Endocrine Disruptors Strategy, February 1997.

<https://nepis.epa.gov/Exe/ZyNET.exe/910140ZK.txt>

3. Beyond Pesticides ChemWatch Factsheets. (Cited under factsheets on [Beyond Pesticides Gateway](#); see top of individual chemical page)

4. US EPA, 2000. Table 1: Toxicity Data by Category for Chemicals Listed under EPCRA Section 313. Toxic Release Inventory (TRI) Program.

https://www.epa.gov/sites/production/files/documents/hazard_categories.pdf

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