

# Chemical Factsheet

## Chlorpropham (CIPC)

### General Information

- Product Names:
  - Biox** (Pace)
  - Aceto Spud Nic-3 EC** (Aceto)
  - Spud Guard** (Dataplex)
  - Sprout Nip** (Loveland)
  - Decco** (Decco Us Post-Harvest, Inc.)
- Chemical Class: Carbamate Herbicide
- Uses: Control of mouseear chickweed in spinach, also used as part of an IPM method to decrease incidence of Botrytis infection (a fungal disease) in Easter lilies. As a plant growth regulator inhibits sprouting in stored potatoes and controls fruiting in ginkgo trees.
- Alternatives: [Organic Agriculture](#), [Non-Toxic Lawns and Landscapes](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

*See citations at end of document.*

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

### Additional Information

- Regulatory Status:
  - [EPA Reregistration Eligibility Decision \(RED\) Signed 10/1996](#)
- Supporting information:
  - [PAN Pesticides Database: Chlorpropham](#) (Pesticide Action Network)
  - [Chlorpropham Factsheet](#) (EXTOXNET)
  - [PubChem Hazardous Substances Database](#) (National Library of Medicine)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Chlorpropham, a carbamate ester herbicide, has an endocrine-disrupting potential by inhibiting the homodimerization of human androgen receptor.](#) Jeong, Da-Hyun & Jung, Da-Woon & Jang, Cheol-Ho & Kim, Uk-Jin & Park, Yooheon & Park, Yeonhwa & Lee, Hee-Seok. (2023). Chlorpropham, a carbamate ester herbicide, has an endocrine-disrupting potential

by inhibiting the homodimerization of human androgen receptor. Environmental Pollution. 325. 121437. 10.1016/j.envpol.2023.121437.

- [Developmental toxicity of chlorpropham induces pathological changes and vascular irregularities in zebrafish embryos](#). Lee, J. Y., Park, H., Lim, W., & Song, G. (2020). Developmental toxicity of chlorpropham induces pathological changes and vascular irregularities in zebrafish embryos. Comparative biochemistry and physiology. Toxicology & pharmacology : CBP, 236, 108802. <https://doi.org/10.1016/j.cbpc.2020.108802>
- [Wastewater surveillance for assessing human exposure to pesticides: Investigating populations living near flower bulb fields](#). Bijlsma, L. et al. (2025) Wastewater surveillance for assessing human exposure to pesticides: Investigating populations living near flower bulb fields, Journal of Environmental Chemical Engineering. Available at: <https://www.sciencedirect.com/science/article/pii/S2213343725017865>.
- [Trends in airborne pesticides: A retrospective analysis of the last two decades \(2007–2024\) in a Mediterranean Region](#). López, A., Fuentes-Ferragud, E., Muñoz, A., Borràs, E., Vera, T., & Coscollà, C. (2025). Trends in airborne pesticides: A retrospective analysis of the last two decades (2007-2024) in a Mediterranean Region. Environmental pollution (Barking, Essex : 1987), 383, 126770. Advance online publication. <https://doi.org/10.1016/j.envpol.2025.126770>
- [Chlorpropham induces mitochondrial dysfunction in rat hepatocytes](#). Nakagawa, Y., Nakajima, K., & Suzuki, T. (2004). Chlorpropham induces mitochondrial dysfunction in rat hepatocytes. Toxicology, 200(2-3), 123–133. <https://doi.org/10.1016/j.tox.2004.03.012>
- [Subchronic toxicity of chlorpropham \(CIPC\) in ICR mice](#). Fujitani, T., Tada, Y., Fujii, A., Kimura, M., & Yoneyama, M. (2000). Subchronic toxicity of chlorpropham (CIPC) in ICR mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association, 38(7), 617–625. [https://doi.org/10.1016/s0278-6915\(00\)00043-0](https://doi.org/10.1016/s0278-6915(00)00043-0)
- [Developmental toxicity of chlorpropham in mice](#). Tanaka, T., Fujitani, T., Takahashi, O., Oishi, S., & Yoneyama, M. (1997). Developmental toxicity of chlorpropham in mice. Reproductive toxicology (Elmsford, N.Y.), 11(5), 697–701. [https://doi.org/10.1016/s0890-6238\(97\)00030-0](https://doi.org/10.1016/s0890-6238(97)00030-0)

## Gateway Health and Environmental Effects Citations

1. National Library of Medicine. PubChem Hazardous Substances Database. [PubChem \(nih.gov\)](#)
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>.
3. Extension Toxicology Network (EXTOXNET) Pesticide Information Profiles. <http://extoxnet.orst.edu/pips/ghindex.html>

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