Global Warming and Emerging Issues in Toxicology: Food-borne Poisonings

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ABSTRACT

It is postulated that global warming accelerates insect’s life cycle and population. Some insects will destroy corps which are essential for human. This will exert pressure on man to use pesticides. Thus, adverse effects from using insecticides are concomitantly increased. This article will address the health effects from pesticide exposure and poisoning. It is predicted that acute insecticide poisoning will inevitably increase. Insecticides are composed of the old and the new chemicals. The old ones are exemplified by organochlorine (OC), organophosphorus (OP) and carbamate, whereas the new generation insecticides include pyrethroid, abamectin and neonicotinoid. The new generation is supposed to have less toxicity than the old one. According to the evidence, OCs are categorized teratogen and carcinogen rating 2B. They are as classified as endocrine disruptors and persistent organic pollutants. It is a commitment worldwide for banning the OCs out of the market. For OP insecticides, they are associated with neuropsychiatric disorder which is called “chronic organophosphate induced neuropsychiatric disorder” (COPND), but there is no strong evidence to suggest that they are carcinogens or teratogens. Some evidences suggest that pyrethroids may cause some chronic effects such as polyneuropathy, organic brain syndrome and autonomic dysfunction. Carcinogenic and teratogenic effects are not established in chronic pyrethroid exposure. Avermectin can cross placenta, however, no human data to show its teratogenic effect. No carcinogenic effect is observed in long term animal study. The human data of neonicotinoids are limited.