Chemical Factsheet

Thiram

General Information

- Fact Sheet: thiram.pdf
- Product Names:
  Detour Rabbit and Deer Repellent (Farnam Companies), formulated with Morpholine
  Bulb Dust (Bonide Products), formulated with Methoxychlor
  Gustafson (Bayer Cropscience), formulated with Carboxin, Triadimenol (some formulations)
  Vitavax (Chemtura USA), formulated with Carboxin
  Stiletto (Chemtura USA), formulated with Carboxin, Metalaxyl
- Chemical Class: Dimethyl dithiocarbamate fungicide, animal repellant
- Uses: Fungicide used to prevent crop damage in the field and to protect harvested crops (apples, peaches, and strawberries) from deterioration in storage or transport, seed protectant (e.g. small seeded vegetables, large seeded vegetables, cereal grains and other seeds, coniferous seeds, cotton seed, ornamental seeds, and soybeans), protects turf from fungal diseases; also an animal (rabbit, rodent, and deer) repellent
- Alternatives: Organic agriculture, Organic golf course managment
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

- Cancer: Not yet evaluated, equivocal data (**1**)
- Endocrine Disruption: Yes (**2**)
- Reproductive Effects: Yes (**3**)
- Neurotoxicity: Yes (**3**)
- Kidney/Liver Damage: Yes (**4**)
- Sensitizer/ Irritant: Yes (**5**)
- Birth/Developmental: Yes (**3**)
- 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 (**4**)

Additional Information

- Regulatory Status:
  - EPA Reregistration Eligibility Decision (RED) signed (9/2004)
- Supporting information:
  - Extoxnet Thiram Factsheet (Extension Toxicology Network)
  - PAN Pesticides Database: Thiram (Pesticide Action Network)
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Combined exposure to low doses of pesticides causes decreased birth weights in rats. Hass U, Christiansen S, Axelstad M, Scholze M, Boberg J. 2017. Reprod Toxicol. 72:97-105

- Inhibition by pesticides of the DJ-1/Park7 protein related to Parkinson disease.. Mathas, N., Poncet, G., Laurent, C., Larigot, L., Le-Grand, B., Gonis, E., Birman, S., Galardon, E., Sari, M.A., Tiouaini, M. and Nioche, P., 2023. Toxicology, 487, p.153467.
- Thyroid under Attack: The Adverse Impact of Plasticizers, Pesticides, and PFASs on Thyroid Function. Rodrigues, V.G. et al. (2024) Thyroid under Attack: The Adverse Impact of Plasticizers, Pesticides, and PFASs on Thyroid Function, Endocrines. Available at: https://www.mdpi.com/2673-396X/5/3/32.
- Identifying the Link Between Chemical Exposures and Breast Cancer in African American Women via ToxCast High Throughput Screening Data. Katelyn Polemi, Vy Nguyen, Julien Heidt, Adam Kahana, Olivier Jolliet, Justin A. Colacino. Identifying the Link Between Chemical Exposures and Breast Cancer in African American Women via ToxCast High Throughput Screening Data. bioRxiv 2021.01.22.427848; doi: https://doi.org/10.1101/2021.01.22.427848

Gateway Health and Environmental Effects Citations

1. Insecticide Resistance Action Committe (IRAC) eClassification of Chemical Mode of Action http://www.irac-online.org/eClassification/

2. Colborn, T., D. Dumanoski, and J.P. Myers. 1996. Our Stolen Future: Are We Threatening Our Fertility, Intelligence, and Survival? New York: Dutton. http://ourstolenfuture.org/Basics/chemlist.htm

3. 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

4. Briggs, S.A. 1992. Basic Guide to Pesticides: Their Characteristics and Hazards. Washington, DC: The Rachel Carson Council, 98. https://www.cabdirect.org/cabdirect/abstract/19932334845

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

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