Truvist herbicide

Noxious Weed Control

Town of Blue Mountains
Agricultural Advisory Committee
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Eastern Canada
Our mission

Bayer: Science for a better life
Agenda

// What is Vegetation Management?
// What is a Noxious Weed?
// The Noxious Weed Act in Ontario.
// Wild Chervil – Noxious weed rationale.
// Truvist Overview
  // Product and label review
  // How it works.
  // Environmental Fate/Human health
  // Transition to Navius FLEX
What is Vegetation Management?

// The control of unwanted vegetation from a specific site (hydro sub-station, railway ballast) or a Right-of-Way (ROW) such as a power utility corridor, pipeline or roadside.

// To protect the public and worker safety

// Protect agriculture, livestock and values

// Prevent water retention, reduce fire hazards

// Facilitate snow removal

// Ensure brush etc. does not interfere with powerlines

// Reduction of property value due to unmanaged weeds
Vegetation Management applications
Herbicides can be used for a variety of settings and applications.

// Bare Ground
// Brush
// Selective
// Noxious Weed Control
// Aquatic
What is a Noxious Weed?

// A noxious weed is defined under the Weed Control Act as:

// Difficult to manage on agricultural land once established and will reduce the yield and quality of the crop being grown; for example, thistles, wild carrots, or coltsfoot; or vector diseases Common barberry or European buckthorn.

// Negatively affects the health and well-being of livestock or pets; for example dodder, leafy spurge, or poison hemlock, or

// Posing a risk to the health and well-being of agricultural workers or public in general; for example ragweed for pollen allergies, poison ivy for skin irritation, and more serious reactions that can lead to blindness or death from wild parsnips or poison hemlock.
What is the Noxious Weed Act in Ontario?

// The intent of the Weed Control Act is to reduce:

// The infestation of noxious weeds that negatively impact on agriculture and horticulture lands including new invasive species such as Wild Parsnip and Wild Chervil

// Plant diseases by eliminating plant disease hosts such as common barberry and European buckthorn.

// Health hazards to livestock and agricultural workers caused by poisonous plants such as poison ivy, wild parsnip or giant hogweed.

// Municipalities and homeowners are obligated to control these weeds.

// Noxious weeds cannot be controlled adequately through methods such as mowing—they must be removed /killed to prevent further spreading and reducing potential hazardous effects.
Enforcement of the Noxious Weed Act

Weed Control Act, R.S.O. 1990 c. W5

// Duty to destroy noxious weeds
   // “Every person in possession of land shall destroy all noxious weeds on it”

// Road authorities deemed in possession of roads
   // Every road authority within the meaning of the Public Transportation and Highways Improvement Act shall be deemed to be the person in possession of the land under its jurisdiction.

// Weed inspectors duty to enforce the Act.
   // Power of the inspectors – may at any time enter upon any land and buildings to inspect the land, buildings, machinery, vehicles and crops or other plants.
   // Order for the destruction of weeds (at least 7 days from date of issue).
Noxious Weeds in Ontario – effective Jan 2015

- Black Dog-Strangling Vine
- Bull Thistle and Canada Thistle
- Coltsfoot
- Common Barberry
- Common Crupina
- Cypress Spurge
- Dodder
- Dog-Strangling Vine
- European Buckthorn
- Giant Hogweed
- Jointed Goatgrass
- Knapweed
- Kudzu
- Leafy Spurge
- Poison Hemlock
- Poison Ivy
- Ragweed
- Smooth Bedstra
- SowThistle
- Tansy Ragwort
- Wild Chervil
- Wild Parsnip
Herbicides 101

The Basics

// **A herbicide is a pesticide used to control unwanted plants or trees.**

// Herbicides are designed to control plants and trees by interfering with the growth of the plant.

// **Non-selective.**

// Non-selective herbicides control or suppress plants regardless of species.

// **Selective.**

// A selective herbicide controls or suppresses some plant species without seriously affecting the growth of another plant or grass species.

// Ensures health of grass.
Wild Parsnip – Very Dangerous to Humans, and Animals
Noxious Weed Control
Truvist @ 168g/ha – 1YAT - Low Volume Foliar (LVF) – Thunder Bay, ON
Phragmites in Ontario

Drainage spraying

Cattail and Phragmites.

Ensure drainage.
Wild Chervil – Anthrisus sylvestris

Background

Wild chervil is a herbaceous biennial or short-lived perennial from the parsley family, introduced to North America from Europe. It was first brought to North America as part of European wildflower seed mix used for plantings along hedgerows and meadows.

Wild chervil has few checks on its population in North America and can quickly take over an area, displacing native species and forming dense stands that are difficult to control.
Wild Chervil – What’s the problem?

// An aggressive competitor, with broad leaves that shade out surrounding vegetation and limit water and nutrients for other plants.

// When mature, it forms tall dense vegetation stands that are unpalatable to livestock.

// Produces large amounts of seeds that are easily spread by people, animals and the wind.

// Difficult to control due to resistance to certain herbicides and a deep root system.

// Host to the plant disease yellow fleck virus, which can impact species in the carrot and parsnip family.
Truvist Overview
Superior Broadleaf Weed Control

// Aminocyclopyrachlor 39.5 % + Chlorosulfuron 15.8 %

// 2 Modes of Action for effective resistance management

// Proven broad-spectrum broadleaf weed control on the toughest weeds such as Kochia, Field Horsetail, Wild Parsnip etc.

// Easy to use, low odour, dry formulation

// Extremely low use rate per/ha (168g)

// Excellent TVC tank mix partner with Glyphosate and/or Esplanade.

// PCP# 30920
Over 50 species controlled, including:

- Key Species – Wild Parsnip, Wild Chervil, Field Horsetail, Kochia, Knapweed, etc.

<table>
<thead>
<tr>
<th>Weeds controlled include:</th>
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<tbody>
<tr>
<td>• Buttercup (tall, bulbous, small-flowered hairy)</td>
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<tr>
<td>• Dandelion</td>
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<tr>
<td>• Field bindweed</td>
</tr>
<tr>
<td>• Field Horsetail</td>
</tr>
<tr>
<td>• Giant hogweed</td>
</tr>
<tr>
<td>• Goldenrod (Canada, common)</td>
</tr>
<tr>
<td>• Hawkweed (orange, yellow)</td>
</tr>
<tr>
<td>• Knapweed (diffuse, spotted)</td>
</tr>
<tr>
<td>• Kochia (including Group 2-resistant)</td>
</tr>
<tr>
<td>• Ox-eye daisy</td>
</tr>
<tr>
<td>• Plantain species</td>
</tr>
<tr>
<td>• Poison ivy</td>
</tr>
<tr>
<td>• Prickly lettuce</td>
</tr>
<tr>
<td>• Ragweed (common, western and giant)</td>
</tr>
<tr>
<td>• Thistle (Canada, nodding, Russian, annual and perennial sow)</td>
</tr>
<tr>
<td>• Wild carrot</td>
</tr>
<tr>
<td>• Wild chervil</td>
</tr>
<tr>
<td>• Wild parsnip</td>
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Superior Broadleaf Weed Control

**SITES:** Industrial Non-Crop Areas

**TIMING:** For best results, apply to young, actively growing weeds. Thorough coverage of target weeds is essential.

**APPLICATION RATE:**

<table>
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<tr>
<th>Truvist™ Herbicide</th>
<th>168 grams/hectare</th>
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Adjuvants:

| Non-Ionic surfactant OR | 0.25% v/v |

Roadside truck rate – approx. 200-300L/ha total solution

Backpack (spot spray) – typically less liters per/ha
**Application- buffer zones**

Always read and follow label instructions carefully.

<table>
<thead>
<tr>
<th>Buffer Zones (metres)</th>
<th>Required for the Protection of:</th>
<th>Terrestrial habitat (m)</th>
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<tbody>
<tr>
<td>Freshwater Habitat of Depths:</td>
<td></td>
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<tr>
<td>Less than 1 m</td>
<td>Greater than 1 m</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>25</td>
</tr>
</tbody>
</table>

- Buffer zones for the protection of terrestrial habitats are not required for use on rights-of-way.
- Buffer zones can be reduced with the use of drift reducing spray shields.
- Hand-held or backpack sprayer and spot treatments DO NOT require buffers.
Application

Always read and follow label instructions carefully.

- No respirator is required for mixing or application of Truvist™ Herbicide.
- Wear chemical resistant gloves, long-sleeved shirt, long pants, shoes and socks during mixing/loading, application, clean-up and repair activities (gloves are not required for ground boom sprayers).
- Rain-fast at 4 hours after application.
- Worker re-entry: once sprays have dried.
- No daily application limit.
- A maximum of one application of Truvist Herbicide may be made per year.
Truvist: Biological Activity

// Mode of action: Auxinic – controls only broadleaf plants (Group 4).

// Aminocyclopyrachlor stops the growth of plants by interfering with the hormonal balance necessary for normal shoot and root development. The herbicide has unique features acting via a distinctive mechanism that targets a family of auxin receptor complexes.

// Systemic: Translocation through Xylem/ Phloem

// Absorption: Leaves, Roots, Bark and Cambium: quickly taken up by leaves, stems, roots

Canada Thistle 35 DAA with Truvist™
Truvist: Environmental Fate

// Aminocyclopyrachlor is soluble in water and therefore it is not likely to volatize under field conditions.

// Volatility – tendency of a substance to vaporize.

// Not expected to bio-accumulate.

// ½ life in the soil – 176 days (field study in Ontario)

// No significant carry-over of ACP to the following growing season is expected.
Truvist: Human health

// Low acute oral and dermal toxicity (LD50 > 5,000 mg/kg)
// LD50 = median lethal dose, or dose at which half of the members of a population are killed.
// LD50's for RATS of some other substances:
// Table salt: 3000 mg/kg  Caffeine: 192 mg/kg  Nicotine: 50mg/kg
// Low acute inhalation toxicity (LC50 > 5.11 mg/L)
// Minimally irritating to skin and eyes
// Not a skin sensitizer
Truvist: Key Points on Use

// Truvist herbicide helps treat/control certain invasive and noxious weed infestations in Ontario such as ragweed, wild chervil, giant hogweed, wild parsnip and poison ivy.

// Most noxious weeds in Ontario are perennials and patchy in nature. Treatment of these weeds using Truvist provides good control of invasive and noxious weeds, while maintaining grassy plants that will provide ground cover and competition to the weeds.

// This herbicide is quickly taken up by the leaves, stems and roots of plants and does not bio-accumulate in soil. It is degraded in the soil by micro-organisms.

// The label use instructions ensure buffer zone restrictions to protect sensitive areas such as grasslands, forests, lakes, rivers, creeks and wetlands; therefore, there should not be any concern in regards to leeching into waterways/groundwater.
New Innovation in 2020

Coming in 2020
Transitioning to Navius FLEX

Available until the end of 2020

Available in the spring of 2020.
Bayer is excited to announce the launch of **Navius FLEX** in 2020.

**Navius FLEX** – same trusted ingredients as Navius *(Aminocyclopyrachlor 39.5% + Metsulfuron-methyl 12.6%)*.

4 additional weeds submitted to PMRA for addition to the Navius FLEX label including: wild parsnip, wild chervil, dog strangling vine, and poison ivy.

Over 45 broadleaf weed species on the label

1 flexible product for all brush and weed control.

Navius FLEX will be available summer of 2020
Questions?

Thank You

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