



Key Issue Points Re: *Pediatrics: Attention-Deficit/Hyperactivity Disorder and Urinary Metabolites of Organophosphate Pesticides*

- 1.) There are indications in this journal story which suggests that further research would need to be done to determine a direct causative connection between the exposure of organophosphates and the development of ADHD in children.
 - The story itself says that “prospective studies are needed to establish whether this association is causal,” indicating that this is an association study and no data directly indicates cause and effect.
 - The information on use of this pesticide class cited in the paper is outdated and does not reflect a significant decline in use of organophosphates in recent years. If exposure to such pesticides were a significant contributing factor in the etiology of ADHD, it should be reflected in the epidemiology of the condition, through a corresponding significant drop in diagnosis of ADHD. In plain English--the declines in actual use of organophosphates in the last 5+ years do not seem to correlate with any reported declines in ADHD. This could be a logical next step to build on the results of this paper. We look forward to those results.
 - There are many methods in this study which require further clarification, such as the one-time urinalysis to determine a correlation to a long-term disorder, and subjective determination of ADHD through phone interviews only without the review of medical records.

- 2.) The health of consumers is a top priority for the crop protection industry and regulatory agencies.
 - Pesticides are rigorously tested for their possible effects on humans, as well as animals and the environment.
 - We work closely with government agencies to carefully regulate pesticide products and regularly review and monitor the use of pesticides for potential health effects.
 - The crop protection industry requires that its products are used in a way that is consistent with label instructions, which are recognized guidelines approved by regulatory agencies.

- 3.) To help protect human health, crop protection products go through a rigorous registration and re-registration process.
 - It typically requires six to seven years from the discovery of a pesticide compound to its submission to the EPA for registration.
 - The registration package for a particular product contains thousands of pages of test data that are reviewed by scientists before approval.
 - Regulatory agencies also re-examine products on a regular basis.



- 4.) The extensive study and rigorous regulatory review that pesticides undergo before market approval ensures that potential health risks are negligible when products are used according to label directions.
 - The industry carries out rigorous studies on the possible effects of products on human health before applying for a pesticide registration. These are further supplemented by the studies of national regulatory agencies.
 - We regularly monitor developments in the patterns of potential exposures among pesticide users in order to ensure continued safety in use.
 - Health outcomes frequently have multiple, complex causes. These include genetic and family influences, which can have as much or more of an impact than environmental factors.

- 5.) Health authorities require specific testing and safety measures that take into account children's well being.
 - Public regulators factor children's health into their review of safety measures based on extensive studies of pesticide products used according to the label instructions.
 - Maximum Residue Levels (MRLs) are set to protect our smallest and most vulnerable citizens – children.
 - Health authorities carefully and continually monitor the use of pesticides and review for any health effects.

- 6.) Crop protection products--including many organophosphate insecticides--contribute extensively to the safe and abundant supply of food--especially fruits and vegetables which are still consumed by people, and especially children, in quantities far lower than recommended for good health. Our industry looks forward to continuing to help farmers expand the supply of all food, fiber and renewable fuels--while assuring the safety of our crop protection products by continuing to respond to the most modern scientific safety analysis government brings forward.