**Deltamethrin**

**Uses**: synthetic pyrethroid insecticide; it is also the metabolite of tralomethrin.

**Residues**: in breast milk, children’s urine, house dust, food.

**Acute toxicity**: high acute oral toxicity, neurotoxin. Symptoms include dizziness, headache, nausea, blurred vision, anorexia, fatigue, disrupted sleep, delirium, numbness, itching tingling burning skin, vertigo, twitching, loss of consciousness. Occupational deaths from pulmonary oedema and convulsions. Treated bed nets have caused rash, cough, runny nose, sneezing. Numerous reports of poisonings, including children in Nicaragua.

**Neurological**: nerve degeneration, neurobehavioural effects in rats.

**Cancer**: mammary tumours, thyroid tumours, lymphoma (rodents); breast cancer risk.

**Genotoxicity**: genotoxic in fish, plants, rodents; mutagenic in human and rodent cells.

**Endocrine disruption**: oestrogenic, causing growth of breast cancer cells, anti-androgenic.

**Immune**: suppresses immune system (rats).

**Environmental effects**: aquatic: highly toxic to fish, invertebrates; fish kills in US. Terrestrial: highly toxic to bees and beneficial insects.

**Environmental fate**: moderately to highly persistent in soil and aquatic systems. May bioaccumulate. Found in surface water (Philippines) and air.

**Hazard to children**: acute toxicity, immune suppression, endocrine disruption, potential developmental and behavioural effects; later in life breast cancer, male reproductive problems.

**Reproduction**: birth defects, craniofacial in fish, extra ribs in mice. Abnormal sperm in mice; testicular damage, reduced sperm motility (rats); embryonic death, reduced foetal growth, lung hyperplasia, kidney damage (rabbits); reduced male fertility (rats).

**Immune**: suppresses immune system (rats).

**Endocrine disruption**: oestrogenic, causing growth of breast cancer cells, anti-androgenic.

**Environmental effects**: aquatic: highly toxic to fish, invertebrates; fish kills in US. Terrestrial: highly toxic to bees and beneficial insects.

**Environmental fate**: moderately to highly persistent in soil and aquatic systems. May bioaccumulate. Found in surface water (Philippines) and air.
References:


4. UNEP. 2012. Fact sheets on chemical alternatives to endosulfan and DDT. Persistent Organic Pollutants Review Committee.


