

## ROUNDUP AND THE ENVIRONMENT

Roundup has been found to be highly deadly to tadpoles when used in recommended concentrations, suggesting a possible cause for the decline in frog species world wide. Glyphosate containing products are acutely toxic to fish and have been shown to kill beneficial insects such as parasitic wasps, ladybirds, lacewings and predatory beetles, and to affect earthworms, beneficial fungi and soil bacteria. Various insects such as butterflies, whose larvae feed on weeds, can be affected by the loss of food sources due to herbicide use. Glyphosate has indirect impacts on birds, which depend on plants for shelter and food, and the insects which feed on them.

Some weeds, such as annual rye grass in Australia, are reported to be developing natural resistance to glyphosate, making the herbicide ineffective.

## THE INTERNATIONAL AND LOCAL SITUATION

In the USA and Canada growing numbers of local government authorities have stopped using herbicides in street maintenance and have even placed local bans and other restrictions on the private use of pesticides and herbicides. Some governments have developed education campaigns on the health problems associated with herbicides. In the USA at least a dozen states have introduced pesticide legislation requiring prior public notification of commercial pesticide and herbicide applications. The Danish government is considering restrictions on Roundup after it was found to be contaminating groundwater used for drinking. The City of Auckland, New Zealand, only uses herbicide when no alternative is available. In Western Australia the Cities of Fremantle and Nedlands have stopped using herbicide routinely in street maintenance due to residents' health concerns but most local governments in Australia simply ignore the problem.

## MORE INFORMATION

Residents Organising Against Roundup has recently formed in SA and is already active in NSW.

Glyphosate Fact Sheet Part 1 & 2.

<http://www.mindfully.org/Pesticide/Roundup-Glyphosate-Factsheet-Cox.htm>

Ontario College of Family Physicians Pesticide Review

<http://www.ocfp.on.ca/English/OCFP/Communications/CurrentIssues/Pesticides/default.asp?s=1>

Our Stolen Future: Exposure early in life to herbicides and pesticides.

<http://www.ourstolenfuture.org/NewScience/oncompounds/pesticides/2003/2003-1214salametel.htm>

Beyond Pesticides <http://www.beyondpesticides.org/lawn/activist/index.htm>

# PUBLIC HEALTH ALERT

## RESIDENTS ORGANISING AGAINST ROUNDUP

*Raising Community Awareness of the Health Impacts of Roundup Herbicide*

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## WHAT IS ROUNDUP?

Roundup is a common herbicide used extensively by local governments to control weeds in our streets and parks. Many people use Roundup in their home gardens. The active ingredient in Roundup is called glyphosate but there are numerous different brands of herbicide containing glyphosate that are marketed under different names.

## HOW SAFE IS ROUNDUP

Monsanto, the original manufacturers of Roundup, claim that their product "poses no danger to human health when used according to label directions" and that "no special protective clothing or equipment is required when spraying Roundup". But can these safety claims be trusted?

## HEALTH PROBLEMS LINKED TO ROUNDUP

New research regarding Roundup and other glyphosate-based herbicides paints a very different picture from Monsanto's safety claims.

- **CANCER:** Long-term exposure to glyphosate significantly increases the risk for non-Hodgkin's lymphoma.
- **REPRODUCTIVE PROBLEMS:** Exposure to glyphosate has been linked to miscarriages, premature births, and difficulty getting pregnant when either the male or the female is exposed.
- **BIRTH DEFECTS:** Parental exposure to glyphosate has specifically been linked to birth defects.
- **ASTHMA IN CHILDREN:** Children exposed to herbicide before the age of 1 year are ten times more likely to get asthma.
- **SKIN DISEASES:** Glyphosate is classed as a skin irritant and can cause eczema and dermatitis.
- **MULTIPLE CHEMICAL SENSITIVITY:** MCS, or "allergy to the modern world", is a medical condition associated with chronic fatigue syndrome. People with MCS often report increased chemical sensitivity and severe allergy-type reactions following exposure to glyphosate herbicides.
- **NEURO-BEHAVIOURAL DISORDERS:** Conditions like attention deficit hyperactivity disorder (ADHD) have been linked to glyphosate.

## **GENERAL SYMPTOMS OF GLYPHOSATE EXPOSURE**

Although glyphosate is considered to be less toxic than most other herbicides, it is still a serious poison. Acute health problems following unintentional exposure to glyphosate include:

- Eye Irritation • Painful Eyes • Burning Eyes • Blurred Vision • Swollen Eyes, Face And Joints • Blisters • Skin Rash • Rapid Heartbeat • Heart Palpitations • High Blood Pressure • Chest Pains • Coughing • Headache
- Nausea • Facial Numbness • Burning Sensation On Skin • Itchy Skin
- Tingling Skin • Recurrent Eczema • Fatigue • Breathing Problems •

## **WHAT HAPPENS TO THE GLYPHOSATE WHEN IT IS SPRAYED AROUND OUR STREETS AND HOMES?**

Monsanto claims that Roundup “has no residual soil activity” is “completely biodegradable” and “sticks very tightly to the soil”. They also advise that “children and pets should be kept away from the sprayed area until the weeds are completely dry” but that “this is simply to avoid transferring Roundup from the treated weeds onto desirable plants”. But how accurate are these claims?

Glyphosate is considered by independent researchers to be a persistent environmental pollutant. Glyphosate residues have been found in lettuce, carrots and barley planted one year after glyphosate applications. Glyphosate can also evaporate from certain soils, with up to 80% of applied glyphosate evaporating within a two-hour period. The fact that glyphosate is both highly persistent and relatively mobile in soil increases its toxic potential. In addition, glyphosate is always used as a spray and the problem of spray-drift cannot be avoided no matter how carefully it is applied. Glyphosate can be detected in the urine of farm children who were present when it was mixed or sprayed. Due to their small size and immaturity children are at increased risk of damage from herbicides.

People with chemical sensitivity report severe reactions to minor spray-drift and glyphosate residues. Even walking in an area that has been sprayed several days earlier can make some people sick for weeks or months with allergy-type symptoms.

## **MONSANTO'S HISTORY OF DECEPTION**

Laboratories used to assess the safety of glyphosate have been associated with fraudulent practices. In 1991 allegations of falsified data by the US Environment Protection Agency resulted in criminal charges and multi-million dollar fines. In 1996 and 1998 Monsanto was successfully sued by the New York State Attorney General for “false and misleading” advertising regarding the human and environmental safety of Roundup.

## **MONSANTO'S DENIAL**

Monsanto denies recent independent research that found Roundup is associated with cancer, placental cell death, miscarriage, liver damage, genetic impairment, and delayed embryonic development. Based on their findings independent researchers have concluded that Roundup should be considered “a health concern by inhalation during spraying”.

## **PESTICIDE REFORMS**

The health problems described in this Public Health Alert brochure have been confirmed by medical research, including a comprehensive review of pesticide research by the Ontario College of Family Physicians. Doctors at the College are calling for urgent social and political action to reduce human exposure to all pesticides and herbicides.

Independent researchers are advising that there is now a wealth of evidence that should require glyphosate products to carry world-wide health warnings.

## **WHAT CAN YOU DO ABOUT ROUNDUP?**

In recent decades we have seen a number of situations where serious public health problems were ignored for too long by corporations and governments. Asbestos and tobacco are good examples, with many people being injured and killed by preventable lung disease.

Given this situation, you should take precautionary action to protect yourself and your family from Roundup. Here are some suggestions:

- Contact your local government and ask what they are doing to reduce or eliminate the use of Roundup in our streets and parks.
- Request that your home be placed on a no-spray register and that you be notified prior to any spraying in your area.
- Require your local government to immediately cease spraying herbicides in children’s play areas and reserves.
- Ask for prominent warning signs to be erected whenever herbicides are used in public areas and for pink dye to be added to the herbicide to clearly identify recently sprayed areas.
- Discuss the Roundup problem with your neighbours and explore creative solutions to maintain your local streets and parks without using herbicides.
- Avoid the use of Roundup in home gardening. Alternatives to chemical herbicides include steam machines, boiling water, vinegar, salt, mulching, hand weeding and improved garden design.
- Contact your local Member of Parliament to voice your concerns.
- Support ROAR and share your knowledge with others.