Chemical Factsheet

Fenoxaprop-ethyl (FE)

General Information

- Product Names:
  Acclaim 0.5 We Herbicide (Bayer)
  Acclaim 0.75ec Herbicide (Bayer)
  Acclaim 1ec Herbicide (Bayer)
  Whip 0.75 Ec Herbicide (Bayer)
  Whip 1 Ec Herbicide (Bayer)
  Whip Technical (Bayer)
- Chemical Class: Aryloxyphenoxy propionic acid
- Uses: Not Registered in U.S.: A selective, postemergence herbicide for control of annual and perennial grass weeds in crops such as beans, beets, cotton, groundnuts, potatoes and other vegetables.
- Alternatives: Organic agriculture, Organic land managment
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

- Cancer: Suggestive (**1**, **2**)
- Endocrine Disruption: Suspected (**3**)
- Reproductive Effects: Yes (**4**, **5**)
- Neurotoxicity: Insufficiently Studied
- Kidney/Liver Damage: Yes (**4**)
- Sensitizer/ Irritant: Yes = Skin (**2**)
- Birth/Developmental: Yes (**4**)
- Detected in Groundwater: Insufficiently Studied
- Potential Leacher: Low (**2**)
- Toxic to Birds: Possible (**2**)
- Toxic to Fish/Aquatic Organisms: Yes (**2**)
- Toxic to Bees: Possible (**2**)

Additional Information

- Regulatory Status:
  - Only Enriched Isomer Formulation is EPA Registered [Fenoxaprop-p-ethyl (FPE)]
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Differential effects of herbicides atrazine and fenoxaprop-ethyl, and insecticides diazinon and malathion, on viability and maturation of porcine oocytes in vitro. Casas, E., Bonilla, E., Ducolomb, Y., & Betancourt, M. (2010). Differential effects of herbicides atrazine and fenoxaprop-ethyl, and insecticides diazinon and malathion, on viability and maturation of porcine oocytes in vitro. Toxicology in vitro : an international journal published in association with BIBRA, 24(1), 224–230. https://doi.org/10.1016/j.tiv.2009.09.004
  - The potential endocrine disruption of pesticide transformation products (TPs): The blind

spot of pesticide risk assessment. Ji, C., Song, Q., Chen, Y., Zhou, Z., Wang, P., Liu, J., Sun, Z., & Zhao, M. (2020). The potential endocrine disruption of pesticide transformation products (TPs): The blind spot of pesticide risk assessment. Environment international, 137, 105490. https://doi.org/10.1016/j.envint.2020.105490

Gateway Health and Environmental Effects Citations

1. US EPA Office of Pesticide Programs. List of Chemicals Evaluated for Carcinogenic Potential. October 30, 2023. http://npic.orst.edu/chemicals_evaluated.pdf

2. The University of Hertfordshire. 2021. Pesticide Properties DataBase (PPDB): Fenoxaprop-ethyl https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/302.htm

3. Ji, C., Song, Q., Chen, Y., Zhou, Z., Wang, P., Liu, J., Sun, Z. and Zhao, M., 2020. The potential endocrine disruption of pesticide transformation products (TPs): The blind spot of pesticide risk assessment. *Environment international*, *137*, p.105490. https://www.sciencedirect.com/science/article/pii/S0160412019332647?via%3Dihub#s0120

4. 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

5. He, Y.T., Wang, W., Shen, W., Sun, Q.Y. and Yin, S., 2019. Melatonin protects against Fenoxaprop-ethyl exposure-induced meiotic defects in mouse oocytes. *Toxicology*, *425*, p.152241. https://www.sciencedirect.com/science/article/abs/pii/S0300483X19301878

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