June 30, 2017

U.S. Environmental Protection Agency
Office of Pesticide Programs
1200 Pennsylvania Ave. NW.
Washington, D.C. 20460-0001

Re: Preliminary Comparative Environmental Fate and Ecological Risk Assessment for the Registration Review of Eight Synthetic Pyrethroids and Pyrethrins; Docket ID No. EPA-HQ-OPP-2012-0501-0021

The National Corn Growers Association (NCGA) appreciates the opportunity to respond to the U.S. Environmental Protection Agency (EPA) on its Preliminary Ecological Risk Assessment (PRA) for the registration review of pyrethroids and pyrethrins. Farmers place a high value on the access to tools that allow them to continually improve the sustainability of their operations while supplying a safe, secure supply of food.

Founded in 1957, NCGA represents more than 40,000 dues-paying corn growers and the interests of more than 300,000 farmers who contribute through corn checkoff programs in their states. NCGA and its 49 affiliated state associations and checkoff organizations work together to help protect and advance corn growers' interests. NCGA acknowledges crop protection chemistries as a critical tool for growers, allowing increased production efficiency and reduced yield loss under stressed conditions. Producers take seriously the importance of crop protection products, their stewardship and their efficacy.

Pyrethroid pesticides are an effective tool in controlling a wide range of insects, from mosquitos and ticks, to myriad insects that threaten agricultural production. Pyrethroids play a critical role in integrated pest management (IPM) and insecticide resistant management programs. The need to maintain multiple modes of actions available in the marketplace is necessary for growers to successfully implement IPM best management practices. Pyrethroid products have a strong worker safety record, and do not pose health risks for applicators when used as directed. The importance of pyrethroids in pest management is underscored by the fact there are very few if any alternatives currently available.

NCGA supports the Pesticide Policy Coalition's comments on this docket and includes them in this submission:

The Coalition supports the long-established, rigorous, and science-based pesticide registration review process established under the Federal Insecticide Fungicide, and Rodenticide Act (FIFRA). Unlike other federal environmental statutes, FIFRA requires EPA to engage in a risk-benefit analysis in its regulation of pesticides. Ecological risk assessments to ensure that approved uses of pesticides are not likely to cause harmful effects to terrestrial and aquatic life are an important component of the review process. This is a complex process that must account for pesticide use patterns, the chemical properties and behavior that influence environmental fate and transport. A thorough and holistic approach that relies on sound science and robust data ensures that risk conclusions are as

closely tied to real-world conditions as practicably possible. For the reasons discussed in the following comments, the Coalition is concerned that EPA's PRA does not reflect the risk-benefit balancing required under FIFRA, and overstates the potential risks of pyrethroids due to its failure to account these complexities, the real world conditions supported by numerous scientific studies, and risk mitigated via IPM practices and label restrictions.

1. EPA's PRA fails to adequately account for pyrethroids' chemical properties and behavior in the environment.

EPA's standard risk assessment approach does not account for pyrethroids' unique chemical and environmental fate properties. Pyrethroids are extremely hydrophobic, showing low solubility in water. Pyrethroids that enter aquatic systems readily adsorb to sediments and organic matter, which leaves a very small fraction of the chemical freely dissolved and potentially bioavailable for uptake by aquatic organisms. Unlike other hydrophobic classes of compounds, pyrethroids are readily degraded by microrganisms and organisms. The degradates of pyrethroids are nontoxic. The use of traditional exposure models do not properly account for these unique properties, producing misleading results that overstate potential risks for non-target species. For example, EPA's use of total residue monitoring data is inappropriate for assessing pyrethroids since only freely dissolved, bioavailable concentration of pyrethroids is relevant. Going forward, EPA should refine its ecological risk assessment to include the best available scientific findings that incorporate recent advances in estimating bioavailable concentrations of pyrethoids and more realistic exposure estimates based on available monitoring data[1].

2. The PRA is based on a modeling approach that does not reflect real world conditions.

EPA's PRA relies on modeling that is flawed or lacks independent, scientific review. For several years, EPA's own Scientific Advisory Panel has recommended the agency follow probalistic ecological modeling that relies on real world data where available. In contrast, EPA's risk characterization for pyrethroids relies heavily on the toxicity studies using laboratory-reared cultures, including highly sensitive freshwater amphipods (Hyalella azteca). Although it is appropriate to focus on potential risks to aquatic insects and crustacean, EPA's risk assessment should incorporate the broader toxicological database and scientific findings, including field and mesocosum studies. As EPA references in the PRA, recent field studies in California rivers and streams have documented healthy H. azteca populations in streams were up to 550 times less sensitive to the pyrethroid concentrations present than the risk assessment would predict. The Coalition cannot support an assessment that is based on laboratory findings that EPA acknowledges may deviate from real world conditions by a factor of 550. EPA should not disregard this vast discrepancy between observations in the field with those documented in a lab, and should adjust its risk assumptions accordingly.

In the PRA, EPA introduced a new conceptual model for outdoor residential applications of pyrethroids, based on number of assumptions, including a standard lot size and structural footprint, percentage of pervious surface, and total treatment area. An independent, peer review of this new

[1] *See e.g.*, Parry, E., & Young, T. (2013). Distribution of pyrethroid insecticides in secondary wastewater effluent. *Environmental Toxicology and Chemistry, 32,* 2686 – 2694.; You, J., et. al (2011). Chemical techniques for assessing bioavailability of sediment-associated contaminants: SPME versus Tenax extraction. *Journal of Environmental Monitoring*,*13*, 792-800.; Smith, S., & Lizotte, R. (2007). Influence of selected water quality characteristics on the toxicity of lambda-cyhalothrin and gamma-cyhalothrin to *H. azteca*. *Bulletin of Environmental Contamination and Toxicology, 79,* 548-551.; and Yang, W., et. al (2007). Bioavailability of permethrin and cyfluthrin in surface waters with low levels of dissolved organic matter. *Journal of Environmental Quality, 36,* 1678 – 1685.

EPA standard should be conducted to verify that the assumptions are sound and appropriate for the risk assessment process.

3. EPA's PRA fails to account for IPM and resistance management practices and the role of pyrethroids in the managing resistance.

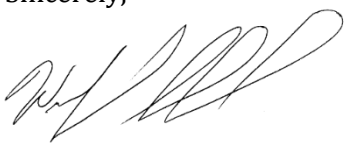
EPA's risk assessment does not account for the label restrictions on pesticide products. Growers and applicators have a vested interest in following these restrictions and also adhere to well-established IPM and resistance management practices. These practices limit the volume, rate and frequency of applications to mitigate pest resistance and ensure the effectiveness of pyrethroid products now and in the future. EPA's model incorporates the minimal interval between applications at the maximum rate. EPA acknowledges that it is uncertain whether this use pattern actually occurs in the field, and that "[i]t appears unlikely that users will apply each chemical under these circumstances, and on a yearly basis for 30 consecutive years, as assumed in the modeling performed in this preliminary ecological risk assessment." Once again EPA appears to recognize an assumption in the PRA that is overly conservative and has no basis in reality. The Coalition urges EPA to refine the maximum use scenario to better reflect the wide use of IPM and resistance management practices.

EPA's risk-benefit balancing should also consider the vital role of pyrethroid products in mitigating resistance and ensuring safe and effective use of pesticides in crop protection and public health. Effective and sustainable resistance management rests on the availability of a menu of pest control options and pesticide products. Regulatory decisions that would remove an entire class of products from the market or further restrict their use would weaken resistance management efforts and could lead to increased resistance and the use of pesticides that have a greater risk profile for humans and the environment.

CONCLUSION

The NCGA cannot support EPA's ecological risk assessment for pyrethroids absent further refinement to address the issues and limitations highlighted in these comments. Without further refinement, EPA risks limiting the availability of pyrethroid products and leaving corn growers without effective and safe alternatives and critical resistance management tools, based on a risk assessment that grossly overstates the potential risk pyrethoids pose to the environment and fails to meet the risk-benefit balancing required by FIFRA.

Sincerely,



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