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Senate Environment Committee
State of Connecticut

Dear Committee Members:

First, I offer my apology for my absence from the hearing. I have two classes at Yale on January 31st. My name is John Wargo, and I am a professor of risk analysis and environmental policy and political science at Yale University with appointments in the School of Forestry and Environmental Studies, the Department of Political Science, and I have been Director of Undergraduate Studies for Yale's recently formed Environmental Studies major. I hold a PhD in environmental policy from Yale (1984), taught at Dartmouth in the Thayer School of Engineering until 1986, returned to Yale in 1986, and was promoted to tenure in 1996. Currently, I am a full professor. I have participated in several National Academy of Sciences Panels on human exposure to pesticides, have provided advice to several EPA administrators, have been a long time contributor to EPA's Scientific Advisory Board, testified in both the U.S. House and Senate on issues related to children's environmental health, and advised the U.N. World Health Organization and the Food and Agriculture Organizations on methods to protect children's health from pesticides. I have also participated in the drafting of federal, state and local law designed to protect children from exposure to pesticides in food, air, water, soils, and consumer products, including pesticides. I also have specific experience measuring and modeling children's exposure to pesticides. I have only a few points to make and they follow.

1. Pesticides are intentionally toxic substances. It is a serious mistake to assume they will affect only species they were designed to harm. Pesticides often have unintended effects on non-targeted species.
2. Children are especially vulnerable to pesticides for two reasons. First, children are physiologically more susceptible to health loss due to rapid growth and development of organs and functions. Second, children breathe more air volume, drink more water, eat more food and touch more potentially contaminated surfaces—all per unit of their bodyweight—than adults. For any concentration of pesticide residue in air, water, food or surfaces, children normally experience higher levels of exposure than adults.

3. Children experience rapid growth and development of different organ systems and functions during different periods. Full maturity often does not occur until the age of 20, after high school years.

4. Most pesticides have not been tested to know their effects on the developing nervous, immune, and endocrine systems of humans. There is plausible evidence that many pesticides are neurotoxic, others mimic human hormones, and still others may affect the immune system. Adverse effects are normally dependent upon the intensity of dose, however the doses that children and adolescents experience in school settings are poorly understood.

5. Current pesticide law permits the application of dozens of pesticides in the school environment, and they are normally applied by individuals who have little or no training in modern chemistry, biology, toxicology, epidemiology, exposure assessment or risk assessment.

6. Collectively, these are serious challenges to those who propose continued application of pesticides in or near schools. I strongly support State legislation that would ban pesticide applications for cosmetic purposes and nuisances on school property. A serious public health threat should be demonstrated before any application is permitted. If public health officials determine that a serious health threat from pests does exist, non-chemical solutions should be attempted before the least persistent, mobile and toxic pesticides are applied. Integrated pest management (IPM) is a term-of-art that often used to justify continuation of past pesticide use practices. It is my opinion that IPM should not be relied upon to provide sufficient protection for children's and women's health.

7. I have not accepted payment for this comment, and I encourage all who offer testimony on this issue to disclose their financial interest in the bill.

Sincerely,

John Peter Wargo, Ph.D.
Professor
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