

Publication #63  
ISBN#978-1-77189-666-5

# HERBICIDES

by Joe Castrilli and Ann Lancaster  
of the Canadian Environmental Law Association



Metro Toronto organic gardener's vegetables are threatened with contamination two seasons in a row by the roadside spraying of 2,4-D amine, a herbicide used by a local parks agency trying to eradicate weeds. By definition, an organic farmer cannot sell crops that contain chemicals. On the other hand, the parks agency is required by provincial law to carry out a weed control program. The gardener's request for compensation for damages and lost sales was denied. The sprayer argued that no spray drifted onto the property despite conceding that spray vehicles were "approximately five feet" from the gardener's lands.

A northern Ontario vegetable farmer's domestic water well is mysteriously contaminated by picloram, a herbicide used extensively for brush control. The only users of picloram in the area are provincial utility and highway agencies who deny, however, all responsibility for the pollution. Shortly after this contamination, the complainant died of cancer; her doctor could not conclusively state whether her illness was related to the chemicals in her well water.

Mother's milk is contaminated with DDT in the Toronto area. \*

These examples illustrate a pervasive problem that persists across Canada whether in forest, rural, recreational, urban or urban fringe areas: non-target contamination from spraying intended only to eliminate certain "undesirable" insect or plant life. This non-target impact usually occurs because of drift (movement of pesticide particles or vapours from the intended spray area by wind currents, temperature or air pressure changes) or runoff (rainfall) of pesticides.

Some of the major pesticides used in aerial and roadside spraying are coming under increasing re-evaluation by the scientific community and government for continued use because of potential adverse human and environmental health effects. For example, 2,4-D and 2,4,5-T are frequently used in mixture together by municipalities in southern Ontario for road spraying purposes. 2,4,5-T has also been used in northern Ontario forests. The National Research Council of Canada's subcommittee on pesticides reported in August that "in terms of human exposure to phenoxy herbicides"—which include 2,4-D and 2,4,5-T—"health effects from operational spraying have not been properly monitored in Canada". The toxic compound TCDD—found in 2,4,5-T—was of particular concern to the subcommittee. Effects on laboratory animals ranged from liver damage and genetic mutation to death.

## THE NATURE OF GOVERNMENT REGULATION

Control of substances like 2,4,5-T in Canada is both a federal and provincial responsibility. All pesticides used in Canada must be registered by the federal Department of Agriculture, under the *Pest Control Products Act*. To be sold in Ontario, all pesticides have to be approved under *The Pesticides Act* and be classified into one of six schedules established under the regulations. The schedules classify pesticides on the basis of use patterns, toxicity, flammability, concentration and persistence. (*ed. - other provinces have similar legislation*). The Act requires the licensing of commercial businesses and applicators; and requires special permits for aerial spraying, direct application to waters, and land exterminations using certain pesticides such as picloram. Permits or licenses may be withheld or withdrawn for several reasons including the past conduct of the applicant; possible danger to human health or to the environment; and the existence of an alternative method of pest control that will be equally effective and cause less harm to the environment. Farmers are exempt from licence and permit requirements as are farmers helping neighbouring farmers where only one spray vehicle is in use at a time (though if farmers engage in aerial spraying they would still need a permit). It is estimated by the Ministry of Environment that sixty percent of all pesticides used in Ontario are used on agricultural lands in situations where a farmer or farmer helping a neighbour would not require a permit or licence.

## AGENCY SELF-REGULATION: SPRAY PROCEDURES AND ALTERNATIVES TO SPRAYING

In addition to federal and provincial regulation, utility and road agencies will often prepare manuals for their operators on proper spray procedures. While the manuals have no legal effect, they can frequently be used as a basis for determining whether an operator was performing, in a given situation, in a manner likely to prevent or minimize non-target contamination. The Ontario Ministry of Transportation and Communication's Spray Manual, for example, includes in its section on application safety, no spraying near crops, gardens, flowers, or shrubbery; no application of pesticides closer than one hundred feet to built up, single dwelling or certain recreational areas; and no spraying when wind and temperature conditions become favourable for drift.

\* CTV Report, "Inquiry", Sunday September 3, 1978

Public pressure has also resulted in better agency self-regulation. Some municipalities are modifying or reducing their spray programs, including seeking alternatives to spraying. In at least one southern Ontario regional municipality, where people place signs on their property asking not to be sprayed or asking for notification prior to spraying, the road spray team will normally turn to mechanical or hand mowing techniques rather than spray in their vicinity. This is done even though cutting is usually more expensive; spraying can cost \$11.60 per acre; tractor mowing \$16.00 per acre and hand mowing \$104.00 per acre.

Other regional municipalities are halting or severely limiting spraying on regional roads adjoining woodland or swamp areas though they note that the provincial *Weed Control Act* requirement to control noxious weeds makes it difficult to eliminate spraying adjacent to croplands.

**THE LAW AND THE NATURE OF CITIZEN ACTION**

Crop growers concerned with protecting their crops should take the following steps. They should write to the local municipality and hydro officials and indicate that if any spraying programs are planned for their locality, they wish to be notified of the dates of any spraying. They should specifically request that their property remain unsprayed. The grower should also contact the contractor in charge of spraying.

On the date of the actual spraying the grower should be present and ensure spraying does not take place on his or her property and also watch for potential drift.

If pesticides have drifted onto the crops the following remedies are available:

- Criminal Action for Trespass—this will result in a fine
- Civil Action for Trespass—this will usually result in damages
- Civil Action for Private Nuisance—if the plaintiff has suffered monetary damage by loss of crop or loss of ability to sell a crop, the plaintiff could receive damages to compensate this loss
- Injunction—this is an application brought before the court requesting a prohibitory injunction to prohibit any further spraying which would result in a drift of chemicals
- Private Prosecution Under Environmental Protection Acts—in Ontario, s. 14 of *Environmental Protection Act*). The defendant can be charged with depositing a contaminant into the natural environment if it causes or is likely to cause injury or damage to property or to plant or animal life or renders or is likely to render any property or plant or animal life unfit for human use. If found guilty the defendant would be liable to a fine of not more than \$5,000 and on each subsequent conviction to a fine up to \$10,000 for every day upon which the offence occurs.

It is now accepted throughout Canada that where crops on privately owned land are inadvertently sprayed with pesticides or herbicides, the sprayer is liable to the crop owner for the ensuing damages. In one case (*Township of Tiny*), damages of \$1,350 were awarded to an Ontario potato grower after a road crew sprayed pesticide on his crop. \*

In the *Friesen* case, a recent Supreme Court of New Brunswick decision, the plaintiff sued a spraying company for having sprayed a portion of their property with a liquid pesticide, claiming damages for personal injuries and loss of bees, livestock and fruit trees. \*\* The court held that the defendant, in depositing the spray, committed a trespass which entitled the plaintiff to damages. The court also found that the spraying constituted a private nuisance.

The person who is responsible for the aerial spraying is responsible for ensuing damages to neighbours' crops if the herbicide so applied is permitted to escape and damage crops on a neighbour's land. \*\*\* It does not make any difference whether the application of the herbicide is by ground or by the aerial spraying method.

**CONCLUSION**

Despite existing controls on pesticide spraying, much work remains to be done. Canada is still in its infancy when it comes to permitting citizen input to regulatory agency decisions on pesticide registration and use. Recent environmental impact assessment law in Ontario may mark the first opportunity for citizen review of government spraying programs. However, currently Ministry of Natural Resources forest spray programs are exempt from the *Environmental Assessment Act*. The possib-

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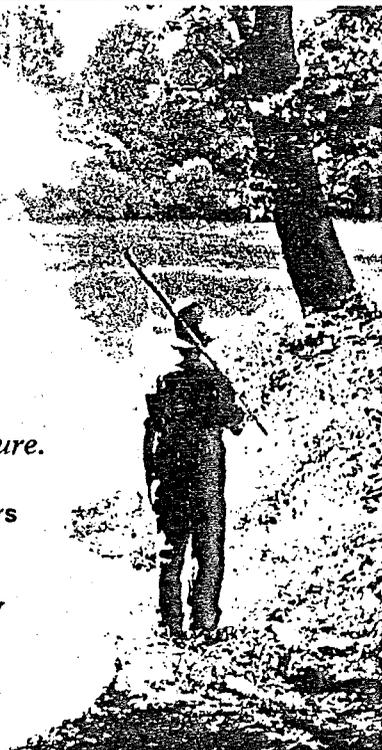
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ility is also strong that municipal road spray programs will remain exempt. Important as they are, citizen opportunities for protection should not be limited as they now are, mainly to reacting after damage has already been suffered. Such remedies have their drawbacks including archaic legal barriers to getting into court and prohibitive financial costs. Moreover, in pesticide control—as in medicine—prevention is usually better than treatment. It is becoming more and more apparent that chemicals are harming more than the insects and weeds they're aimed at.

—NL—

*The subject of phenoxy herbicide spraying is one about which we feel very strongly, an attitude shared by most of our readers, no doubt. To help us all become more aware of the facts, and what to do about them (both on a personal level and as an issue), Natural Life has produced ENVIRONMENTAL ACTION KIT NO. 1: HERBICIDES. This eight page booklet (which is continually being added to and updated) describes the dangers of chemical sprays (both in purchased food and when experienced as drift from someone spraying another's property). It provides much background information about various sprays and details what to do if your property is sprayed. We are charging \$1. per copy to cover printing costs and mailing. Bulk rates are available on request. Available from us at Box 640, Jarvis, Ontario, N0A 1J0.*

\* *Gabriel Maurice v. The Township of Tiny* (1973) 2 CELN 22. For a similar Manitoba case see *Cruise v. Niessen et al.*, (1977) 2 WWR 481 Man. Q.B.

\*\* *Friesen et al v. Forest Protection Ltd.* unreported (NBQB) May 17, 1978

\*\*\* *op. cit.*, *Cruise* (1977) 2 WWR 481 Man. Q.B.

# ACCESS

## ENVIRONMENTAL LAW ASSOCIATION

We thank the Canadian Environmental Law Assoc. for the article on pesticide spraying. Their newsletter *Canadian Environmental Law News (CELN)* is a great source of information about court cases in all areas of environmental law and relevant government legislation.

### CONTACT

Can. Environmental Law Association  
Suite 303, 1 Spadina Cres.  
Toronto, Ontario

### ENVIRONMENT SOURCE BOOK

Finally—a guide to environmental information in Canada! The *Environmental Source Book* is set up to provide access to sources of information about various environmental issues. Each federal and provincial department with jurisdiction in environmental and renewable resource management has described its responsibilities and information sources. There are also listings of citizens' groups; a list of directories of other groups; a bibliography of literature on the environment; and a brief discussion of environmental studies at universities and community colleges.

A good subject index completes this useful guide to where to find out more about environmental issues and problems. It's available free of charge from the following addresses. (You might keep these addresses on hand for other information requests too.)

### CONTACT

Communications Branch  
Alberta Environment  
9820-106 St.  
Edmonton, Alberta, T5K 2J6

Information Services  
B.C. Ministry of Environment  
309-780 Blanshard St.  
Victoria, B.C., V8W 2H1

Information & Educational Services  
Environmental Management Division  
Manitoba Department of Mines  
Resources & Environmental Management  
139 Tuxedo Ave.  
Winnipeg, Manitoba, R3M 2K1

Information Services  
N.B. Department of the Environment  
Box 6000  
Fredericton, N.B., E3B 5H1

Coordinator, Environmental Reports  
and Enquiries  
Nova Scotia Department of the Environment  
Box 2107  
Halifax, N.S., B3J 2B7

Information Services Branch  
Ontario Ministry of Environment  
135 St. Clair Ave. W.  
Toronto, Ont., M4V 1P5

Coordinator, Environmental Education  
P.E.I. Dept. of the Environment  
Box 2000  
Charlottetown, P.E.I., C1A 7N8

Information Services  
Environment Protection Service  
2360, chemin Ste-Foy  
Ste-Foy, P.Q., G1V 4H2

Public Information & Education Branch  
Sask. Department of the Environment  
5th floor, 1855 Victoria Ave.  
Regina, Sask., S4P 3T1

Extension Services  
Sask. Department of Tourism and  
Renewable Resources  
Sask. Telephone Bldg.  
1825 Lorne St.  
Regina, Sask., S4P 3N1

Enquiry Centre  
Information Services Directorate  
Department of the Environment  
Ottawa, Ont., K1A 0H3

## REGIONAL



## REPORT

## NEWS AND VIEWS

FROM B.C.

by Louise Price

**ENERGY COALITION**—One of the largest meetings of environmental and energy groups in the province took place over the weekend of August 12 and 13 on Lasqueti Island. The purpose of the meeting was to form a B.C. Energy Coalition and it attracted representatives from over twenty-five groups. Taking part were such diverse groups as the Voice of Women, Union of B.C. Indian Chiefs, SPEC, Greenpeace, Canadian Coalition for Nuclear Responsibility, Save the Kootenay Committee, Lasqueti Island Steering Committee, Victoria International Development Education Association, West Coast Environmental Law Association, the South Okanagan Environmental Coalition, along with representatives from smaller groups in Smithers, Fanny Bay, North Vancouver, Hudson Hope and Powell River.

The first move of the newly-formed coalition was to call for a moratorium on all major energy projects in the province until an environmentally sound long range energy policy can be implemented. Emphasis in such a policy would be active public participation in the management of regional and provincial resources. Equal emphasis was put on the job maximizing benefits of any policy considered. Other priorities of the groups included better communication among themselves in an effort to give financial, physical and political support to individual groups fighting energy-related issues throughout the province.

Two such hot issues currently being fought in B.C. are the Kootenay Diversion plan and uranium mining at Genelle in the Kootenays. The Kootenay Diversion is a plan for B.C. Hydro to divert up to 1.5 million acre-feet of water annually from the

Kootenay River into the Columbia by the year 1984. It is expected to cost up to \$82 million (1976) and the local people have facts to prove it isn't needed and is environmentally unsound. They believe that as a B.C. Hydro application to the Comptroller of Water Rights has never been rejected, it is imperative to stop Hydro before their proposal reaches the hearings with the Water Comptroller.

The uranium mining at Genelle is uranium exploration in the China Creek watershed area which supplies the water for the town of Genelle. Local people have been manning a round-the-clock blockade in an attempt to stop the exploration which they believe will contaminate their water. Contact: B.C. Energy Coalition 801-318 Homer St., Vancouver, B.C.

## ONTARIO REPORT

by Werner Driesnitz

**SOLAR COMMUNITY RESOURCE CENTRE**—Construction began this past summer on an alternative energy centre at the Brampton Campus of Sheridan College of Applied Arts and Technology. The solar house will be the first of its kind in Canada to be open to the public as a community resource facility.

Before we can consider adding solar components to a house, the structure itself must be as energy-efficient as possible", says staff member Barry Marta. "We studied various wall designs and after considering cost, R-values and infiltration we chose a masonry wall with external insulation. The external rigid insulation provides an envelope around the building which encloses the concrete mass of the wall. Basement walls will be insulated as well, and even the basement floor."

The 1,988 square foot house will incorporate both active and passive solar energy collection. A glass green-

house extends along the south wall of the building with a Trombe wall serving as collector surface and heat storage. Air collectors on either side of the greenhouse will force solar heated air underground to rock storage areas, from where it can be circulated throughout the building. On the roof, solar water collectors will heat 8,000 gallons a day. The front door will contain an air lock system and a mylar reflector will minimize heat loss.

Open to the public, the building will contain a library, displays on renewable energy sources and will provide space for classes and seminars. Courses, workshops, and seminars will teach the homeowner how to build a solar collector, how to harness the wind for energy, and how to install heat pumps and insulation. Special sessions will also be held for architects, builders and planners.

The new centre will make Sheridan College the first institution in Canada to have a permanent facility for alternate energy research combined with a library containing alternate energy books and resource materials.

**NUCLEAR PROTEST-SUN** (Stop Using Nukes), supported by the Ontario Non-Nuclear Network, maintained a daily vigil outside the office of the Atomic Energy Control Board in Ottawa this summer. The protest was in response to AECB's refusal to make public documents relating to the safety of operating Candu reactors in Canada. The controversy arose following revelations that information had been withheld from the Royal Commission on Electric Power Planning (Porter Commission) in Ontario. AECB, it was learned through documents leaked to the Canadian Coalition for Nuclear Responsibility, ordered the de-rating of the Bruce and Douglas Point Reactors because it fears that the Emergency Core Cooling Systems are not capable of dealing with a loss of coolant accident at full power. The order was issued in April of 1977 but not made public. The AECB confirmed that it ordered Ontario Hydro to operate the reactors at 88% and 70% of their design potential and described the lack