

# Chemical Factsheet

## Tebufenozide

### General Information

- Chemical Class: Diacylhydrazine insecticide
- Uses: Control of lepidopterans in forestry, ornamentals, grapes, blueberries, cranberries, nut trees, pome fruits, citrus, brassica, leafy vegetables, fruiting vegetables, canola, cotton, mint and turnip.
- Alternatives: [Organic agriculture](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

*See citations at end of document.*

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

### Residential Uses as Found in the ManageSafe™ Database

- [Bagworms](#)
- [Gypsy Moths](#)

### Additional Information

- Regulatory Status:
  - [Tebufenozide Registration Review document](#)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Current-use pesticides in vegetation, topsoil and water reveal contaminated landscapes of the Upper Rhine Valley, Germany](#). Mauser, K.M., Wolfram, J., Spaak, J.W. et al. Current-use pesticides in vegetation, topsoil and water reveal contaminated landscapes of the Upper Rhine Valley, Germany. Commun Earth Environ 6, 166 (2025). <https://doi.org/10.1038/s43247-025-02118-2>

### Gateway Health and Environmental Effects Citations

1. Xu, W., Wang, B., Yang, M., Zhang, Y., Xu, Z., Yang, Y., Cao, H. and Tao, L., 2017. Tebufenozide

induces G1/S cell cycle arrest and apoptosis in human cells. *Environmental toxicology and pharmacology*, 49, pp.89-96. <https://doi.org/10.1016/j.etap.2016.12.002>

2. Lee, W.C. and Kwak, I.S., 2005. The Mentum deformity of *C. plumosus* following exposure to endocrine disruption chemicals. *Korean Journal of Ecology and Environment*, 38(1), pp.11-17. <https://www.koreascience.or.kr/article/JAKO200518317183916.page>

3. The University of Hertfordshire. 2021. PPDB: Pesticide Properties DataBase - Tebufenozide <https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/611.htm>

4. European Food Safety Authority, 2010. Conclusion on the peer review of the pesticide risk assessment of the active substance tebufenozide. *EFSA Journal*, 8(12), p.1871. <https://efsa.onlinelibrary.wiley.com/doi/abs/10.2903/j.efsa.2010.1871>

5. Pesticide Action Network Pesticide Database. [http://www.pesticideinfo.org/Search\\_Chemicals.jsp](http://www.pesticideinfo.org/Search_Chemicals.jsp).

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