

2,4,5-T Herbicide Fact Sheet

2,4,5-T and its use in Canada

- 2,4,5-T (2,4,5-Trichlorophenoxyacetic acid), is a systemic herbicide formulated as various esters and salts (propylene glycol butyl ether ester, amine salt, butoxyethyl ester, low volatile esters).
- 2,4,5-T was used mainly for control of perennial broad-leaved weed species and deciduous brush species in non-crop areas, including rough grass pastures, farmyards, ditchbanks, industrial sites, and rights of way, such as under hydro and telecommunications lines, along roadsides, highways, fencerows, and along railway tracks. It was also used for conifer release and in site preparation for planting of coniferous tree species. Authorities of parks, golf courses, and other recreational areas were permitted to apply some formulations of 2,4,5-T for control of poison ivy.
- The federal government removed 2,4,5-T from the list of approved herbicides in 1985.
- There were 250 herbicide products registered for use in Canada between 1948 and 1985 that contained some form of 2,4,5-T, either by itself, or in combination with other herbicides, such as 2,4-D, picloram, dicamba, and paraquat.

2,4,5-T use in Ontario

- 2,4,5-T was used by the Ministry of Natural Resources and its predecessor, the Department of Lands and Forests, from at least 1957 until 1979. It was also used by private forestry companies. 2,4,5-T was used to control competing vegetation so that planted seedlings could become established and grow to renew forests. It was traditionally applied by aircraft.
- A 1979 report by the Ontario Pesticides Advisory Committee indicates the product was used on non-crop land, which, according to the Pest Management Regulatory Agency, was an approved use. Farmers and other rural residents may have used this product to control certain kinds of weeds in woodlots and fencerows.
- Records from the former Ontario Hydro show that 2,4,5-T was one of the herbicides used for brush clearing as part of their transmission system activities.

- Herbicides were used by forestry crews in the Ministry of Transportation. Part of their job was to apply various herbicides to the Right-of-Way (ROW).
- Herbicides were applied to vegetation on the roadside. Application was continuous unless interrupted by sensitive areas (waterbodies, wells, populated areas, etc.). To avoid overspray, it was not applied during high winds.

Differences between 2,4,5-T in Canada and Agent Orange

- Agent Orange was never approved for use in Canada. Agent Orange was a United States Military chemical used in Vietnam. It was, however, tested at Canadian Forces Base Galetown briefly in the 1960s.
- Manufacturing processes for military chemicals were different from those of registered commercial herbicides. There are reports that dioxin levels in Agent Orange test chemicals were much higher than in registered products.
- 2,4,5-T was a component of Agent Orange; however, the combination of 2,4-D and 2,4,5-T in registered products was not the same as the military chemical that was tested at CFB Galetown and used in Vietnam.
- The fact that Agent Orange was not a registered product in either Canada or the US means that it would not be required to meet the standards that existed for registered products at that time.

Dioxins in 2,4,5-T

- With better understanding of chemical contaminants and their effect on health and the environment, governments began taking action to limit allowable levels of dioxin in the early-to-mid 1970s.
- The discovery that some substances containing 2,4,5-T were contaminated with 2,3,7,8-TCDD dioxin prompted Canada to set a limit for dioxins of 100 parts per billion TCDD in these products, which was in place by 1975. Canadian registration of 2,4,5-T was discontinued in 1985.
- Health Canada has worked with industry to virtually eliminate dioxin contamination in pesticides, which is consistent with the Government of Canada's Toxic Substances Management Policy.

Independent Fact-Finding Panel

- The Minister of Natural Resources appointed an Independent Fact-Finding Panel to investigate the scope and scale of the use of 2,4,5-T herbicide by Ontario Government ministries and agencies during the time that product was approved for use in Canada.

- Dr. Leonard Ritter has been named the chair of the Independent Fact-Finding Panel. Dr. Ritter is the executive director of the Canadian Network of Toxicology Centres and professor of toxicology at the University of Guelph.
- The Panel will examine whether exposure to 2,4,5-T herbicide may have potential health impacts.
- The findings of the Panel will be published in a Report that will be submitted to the Minister of Natural Resources. The Report will be made available to the public.

Public health risks associated with the use of 2,4,5-T in Ontario

- The Independent Fact Finding Panel will investigate the use of 2,4,5-T herbicide by Government of Ontario ministries and agencies and examine whether exposure to 2,4,5-T herbicide may have potential health impacts.
- As a part of the investigation, the Fact Finding Panel will look into the scope and scale of the use of 2,4,5-T herbicide, as well as the geographic area where it was used. These findings will help to assess whether there was any potential for significant exposure to members of the public. Although there is no information to date that would suggest this, the Panel's investigation will help to determine any potential for this to have occurred.

Call centres and website

- The Workplace Safety and Insurance Board's Occupational Disease Information Line has a dedicated phone line for inquiries about 2,4,5-T exposure. That number is 1-800-387-0750 (press 1 for English or 2 for French) then press 1 and then 4163444440 to reach an agent during business hours.
- There is also a toll-free number (1-888-338-3364) line so that anyone with information or concern about the use of herbicides during this period may contact the Ministry of Natural Resources.
- The Ministry of Natural Resources continues to update their website when new information becomes available. Please visit:
<http://www.mnr.gov.on.ca/en/>

Independent health and environment risks assessments

- In 2006/07, independent studies assessed health and environmental risks from the testing of Agent Orange in 1966/67 and the use of registered pesticides at CFB Gagetown from 1952 -2004. Conservative or worst-case

assumptions were used so as to not underestimate risk; however, the level of precision was limited due to uncertainties from reconstructing activities that occurred more than 50 years ago.

- Assuming use under the most extreme conditions, the majority of people who lived and worked at or near CFB Gagetown were not at risk for long-term health effects. Some increased risk may exist for certain workers involved in application activities (mixer/loader, applicator, flaggers). An epidemiology study found no significant increase in disease risk for the local population compared to the province as a whole.
- The studies can be found at:
<http://www.forces.gc.ca/site/reports-rapports/defoliant/tasks-eng.asp>
 - Fact-finding Task 3A-1 Tier 2 – focused on Dioxins in Registered Products
 - Fact-finding Task 3A-1 Tier 3 – focused on Registered Products (including 2,4,5-T)
- Health Canada provided technical support for these independent studies, including the provision of available scientific and technical information for assessing the potential risks to human health and the environment from use of these chemicals from 1952 to 2004.