

ClearView™

HERBICIDE

WHAT IS CLEARVIEW™ HERBICIDE?

ClearView is a herbicide professional vegetation managers use to control unwanted weeds and small brush along right of ways such as electrical power lines, roadsides, pipelines, and oil and gas sites. It is an important tool in an effective vegetation management program.



ClearView™ Frequently Asked Questions



RIGHT OF WAY VEGETATION: CONTROL AND OPTIONS

Why use ClearView™? Can't you just cut the 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 ClearView herbicide 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 safest, most cost effective long-term vegetation management strategy.

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

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, 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 growth can help avert car/train accidents.

Invasive species growth and spread can negatively affect biodiversity. Controlling these invasive plants allows natural species to flourish and contributes to a safe and diverse environment for wildlife, pollinators, beneficial species and the public.

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.

Frequently Asked Questions

ClearView™'s active ingredients disrupt a growth regulator as well as impede an enzyme function only found in plants. It enters treated vegetation through leaves 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. ClearView also prevents the function of an enzyme, found only in plants, responsible for amino acid synthesis. Applicators can selectively target the species of concern and leave the desirable species to continue growing.

The Pest Management Regulatory Agency (PMRA), a division of Health Canada, regulates label claims. It is necessary for a manufacturer to demonstrate with scientific studies that the formulated product controls or suppresses the weeds written on the label. A control claim means the weed is no longer viable and any new weeds emerging are a result of weed seeds germinating post herbicide application.

Who applies ClearView?

Trained, professional applicators apply ClearView in designated areas using approved application techniques. Every province enforces strict standards requiring applicators to be certified. Applicators follow directions on the product label, which is reviewed by the PMRA.

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 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 from its use.

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 impact¹

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.

HERBICIDES AND HUMAN HEALTH

What is the impact of ClearView 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 illnesses².

ClearView, as with any pesticide registered in Canada, does not represent unacceptable risk to human health when used according to the label directions.

What are the guidelines for entering an area treated with ClearView?

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

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 ClearView™ 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. ClearView does 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, when ClearView is used according to the label, it does not pose an unacceptable risk to pollinators.

Soil

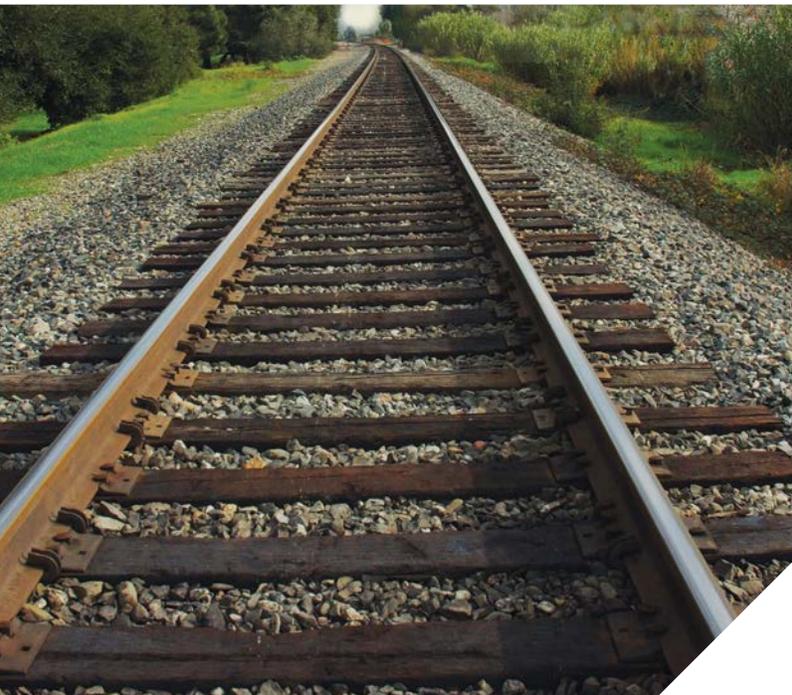
ClearView is broken down by naturally occurring soil microorganisms (fungi and bacteria), as well as sunlight. When the process is complete, the final products are carbon dioxide, water and other organic materials. How quickly the product breaks down depends on rainfall and soil temperature.

Nearby ornamentals and gardens

ClearView has 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 ClearView only to targeted vegetation. ClearView will not harm grasses when applied according to label directions.

Applicators use extra caution to protect your ornamentals or garden by leaving an untreated buffer zone which adds an extra measure of protection. A selective spot application is highly unlikely to cause damage to ornamentals or gardens. When making foliar applications, applicators monitor wind speed and direction to ensure accuracy.

Questions? Visit us at ivm.corteva.ca to find your Corteva Agriscience™ IVM Expert.



¹ http://publications.gc.ca/collections/collection_2017/sc-hc/H110-2016-eng.pdf

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