

EPA concludes Endocrine Disruption Screening Program Weight of Evidence Assessment for 2,4-D

On July 30, 2015, the United States Environmental Protection Agency released its reviews of the Tier 1 screening assay results for the first 52 pesticide chemicals (active and inert ingredients) in the Endocrine Disruptor Screening Program (EDSP) and finds no convincing evidence of potential interaction with the estrogen, androgen or thyroid pathways for 2,4-D. This is an important stage in a multi-step process to protect public health and the environment by ensuring that exposure to chemicals does not result in adverse effects that can occur from the disruption of hormones. The Tier 1 screening data is the best way to determine whether a chemical has the potential to interact with the endocrine system and would then require more thorough testing.

The EDSP Tier 1 assay battery is designed to provide the necessary data to evaluate the potential of chemicals to interact with the estrogen (E), androgen (A) or thyroid (T) signaling pathways. In addition to the available Tier 1 assay data, other scientifically relevant information (OSRI) was considered in this weight of evidence (WoE) assessment such as the extended one-generation reproduction toxicity test (EOGRT) in rats (equivalent to the EDSP Tier 2 study), general toxicity data, and open literature studies of sufficient quality.

In determining whether 2,4-dichlorophenoxy acetic acid (2,4-D) interacts with E, A or T hormone pathways, three important factors were considered: the number and type of effects induced, the magnitude and pattern of responses observed across studies, and taxa and sexes. Additionally, the conditions under which effects occur were considered, in particular, whether or not endocrine-related responses occurred at dose(s) that also resulted in general systemic toxicity or overt toxicity.

The EDSP Tier 1 Assay Weight of Evidence Review Committee (T1WoERC) of the Office of Pesticide Programs (OPP) and the Office of Science Coordination and Policy (OSCP) conducted a weight-of-evidence (WoE) analysis of the potential interaction of 2, 4-D with the E, A or T signaling pathways.

The WoE evaluation concludes that 2, 4-D demonstrates no convincing evidence of potential interaction with the estrogen, androgen or thyroid pathways.

The complete EPA EDSP Weight of Evidence Conclusions on the Tier 1 Screening Assays for 2,4-D can be found on the EPA website.¹


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About the Task Force

The Industry Task Force II on 2,4-D Research Data is organized to provide funding for the on-going Good Laboratory Practice (GLP) research studies required to respond to the US EPA registration review and PMRA pesticide re-evaluation programs. The 2,4-D Task Force is comprised of those companies holding technical 2,4-D registrations: Dow AgroSciences (U.S.), Nufarm, Ltd. (Australia) and Agro-Gor Corp., a U.S. corporation jointly owned by Albaugh, LLC. (U.S.) and PBI-Gordon Corp. (U.S.).

References:

¹ <http://www2.epa.gov/ingredients-used-pesticide-products/weight-evidence-edsp-24-d>

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