

Hazardous Chemicals in Pesticides

Currently, 9530 pesticide products are registered in Massachusetts representing over 600 active ingredients.

Recognized human health effects of pesticides include: cancer, developmental effects, reproductive effects, endocrine disruption, immunotoxicity, neurotoxicity, and toxicity to various organ systems such as skin or sense organ, cardiovascular or blood, stomach, intestines, liver, kidney and respiratory system.

Carcinogens: In 2004, 190 pesticide products were registered in Massachusetts that contained one or more of 46 active ingredients known, suspected, or likely to cause cancer.

Alachlor, Arsenic pentoxide, Cacodylic acid, Chlorothalonil, Chromic acid (Chromium VI), Creosote, Dipropyl isocinchomeronate, Diuron, Ethoprop, Ethylene oxide, Fenoxycarb, Fentin hydroxide, Folpet, Formaldehyde, Imazalil, Iprodione (glycophene), Kresoxim-methyl, Lactofen (Cobra), Lindane, Mancozeb, Maneb, Metam-sodium, Methyl isothiocyanate, Methylene bis(thiocyanate), Metiram, Nitrapyrin, Ortho-phenylphenol, Ortho-phenylphenol, sodium salt, Para-dichlorobenzene, Propachlor, Propargite (omite), Propoxur (Baygon), Propyzamide, Pymetrozine, Pyrethrins, Sodium dichromate, Sodium dimethyl dithio carbamate, Thiabendazole, Thiamethoxam, Thiodicarb (Larvin), Thiophanate-methyl, Trichlorfon, Vinclozolin, Ziram, Captan

Nerve toxins: That same year, 467 products were registered that contained active ingredients from the family of organophosphates (OPs) known to damage the nervous system.

Acephate, Azinphos-methyl, Bensulide, Chlorpyrifos, Coumaphos, Diazinon, Dicrotophos, Dimethoate, Disulfoton, Ethefon, Ethoprop, Fenamiphos, Malathion, Methamidiphos, Methidathion, Naled, oxydemeton-methyl, Phorate, Phosmet, Propetamphos, Temephos, Terbufos, tetrachlorvinphos, Tetrachlorvinphos z-isomer, trichlorfon

Reproductive and Developmental Toxins and Endocrine Disruptors: Currently, nearly 1600 products are registered that contain reproductive or developmental toxicants or known or probable endocrine disruptors. The 60 active ingredients from this category are listed on either on the California EPA Proposition 65 list and/or on the US EPA TRI list of developmental or reproductive toxins.

So-Called “Inert” Ingredients: More than 1700 other components of pesticide products, the so-called “inert ingredients” can be used in pesticide products. Most are unstudied, only about 300 are generally regarded as safe and others are known to cause adverse health effects. Sometimes the same chemical (for example formaldehyde) is considered both an active and an inert ingredient in different products. Inert ingredients are not required to be listed on the label.

While not all of the products containing known toxic ingredients are available for sale to the general public, most could be applied in households or gardens either by the consumer or by a certified applicator.