



Region of Waterloo
PUBLIC HEALTH

Pesticide Symposium

Speaker Presentations and Notes

Council Chambers
150 Frederick St., Kitchener, Ontario

October 30th, 2002

AGENDA

Symposium on Non-Essential Pesticide use in the Region of Waterloo

Wednesday October 30th – Council Chambers,
Regional Headquarters, 150 Frederick St., Kitchener

Opening Remarks (6:30 p.m. – 6:40)

Sean Strickland Chair

Science and Health Effects (6:40 – 7:30)

Registration and Regulation (Canadian Centre for Pollution Prevention – Tania Del Matto)

- types of pesticides use for cosmetic use (non agricultural)
- registration, re-evaluation, safety margins
- effectiveness of pesticides registered

Health Concerns with cosmetic pesticide use (Canadian Association of Physicians for the Environment – Dr. Sergio Lappano and Globaltox – Ron Brecher,)

Panel Discussion (Q & A) with all speakers (20 minutes)

Stakeholder Concerns and Interests (7:30- 8:30)

Citizen/Community representation (Get Rid Of Urban Pesticides – Susan Koswan)

Lawn care industry & IPM (Landscape Ontario – Patrick O'Toole)

Horticultural approach (Master Gardener – Anne Morgan)

Golf Courses (Ontario Golf Superintendents Association, Doug Breen)

Panel Discussion (Q & A) with all speakers (20 minutes)

Break

Range of Options to Reduce Non-Essential use of Pesticides (8:45 – 9:45)

Public Education (City of Cambridge – April Souwand)

Policy: Plant Health Care (City of Waterloo - Mark Hillis & Anna-Marie Cirpriani)

Pesticide Bylaws (Canadian Environmental Law Association - Theresa McClenaghan)

Panel Discussion (Q & A) with all speakers (20 minutes)

Closing Remarks (9:45 – 10:00 p.m.)

Sean Strickland

C2P2
**(Canadian Centre for
Pollution Prevention)**

The Regulation of Pesticides in Canada

Presented by:
Tania Del Matto



Canadian Centre
for Pollution Prevention

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Responsible Pest Management

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1-800-667-9790

Background

Resources

- About Us
- Legislation
- Best Practices
- Management Tools
- Outreach Tools

Initiatives

Connect with Experts

What's New

Feedback

Members Only

Responsible Pest Management

provides municipal governments and communities with access to information, tools and networks that maximize opportunities for pesticide reduction

Responsible Pest Management services are possible through the generous support of:



Distribution of Principal Responsibilities

Federal (PMRA of Health Canada)	Provincial/Territorial	Municipal
• Pest Control Products Act and Regulations • Pesticide registration and re-evaluation • Human health and safety • Environmental impact • Value assessment • Support for development and use of alternative strategies • Compliance and enforcement	• Transportation, sale, use, storage and disposal • Training, certification and licensing of applicators and vendors • Spills and accidents • Permits and use restrictions • Compliance and enforcement • Municipal Act allocates authority to local governments	• Bylaws for municipal (and, in some cases, private and/or residential) lands only

Source: Pest Management Regulatory Agency

What is the federal role in pesticide regulation?

- Pest Control Products Act (PCPA)
 - Pest Management Regulatory Agency
 - Administer PCPA
 - Register Pest Control Products
 - Re-evaluate Registered Products

Pesticide Terminology

- Pest: Any injurious, noxious or troublesome insect, fungus, bacterial organism, virus, weed, rodent or other plant or animal

Pesticide Terminology

- Pesticide or pest control product:
“Any product, device, organism, substance or thing that is manufactured, represented, sold or used as a means for directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest.”

How are pest control products evaluated by the federal government?

- Purpose of the Pest Management Regulatory Authority
 - Decisions based on risk assessment
- Does federal registration of a product mean it is safe?
 - risks managed through labeling information
 - “pesticides safe when used as directed”

Are risks of older pesticides being addressed?

- Re-evaluation process
 - Phase out of chlorpyrifos
 - Voluntary phase-out of Diazinon
 - Other insecticides under re-evaluation: malathion and carbaryl
 - Herbicides under re-evaluation: 2,4- D, MCPA, dicamba and mecoprop

Provincial Role in Pesticide Regulation

- Ontario: Pesticides Act
 - Regulations: shipment, sale, application, storage and disposal of pesticides
 - Permitting requirements, training, certification and licensing of applicators and sellers of pesticides
- Municipal Act allocates authority to municipalities to enact bylaws

Municipal Role in Pesticide Regulation

- Supreme Court of Canada:
 - “Law-making [is] often best achieved at a level of government that is...closest to the citizens affected and thus most responsive to their needs, to local distinctiveness and to population diversity.”

Examples of Municipal Pesticide By-laws

- Municipality of Chelsea, Quebec
- Halifax Regional Municipality

Thank-you!

- Key websites:
 - www.pestinfo.ca
 - www.hc-sc.gc.ca/pmra-arla

- For more information:



Canadian Centre
for Pollution Prevention

1-800-667-9790
info@cc2p2online.com
www.cc2p2online.com

CAPE
(Canadian Association
of Physicians
for the Environment)

Presentation to the Waterloo Regional Council

By Sergio Lappano MSc., MD, CCFP, FCFP

It is a privilege to have the opportunity to speak on this very important issue of the health effects of pesticides. I am a Family Physician and a member of the Ontario College of Family Physicians and of the Canadian Association of Physicians for the Environment. As a Family Physician I feel one of my roles is to be an advocate of healthy life styles and to educate my patients on issues that promote good health and help prevent illness. It is for this reason that I have become involved in the issue of the health effects of pesticides.

In 1998 the Environmental Health Committee of the Ontario College of Family Physicians sent out a newsletter to all Family Physicians in the province. One of the recommendations made to Family Physicians in this newsletter was to ensure that local governments and businesses are not exposing patients or our communities to pesticides by local spraying or pesticide application. This recommendation was made after a careful analysis of the data on the health effects of pesticides at that time. Since then even more evidence has come available linking pesticides with significant health concerns in adults and most importantly in children, the developing fetus and the infirm.

Several reports exist in the medical literature demonstrating an association between exposure to pesticides such as 2,4-D (the active ingredient in most lawn sprays) and an increased risk of developing non-Hodgkin's lymphoma. In a recent article in the Canadian Medical Association Journal it was suggested that non-Hodgkin's lymphomas are associated with environmental and occupational exposures to herbicides such as 2,4-D. It is also true that non-Hodgkin's lymphomas are one of the few cancers that are increasing in both incidence and mortality.

Recently there has also been the suggestion that the phenoxyacetic acid herbicides such as 2,4-D, may have effects on neurodevelopment and may contribute to neuromuscular disorders such as Parkinson's disease and Lou Gehrig's disease.

In November of 1999 the Bureau of Reproduction and Child Health in Ottawa reported that there was an increased risk of spontaneous abortion in the first trimester of women whose partners were exposed to 2,4-D, three months before conception to the month of conception. Researchers at the University of North Carolina, Chapel Hill reported similar results in February of 1999. More recently an article published in Environmental Health Perspectives vol. 110, November 2002, demonstrated how a commercial mixture of lawn herbicide containing 2,4-D, mecoprop and dicamba caused a decrease in litter size when fed to pregnant mice at very low concentrations in their drinking water. This reduction was as a result of a decrease in implantation sites. The greatest effect was seen at the lowest concentrations. Presently most testing is done on individual ingredients; however, this study looked at the effect of a commercially

*12.8
7x less than
current
EPA drinking
water
limit*

available product on reproduction and development. These are the products that we and our communities are exposed to in everyday situations.

The risk to human health by these agents is of even greater concern when one speaks of the effects on children and the developing fetus. We know that children are not merely small adults. Children are actively growing and developing with a unique biochemistry and physiology. Their ability to clear toxins has not fully matured and the surface area per unit body mass is double that of an adult. All of these features put children at much greater risk. The effects of these chemicals on their development can be profound. Childhood and in utero exposure to pesticides has been associated with childhood leukemias, lymphomas, brain cancer, learning disabilities, behavioural abnormalities, allergies and chemical sensitivities.

Many will argue that there is no proven link between pesticides and cancer or neurodevelopmental disorders and it is true that at present there has been no clear cause and effect established. However, there is enough evidence to suggest a clear association between these chemicals and serious health related issues. If we wait for specific proof we are subjecting our children and our communities to a very dangerous biological experiment. Arguments to not act until proof is available is reminiscent of arguments made in the 50s and 60s about tobacco and heart and lung disease, and more recently around the issue of the possibility of Bovine Spongiform Encephalitis (BSE) being passed on to humans as a variant of Creutzfeld-Jacob disease through tainted meat. A recent report from the public enquiry into Britain's handling of the BSE epidemic stated- "The belief that BSE posed only a remote risk to humans was perpetuated despite the existence of growing opposing scientific evidence."

I believe that the notion that pesticides are safe when used correctly is being perpetuated despite the existence of growing opposing scientific evidence. It is for reasons such as these that we need to apply the precautionary principle and adopt policies that minimize risk in our communities. I would therefore respectfully suggest that this council adopt a by-law banning the cosmetic use of pesticides.

Respectfully submitted

Sergio Lappano MSc., MD, CCFP, FCFP

Globaltox

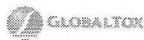
Health Effects of Cosmetic Pesticides

Ronald W. Brecher, PhD, DABT
Mark T. Goldberg, PhD, DABT and Karen A. Philipps, BSc
GlobalTox International Consultants Inc.
presented to
Regional Municipality of Waterloo
October 30, 2002



What is a Pesticide?

- **Definition:** A substance or mixture of substances used to prevent, destroy, repel or mitigate any **pest**
- **Pests** range from insects, animals and weeds to microorganisms (such as bacteria, fungi, moulds and viruses)



Why are Pesticides Used?

Uses for pesticides:

- Kill or control potential disease-causing organisms
- Control organisms which are aesthetically undesirable



What is Cosmetic Use of Pesticides?

"The use of pesticides for the maintenance of outdoor trees, shrubs, flowers, ornamental plants and turf and the removal of vegetation from sidewalks and driveways and on other areas on part of the property used for residential, municipal and commercial purposes (excluding agricultural)."

-Regional Municipality of Waterloo definition



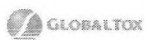
Pesticides Included in RMOW Definition

- Some Herbicides (control or kill plants)
- Some Insecticides (control or kill insects)
- Some Fungicides (control or kill fungi)



Pesticides Not Included in RMOW Definition

- Rodenticides
- Molluscicides
- Disinfectants (antibacterial, antiviral agents)
- Nematocides
- Some Insecticides:
 - Flea control products
 - Cockroach and wasp sprays
 - Mosquito repellents
- Some Fungicides:
 - Household mould and mildew control agents,
 - Pool chemicals
- Agricultural Herbicides



Concerns with Pesticide Use

- **Environmental Impact**
 - Effects on non-target species (eg. effects other plants or beneficial insects)
 - Accumulation in food chain (bioconcentrates in tissue)
 - Persistence in environment (eg. minimal degradation in water)
- **Human Health Effects** (Focus of this talk)
 - Short-term effects (acute)
 - Long-term effects (chronic)



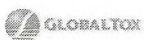
Human Exposure to Pesticides

- Humans may be exposed to pesticides by:
 - Accidental or intentional exposures
 - Occupational exposure
- Pathways and routes of exposure include:
 - Ambient dermal or inhalation exposure (off-target drift)
 - Ingestion of food items containing pesticide residues
 - Ingestion of water (or soil) containing pesticide residues



Human Exposure to Pesticides

- Exposure depends on:
 - Formulation and chemical properties
 - Protective gear worn during mixing, application and clean-up
 - Area of skin exposed
 - Weather conditions



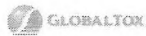
Human Exposure to Pesticides

- Children's exposure can also depend on or involve:
 - Age
 - hand to mouth transfer
 - Proximity of breathing zone to the ground
 - Transfer from household pets
 - Exposure in the womb
 - Accidental exposure



Health Effects of Pesticides

- ◆ Focus of presentation is on hazards
 - Risk (the likelihood that a hazard will cause harm) is beyond the scope of this discussion
 - Risk depends both on the hazard and on exposure.
- ◆ Several different types of effects
 - Cancer
 - Nervous System
 - Reproductive / Developmental Effects
 - Respiratory Effects
 - Immune System Effects



Health Effects of Pesticides

Cancer:

- 2, 4-D (and other phenoxy herbicides) has been well studied. The results are mixed and inconclusive.
- Studies on occupationally exposed groups sometimes show higher rates of Non-Hodgkin lymphoma or soft tissue sarcoma.
- Different regulatory agencies have concluded that the cancer causing potential of 2,4-D is *limited, inconsistent or inconclusive*.



Health Effects of Pesticides

Nervous System Effects:

- Lawn and garden insecticides are associated with adverse effects on human nervous system.
- Organophosphates, carbamates and at high doses, permethrin can disrupt nerve transmission.
- Several recent studies have raised concern about a possible association between occupational pesticide exposure and Parkinson's disease.



Health Effects of Pesticides

Reproductive and Developmental Effects:

- 2,4-D may affect endocrine system function
- A recent study has shown it is a reproductive toxicant at very low doses
- Chlorpyrifos (insecticide) may cause a cognitive deficit in offspring of animals treated during pregnancy



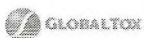
Health Effects of Pesticides

Respiratory Effects:

- Several cosmetic pesticides cause respiratory tract irritation e.g. glyphosate (ROUND-UP)
- An association between occupational asthma and pesticide exposure has been seen in farmers.

Immunological Effects:

- Organophosphates and carbamates can cause immunotoxicity.



Conclusions

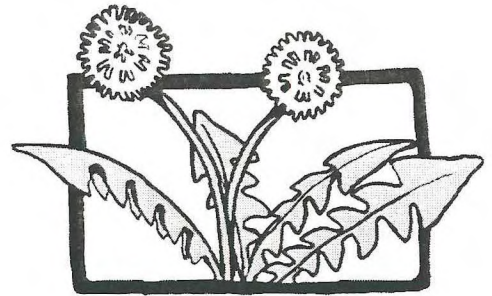
- A wide variety of confirmed and potential adverse health effects are associated with exposure to cosmetic pesticides.
- However, the likelihood (i.e. risk) that effects will occur is not well established for most effects.
- Data are often inconclusive, particularly regarding long-term effects of low-level exposure.
- The Pest Management Regulatory Agency (PMRA) is re-evaluating pesticide risks and some products are being phased out: e.g. chlorpyrifos and diazinon.



GROUP
(Get Rid of Urban Pesticides)

October 30, 2002

**Presentation Notes: Susan Koswan
GROUP (Get Rid of Urban Pesticides)**



GROUP Position

Cosmetic pesticide use poses an acceptable health risk
+ There are safe and effective methods
+ Federal and provincial government unwilling to introduce legislation
+ No protection from urban pesticide use for at least 8 months of the year
= The need for a Municipal bylaw with education to protect human and environmental health

Commissioner of the Environment and Sustainable Development

Ottawa, 22 October 2002 – The federal government's management of toxic substances remains inadequate, warns the Commissioner of the Environment and Sustainable Development, Johanne Gelinas, in her Report tabled today in the House of Commons. The production of industrial chemicals, pesticides and their by-products in Canada can pose serious risks to the health of Canadians and to our environment.

Some chemicals are associated with health problems such as cancer, decreased fertility and neurological disorders. "The federal government still has a long way to go to ensure that the risks that toxic substances pose to Canadians are dealt with effectively. It must increase its efforts to act on our past recommendations. The current situation regarding toxic substances is unacceptable," said Johanne Gelinas.

W5 – Fri. Oct. 25, 2002

Wendy Sexsmith helps run the Pesticide Management Regulatory Agency, Ottawa's pesticide watchdog.

"Every pesticide when they were registered, were assessed for human health and environmental safety, as well as efficacy."

But many of these pesticides haven't been tested in decades. The PMRA are now re-evaluating the products to see if they meet modern standards.

W-FIVE was surprised to learn that Sexsmith's department, gets 25 per cent of its funding from pesticide manufacturers - about 8-million dollars.

GROUP Initiatives

While waiting for a bylaw (funding source indicated where applicable):

Educational Workshops – Service clubs, community groups, KPL, high schools - City of Kitchener

Committee Work – Alternatives to Pesticide Team – City of Waterloo, Pesticide Education and Reduction Committee – regional/multistakeholder

Dandelion Festival – 5 years – multi-funded

EcoLawn Project – EcoAction, Region of Waterloo, cities of Kitchener and Waterloo

Organic Garden Tours – 2 held

Public Events – Lorraine Johnson and Dr. Neil Arya with Wordsworth Books and KPL

First Pesticide-free Walkabout in 2002

Lawn Signs – City of Waterloo

GROUP Initiatives (cont'd)

Publications: Letters to the Editor, Parks and Rec. Canada, Grand Actions
Creation of educational pamphlets
Supreme Court/Hudson intervenors
Pesticide-Free Ontario member
Peer Gardeners Programme – Regional Health Dept./community project

EcoLawn Project

2-yr programme demonstrated effectiveness of Plant Health Care model on 24 properties, sold EcoLawn Care Starter Kits, EcoDaytimer (dayplanner and Green Guide to Waterloo Region)
Provided model for partnerships with citizen group, 3 levels of gov't and industry – door is open to work with Zehrs again
Feedback from homeowners has been generally positive; they are using recommended materials and methods demonstrated in second year on their own

Recognition

Environmental Sustainability Award 2002
Rogers/Okttoberfest Woman of the Year – Environment category 2002
YMCA Peace Medallion – Environment category 2002

What You Should Know About IPM for Lawns and Gardens – see attached for clarification:

1. Quebec Rejected IPM
2. IPM Is Not Required With Pesticide By-laws
3. IPM Does Not Eliminate Cosmetic Use of Pesticides
4. IPM Rarely Achieves 100% Reduction in Cosmetic Pesticide Use
5. IPM Does Not Offer Optimal Health Protection
6. IPM Does Not Prevent Pesticide Abuse
7. IPM For Homeowners Is Unproven
8. IPM Council Promotes Industry Interests Only
9. IPM Accreditation Is Flawed
10. IPM Downloads Responsibility

Recommended Programme

3-Year Plan to go Pesticide-Free (see attached for clarification)
Based on Plant Health Care Programme, organic approach
Combine with RoW's Naturescaping pamphlet that promotes use of native/drought resistant plants, shrubs and trees

Need for a Bylaw

Bylaw is most effective and cost-effective way – how can and why should municipalities compete with millions of advertising, marketing and tele-marketing dollars of chemical lawnspray companies?
Community volunteers are willing to be partners as long as municipalities play their part. Since the potential for harm without benefit is known, why would we continue using pesticides?

Ten (10) Things You Should Know About IPM For Lawns and Gardens

1. Quebec Rejected IPM

The Province of Quebec rejected IPM because the lawn-care industry's "version" of IPM relied almost exclusively on pesticides. The Association des Services en Horticulture, Ornementale du Québec (ASHQQ), which is the equivalent to Landscape Ontario, revealed that in the year 2000, only 0.5% of their IPM lawn care treatments were employing "alternative methods";

2. IPM Is Not Required With Pesticide By-laws

Municipalities who have adopted pesticide by-laws have rejected IPM outright because IPM is dependant upon the continued use of pesticides;

3. IPM Does Not Eliminate Cosmetic Use of Pesticides

IPM programs in cities have seen increases in pesticide use, rather than decreased use. An article on January 22, 2002 in the Calgary Sun stated that the "parks department does not acknowledge reduction as the goal of the IPM program...Pesticides are (supposed to be) a last resort, and yet even having been trained in IPM, city staff aren't practising the basic tenet.";

4. IPM Rarely Achieves 100% Reduction in Cosmetic Pesticide Use

According to a University of Laval study, there have been reductions in the range of 60% by implementing IPM. A strategy to reduce pesticide use in agriculture was also noted with a 50% reduction over 15 years. Implementing a pesticide by-law can achieve 95% to 100% pesticide reduction with homeowners in the first year;

5. IPM Does Not Offer Optimal Health Protection

IPM offers no buffer zone protection to non-targeted organisms nor individuals that are vulnerable to the adverse effects of pesticide. Environment Canada's Federal Code of Good Practice, states that the herbicide Killex can drift up to 100 meters when the wind is no more than 10 km/h and the temperature of the day does not exceed 25C;

6. IPM Does Not Prevent Pesticide Abuse

IPM will not prevent lawn-care applicators from spraying pesticides during winds (i.e. over 10 Km/h) or during or after a rainfall where pesticide runoff always occurs;

7. IPM For Homeowners Is Unproven

Municipalities with pesticide by-laws promote the use of natural (ecological) and other alternative lawn care practices. IPM programs for homeowners are unproven in terms of benefits in pesticide reduction;

8. IPM Council Promotes Industry Interests Only

Industry's self-regulatory body known as the "IPM Council" is driven by Landscape Ontario and organizations that lobby "to preserve the use of pesticides." Auditing and enforcement from such an organization amounts to the fox guarding the hen-house;

9. IPM Accreditation Is Flawed

An IPM accredited company is no guarantee to a customer that the actual pesticide applicators

treating their property will be properly trained and IPM accredited. Only ONE officer for that entire local company is required to attend an IPM training course for the company to be deemed wholly IPM accredited!;

10. IPM Downloads Responsibility

IPM downloads responsibility onto their customers “as being an integral part of the IPM process” rather than IPM accredited companies themselves taking the leading role. This is in stark contrast to socially conscious companies such as Loblaw's that declared they shall no longer sell chemical pesticides by 2003.

Proposed Pesticide By-law for the Region of Waterloo

An outline of a by-law to protect public health by banning the use of pesticides for non-essential, cosmetic purposes in Waterloo Region.

Proposed for Public Discussion

Why should Cosmetic Pesticide use be banned?

- **Pesticides are harmful.**

They are toxins meant to kill, and they disrupt living beings as well as target organisms. They are particularly harmful to children and may be linked to many illnesses including cancer, diabetes, asthma, allergies, autism and attention deficits;

- **Pesticides go everywhere.**

They do not stay where they are applied. Pesticides and their degraded products are found in the soil, water and air, and in human tissues, blood, breast milk and semen;

- **Cosmetic pesticides are unnecessary.**

There are safer ways to maintain lawns and gardens, and the Region of Waterloo has that information available; and

- **It is the mandate and responsibility of the Region of Waterloo to protect public health.**

The Supreme Court of Canada has ruled that municipalities can act in a precautionary manner to protect public health, and in the case of pesticides to restrict their use in the interest of health and good governance. The Federal Minister of Health recognizes that local pesticide by-laws will complement federal and provincial regulations.

Key Elements of the Proposed Pesticide-Use By-law:

- Applies outdoors, and does NOT apply to agriculture or forestry
- Deals with non-essential, cosmetic pesticide uses. Uses for public health purposes continue.

- Allows for permits for professional treatment of infestations
- Golf courses to have a 3-year phase-in
- Enforcement on a complaint basis as a standard nuisance by-law, with education as the first response (*NO pesticide police!*)
- Pesticide-use bylaw to be phased-in – no fines until 2004 (public education continues)

Elimination of cosmetic pesticide use is supported by:

Ontario College of Family Physicians, Ontario Public Health Association, Registered Nurses Association of Ontario, Canadian Association of Physicians for the Environment, Allergy & Environmental Illness Association, Canadian Cancer Society

A Pesticide-Use By-law for the Region of Waterloo

An outline of a by-law to protect public health by banning the use of pesticides for non-essential, cosmetic purposes in Waterloo Region

Proposed for Public Discussion

Preamble: The Region of Waterloo's pesticide-use policy be directed at the protection of public health. Many hospitals, schools, churches, housing co-operatives, seniors' residences and commercial enterprises have already developed policies and practices. Within the Region of Waterloo are extensive community resources and municipal practices that are the gold standard for effective and safer methods of turf and garden care. These initiatives will be further developed to support the purpose of this by-law.

Prohibition: The application and use of pesticides is prohibited throughout the Region of Waterloo.

Exceptions:

1. Low Toxicity Pesticides and Specific Use Pest Control Strategies (to protect public health) are permitted.
2. The use of other pesticides is authorized:
 - For agricultural and forestry purposes;
 - Inside of a building;
 - In public or private swimming pools, the contents of which will not enter a natural water body; for purifying water destined for human or animal consumption;
 - To control an Infestation, with a Temporary Pesticide Application Permit granted by the Region of Waterloo
3. Pesticides may be applied to golf courses within the Region of Waterloo until Jan 1 2006. Starting in 2006, only Low Impact Pesticides and Specific Use Pest Control Strategies may be used on golf courses.

Temporary Pesticide Application Permit: A Temporary Pesticide Application Permit for treatment of an infestation may be requested by the owner and/or occupant. The Competent Authority appointed by the Region of Waterloo must confirm the Infestation and health hazard, and be satisfied that good Environmental Management practices are not sufficient to protect health with regard to the Infestation. The Competent Authority shall have regard to heightened concerns close to Protected Properties. The application of pesticides pursuant to the Permit

may be made by a licensed pesticide applicator, in compliance with all requirements indicated on the Permit, such as safety and notice provisions. The Temporary Pesticide Application Permit will be valid for 10 days, and must be displayed prominently and in view on the property from the day of receipt until 72 hours after the pesticide application. A minimum of 14 days must separate successive pesticide applications for the same infestation.

Requirements for Pesticide Applicators in the Region of Waterloo: Applications of any registered pesticide not described on the lists of Low Toxicity Pesticides or Specific Use Pest Control Strategies may only be made by a Pesticide Applicator licensed by the Ministry of Environment and Energy.

Golf courses and Pesticide Applicators (for non-agricultural and non-forestry uses) must register with the Region of Waterloo by March 1 of each year. A log of pesticide use including identity, quantity, dates and areas of application must be kept and be available for inspection upon the premises, and be supplied to the Region of Waterloo in November of each year.

All owners and occupants of abutting properties, and Protected Properties within 100 m of the property line shall be given 48 hours notice of pesticide applications.

Enforcement: A by-law officer shall investigate each complaint under this by-law. Where there is evidence of a pesticide application contrary to this by-law, the officer shall inform and provide to the offender an information package on the health risks associated with pesticides and an information package on safer alternatives to pesticides. Only upon repeat offences, and beginning in 2004, shall the penalties under this by-law apply.

Nuisance: The use of pesticides contrary to this by-law constitutes a "nuisance".

Limitations: This by-law does not diminish responsibilities or provisions under any other statute of Ontario or Canada to protect health or to preserve the environment.

Definitions:

Application of pesticides includes, but is not limited to, spraying, atomising, gaseous applications, and spreading of pesticides in granular, powder or liquid form.

Competent Authority is a person appointed by the Region of Waterloo who has expertise in horticulture, pest control and environmental management.

Environmental Management Landscaping practices (plant selection, design, maintenance, agricultural practices, etc.) to maintain a landscape using only low toxicity pesticides.

Infestation Plants, insects, fungus or other organisms that pose a hazard to human health, such as noxious weeds as defined by legislation that cannot be controlled by good Environmental Management.

Low Toxicity Pesticides are pesticides that have a minimal impact on the environment and human health. They may be used without restriction. Low toxicity pesticides share the following characteristics:

- they represent the lowest risk, in both the short and long term, for human health;
- they have little impact on non-target organisms;
- they are specific for the target organism;
- they degrade rapidly to non-toxic products;
- they represent lowest risk for the environment during their use and their degradation.

A list of pesticides of low toxicity will be maintained by the Region. It may include:

- materials that are generally regarded as safe (for example food or animal feed grade substances, such as vinegar and corn gluten for weed control, or milk or baking soda for mildew)
- soaps, dormant oil, lime/sulphur preparations, borax;
- Diatomaceous earth for crawling insect control in sheltered areas and adjacent to buildings; and

- bio-pesticides i.e. organisms that specifically attack certain kinds of insects, such as nematodes to control grubs.

Occupant A person other than the owner who occupies a building or, in the case of a commercial establishment, the person who conducts the commercial activity.

Owner The person who holds the deed of the property.

Pesticide Applicators are persons licensed by the Ministry of Environment and Energy to apply pesticides.

Pesticides are substances, including micro-organisms, that interfere with the normal biological processes of living organisms deemed to be pests, such as noxious plants or weeds, plant diseases, insects, fungi, or other unwanted living things. "Pesticides" includes but is not limited to insecticides, herbicides, fungicides and rodenticides.

"Pesticides" includes all products that contain active ingredients of pesticides, such as fertilizer with herbicide.

Protected Properties Children's day-care establishments, schools, nursing homes, hospitals, health clinics, places of worship, public lands, old age residences, day camps and playgrounds are protected properties. As well, a residence where the owner and/or one of its occupants exhibits hypersensitivity to pesticides and/or to chemical products will be protected when the hypersensitive individual presents to the Region of Waterloo a signed letter by a medical doctor licensed to practice in Ontario, attesting to their health condition.

Specific Use Pest Control Strategies are to deal with specific situations putting human health at risk. A list of least-toxic pest control strategies for health risk situations will be maintained by the Health Department of the Region of Waterloo.

Respectfully submitted by

Susan Koswan on behalf of

GROUP (Get Rid of Urban Pesticides)

7 Generations Network

(based on proposed bylaw from The Coalition for a Healthy Ottawa)

Go Pesticide-free....The 3-year lawn care plan!

YEAR 1

April/May

Overseed and top-dress with perennial rye and fescue grass seed mixed with any combination of compost, peatmoss and topsoil. Keep moist until established. Hand-weed.

Mid to late June

Aerate lawn with core-aerator to break up thatch. Hand-weed. Apply organic fertilizer at prescribed rate on package.

July/August

Hand-weed and monitor for damaged areas. Repair bare patches with grass seed and soil and keep moist until established.

Early August

Apply beneficial nematodes ONLY if significant grub damage is evident (large dead patches of lawn can be pulled up)

Late August/early September

Aerate. Overseed and topdress as needed.

October

Apply organic fertilizer at prescribed rate.

YEAR 2

April/May

Overseed and top-dress with perennial rye and fescue grass seed mixed with any combination of compost, peatmoss and topsoil. Keep moist until established. Hand-weed.

Mid to late June

Aerate lawn with core-aerator to break up thatch. Hand-weed. Apply organic fertilizer at prescribed rate on package.

Early August

Apply beneficial nematodes ONLY if significant grub damage is evident.

Late August/early September

Aerate. Overseed and topdress as needed.

October

Apply organic fertilizer at prescribed rate.

YEAR 3

April/May

Overseed and topdress if needed. Keep moist until established.

Mid-June

Aerate lawn with core-aerator

Late August/early September

Aerate. Overseed and topdress as needed.

October

Apply organic fertilizer at prescribed rate.



Ongoing Lawn Maintenance:

1. **Adjust your lawn mower cutting height to its highest level – at least three inches.** Keep blades sharp. Cut no more than 1/3 of the leaf blade off at any one time to avoid stressing the grass.
2. **Leave grass clippings on the lawn** (it's free fertilizer!)
3. **Mulch dry leaves with mower in fall** to add extra nutrients.
4. **Be patient and alert for damage** – there may be setbacks in your transition to pesticide-free but the results will be worth it
5. **Water deeply** only when your lawn needs it. Let your lawn go dormant (brown) if there is a drought (2 or more weeks of no rain). It will green up the next time it rains.
6. **Do not use pesticides (herbicides/insecticides etc)** due to their potential harm to human health and the environment.

Produced by GROUP (Get Rid Of Urban Pesticides) and the Eco-Lawn Project based on the City of Waterloo's Plant Health Care Programme.

April 2001

(519) 578-8508

dandelion@gto.net

<http://home.golden.net/~lgoerzen>

Glossary of Terms

Aerator – Machine that pulls out little plugs or cores of grass roots and soil. Leave plugs on lawn as free fertilizer.

Beneficial Nematodes – microscopic creatures that eat grubs. Available at many garden centres.

Corn Gluten Meal – by-product of corn oil production used for animal feed but also recently discovered to prevent annual weed seeds from germinating.

Overseed and Top-dress – spreading a 1/4" layer of grass seed and topsoil over existing lawn to help thicken it.

Environmentally-Friendly Tool Box

Grubs – prevention using the above methods is the key. In the case of severe damage, beneficial nematodes can be applied in early August.

Weeds – Corn gluten meal has been shown to suppress annual weed seed germination. Apply early in May. Dig up perennial weeds like dandelions & thistles by hand.

Bare Patches – Spread perennial rye grass seed and topsoil/compost and keep moist until germinated.

THIS LADY'S A REAL KILLER!*



**Look inside for the
three-year lawn care
plan to go pesticide-
free!**

* One Ladybug larva can eat 40 aphids in one hour! Go Pesticide-Free so she can do her job!

Landscape Ontario

Patrick O'Toole

- Owner of O'Toole Lawn Care est. 1993
- Office located on Highway 7 in Breslau
- In Lawn Care business since 1981
- B.Sc. Ag. & Professional Agrologist 25 year
- Chair of Lawn Care of Landscape Ontario
- Environment Committee City of Kitchener
- Clean Air Commission for Waterloo Region
- Offer L.P.M. lawn care programs only.
- First in province.

- Father of three (youngest 19 yr.)

The concern the Lawn Care Industry has,

**is that bans or restrictions will not reduce
pesticide use.**

And will kill the industry

Municipal Bans Do Not Work!

- Consumers value pest management tools
- By laws cannot prohibit the sale of pest control products
- Where bans exist pesticide use has **not** declined
- Only impacts licence professional applicators



Pictures from Hudson, Quebec and the skids of "Weed & Feed" for Sale

**We don't expect special favors,
Just a level playing field.**

- **Risk = Exposure x Hazard.**
- **A 1,000 times safe!**
- **A common complaint is the smell.**
- **"Smell is not Clinical Exposure or measurable risk."**
- **If it is hazard of product then the PMRA needs to act.**

Public Education of I.P.M.

- Most effective way to reduce pesticide risk
- Helps to ensure that homeowners use pesticide responsibly and only when necessary
- Consistent with the federal government's healthy lawn strategy.
- Consistent with industry initiatives to promote responsible use through integrated pest management
- Integral part of IPM accreditation

Education Continued

- Allows freedom of choice
- Demonstrates that the city is acting responsibly for the good of all citizens and not just for a vocal minority group.
- Education programs by municipalities will accompany education strategies put forth by the Pest Control Safety Council of Canada

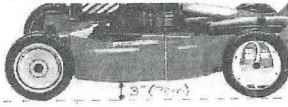
I.P.M. Principals

- Integrated Pest Management, or “IPM is a decision-making process that uses all necessary techniques to suppress pests effectively, economically, and in an environmentally and healthy sound manner to sustain healthy landscapes.”

I.P.M. Principals

1.) Cutting Height

This is the most important step
Failure to do this step seriously affects the other steps



Set the mower's wheels such that the cutting blade is 3 inches (7.6cm) off the ground.



I.P.M. Principals

2.) Annual Aeration

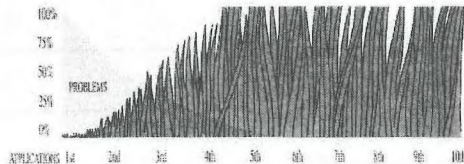
The thatch layer is spongy organic layer just below the soil surface. It is made up of old roots. It is not from clippings. Thatch cannot be raked out of a lawn. Aeration reduces thatch and compaction.



I.P.M. Principals

3.) Regular Feeding.

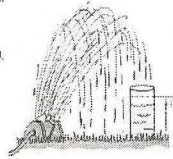
Test the soil and plant tissue to determine your lawn's needs. Apply at regular intervals through out the year. Avoid excessive rates.



I.P.M. Principals

4.) Water

Water your lawn every week there isn't sufficient rain.
Water deeply. Measure this by placing a cup under
the sprinkler and water until there is 1 inch in the cup.



Launching in 2002:
IPM[®] Accreditation

A bold initiative for our industry

Get in on the ground floor with a **IPM Accreditation** to enhance consumer confidence and industry strength. It's **IPM Accreditation**, and it assures that your company follows beneficial horticultural practices. Accreditation elements include testing, commitment to continuing education, Code of Practice compliance and auditing. Participate in this opportunity, please today.

IPM Accreditation
An initiative of the **International Association of Horticultural Producers**
(905) 876-1800

The logo for IPM Accreditation is prominently displayed. To the right of the main text, there is a small, tilted image of a document or certificate, likely representing the accreditation process or a completed application.

Purpose of Accreditation

- Process will accredit companies/organizations that demonstrate commitment to IPM and Plant Health Care
- Achieved through a process of education, ongoing professional development, evaluation, proven dedication to IPM, and adhering to a code of practice.

Governing Body

- PHC/IPM Council of Ontario
- Industry Associations, government regulators and advisors, and groups committed to having IPM as the new standard in turf and landscape care.

IPM Council of Ontario

- Ontario Parks Assoc.
- Hydro One
- Ontario Golf Superintendents Assoc.
- Ontario Vegetation Management Assoc.
- Sports Turf Assoc.
- Croplife Canada
- Urban Pest Management Council

- International Society of Arboriculture
- Landscape Ontario
- Professional Lawn Care Assoc. of Ontario
- Professional Lawn Care Assoc. of America
- Structural Pest Management Assoc. Ontario
- Environmental Coalition of Ontario
- Tech Advisors: GTI, OMAFRA

- The Council will:
 - Develop Best Management Practices
 - Promote IPM through education and training
 - Encourage and fund R&D in a commitment to Continuous Improvement
 - Oversee IPM Manual Updates/Revisions
 - Implement a province-wide web- based pest monitoring system

- Be a resource for public information and educational materials
- Accredite IPM seminars for continuing education credits
- Provide training opportunities
- Set standards for the accreditation procedure and make decisions on maintaining or revoking accreditation privileges

Program Components

- Accredited companies must undergo the following process:
 - Pass an examination based on the IPM manuals developed by the BC MOE and OMAFRA, and training programs will be delivered in variety of methods such as internet, college/university, private trainers, or individual study.
 - Commit to ongoing PD(professional development) by obtaining 10 credits of approved education programs each season.

- Adhere to the IPM Code of Practice
- Submit to an audit, which will ensure compliance is being met

Audit Items

- Evaluate marketing materials
- Review customer education pamphlets
- Examine training activity
- Monitor pesticide reduction records(ai/sq metre

Auditors

- Will be 3rd party individuals with demonstrated expertise of IPM as determined by the IPM Council

IPM Code of Practice

- Focus their business on the promotion and implementation of cultural practices such as using optimum soil depth and quality, suitable turf varieties, overseeding, proper mowing heights, watering, fertilizing, aeration and dethatching as components for maintaining healthy lawns and preventing pest problems.

- Will encourage, educate, and solicit the assistance of the property owner/manager to ensure that optimum cultural practices are followed.
- Will prepare all sites for proper application, ie, remove all items from lawn area, etc.
- Support the principles of IPM as defined by Health Canada:

- Integrated Pest Management, or “IPM is a decision-making process that uses all necessary techniques to suppress pests effectively, economically, and in an environmentally sound manner to sustain healthy landscapes.”

Health Canada def’n cont’d

- The elements of IPM include:
 - Identifying potential pest organisms
 - Monitoring pest and beneficial organism populations, pest damage, and environmental conditions
 - Managing ecosystems to prevent organisms from becoming pests
 - Managing pest populations using strategies that combine biological, cultural, mechanical, behavioural, and when necessary, chemical

Code cont’d

- Document pesticide reduction and pesticide alternative strategies through IPM and agree to monitor and keep records of pesticide use(active ingredient per square metre) for audit purposes.

- Will apply treatments that are properly timed to maximize effectiveness. (Preventative treatments are discouraged and will only be used based on pest history as locally monitored)
- Will only use pesticides after examination (monitoring), diagnosing, and in combination with additional horticultural measures.

- Will not sell programs that are based on numerous pesticide applications and encourage programs that are based on IPM/PHC
- Spot treatments will be utilized for the control of weeds and insects. Blanket applications are only used if warranted.

- Will support mandatory IPM re-certification for all licenced employees.
- Will implement effective staff training and safety procedures.
- Will monitor customers' lawns for pest activity at regular intervals and maintain a log of observations. Will provide the collected monitoring data in support of a province wide monitoring network/database

Applications will be made to target areas only.

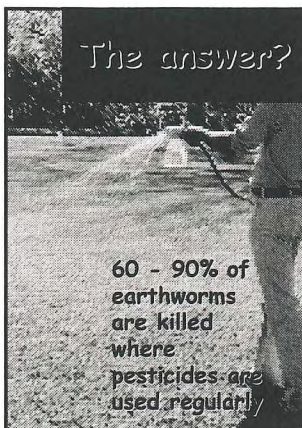
- Over 100 hundred companies have successfully completed the Examination portion of Accreditation, to become “IPM Registered”.
- Working with an internationally recognized environmental firm for audit design, implementation, and execution.
- The MOE will be advised of all components of audit program.

Master Gardener



The garden is a living ecosystem!

Our neighbours often ask
why they have no
butterflies, no bees, no
other insects, no amphibians
or birds in their gardens?



The answer?

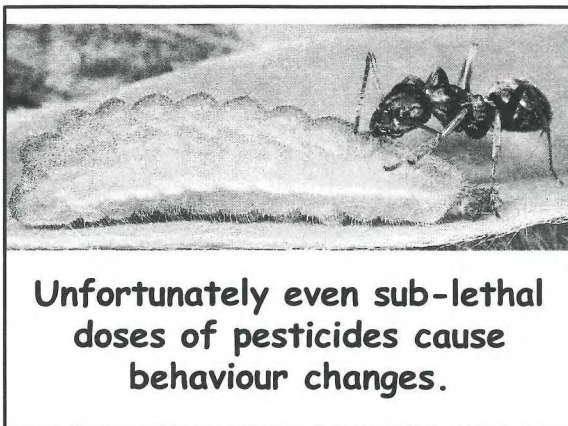
60 - 90% of
earthworms
are killed
where
pesticides are
used regularly

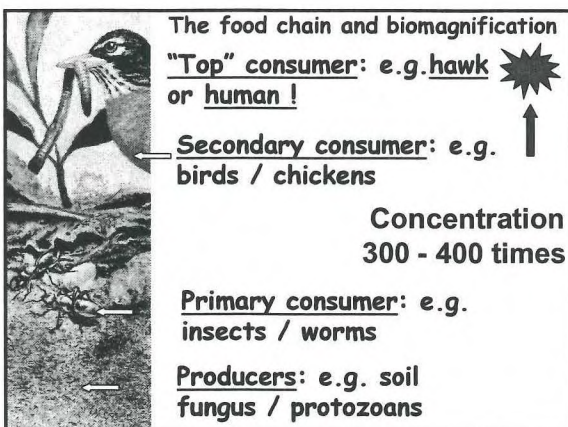
The lawn on
pesticides is an
ecological
desert!

? Habitat

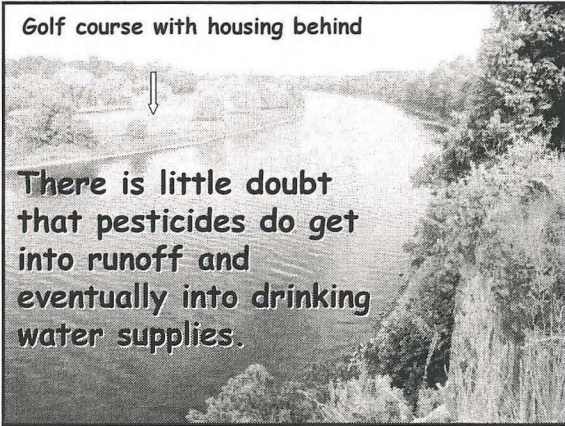
? Food







Golf course with housing behind



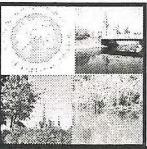
**There is little doubt
that pesticides do get
into runoff and
eventually into drinking
water supplies.**



**The health of
our children
and our
ecosystems
cannot be
jeopardised by
the use of
cosmetic
pesticides.**

**Ontario Golf
Superintendents
Association**

City of Cambridge



Cambridge City Green Strategy

1

What is the Cambridge City Green Strategy?



- A volunteer organization which encourages and coordinates action in support of the natural environment. City Green strives to promote environmentally friendly lifestyle changes and community projects.
- City Green is a sub-committee of the Cambridge Environmental Advisory Committee (CEAC) which advises Cambridge Council.

2

Community Alliances



- Cambridge City Green Strategy was established in 1993 and over the past nine years, has established many strong relationships with other community groups, schools, churches and businesses, for example:
 - The Rotary Club: Witney Trail in Riverside Park
 - Hespeler Healthy Community Coalition: Speed River Clean-up
 - Cambridge Times/Reporter –monthly column and other coverage

3

City Green Projects

4

Naturalization — Churchill Park



5

Clean-up and Tree Planting



6

Storm Drain Marking



7

Community Garden — Grand View School



8

Alternatives to Pesticides Project

- Commenced in 1996
- Funded by a grant from the Great Lakes Health Effects Program (Health Canada) and the City's Community Services Department
- Developed with advice from Health Canada and Region of Waterloo Community Health Department and Lang's Farm Village Association

9

Alternatives to Pesticides Project

- **Purpose:** reduce the amount of pesticides used on residential lawns in Cambridge
- **Objective:** to educate residents about the implications of using pesticides and to outline and promote methods of reducing their use

10

Alternatives to Pesticides Project

- **4 Components:**
 1. **Brochure**
 2. **Lecture Series**
 3. **Display**
 4. **Newspaper Insert**

11

Brochure

- Originally produced 5000 copies in 1996
- Reprint of 5000 copies in 1999 with grant from Canada Trust Friends of the Environment Foundation
- Distributed through many venues, including Children's Groundwater Festival, Composter Distribution Days, etc.
- Designed to be used as a poster as well

12

Lecture Series

- Fall/Winter 1996/97
- Held at local community centres
- Speakers included parks managers, horticulturalists and master gardeners
- City parks director continues to speak upon request

13

Display

- Developed in 1996
- Available to any groups who want to sign it out
- Library, Cambridge Memorial Hospital, Cambridge Centre Mall, Composter Distribution, Rain Barrel Distribution, Riverfest, etc.

14

Newspaper Insert

- March 2000
- Cambridge Times
- Distributed to every household in Cambridge
- Funded by Canada Trust Friends of the Environment Foundation grant

15

Cambridge City Green Strategy

- Alternatives to Pesticides Project
- 6 year public education effort
- Inform the residents of Cambridge WHY and HOW to reduce or eliminate pesticide use by working WITH nature and not against it

16

City of Waterloo

Vegetation Management in a Weed Friendly Community



Presented By:

- Anna Marie Cipriani
 - Environmental Services Division
 - Environmental Enforcement Officer
 - Weed Inspector
- Mark Hillis
 - Parks Services Division
 - Team Leader

Presentation Outline

- Perceived challenges to being a Weed Friendly Municipality
- The Weed Control Act
- Tools utilized in successful implementation

Perceived Obstacles in Being Weed Friendly

- The *Weed Control Act*
- Public/Corporate Perception
- Operational nightmare

PART ONE

The *Weed Control Act* Revisited

- First enacted about 100 years ago
 - 95% of local population lived in agricultural areas
 - 5% now live in agricultural areas
- “Outlawed” 23 Plant Species
 - 2 species adversely affect human health
 - Poison Ivy
 - Ragweed

Main Purpose of the Act

- Reduce impact of noxious weeds on:
 - agriculture and horticulture industries

Applicability of the Act

- “Applies to agricultural and horticultural lands that generate income or benefits to agriculture...”



- EXCLUDING lawns, gardens and private areas for personal enjoyment and leisure”

• Hugh Martin, OMAFRA Chief Weed Inspector in memo [Guidelines for 1999](#).

Urban Vigilance

- Poison Ivy and Ragweed
- Utilize Sec. 22
 - Sections 3, 13, 16, 18 *do not apply* to noxious weeds (or seeds) far enough away from any land used for agricultural or horticultural purposes
 - Sec 3 - duty to destroy noxious weeds - owner
 - Sec 13 - Inspector's order for destruction
 - Sec 16 - weed destruction ordered by Council
 - Sec 18 - District Inspector's orders
- Other 21 weeds named in Regulation 1096 *un-enforced in urban areas*

PART TWO

Challenges to implementation in Waterloo

Public Attitude and Ignorance

- All “wild” looking herbaceous plants are bad
- “Goldenrod is causing my hay fever”
- Ragweed anxiety
- “Wildlife species” undesirable

PART THREE

Tools for Successful Implementation of a “Weed” Friendly Approach

Tools

- A supportive Council
- Urban Interpretation of the Weed Act
- Property Standards By-law 89-137
- Internal Communication re: our interdepartmental approach to “weed” complaints
- Buffer Recognition Agreements
- Educational Materials
- Plant Health Care Program (PHCP)



PLANT HEALTH CARE PROGRAM

Presentation Outline

- Brief History of Plant Health Care
- Public Opinion
- Plant Health Care Program
- Results & Challenges
- Future Direction

History of Plant Health Care in the City of Waterloo

Pre-1980's

- Reliance on Pesticides
- "spray until the budget gone" mentality
- 73% of greenspace sprayed

History of Plant Health Care in the City of Waterloo

1980's

- Rethink "traditional" turf management approach
- Pesticide Task Force
- Precautionary principle adopted
- Environment 1st Policy

History of Plant Health Care in the City of Waterloo

1990's

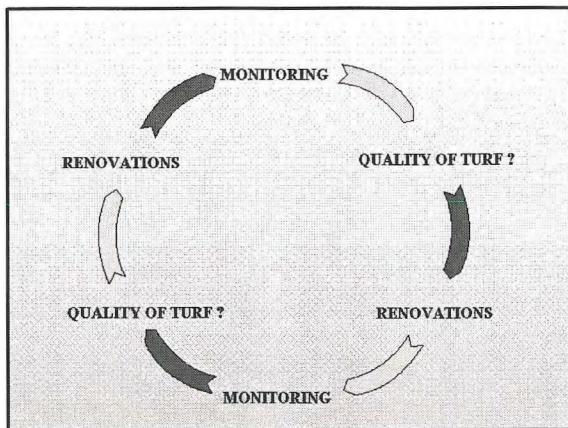
- PHCP ongoing improvements
- <1% of greenspace sprayed

Plant Health Care Program

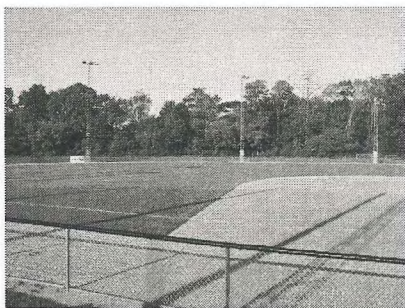
"A set of cultural practices that when consistently used in combination will promote healthy vigorous turf growth, while having the smallest possible negative impact"

PHCP Components

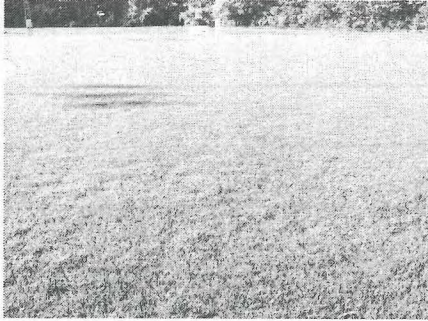
- Monitoring
- Mowing
- Fertilizing
- Aerating
- Topdressing
- Overseeding
- Irrigating
- Dethatching
- Education and Training



Example- Sportsfield



Example- Sportsfield

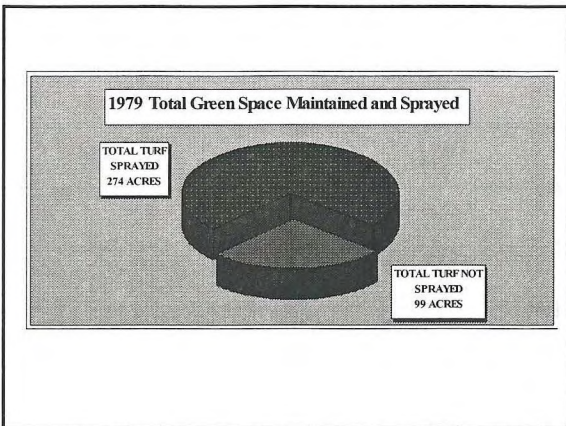


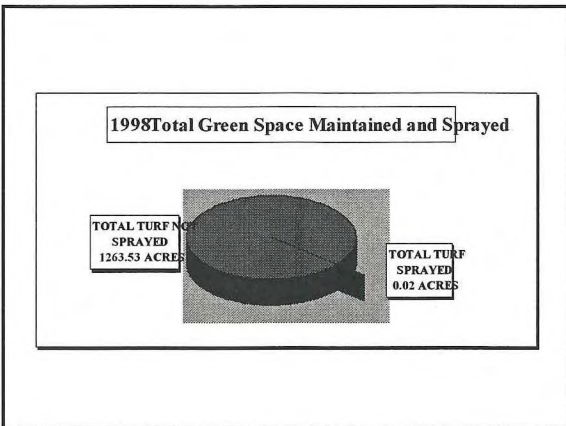
Example- City Hall

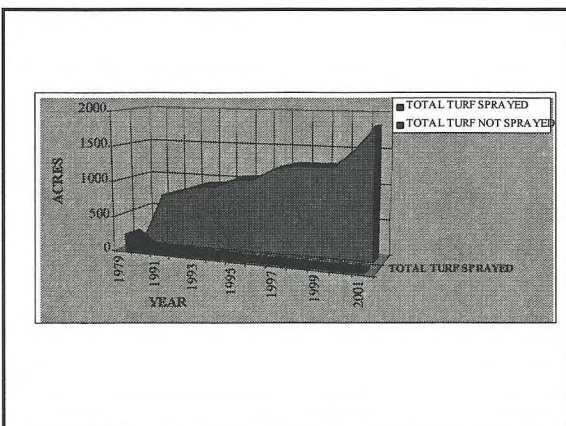


Example- City Hall



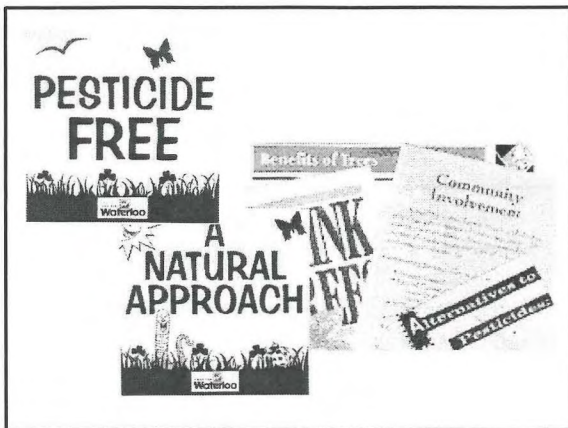






Future Direction & Challenges

- Expand PHCP on lesser priority areas
- Educate community on pesticide use
- Golf course operations represents new challenge
- Internal committee to deal with internal pesticide use



CELA
**(Canadian Environmental
Law Association)**

Pesticides and Municipalities

*Is the Law Protective?
Hudson and the Supreme Court
Municipal Act Mythology
Responding to Community Concern*

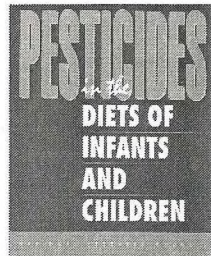


Kathleen Cooper, Researcher
Canadian Environmental Law Association www.cela.ca
©Canadian Environmental Law Association
Information current to October 2012

1

Pesticides and Children

- Children at risk
- Developing systems
- Greater exposure
- 1996 U.S. Food Quality Protection Act (FQPA)
- 1996 U.S. Safe Drinking Water Act
- Multi-year research and policy agenda
- Canada, 2002 – “FQPA-lite”
– Bill C-53/C-8



2

Known/Potential Health Effects in Children from Pesticides

- Birth defects
- Neurobehavioural, cognitive impairment
- Immune system effects
- Altered hormone functioning
- Reproductive problems
- Cancer

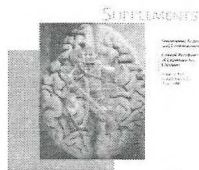
3

Risks to Developing Brains

- "We are conducting a vast toxicological experiment in our society, in which our children and our children's children are the experimental subjects"

Dr. Herbert Needleman

Environmental Health



13

4



Canadian Environment
Urban Association

CHILDREN'S
HEALTH
PROJECT



Environmental Health
Commission

Environmental Standard Setting and Children's Health

May 25, 2000
Available at: www.cela.ca

5

Summary of findings

The law is not protective:

- Older standards are rarely child-protective
- Newer/proposed standards are rarely child-protective
- Laws and underlying methods are not protective
 - reactive laws; not used or enforced
 - risk assessment and risk management
- Summary at www.alternativesjournal.ca (Vol 28 No. 1, Children's Health-focused issue, Winter, 2002)

6

Laws Should be Protective

Greatest Challenge: Substances Already in Commercial Use

- Explicit need to make decisions that are prudently protective of children - to prevent harm
- Legal framework is supposed to be protective
- Not so with environmental standards - has been skewed by risk assessment
- Tens of 1000s of controlled experiments vs ongoing, massive uncontrolled experiment on children

7

The Hudson By-law

- Not a full ban (see text at www.pestinfo.ca)
- Overall prohibition with series of permitted uses:
 - Swimming pools; water purification
 - danger to people from animals or plants
 - indoor use
 - agriculture and horticulture (subject to registration requirements)
 - golf courses (for five years)
 - biological pesticides
 - If threat posed to nearby agriculture (according to Provincial rules on noxious plants)

8

The Supreme Court Decision

- By-law unsuccessfully challenged in two levels of the Quebec courts
- Supreme Court of Canada ruled on validity of Hudson's authority to pass the by-law
- Public interest interventions; implications for municipalities across Canada

http://www.lexum.umontreal.ca/csc-ccc/en/pub/2001/vol12/html/2001scr2_0241.html

9

The Supreme Court Decision

- By-law authority exists in *Quebec Cities and Towns Act*
- Court agreed that other provinces give their municipalities similar powers (incl. Ontario)
- by-law not in conflict, in fact complementary to, federal and provincial law
- In total, "these laws establish a tri-level regulatory regime"
- By-law respects international law's "precautionary principle"

10

Tri-level regulatory regime

- Federal – regulation of import, export, sale, manufacture, registration, packaging and labeling of pesticides
- Provincial – permitting and licensing of vendors and commercial applicators
- Municipal – powers to enact by-laws for the "general welfare" of the community in response to local challenges and concerns
- International law – precautionary principle

11

1990 Bergen Ministerial Declaration on Sustainable Development

"In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation."

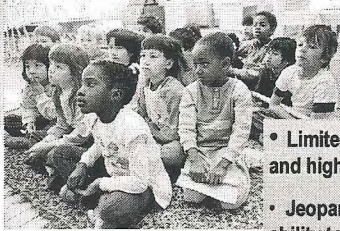
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Municipal Act Mythology

- **Supreme Court refers to Ontario's previous Municipal Act**
- **Municipal Act, 2001 not substantively different**
- **Key provisions remain that empower municipalities to act**
- **No language added to undermine authority to pass pesticide by-laws**

13

Precautionary responses to community concerns



- **Limited information and high stakes risks**
- **Jeopardizing a child's ability to learn?**
- **phase-out non-essential use of toxins**

14

Public Interest Resolutions Supporting Cosmetic Use Ban

- **Ontario Public Health Association**
- **Ontario Registered Nurses Association**
- **Ontario College of Family Physicians**
- **Canadian Association of Physicians for the Environment**
- **Canadian Cancer Society**
- **FCM Model Resolution**
- **Canadian Federation of University Women**

15

Council Motions

- To reduce non-essential use of pesticides
- Not whether but when and how
- Public consultation
- Assess cost implications
- Education about alternatives
- Legal opinions
- Draft by-laws

16

Selected Internet Resources

- www.pestinfo.ca
- www.torontoenvironment.org
- <http://children.cape.ca>
- <http://www.cheonet.org/healthhouse/chemicals/chemicals.asp>
- <http://npic.orst.edu/>
- <http://www.greenventure.on.ca/gv.asp?ID=89>
- www.cela.ca

17
