Chemical Factsheet

Methomyl

General Information

- Product Names:
  - Lannate (Du Pont)
  - Golden Marlin RF-128 Fly Killer (Wellmark) formulated with cis-9-Tricosene
  - Lurectron Scatterbait (Denka) formulated with cis-9-Tricosene
  - Stimukil Fly Bait (Troy) formulated with cis-9-Tricosene
- Chemical Class: Carbamate
- Uses: Restricted use pesticide. Controls insect pests on field, vegetable, and orchard crops; turf (sod farms only); livestock quarters; commercial premises; and refuse containers.
- Alternatives: Organic agriculture
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

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

Additional Information

- Regulatory Status:
  - EPA Plans New Use Limitations on Carbaryl, Carbofuran, and Methomyl to Protect Salmon and Steelhead in California, Idaho, Oregon, and Washington (5/2010)
  - EPA Reregistration Eligibility Decision (RED) signed (12/1998)
- Supporting information:
  - Extoxnet Methomyl Factsheet (Extension Toxicology Network)
  - PAN Pesticides Database - Methomyl (Pesticide Action Network)
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Effect of methomyl on the biochemical and reproductive parameters in pregnancy rats: the protective role of Pistacia Lentiscus oil. Mosbah, R., Mokrani, N., Mosbahi, I., Rouabhi, S. and Mantovani, A., 2016. In 18th European Congress of Endocrinology (Vol. 41). BioScientifica.
  - Investigating the Acute Metabolic Effects of the N-Methyl Carbamate Insecticide,

Methomyl, on Mouse Liver. Groswald, A.M. et al. (2023) Investigating the acute metabolic effects of the N-methyl carbamate insecticide, methomyl, on Mouse Liver, Metabolites. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10456691/.
- Mixture effects of thiamethoxam and seven pesticides with different modes of action on honey bees (Aplis mellifera). Li, W. et al. (2023) Mixture effects of thiamethoxam and seven pesticides with different modes of action on honey bees (Aplis mellifera), Scientific Reports. Available at: https://www.nature.com/articles/s41598-023-29837-w#ref-CR30.
- Unveiling bee pollen's contamination with pesticides and mycotoxins: Current analytical procedures, results and regulation. Carrera, M. et al. (2024) Unveiling bee pollen's contamination with pesticides and mycotoxins: Current analytical procedures, results and regulation, Trends in Analytical Chemistry. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0165993624004187.
- A Th2-type immune response and low-grade systemic inflammatory reaction as potential immunotoxic effects in intensive agriculture farmers exposed to pesticides . Lozano-Paniagua, D. et al. (2024) 'A th2-type immune response and low-grade systemic inflammatory reaction as potential immunotoxic effects in intensive agriculture farmers exposed to pesticides', Science of The Total Environment, 938, p. 173545. doi:10.1016/j.scitotenv.2024.173545.
- Pesticide-Induced Inflammation at a Glance. Lopes-Ferreira, M. et al. (2023) 'Pesticide-induced inflammation at a glance', Toxics, 11(11), p. 896. doi:10.3390/toxics11110896.
- Pesticide exposure and sleep disorder: A cross-sectional study among Thai farmers. Juntarawijit, C. et al. (2025) Pesticide exposure and sleep disorder: A cross-sectional study among Thai farmers, Heliyon. Available at: https://www.cell.com/heliyon/fulltext/S2405-8440(24)17154-X.
- Pesticide Residues on Three Cut Flower Species and Potential Exposure of Florists in Belgium. Toumi, K., Vleminckx, C., Van Loco, J., & Schiffers, B. (2016). Pesticide Residues on Three Cut Flower Species and Potential Exposure of Florists in Belgium. International Journal of Environmental Research and Public Health, 13(10), 943. https://doi.org/10.3390/ijerph13100943
- Prenatal residential proximity to endocrine disrupting agricultural pesticides and menstrual cycle characteristics among Latina adolescents in California. Paul, J. et al. (2025) Prenatal residential proximity to endocrine disrupting agricultural pesticides and menstrual cycle characteristics among Latina adolescents in California, American Journal of Epidemiology. Available at: https://academic.oup.com/aje/advance-article/doi/10.1093/aje/kwaf059/8083004.
- Effect of methomyl formulation, a carbamate pesticide on ovarian follicular development and fertility in albino mice. Shanthalatha, A., Madhuranath, B. N., & Yajurvedi, H. N. (2012). Effect of methomyl formulation, a carbamate pesticide on ovarian follicular development and fertility in albino mice. Journal of environmental biology, 33(1), 33–37.
- Assessment of genetic damage levels in agricultural workers exposed to pesticides in Paraíba, Brazil. Carvalho-Gonçalves, L. et al. (2025) Assessment of genetic damage levels in agricultural workers exposed to pesticides in Paraíba, Brazil, Environmental Toxicology and Pharmacology. Available at: https://www.sciencedirect.com/science/article/abs/pii/S1382668925000900.
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Gateway Health and Environmental Effects Citations

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2. European Commission. Endocrine Disruptors: Study on Gathering Information on 435 Substances with Insufficient Data. Final Report. EU DG Environment: B4-3040/2001/325850/MAR/C2. BKH Consulting Engineers: M0355037. November 2002. http://ec.europa.eu/environment/chemicals/endocrine/pdf/bkh_report.pdf#page=76.

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

4. 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.

5. Yueh, MF et al. 2014. The commonly used antimicrobial additive triclosan is a liver tumor promoter. *PNAS* doi: 10.1073/pnas.141911911. *Triclosan promotes liver cancer cell development and proliferation in mice through pathways common to humans.*

Factsheet generated on January 31, 2026