

Agriculture & Pesticides Facts

SAFETY FIRST: PROTECTING HEALTH AND THE ENVIRONMENT

When wisely selected and applied properly, agricultural pesticides provide yield and quality benefits and do not endanger human health, water and soil quality, or the health of other plants or animals living on or near your property.



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1. HUMAN HEALTH

The use of agricultural pesticides in Ontario is highly regulated. Before a pesticide can be used legally in Canada, it must be approved by the Pest Management Regulatory Agency of Health Canada (PMRA). A pesticide will not be approved for use in Canada if the risk to human health or to the environment is unacceptable. All Ontario farmers must be certified in order to buy or use most agricultural pesticides. Certification ensures that the farmers of Ontario know how to manage pesticides safely and in accordance with the Pesticide Act.

2. WELL WATER

Pesticide contamination of groundwater in Ontario has been a rare occurrence, usually resulting from an accidental spill. Groundwater contamination from normal agricultural usage of pesticides and subsequent leaching of the pesticide into the groundwater has also been very rare. The few instances where pesticide leaching has occurred have typically been the result of repeated use of a moderately persistent pesticide on sandy or gravelly soil.

3. SOIL QUALITY

We now have over 50 years of experience with the use of agricultural pesticides in Ontario. There is no evidence that pesticide use has adversely affected the quality or productivity of Ontario soils - it does not render the soil "lifeless and inert", as some critics suggest. At worst, a few herbicides limit the choice of crops that may be grown in the first year following application.

Some pesticides do alter the proportions of the various micro-organisms living in the soil. Some species are inhibited; others prosper. Overall, there is little net change in the biological activity of the soil, and the effect lasts only as long as that pesticide is present.

Earthworms are of particular concern to many landowners. Studies by Agriculture and Agri-Food Canada have indicated that the use of pesticides is no more injurious to earthworm populations than are other agricultural practices such as plowing and cultivating the soil. Indeed, earthworm populations in soils being managed under a no-till system (i.e., one that relies exclusively on herbicides for weed control) were 30 to 50 percent higher than in soils managed with conventional tillage.

4. NON-TARGETED SPECIES (FISH, WILDLIFE AND OTHER LIVING ORGANISMS)

Prior to being approved for use in Canada by PMRA, all pesticides must undergo an Environmental Risk Assessment to determine whether they are acceptable for use in Canada. This review considers what happens to a pesticide in the environment, the extent to which non-target species would be exposed to it and its potential to adversely affect non-target species. A pesticide will be registered only if the risks of environmental damage associated with it are acceptable and manageable, and if it is of potential value to Canadians.