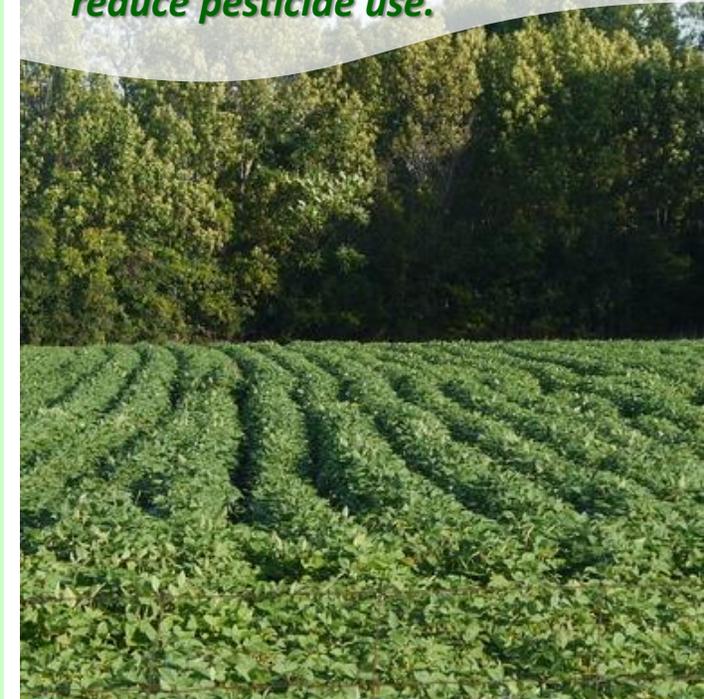


Insecticides, herbicides and fungicides

*Promote natural barriers and
reduce pesticide use.*



Resources

Farm & Food Care Ontario
www.farmfoodcare.org

Health Canada
www.canada.ca/en/health-canada.html

Ministry of the Environment and Climate Change
www.ontario.ca/page/ministry-environment-and-climate-change

Ontario Ministry of Agriculture, Food and Rural Affairs
www.omafra.gov.on.ca

Ontario Pesticide Education Program
www.opep.ca

Ontario Soil & Crop Improvement Association
www.ontariosoilcrop.org

Pest Management Regulatory Agency
www.pmra-arla.gc.ca

Trent Source Protection Plan
www.trentsourceprotection.on.ca

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With support provided by



Integrated Pest Management

Integrated Pest Management (IPM) proposes a balanced approach to managing pests that combines biological, physical, and chemical tools in a way that minimizes risks to our economy, health, and the environment.

A four tier approach to **IPM** works as follows:

- 1) Set a reasonable level for action that may allow for some pests.
- 2) Carefully monitor and identify pests.
- 3) Prevent potential problems by managing what, when, and where crops are grown.
- 4) Evaluate the return on your investment in pest control in terms of weighing costs with associated risks.



PESTICIDE WISE



Impact on Water Sources

Water runoff can carry soil particles with pesticides from treated fields or spills into streams, ditches, ponds, and wells, affecting the health of both people and livestock, and the quality of produce. The greatest effect from surface runoff occurs when rain falls within 24 hours of a pesticide application. Some pesticides are persistent in the soil and can pose a problem for months.

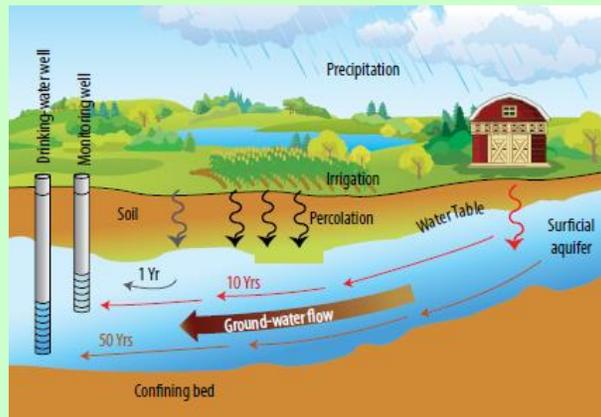
If herbicides are involved, the resulting contaminated water may also cause problems if used for plant irrigation.

Causes of Contamination:

- ✓ Pesticide concentrate spills when mixing and loading sprayers
- ✓ Leakage of stored concentrate
- ✓ Back siphoning or overfilling of sprayer tanks
- ✓ Rinsing or washing spray equipment
- ✓ Spray drift in windy conditions or too close to open water
- ✓ Vapor drift

To reduce pesticide losses from treated fields located along streams and ponds, consider planting across the slope.

Buffer zones of 10m can reduce losses on relatively flat land but offer little help on sloping land. Incorporating the pesticide into the soil or using a foliar application after the crop appears results in lower losses than when applying to bare soil.



Potential for groundwater contamination from pesticides.

TIPS to Protect Water Supplies:

- ✓ Always read the label before you apply any pesticide
- ✓ Keep concentrates in a locked storage area (out of the floodplain)
- ✓ Triple rinse and properly dispose of empty pesticide containers
- ✓ Mix concentrates 30 m away from any water supply
- ✓ Use appropriate buffer zones and berms to avoid surface water contamination by spray drift or runoff waters
- ✓ Follow the setbacks listed on the pesticide label
- ✓ Do not spray within 10 m of shallow wells or other water supplies



Pesticide Storage, Disposal and Handling

Insecticides, herbicides, and fungicides can contaminate water through direct application, runoff, and atmospheric build-up. They can also poison fish and wildlife, contaminate food sources, and destroy animal habitat.

Integrated Pest Management (IPM) can mitigate this damage as well as save money by taking into account specific soils, climate and weather patterns, pest history, and crop conditions.

What are some pesticide best management practices?

- ✓ Use products immediately and apply them exactly as instructed
- ✓ Purchase only the necessary amount for the job so products can be used up quickly – this avoids mixing and long term storage of larger quantities of concentrated products
- ✓ Look for more natural product options and strategies
- ✓ Never discard pesticides down the drain, toilet, sewer, or in the trash
- ✓ Check your municipality's website for collection information and disposal sites for pesticide remains and containers
- ✓ Do not rinse containers in a household sink and do not pour rinse water down the drain
- ✓ Under no circumstances should a pesticide container be burned, reused, or used for storing any other substance



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