



MEMORANDUM-IN-OPPOSITION

February 12, 2020

HB 229 Pesticides - Use of Chlorpyrifos - Prohibition (Stein)

Committee: Environment and Transportation

An act prohibiting the use of chlorpyrifos in the State, including insecticides containing chlorpyrifos and seeds treated with chlorpyrifos; and requiring the Department of Agriculture, with existing budgeted resources, to provide to farmers, certified crop advisors, and pesticide applicators certain education and assistance relating to integrated pest management.

This bill would establish a Maryland ban of the use of one specific organophosphate pesticide, chlorpyrifos, which is an effective insecticide applied across a broad spectrum of pests. In the presence of some key insect pests, chlorpyrifos is the only effective pest control option. It is thus widely used in 48 U.S. States in agricultural applications on over 60 crops, from specialty to row crops. Farming and agriculture is Maryland's #1 industry.

Corteva Agriscience, is **STRONGLY OPPOSED** to the potential ban of chlorpyrifos in this bill.

Extensive studies have shown that current uses of chlorpyrifos meet the U.S. regulatory standard of a "reasonable certainty of no harm." The U.S. is among about 100 countries, including all major U.S. trading partners, that have registered chlorpyrifos for agricultural use by farmers. Chlorpyrifos is one of the most widely studied crop protection products in the world. In fact, more than 4,000 regulatory guideline studies have been conducted and subjected to critical evaluation by regulatory authorities in the nearly 100 countries where the product is currently registered and legally approved for use.

The U.S. Environmental Protection Agency (EPA) is only allowed to register a pesticide to protect food crops if it concludes, after considering the validity, completeness and reliability of the best available scientific information, that exposures from intended uses pose a "reasonable certainty of no harm" to people, including potentially sensitive individuals such as children and pregnant women. Regarding chlorpyrifos, a full weight of evidence evaluation from thousands of studies, along with a critical examination of the studies being cited by some who have raised safety questions, shows that current uses of chlorpyrifos meet the regulatory standard of a "reasonable certainty of no harm" for humans, including children. Such research confirms that chlorpyrifos is not a specific neurodevelopmental toxicant, not a carcinogen, not a genotoxic agent, not a developmental toxicant, and not a reproductive toxicant. Further, laboratory studies conducted under stringent guidelines set by EPA for such research have shown that the young are not more sensitive than adults.

While safety questions have been raised about certain epidemiologic results, the findings are not consistent with other scientific research. For the epidemiology studies that have looked at

chlorpyrifos, it is important to consider all the evidence. The research referred to as the Columbia study claimed some associations, but had weaknesses in determining exposure during pregnancy, and accounting for other competing causes, such as gestational age at birth, nutritional deficiencies, other environmental exposures, and the quality of maternal interactions with the child. As a result, the study can only raise a hypothesis between possible chlorpyrifos exposures and adverse health effects in children.

Other epidemiology studies, and the two most cited (e.g., CHAMACOS and Mount Sinai), reported no significant associations between possible exposure to chlorpyrifos and any adverse health effects in the children from the study. In scientific terms, these studies tested the hypothesis of the Columbia Study and could not validate or replicate the findings.

The most recent Scientific Advisory Panel (SAP) convened by EPA to review the body of evidence urged EPA not to use the Columbia study as it had proposed in its chlorpyrifos evaluation, noting a number of uncertainties and raising questions about the researcher's methodology and conclusions. In addition to the SAP, multiple published reviews of epidemiology findings of the Columbia study describe the evidence for a neurodevelopmental effect as inadequate, inconsistent and biologically implausible.

As such, EPA's 2006 determination that there is a reasonable certainty of no harm from approved uses of chlorpyrifos on food crops will remain in effect until EPA completes the ongoing periodic registration review of chlorpyrifos on or before October 2022, using valid and reliable scientific information.

Corteva Agriscience is thus confident that chlorpyrifos will continue to safely and effectively protect food crops from insect damage after EPA completes its ongoing pesticide registration review.

Thus, for all of the reasons stated herein, Corteva Agriscience **STRONGLY OPPOSES** HB229.

Respectfully submitted,

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