

# Agriculture & Pesticides Facts

## TRENDS IN PESTICIDE USE IN ONTARIO

Since 1973, the Ontario Ministry of Agriculture, Food and Rural Affairs has surveyed the usage of agricultural pesticides in Ontario every five years. These surveys provide detailed information about the amount of pesticide used on each crop grown in the province. The most recent survey was conducted in 1998.



192 Nicklin Road  
Guelph, ON N1H 7L5  
Tel: 519-837-1326 / Fax: 519-837-3209  
E-mail: [agcare@agcare.org](mailto:agcare@agcare.org)  
Website: [www.agcare.org](http://www.agcare.org)

Total agricultural pesticide usage in Ontario peaked in or around 1983. Between 1983 and 1998, total usage (as measured by active ingredient) decreased by 40.7%, and the amount of pesticide applied per hectare of crop land decreased by 35.7%.

### **These reductions came as the result of a combination of factors:**

- a decrease in the amount of pesticides used per hectare of corn (down 34.3%), soybeans (down 57.4%) and tobacco (down 75.7%)
- a decrease in the area planted to corn and a corresponding increase in soybeans, where fewer pesticides are used
- increased use of crop rotation, especially for corn, reducing the pressure from certain pests such as corn rootworm, and thus the need for pesticides to control them
- availability of newer, more effective pesticides that can be used at lower rates or less frequently.

## **CHANGES IN THE RISKS ASSOCIATED WITH THE USE OF AGRICULTURAL PESTICIDES IN ONTARIO**

In 1997, the University of Guelph conducted a detailed analysis of the trends in pesticide usage and related risks, in Ontario between 1973 and 1993. **The authors analyzed the changes in the environmental impact of pesticide usage, taking into consideration the effect of pesticides on:**

- farmworkers - potential acute and chronic health effects
- consumers - potential acute and chronic health effects, and drinking water quality
- the environment - potential effects on fish and other aquatic species, birds, bees, beneficial insects

As with total use, the environmental impact from pesticide use peaked in 1983. It is likely that pesticide-related risks have continued to decrease since this study was completed (e.g., total pesticide use decreased by an additional 16% between 1993 and 1998).

### **According to the study, pesticide reductions between 1983 and 1993 resulted in:**

- 29% reduction in the overall environmental impact of agricultural pesticides in Ontario
- 21% reduction in the environmental impact per hectare of crop land
- 32% reduction in the environmental impact per tonne of food produced, reflecting both the reduction in pesticide use and an increase in productivity
- 41% reduction in the risk to farmworkers
- 28% reduction in the risk to consumers
- 21% reduction in the risk to environment.

Some of reduction in risk occurred because of the decrease in total pesticide usage as outlined above. However, the introduction of new pesticides has also been a significant factor. The authors noted that although newer pesticides are often more toxic toward the target pests than are older pesticides, the overall environmental impact of newer products tends to be less. For example, of the pesticides in use between 1973 and 1993, the ten that had the greatest environmental impact rating all were introduced before 1970. Of the twenty-seven pesticides with high environmental impact ratings that were in use in 1983, eleven were no longer in use in 1993. As older products continue to be replaced by newer ones, the environmental impact of pesticide use in Ontario should continue to decline.

### **INTERNET RESOURCES:**

**Survey of Pesticide Use in Ontario, 1998. Ontario Ministry of Agriculture, Food and Rural Affairs**

<http://www.gov.on.ca/OMAFRA/english/stats/crops/Pesticide%20Survey.pdf>

### **REFERENCE:**

Food Systems 2002: An Analysis of the Reduction in Risk of Pesticides Used on Crops in Ontario Using the Environmental Impact Quotient. G. J. Gallivan, G. A. Surgeoner and J. Kovach 1998, Department of Environmental Biology, University of Guelph.