Chemical Factsheet

Methamidophos

General Information

- Product Names:
  No currently registered products
- Chemical Class: Organophosphate insecticide
- Uses: cotton, potato, tomato and alfalfa grown for seed for broad spectrum insect control, including aphid, Colorado potato beetle, green peach aphid, leafhopper, leafminer, lygus bug, stink bug, tomato pinworm and whitefly. Also used on peppers, strawberries, and squash grown in other countries and imported into the U.S.
- Alternatives: Organic Agriculture
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

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

Additional Information

- Regulatory Status:
  - EPA Reregistration Eligibility Decision (RED) (7/2006)
- Supporting information:
  - Extoxnet Methamidophos Factsheet (Extension Toxicology Network)
  - PAN Pesticides Database - Methamidophos (Pesticide Action Network)
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - The Washington aerial spray drift study: assessment of off-target organophosphorus insecticide atmospheric movement by plant surface volatilization. Ramaprasad, J. et al. (2004) The Washington Aerial Spray Drift Study: Assessment of off-target organophosphorus insecticide atmospheric movement by Plant Surface Volatilization, Atmospheric Environment. Available at: https://www.sciencedirect.com/science/article/abs/pii/S1352231004005199.
  - Proximity to residential and workplace pesticides application and the risk of progression of Parkinson's diseases in Central California. Li, S. et al. (2022) Proximity to residential and

workplace pesticides application and the risk of progression of parkinson's diseases in Central California, Science of The Total Environment. Available at: https://www.sciencedirect.com/science/article/pii/S0048969722079542.
- Child and adolescent mortality associated with pesticide toxicity in Cape Town, South Africa, 2010–2019: a retrospective case review. Davies, B., Hlela, M.B.K.M. and Rother, H.-A. (2023) Child and adolescent mortality associated with pesticide toxicity in Cape Town, South Africa, 2010–2019: a retrospective case review, BMC Public Health. Available at: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-023-15652-5.
- 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.
- 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.
- Cytotoxicity and DNA damage of five organophosphorus pesticides mediated by oxidative stress in PC12 cells and protection by vitamin E. Lu, X. T. et al. (2012) 'Cytotoxicity and DNA damage of five organophosphorus pesticides mediated by oxidative stress in PC12 cells and protection by vitamin E', Journal of Environmental Science and Health, Part B, 47(5), pp. 445–454. doi: 10.1080/03601234.2012.663312.

Gateway Health and Environmental Effects Citations

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

2. 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.

Factsheet generated on February 1, 2026