

# Garlon™ XRT

HERBICIDE

# Garlon™ RTU

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## WHAT ARE GARLON™ XRT HERBICIDE AND GARLON™ RTU HERBICIDE?

Garlon™ XRT and Garlon™ RTU are herbicides that professional vegetation managers use to control unwanted weeds, deciduous brush and trees along right of ways such as electrical power lines, roadsides and pipelines. They are important management tools in effective vegetation management programs.



## FREQUENTLY ASKED QUESTIONS

### Right of Way Vegetation: Control and Options

#### Why use Garlon™ XRT and Garlon™ RTU herbicides? Can't you just cut vegetation?

Mowing and trimming are important parts of any right of way maintenance program, but mechanical means alone do not provide a long-term sustainable solution for managing vegetation along right of ways. Mechanical control can reduce pollinator habitat, distribute weed seeds and cause some plant species to re-sprout rapidly resulting in increased density of the stand. In addition, flying debris and cutting equipment can be dangerous to animals, wildlife, work crews and surrounding property. Mechanical control also needs to be repeated frequently in order to maintain the right of way.

Selective application of Garlon™ XRT and Garlon™ RTU herbicides allows desirable species to flourish which increases biodiversity. It is less disruptive to the landscape and controls the entire plant so crews only need to visit the right of way for vegetation management once every two to four years. Integrated vegetation management programs use both mechanical and herbicide control strategies and are proven to be the most cost effective long-term vegetation management strategy.

### Why does vegetation along a right of way need to be controlled?

Safety is the major reason for managing vegetation along right of ways. Trees, brush and weeds along right of ways can create safety hazards.

For driver and passenger safety, vegetation cannot block traffic signs or roadside markers. It must not conceal guardrails or overtake road shoulders. Vegetation must not obstruct driver vision at intersections or block the line of sight around curves. Excessive vegetation also prevents proper drainage, which damages roadbeds by creating potholes and other hazards.

Trees growing into power lines can cause electrical power outages and make maintenance difficult and dangerous. Additionally, areas around utility substations and land beneath transmission towers require a vegetation-free zone to prevent fire hazards and ensure the transfer of electricity.

Railway companies need to control weeds along their right of ways to maintain the ballast. Weeds hold water around railway ties causing them to rot and increasing chances for derailment accidents. Sparks from the rails can also ignite weeds and brush growing too close to the ballast, which can create a fire hazard for neighbouring residents. Brush that obstructs motorists' views at railway crossings is especially dangerous; preventing their growth can help avert car/train accidents.

### Herbicides: Function and Application

#### How do herbicides work?

Herbicides interrupt or modify a biological process within the plant that leads to the plant being controlled. There are many different biological pathways within a plant and they can vary between species. Because of this, a herbicide can be considered "selective" – it will affect plants with certain biological pathways, but if a plant does not have that pathway, it will not be impacted. These pathways do not exist in other organisms either, including humans and animals. For this reason herbicides, when used according to the label, only affect the plants they are designed to control.

Garlon XRT and Garlon RTU's active ingredient works like a growth regulator found only in plants. It enters treated vegetation through leaves, stems and bark and uses the plant's own transportation system to move into the roots and leaves. It induces rapid growth, which disrupts food production and causes the plant to be controlled due to lack of nutrients. Applicators can selectively target the species of concern and leave the desirable species to continue growing.



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## Herbicide Regulation in Canada

### Who regulates the registration of herbicides in Canada?

Before a herbicide can be sold in Canada, it must be registered by the Pest Management Regulatory Agency (PMRA), a division of Health Canada. Pesticides are one of the most stringently regulated products in Canada. The PMRA employs over 350 scientists, including biologists, chemists, toxicologists, epidemiologists, plant pathologists, weed scientists and entomologists, for the sole purpose of evaluating pesticides. Before a pesticide can be approved for use in Canada, the PMRA requires that it undergoes a thorough scientific review and safety assessment to ensure it meets Health Canada's standards. Only those products that meet these strict health and environmental standards can be registered by the PMRA for use or sale in Canada. A herbicide product will not be registered in Canada unless a health and environmental assessment shows that no harm to human health and the environment will result when used according to the label.

### What is included in the PMRA's science-based risk assessment?

- An examination of all sources and routes (oral, dermal, inhalation) of potential exposure to a given pesticide, including exposure through diet, from drinking water and from contact with treated areas like lawns and gardens
  - An estimation of the amount of pesticides that people, including children, may come in contact with, both during and after a pesticide application
  - A human health risk assessment with a particular focus on vulnerable populations, including children; this considers the potential for a pesticide to cause adverse health effects such as cancer, birth defects and endocrine disruption and allows registration only for those pesticides with exposures well below levels that cause adverse effects
  - An assessment of the movement, persistence and transformation (fate) of a pesticide in the environment
  - An environmental risk assessment that considers risks to plants, birds, mammals, beneficial insects, aquatic organisms as well as fate in the environment
- A value assessment that considers the contribution of the product to pest management, as well as its health, safety and environmental benefits, and social and economic impact<sup>1</sup>. Registered products are re-evaluated regularly to ensure they continue to meet current high-level scientific safety standards. Health Canada also conducts regular investigations and inspections to ensure only registered products are used in Canada and that they are used according to label directions.

<sup>1</sup>[http://publications.gc.ca/collections/collection\\_2017/sc-hc/H110-2016-eng.pdf](http://publications.gc.ca/collections/collection_2017/sc-hc/H110-2016-eng.pdf)

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## Herbicides and Human Health

### What is the impact of Garlon™ XRT and Garlon™ RTU on human health?

Prior to registering a product, Health Canada – PMRA completes a human health risk assessment that focuses on vulnerable populations, including children and expecting mothers. The evaluation determines the potential for a pesticide to cause adverse health effects. Health Canada will not register a pesticide that is known to cause cancer or other illnesses<sup>2</sup>.

Garlon™ XRT and Garlon™ RTU, as with any pesticide registered in Canada, do not represent unacceptable risk to human health when used according to the label directions.

### What are the guidelines for entering an area treated with Garlon XRT and Garlon RTU?

Once the solution has dried, it is safe to enter the treated area.

### Can I eat berries that have been treated with Garlon XRT and Garlon RTU?

Garlon XRT and Garlon RTU are not registered for use on food crops, so due to the absence of supporting data, consumption of berries from treated areas in the year of application should be avoided. In the following years, berries may be harvested and eaten.

## Herbicide Safety and the Environment

### Bodies of water

Health Canada – PMRA completes a full assessment on potential effects of pesticides on aquatic organisms. As part of this evaluation Health Canada – PMRA analyzes worst case scenarios, including direct applications to water. Then they establish rules or restrictions to mitigate problems, if they exist, for each product such as buffer zones which is the distance between water and where the herbicide can be applied. When label directions for Garlon XRT and Garlon RTU are followed, there are no unacceptable risks for aquatic organisms or drinking water for human consumption.

### Plant consumption by animals

Health Canada – PMRA evaluates the amount of herbicide residue that would be present in grains and seeds, fruits, grass, and leaves to determine the amount an animal would be exposed to if they ate exclusively from the treated site. Garlon XRT and Garlon RTU do not represent a risk of concern to wildlife, domestic animals or pets when used according to the label.

### Pollinators

Bees, butterflies and hummingbirds are examples of pollinators that feed from flowers, transferring pollen in the process. Herbicides should not be confused with insecticides. Insecticides usually target the nervous system in insects, while herbicides target a specific pathway in plants. These target sites do not exist in pollinators, including bees. For this reason, Corteva Agriscience™ herbicides, including Garlon XRT and Garlon RTU, when used according to the label, do not pose an unacceptable risk to pollinators.

### Soil

Garlon XRT and Garlon RTU are broken down by naturally occurring soil microorganisms (fungi and bacteria), as well as sunlight. When the process is complete, the final products are carbon dioxide, water and other organic materials. How quickly the product breaks down depends on rainfall and soil temperature. The time required to break down 50 percent of the active ingredient is approximately 30 days.

### Nearby ornamentals and gardens

Garlon XRT and Garlon RTU have the potential to harm any woody or broadleaf plant that comes in direct contact with the product solution. Therefore, applicators take great care to apply Garlon XRT and Garlon RTU only to targeted vegetation specified by the vegetation manager. Garlon XRT and Garlon RTU will not harm grasses.

Crews use extra caution to protect your ornamentals or gardens by leaving an untreated buffer zone which adds an extra measure of protection. The basal application technique is highly unlikely to cause damage to ornamentals or gardens. When making foliar applications, crews monitor wind speed and direction to ensure accuracy.

<sup>1</sup> [http://publications.gc.ca/collections/collection\\_2017/sc-hc/H110-2016-eng.pdf](http://publications.gc.ca/collections/collection_2017/sc-hc/H110-2016-eng.pdf)

<sup>2</sup> <https://www.canada.ca/en/health-canada/services/about-pesticides/are-pesticides-safe.html?wbdisable=true>