2025 Corteva Forestry

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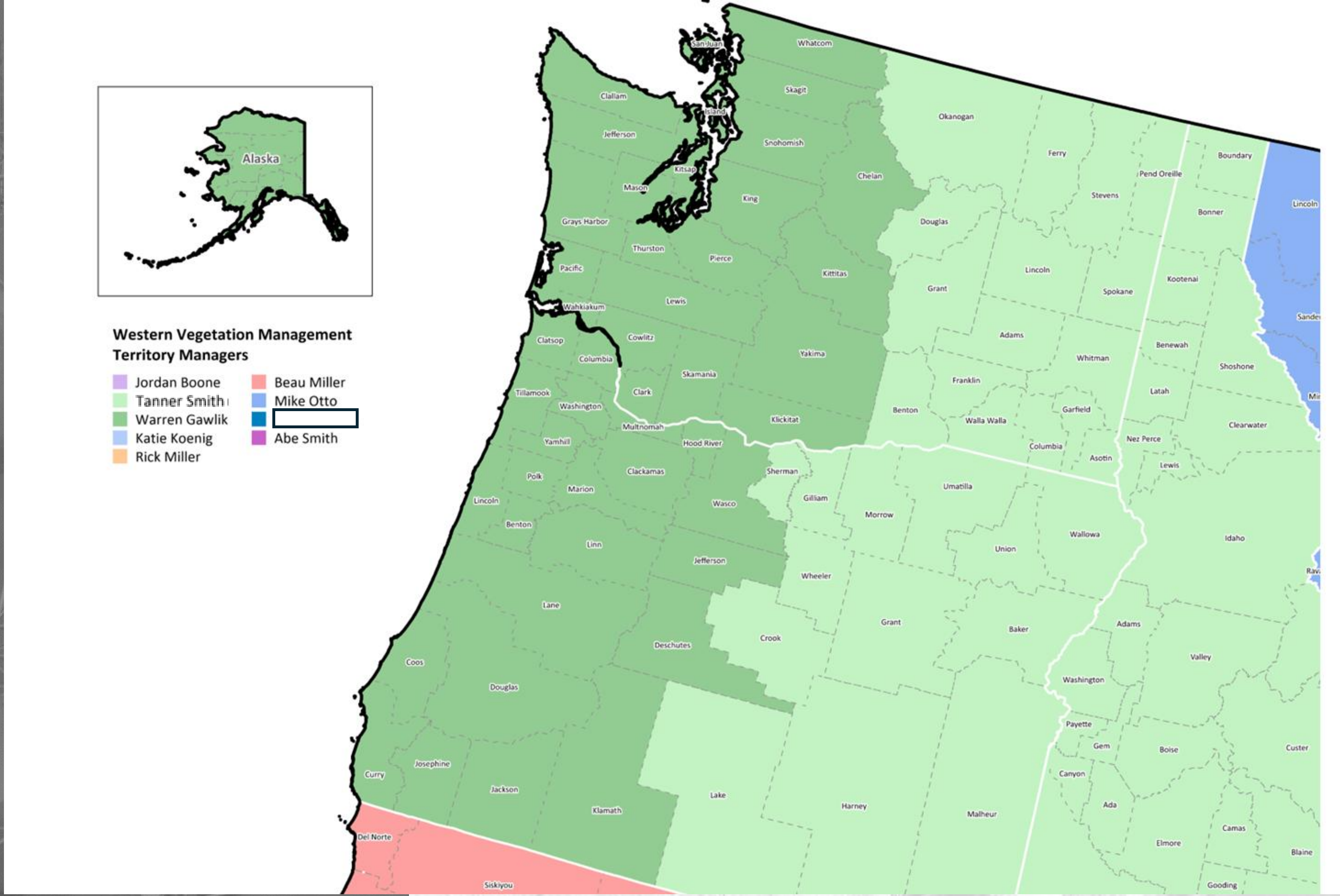
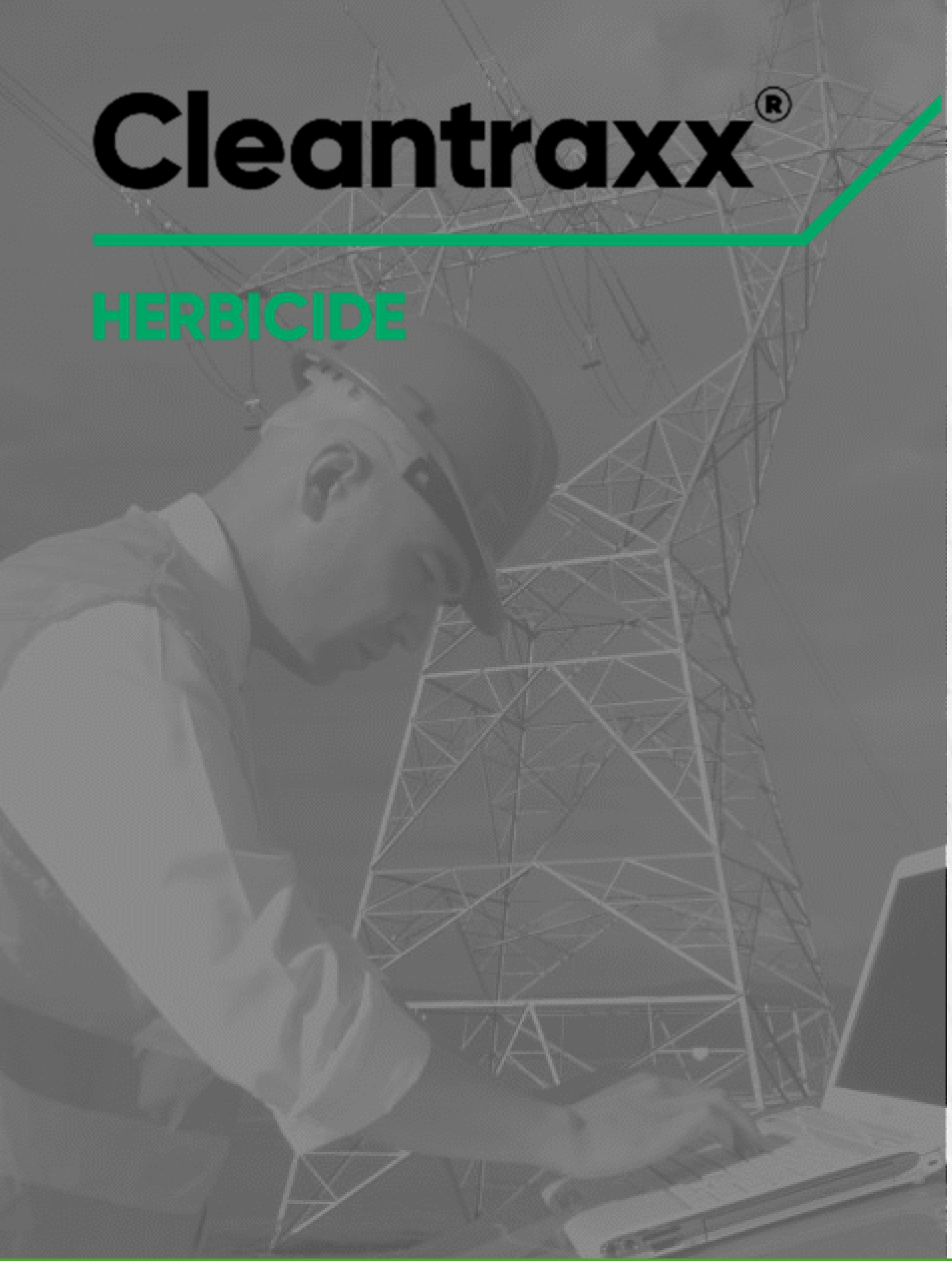
Vegetation Management


Alaska
Western Vegetation Management
Territory Managers
Jordan Boone
Tanner Smith
Warren Gawlik
Katie Koenig
Rick Miller
Beau Miller
Mike Otto
Abe Smith
Whatcom
San Juan
Skagit
Island
Clallam
Jefferson
Snohomish
Kitsap
Mason
Chelan
King
Okanogan
Ferry
Stevens
Pend Oreille
Boundary
Bonner
Lincoln
Grays Harbor
Thurston
Pierce
Pacific
Kittitas
Douglas
Grant
Lincoln
Spokane
Kootenai
Wahkiakum
Lewis
Cowlitz
Clatsop
Columbia
Skamania
Yakima
Adams
Whitman
Benewah
Shoshone
Tillamook
Washington
Clark
Multnomah
Hood River
Klickitat
Benton
Franklin
Walla Walla
Garfield
Columbia
Asotin
Latah
Nez Perce
Lewis
Clearwater
Yamhill
Polk
Marion
Clackamas
Sherman
Gilliam
Morrow
Umatilla
Union
Wallowa
Lincoln
Benton
Linn
Wasco
Jefferson
Wheeler
Idaho
Lane
Crook
Grant
Baker
Adams
Valley
Deschutes
Washington
Coos
Douglas
Payette
Gem
Boise
Custer
Canyon
Ada
Curry
Josephine
Jackson
Klamath
Lake
Harney
Malheur
Camas
Elmore
Blaine
Gooding
Del Norte
Siskiyou

AGENDA

- Intro
- Product Reviews
  - Cleantraxx®
  - Transline ®
  - Opensight ®
  - Triclopyr Product Options
  - Freelex
- Corteva Resources



Cleantraxx®
HERBICIDE

Cleantraxx® herbicide is an SC formulation containing:

- Penoxsulam – 0.083 lb/gallon, an ALS inhibitor (Group 2) herbicide with broad spectrum weed control.
- Oxyfluorfen – 3.96 lb/gallon, a PPO inhibitor (Group 14) herbicide, a long time standard for broad spectrum weed control.

Cleantraxx®

HERBICIDE

Site Prep & Release

- Conifer Safety – Excellent conifer safety when applied both pre-bud break to early post-bud break.
- **Douglas-Fir, Ponderosa Pine, Redwoods, and Western Larch** plus hexazinone intolerant species such as **Sugar Pine, Incense Cedar and White Fir.**
- Broad Spectrum Weed Control – Over 50 broadleaf, grass, and brush species, including **False Dandelion, Woodland Groundsel (Senecio),** and **Ceonothus. (SLN)**

Cleantraxx®
HERBICIDE

Sec 24c SLN

- Labeled for forestry use as a Special Local Needs (SLN) label.
  - ✓ OR
  - ✓ WA
  - ✓ CA
  - ✓ ID

Cleantraxx Best Results

Cleantraxx® HERBICIDE

Best results are obtained using Cleantraxx® herbicide at 3-4.5 pints/acre with a rain event of 0.5” within 21 days after application.

- Keep product agitated, keep from freezing, and avoid use in temperatures close to freezing.
- Use with a post-emergence herbicide tank mix partner
- Use paint stirrer prior to tank mixing to ensure homogeneity
- Product produced within 2 years or less is best
- Follow proper mixing order (WALES)
- **MIX AND SPRAY SAME DAY!**

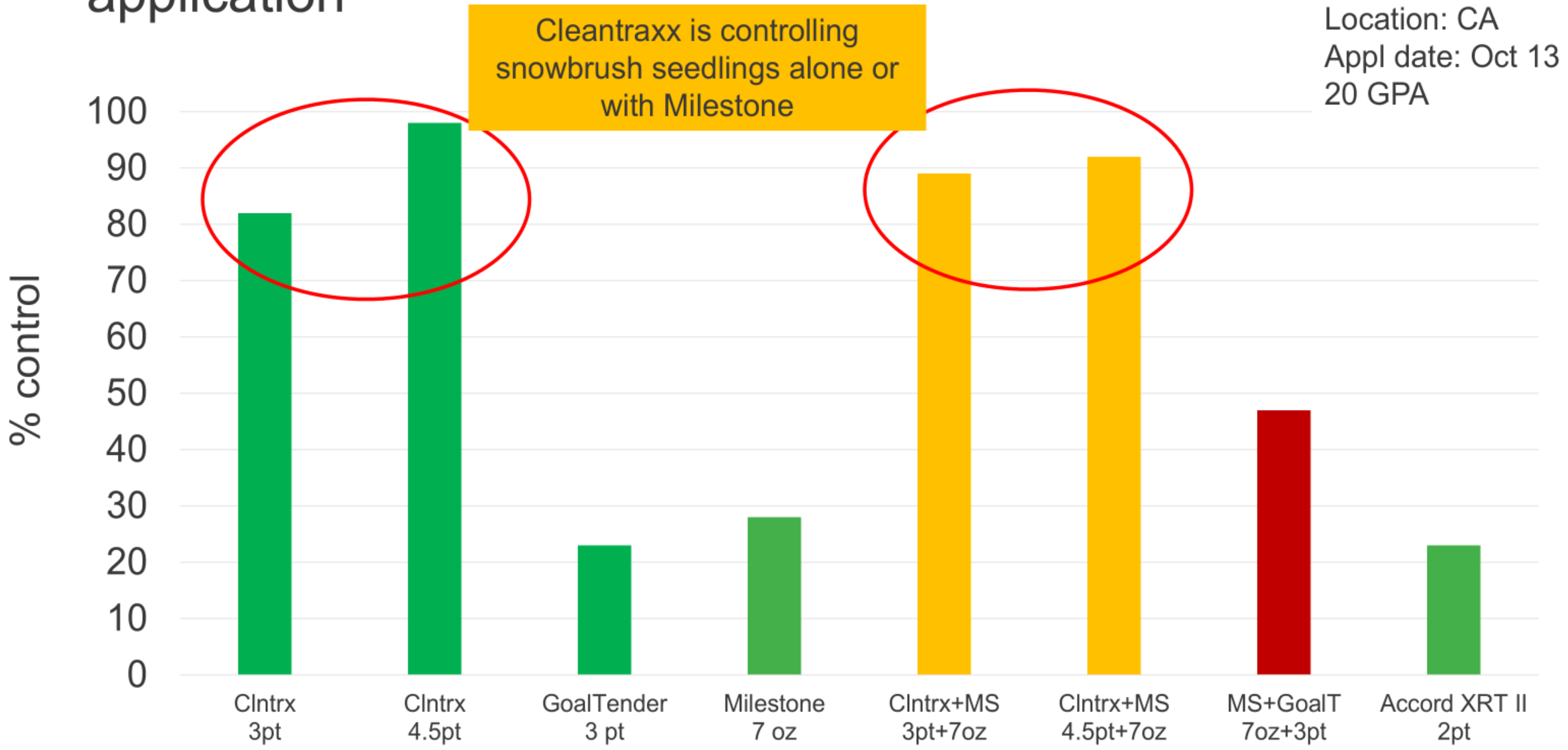
Woody Brush Seedlings[1] controlled by Cleantraxx® with pre-emergence applications

Cleantraxx®
HERBICIDE

Common Name	Scientific Name
Deerbrush	Ceanothus Integerrimus
Snowbrush	Ceanothus Integerrimus
Squaw Carpet	Ceanothus Prostratus

[1] When applied pre-emergence to woody brush seedlings, Cleantraxx® herbicide will control germinating seedlings of woody brush, but it will not control re-sprouting from crowns of woody brush.

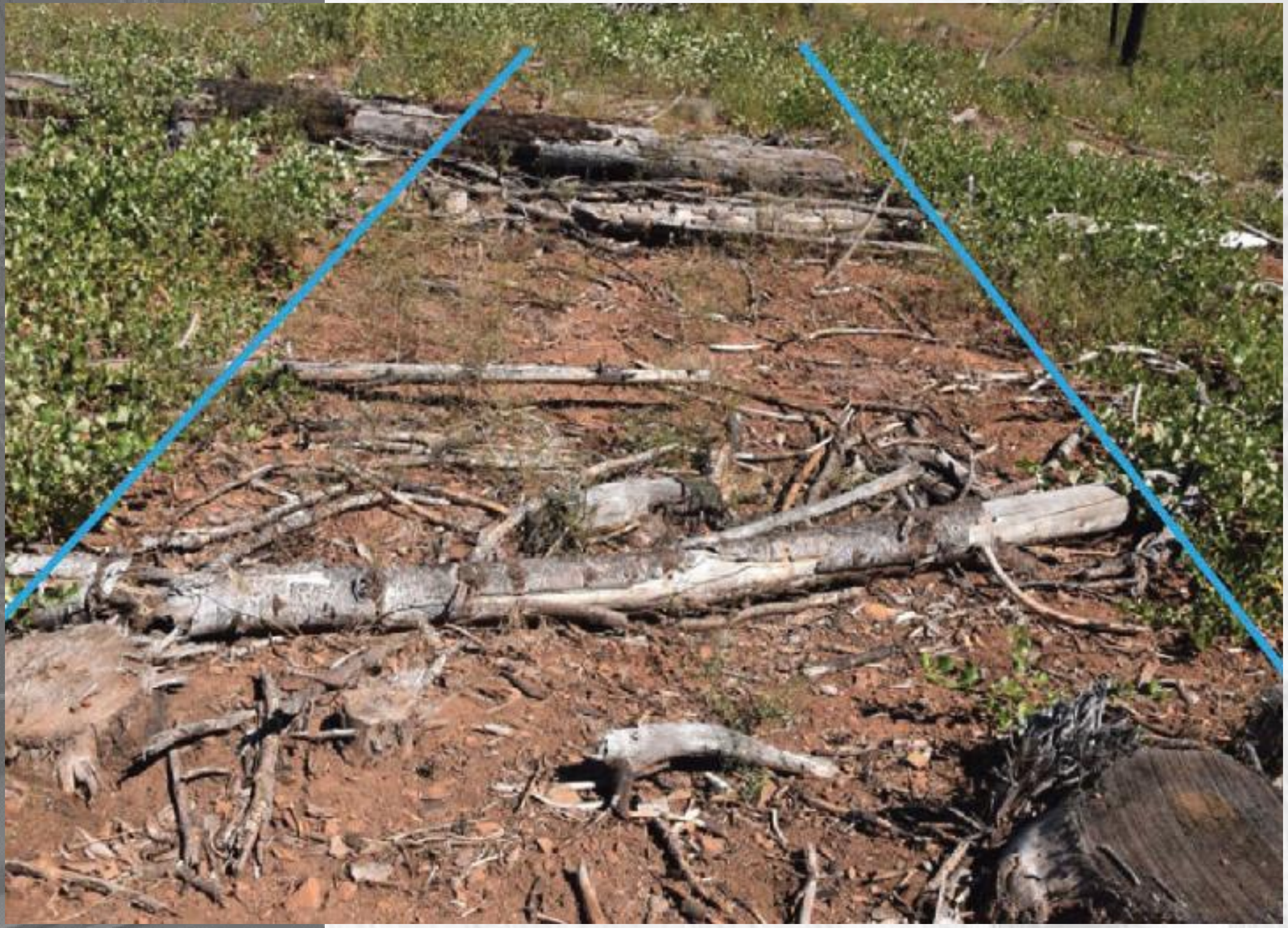
Snowbrush seedling control at 2 years after an October application



NOTE: Accord XRT II added to all treatments at 2

Cleantraxx®
HERBICIDE

Snowbrush Ceanothus seedling control approximately 2 years after fall application with Cleantraxx® + Milestone® at 3 pt + 7 fl oz/A



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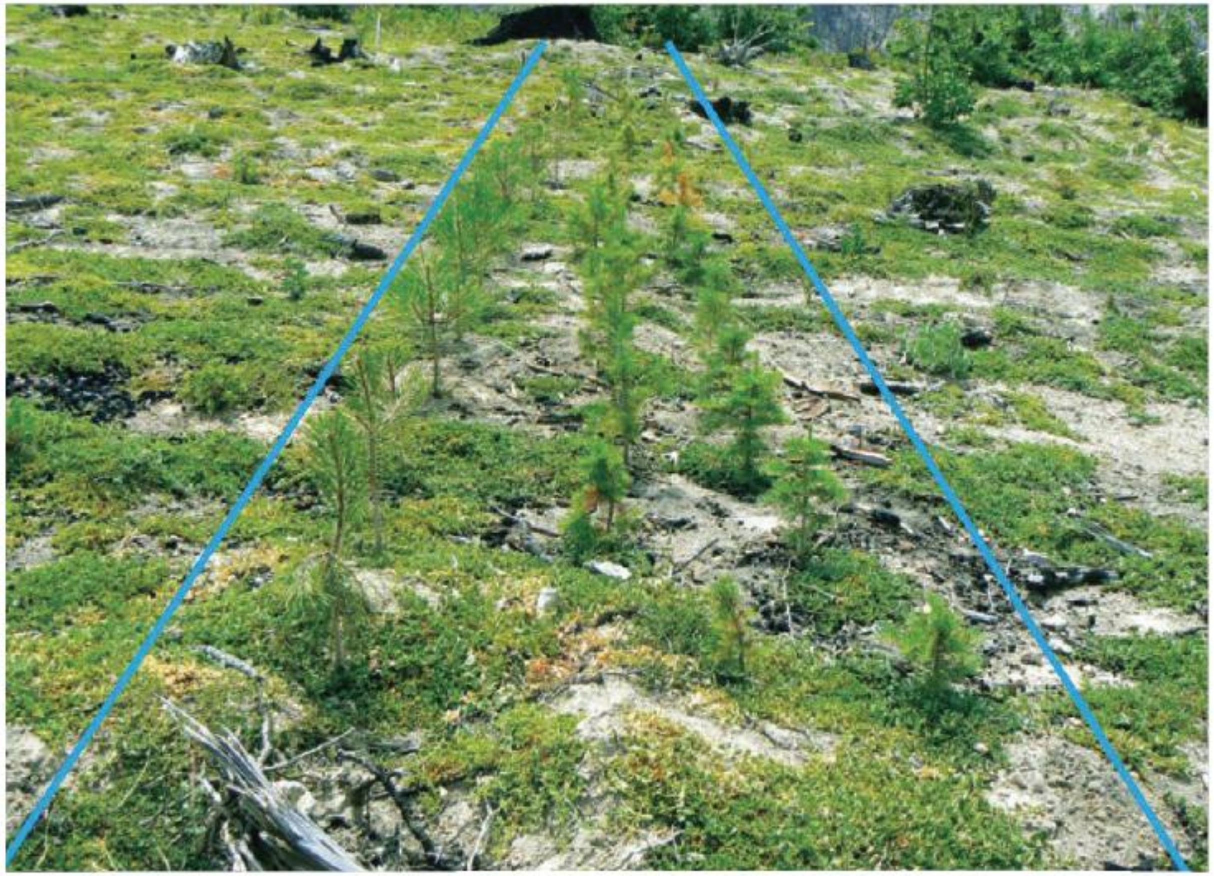
Vegetation Management

Visit us at **vegetationmgmt.com**

Squaw Carpet control with Cleantraxx® at 3 pints/acre applied pre-emergence in spring (Photo taken approximately 1-YR after treatment)

Cleantraxx®
HERBICIDE



Incense Cedar, Sugar Pine, and Ponderosa Pine at 1 year after treatment with Cleantraxx® at 3 pints/acre applied post bud break (2-3 inches of new growth).
No herbicide symptoms observed, trees growing normally

Cleantraxx®
HERBICIDE

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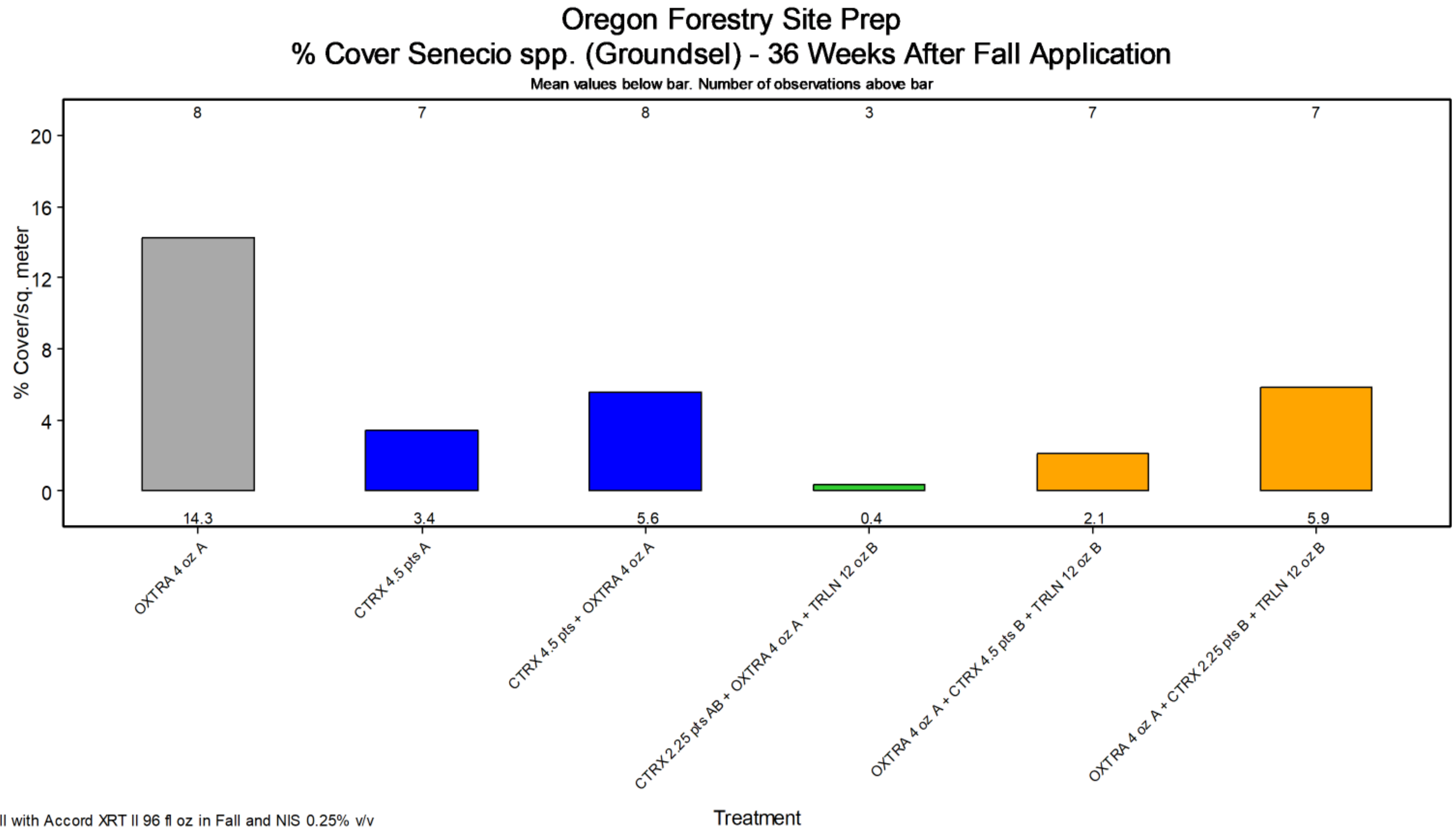
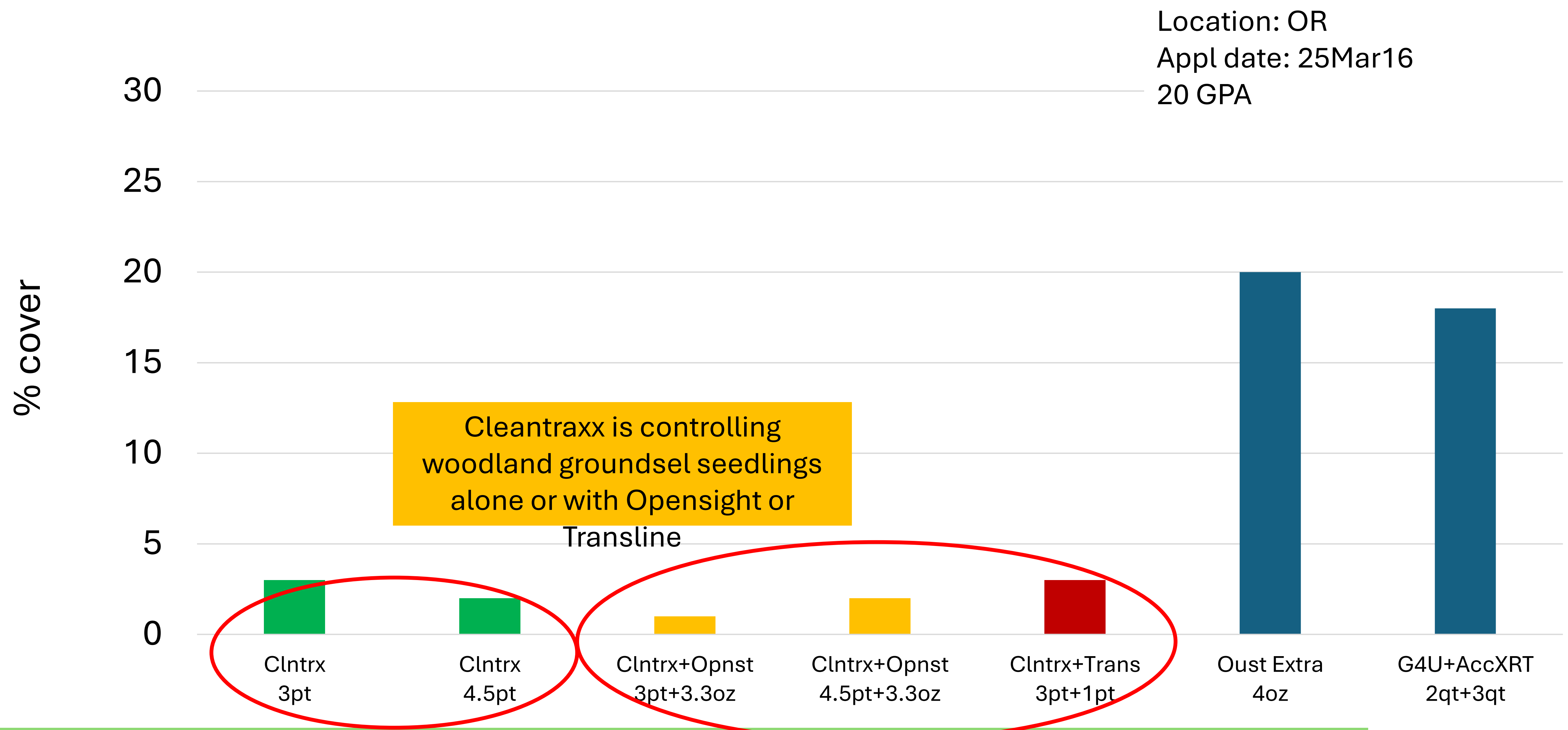


All with Accord XRT II 96 fl oz in Fall and NIS 0.25% v/v

Woodland groundsel **cover** at 20 weeks after a spring application



NOTE: MSO + Garlon 4 Ultra + Accord XRT II at 1% + 2 qt + 3 qt/A (to burndown standing Scotch broom established plants) added to all treatments, except Garlon 4 + Accord XRT II

Cleantraxx™ (left) and Garlon 4 Ultra + Accord XRT II (right) at Silver Butte, OR – March application, August photo

- Yellow line is the center of the plot

Transline® herbicide is an SC formulation containing:

Clopyralid – 3 lb/gallon, an Auxin (Group 4) herbicide with broad spectrum weed control.

Transline®

HERBICIDE

Site Prep & Release

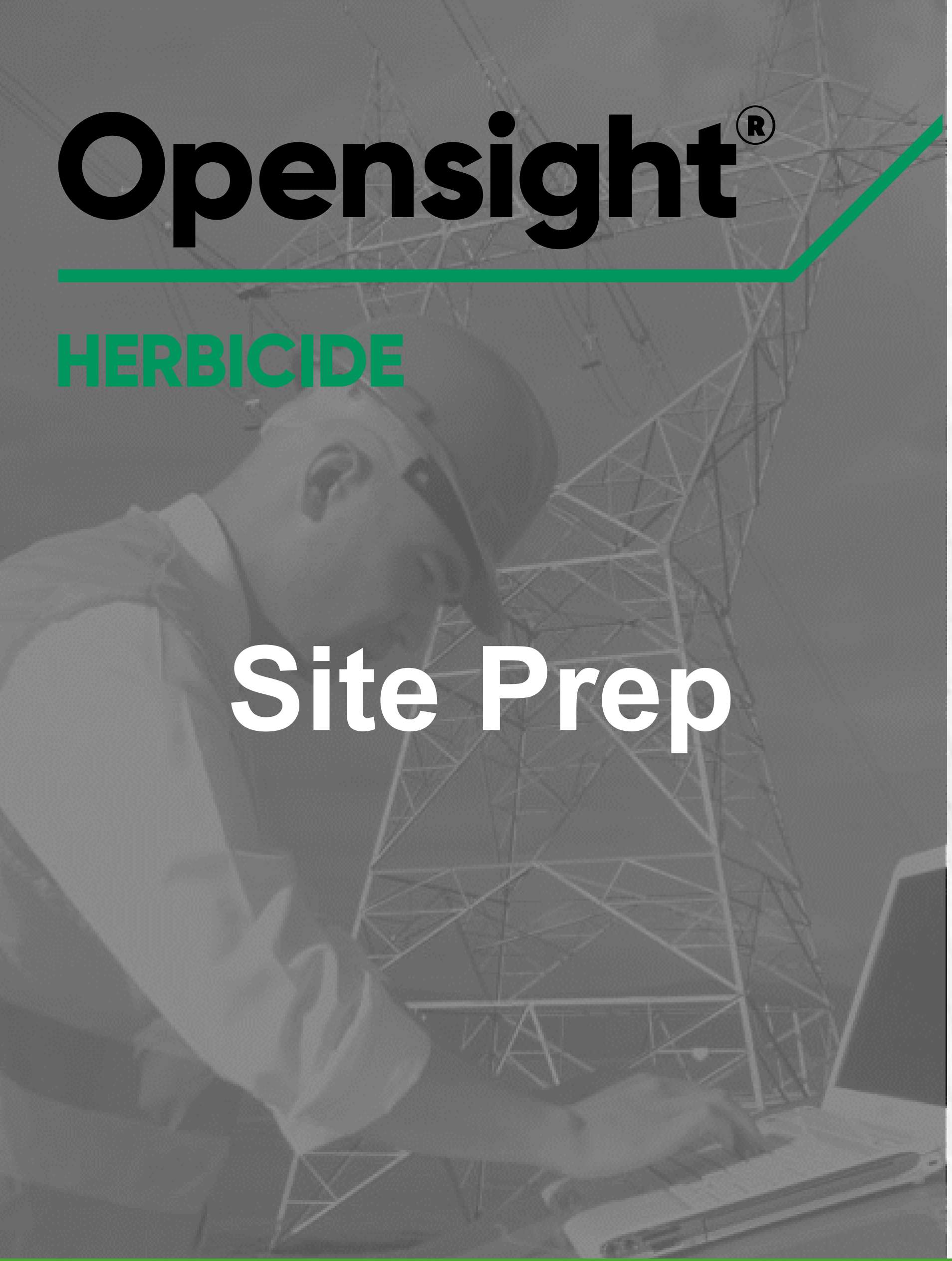
- ✓ Broad Spectrum Weed Control – Over 50 broadleaf weeds and woody brush species, including Elderberry, Knapweeds, and Thistles
- ✓ Site Prep or Release
- ✓ Post emergence control with some residual control
- ✓ Conifer Safety – Excellent conifer safety when applied anytime during the season.
- ✓ Best results are obtained using Transline® herbicide at 12-20 oz/A.

Transline® HERBICIDE

Tree Tolerance

✓ Examples of Tolerant Tree Species

Alder
Balsam Fir
Black Walnut
Blue Spruce
Bur Oak
Cherry
Cherry Bark Oak
Choke Cherry
Cottonwood
Crabapple
Douglas-Fir
Eastern Red Cedar
European Larch
Fraser Fir
Grand Fir
Green Ash
Hackberry
Hickory
Hybrid Aspen
Hybrid Poplar
Incense Cedar
Loblolly Pine
Lodgepole Pine
Longleaf Pine
Noble Fir
Norway Spruce
Pacific Silver Fir
Ponderosa Pine
Red Oak
Red Pine
Russian Olive
Sawtooth Oak
Scotch Pine
Slash Pine
Shortleaf Pine
Sugar Maple
Sumac
Sycamore
Western Red Cedar
Western Hemlock
White Ash
White Pine
White Spruce
White Oak



- Water Dispersible Granule (WDG)
  - Aminopyralid + Metsulfuron Methyl
  - Auxin (Group 4) + ALS (Group 2)
  - Pre and Post-emergence activity
  - Very photostable

- Control over **170** broadleaf weeds, woody plants and some annual grasses.

- Good control of scotch broom germinates

- Use Rate: 2 – 3.3 oz/A

- 24c SLN – For control of **Scotch Broom**, **Thistles**, Hawkweed and other weeds in Forest Plantations.
  - ✓ ID
  - ✓ WA
  - ✓ OR

- **Forest Site Prep** and Directed / Spot Spray
  - Avoid spray contact with foliage and root zone.

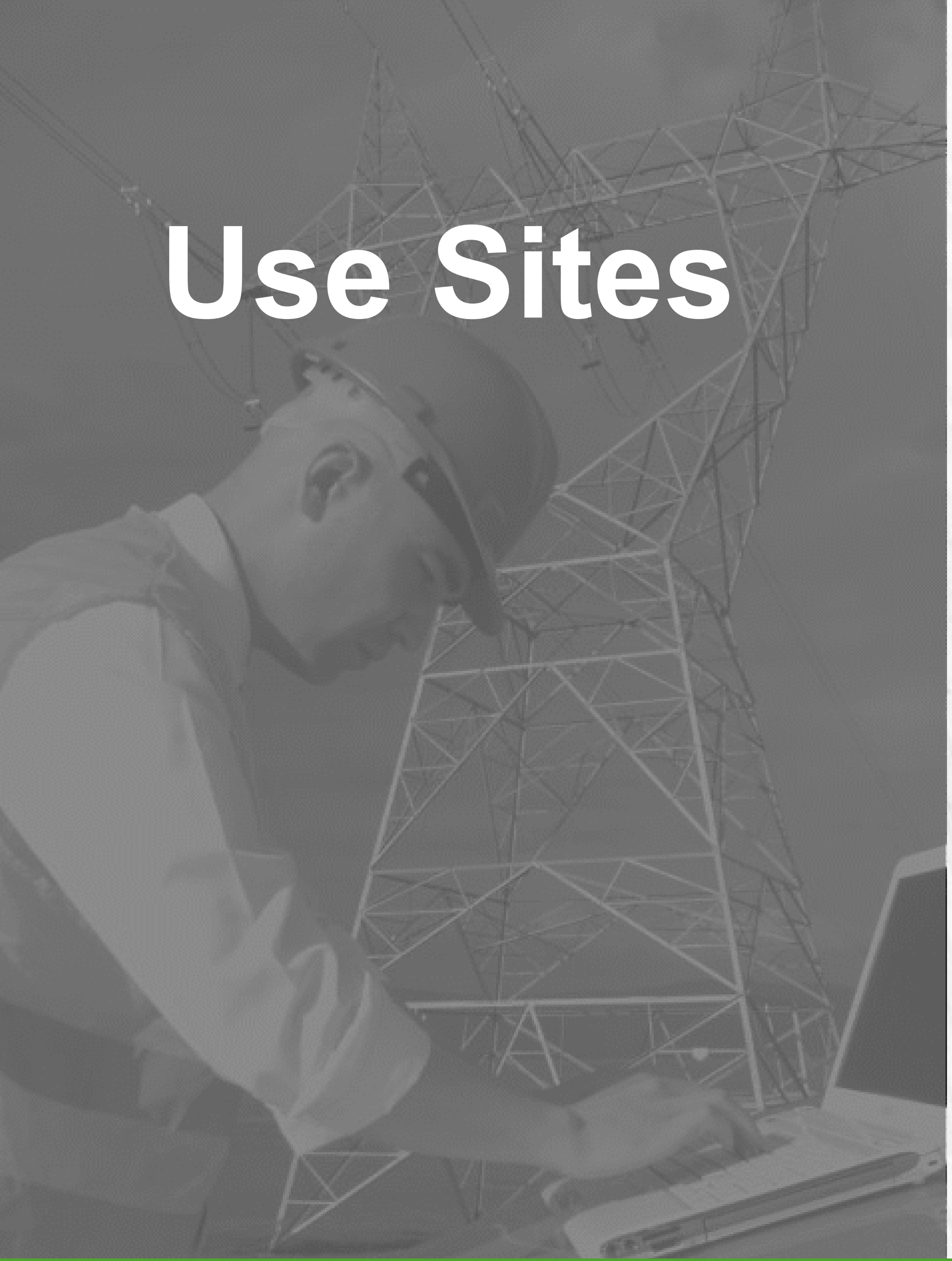
Opensight®

HERBICIDE

- Wild Carrot
- Oxeye Daisy
- Common Dandelion
- False Dandelion
- Hawkweed
- Poison Hemlock
- Marestail
- Knapweeds
- Prickly Lettuce
- Mullein
- Tansy Ragwort
- Rush Skeletonweed
- St. Johnswort
- Starthistles
- Thistles
- Blackberry

Vista® XRT
HERBICIDE

- **Fluroxypyr ester**
  - 2.8 lb ae/gal
  - Pyridine herbicide (Group 4)
- Low volatile ester
- No soil residual
- Use rates 6-22 fl oz/A

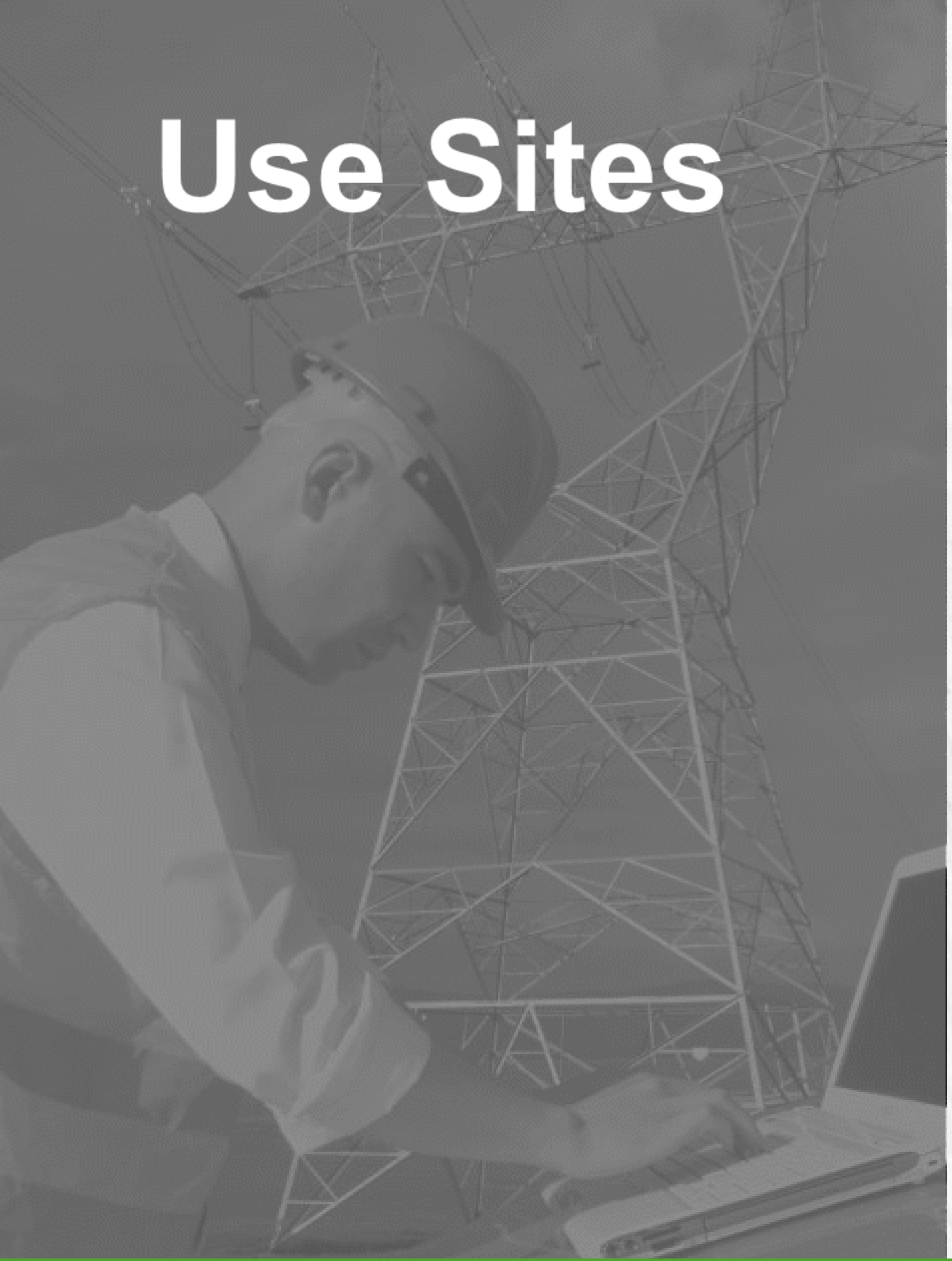


Use Sites

Vista® XRT
HERBICIDE

- **Conifer and tree plantations**
- Rangeland and permanent grass pastures
- Non-cropland areas including industrial sites, rights-of-way (such as roadsides, electrical utility and communication transmission lines, pipelines, and railroads), non-irrigation ditch banks, natural areas (such as wildlife management areas, wildlife openings, wildlife habitats, recreation areas, campgrounds, trailheads and trails) and grazed areas in and around these sites
- Turf sites

Use Sites



Vista® XRT
HERBICIDE

- **Directed Sprays Applications for Conifer Release**
- To release conifers from competing brush and weeds such as blackberry, manzanita and squaw carpet, mix 2 to 4 qts of Vista XRT in enough water to make 100 gallons of spray mixture (0.5 to 1% v/v). Vista XRT can be tank mixed with Garlon 4 Ultra, Forestry Garlon XRT, Garlon 3A, Accord XRT II, Rodeo and other herbicides registered for this use to broaden the spectrum of brush controlled.
- This spray mixture should be directed onto foliage of target brush using calibrated sprayers anytime after the hardwoods and brush have reached full leaf size including fall applications. Care should be taken to direct spray solutions away from conifer foliage, particularly foliage of desirable pines.

Weeds Controlled

Vista® XRT
HERBICIDE

Herbaceous weeds

- ★ kochia
- bedstraw
- buttercup
- prickly lettuce
- clover
- Mustards

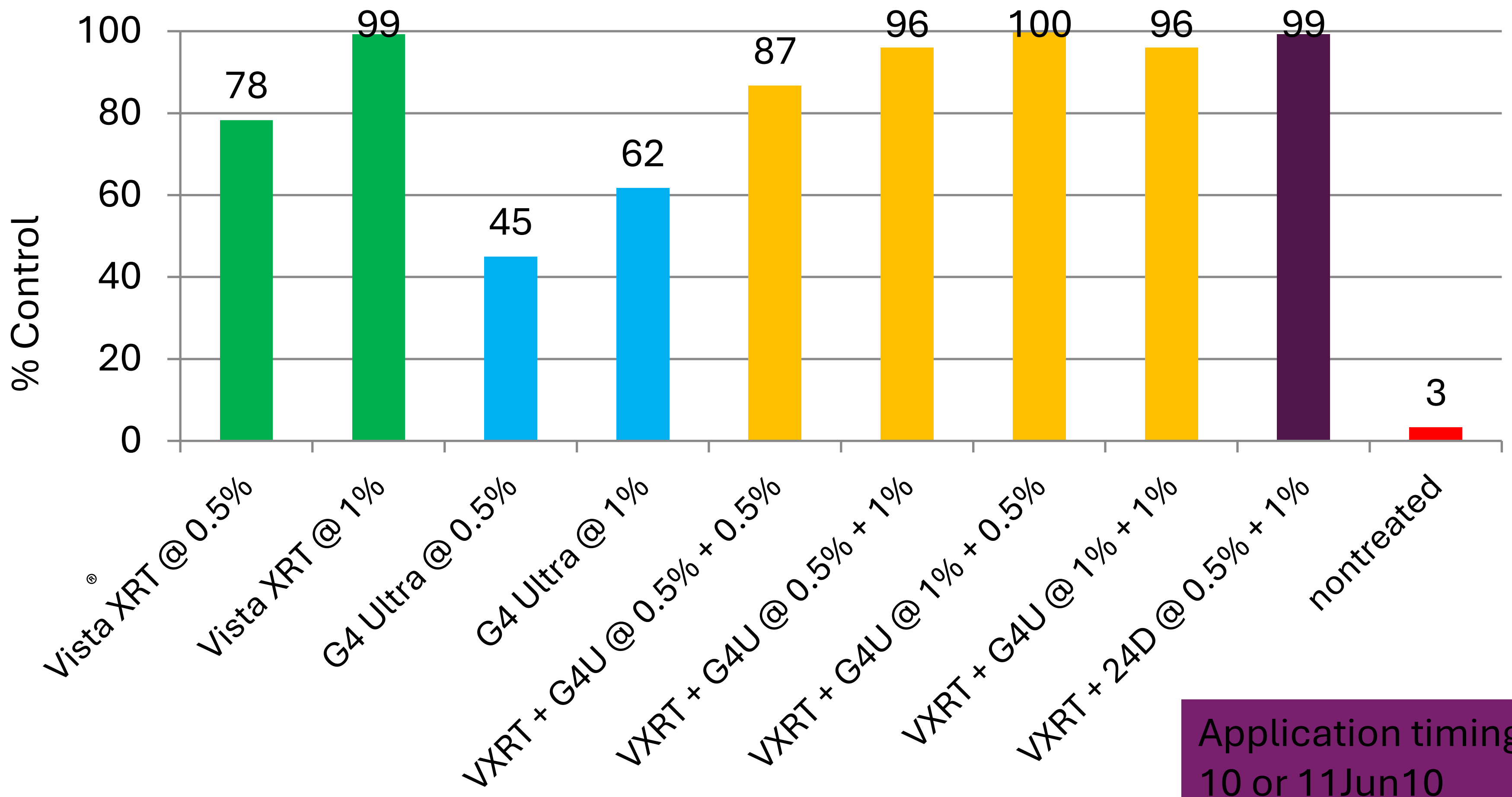
Brush

- ★ greenleaf manzanita
- ★ whiteleaf manzanita
- ★ squaw carpet
- blackberry
- bigleaf maple (basal)
- red alder
- kinnikinnick

Little to no control on:

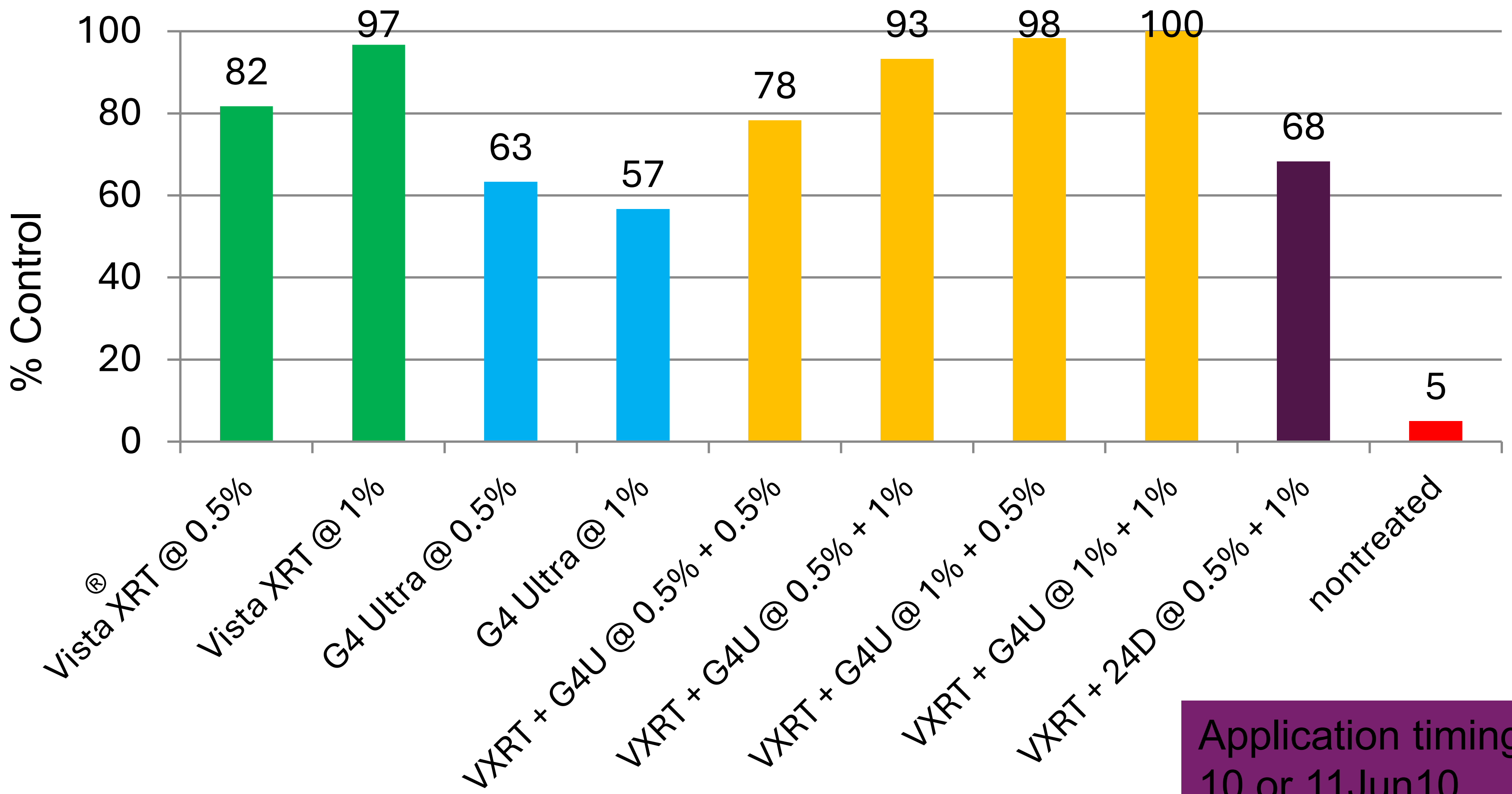
- Snowbrush ceanothus
- tanoak

Greenleaf manzanita control with directed applications at 1 year after treatment



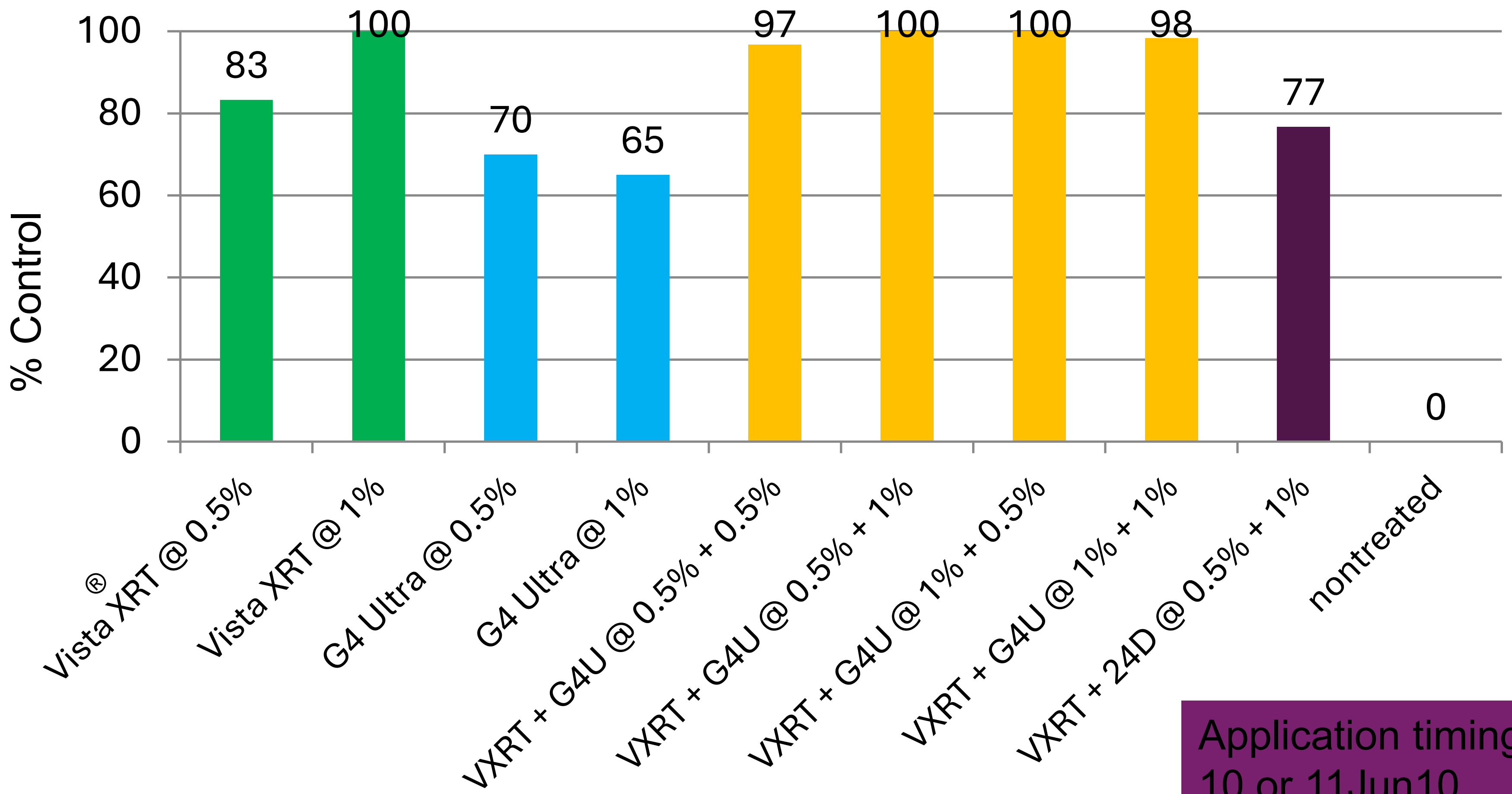
Application timing:
10 or 11Jun10
All treatments with MSO at 0.5% v/v

Whiteleaf manzanita control with directed applications at 1 year after treatment



Application timing: 10 or 11Jun10
All treatments with MSO at 0.5% v/v

Squaw carpet control with directed applications at 1 year after treatment



Application timing:
10 or 11Jun10
All treatments with
MSO at 0.5% v/v

Vista® XRT @ 1% v/v as directed application on greenleaf manzanita at 1 YAT

Triclopyr

Garlon® 3A
HERBICIDE

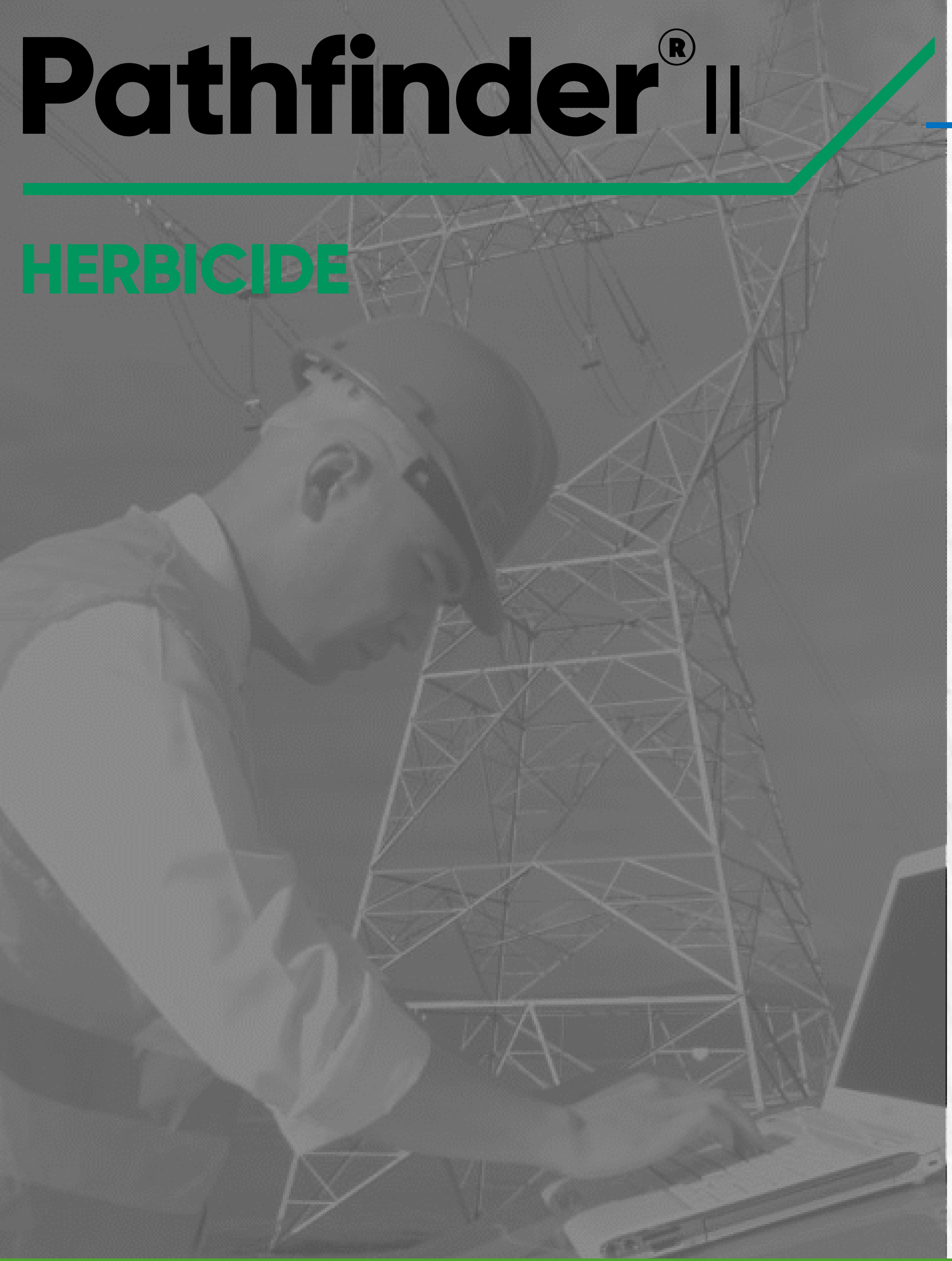
Garlon® 4 Ultra
HERBICIDE

Garlon® XRT
HERBICIDE

Pathfinder® II
HERBICIDE

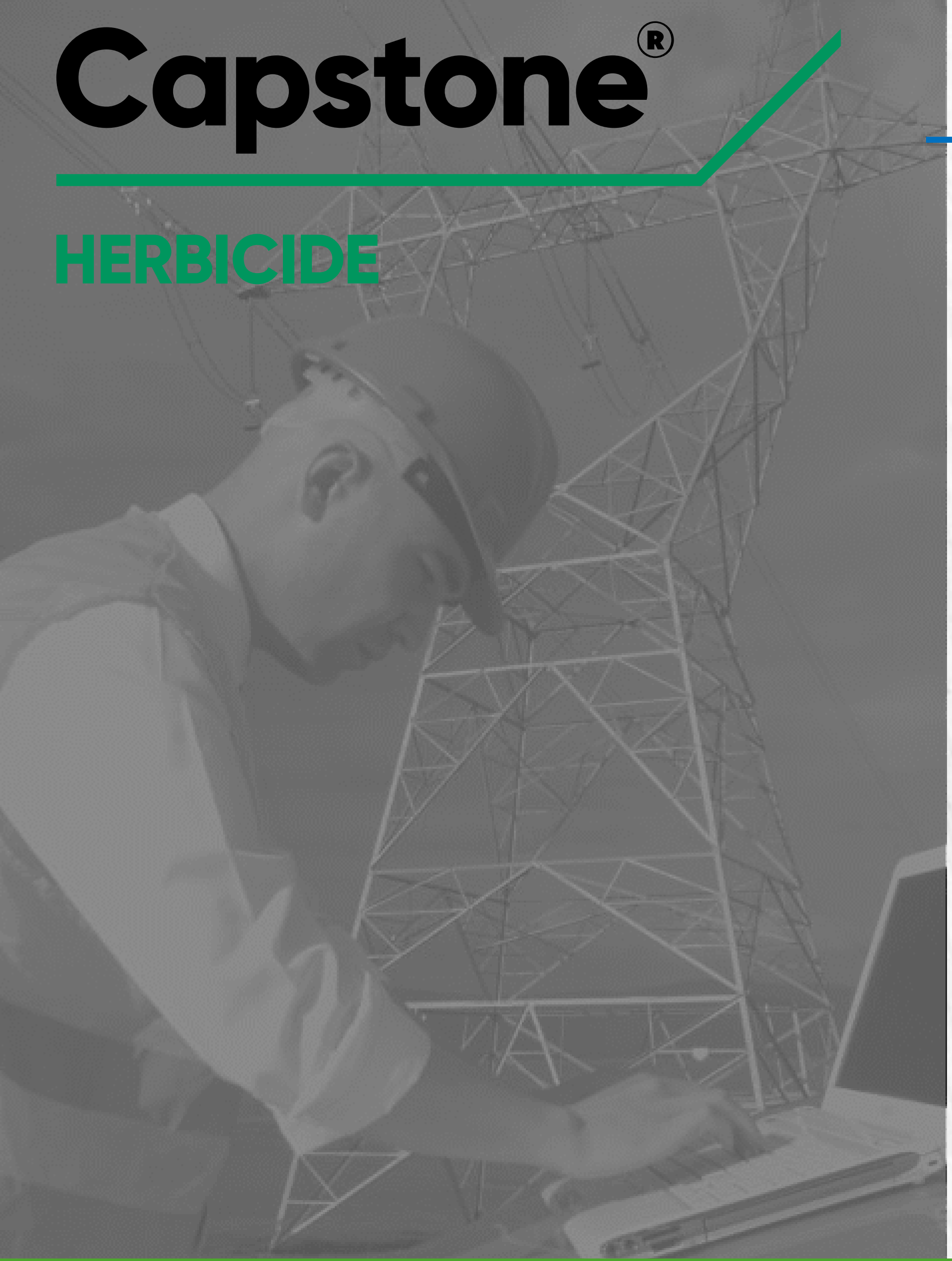
Capstone®
HERBICIDE

Vastlan®
HERBICIDE



Pathfinder II Specialty Herbicide

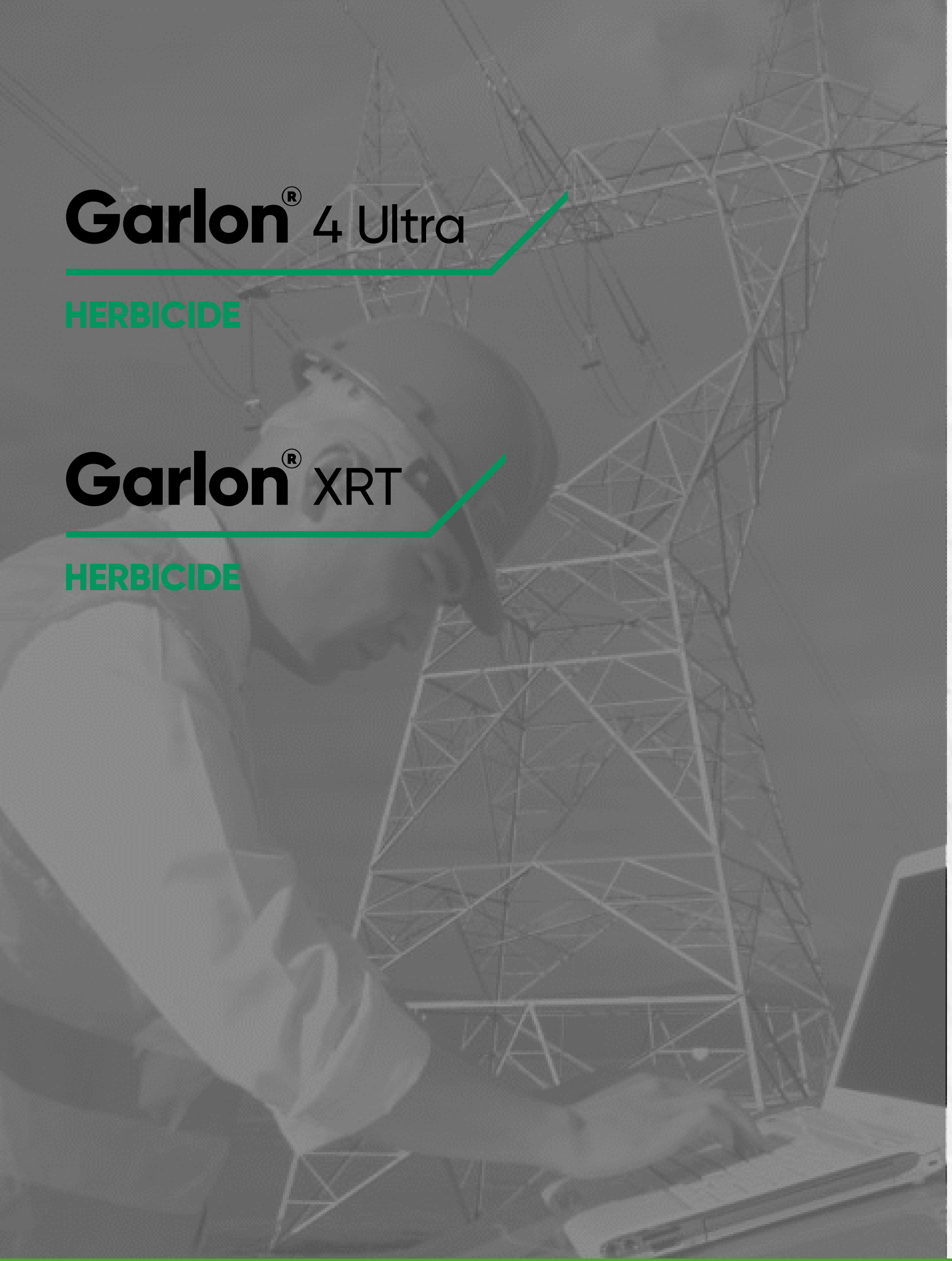
- **0.75 lb/gal Triclopyr Ester**
- Ready-To-Use (No mixing required)
  - Garlon 4U + Oil
- Nonpetroleum-based, plant derived methylated seed oil (MSO) solvent
- Designed specifically for basal bark and cut-stump treatments
- Ideal for small landowner



Capstone Specialty Herbicide

- **0.1 lb Aminopyralid + 1lb Triclopyr Amine**
  - (Milestone + Garlon 3A)
- Controls broadleaf weeds, brush, and vines
- Forestry label includes site-prep, directed spray conifer release, cut stump, hack and squirt, frill or girdle
- Unique low-volatile formulation with “CAUTION” signal
- Safe over-the-top of most industrial grasses
- Primary Uses:
  - Spot treatment of brush and vines
  - Control of broadleaf weeds
  - **Cut surface treatment**
  - **Chemical side trimming**
- **Fast knockdown with effective, long lasting residual control of susceptible broadleaf weeds, small woody plants, and vines. Excellent broad-spectrum brush and broadleaf weed control.**

Garlon 4U vs Garlon XRT



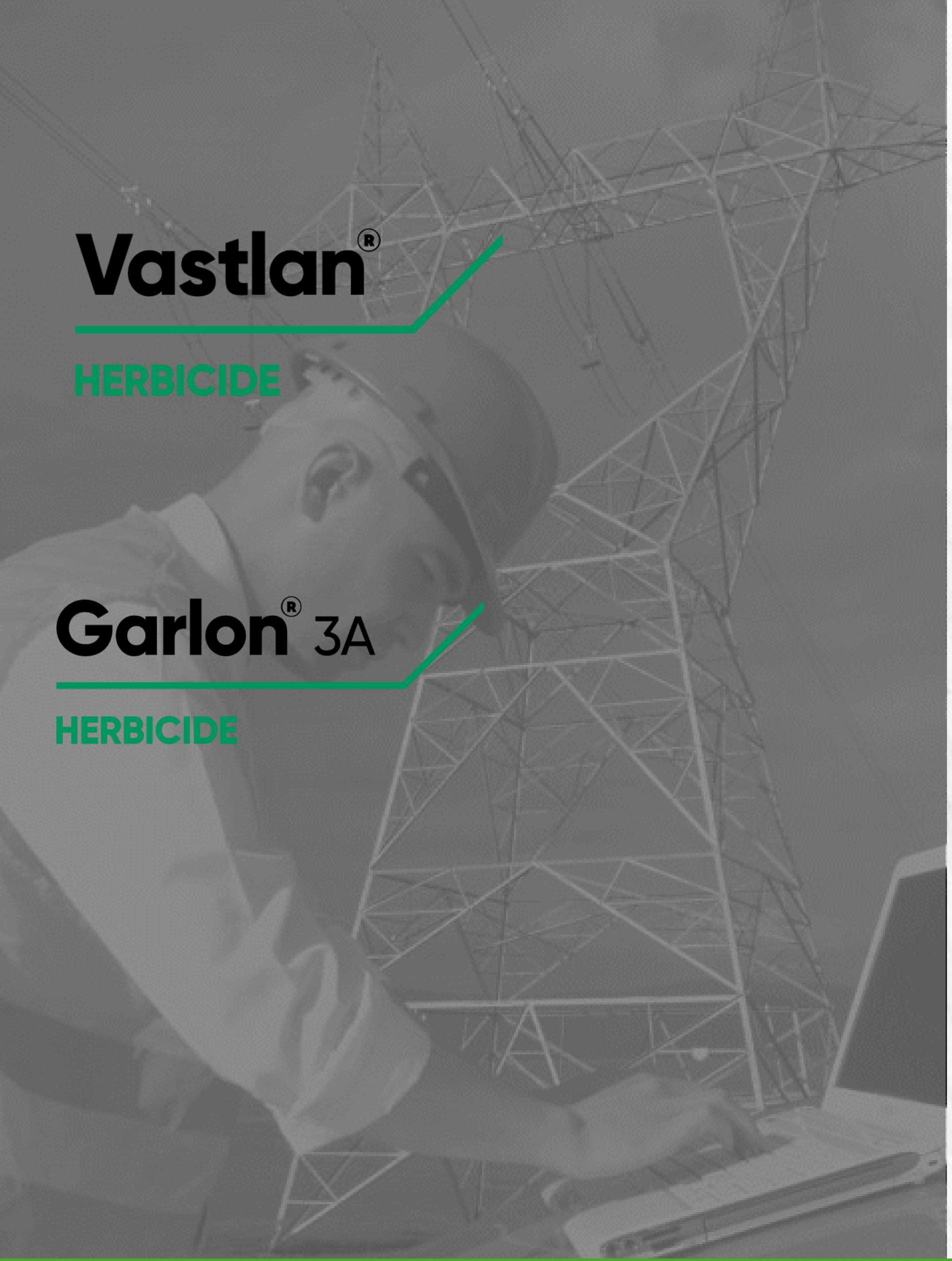
Garlon 4 Ultra

- **4 lb/gal Triclopyr Ester**
- **Oil based formulation**
- **Best option for cut stump, basal bark, dormant stem applications**
- **Volatility concerns above 75-80 degrees**

Garlon XRT

- **6.3 lb/gal Triclopyr Ester**
- **Oil based formulation**
- **Best option for cut stump, basal bark, dormant stem applications**
- **Volatility concerns above 75-80 degrees**
- **Higher load formulation = hauling less jugs into the field and cleaning less jugs afterwords.**

- **Rate conversion:**
- 10 oz Garlon XRT = 16 oz Garlon 4 Ultra
- 6.5% Garlon XRT = 10% Garlon 4 Ultra



Garlon 3A vs Vastlan

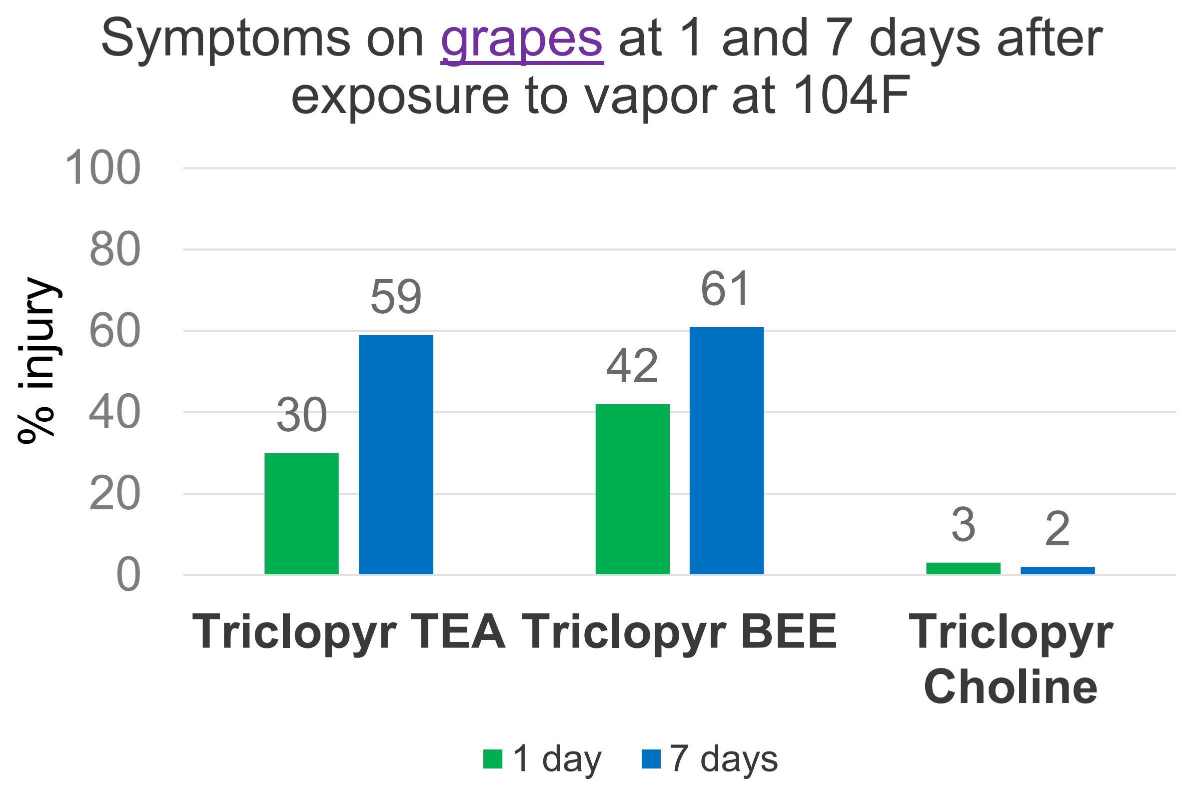
Garlon 3A

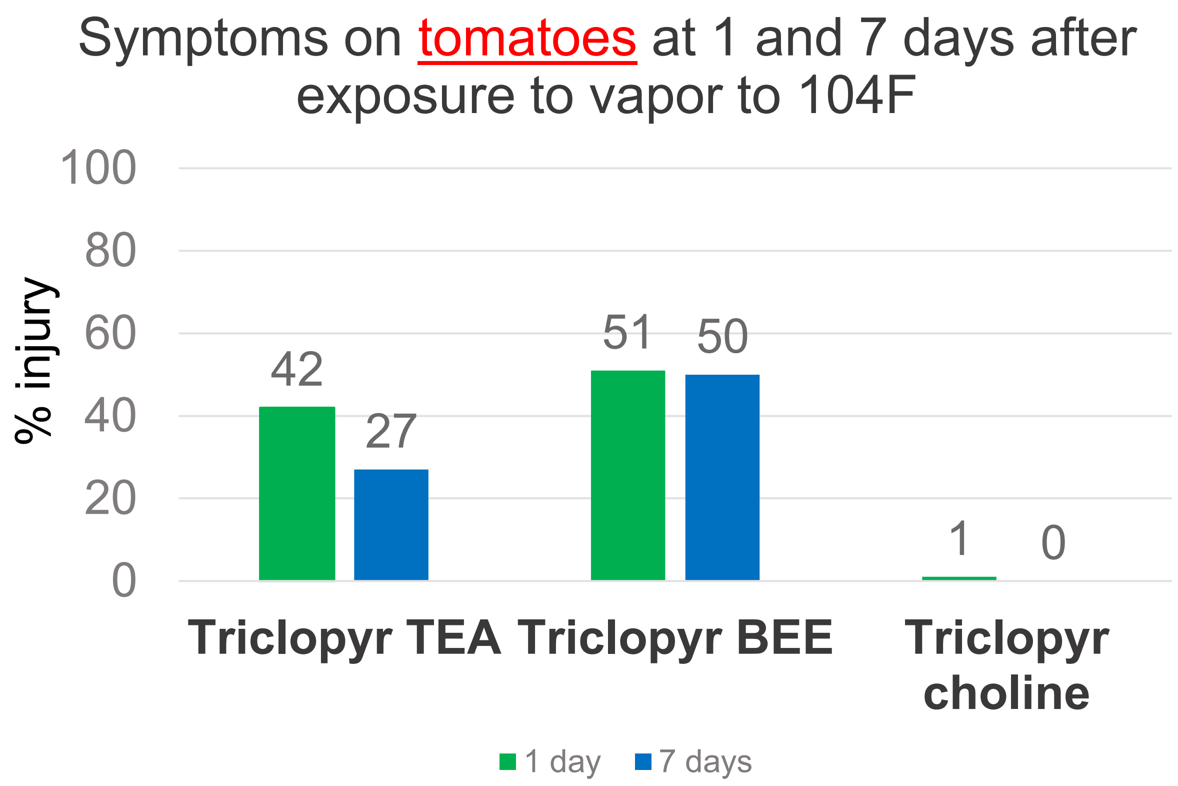
- 3 lb/gal Triclopyr Amine
- Water based formulation
- Low volatility
- Signal Word: Danger
- Excellent tool for foliar brush applications

Vastlan

- 4 lb/gal Triclopyr Choline
- Water based formulation
- Practically Non-Volatile
- Signal Word: Warning
- Excellent tool for foliar brush applications
- Reduced odor formulation

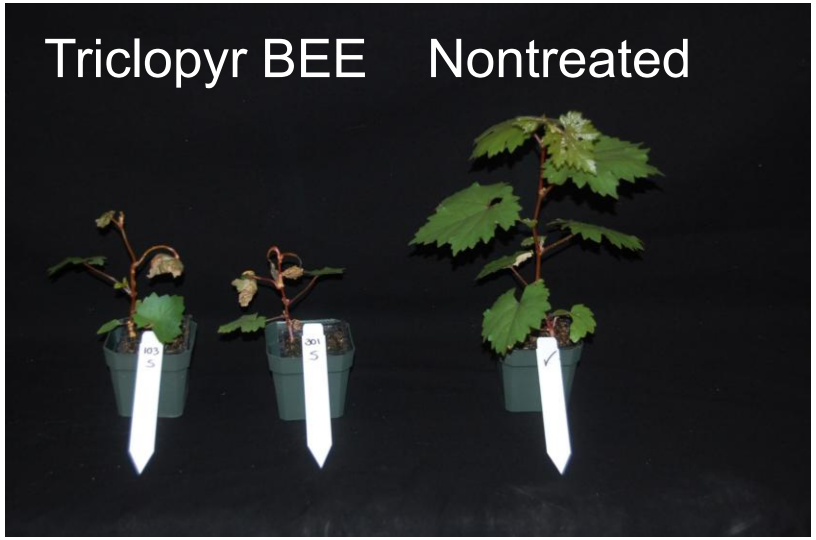
Greenhouse Volatility Test

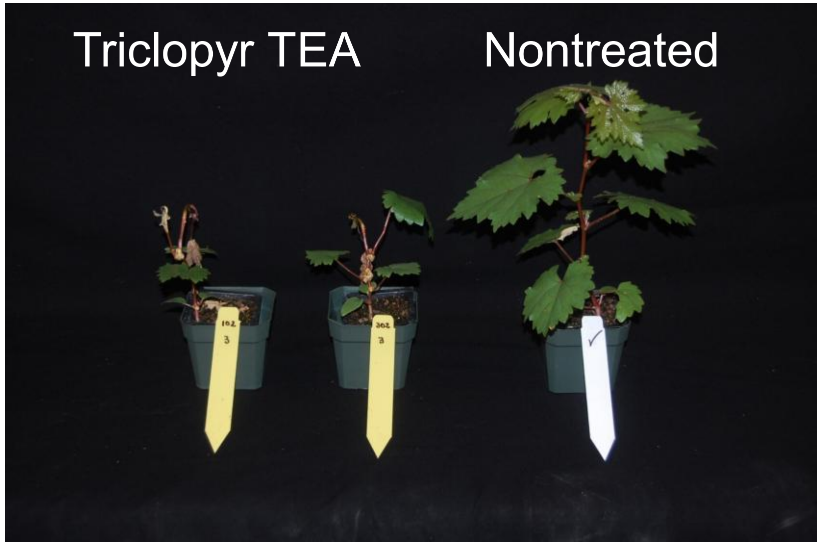


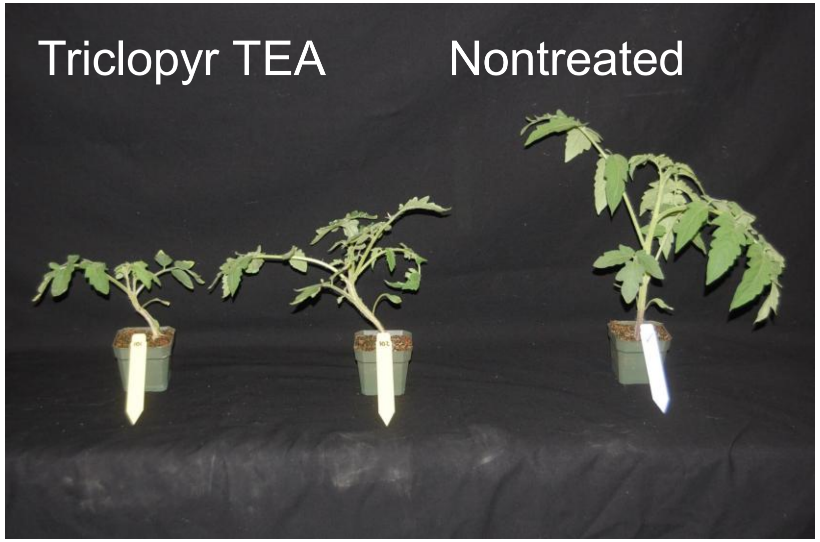


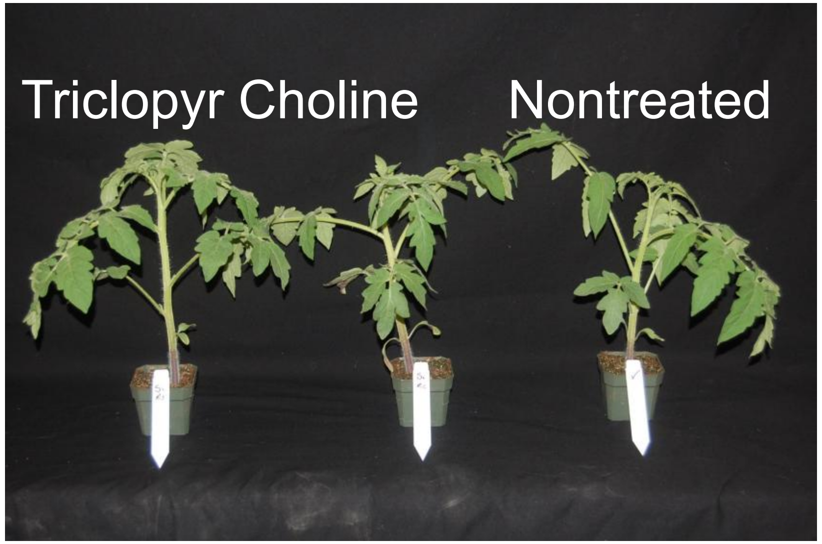
* triclopyr BEE (64 fl oz/A of a 4 lb ae/gallon product)
* triclopyr TEA (86 fl oz.A of a 3 lb ae/gallon product)
* triclopyr choline (64 fl oz/A of a 4 lb ae/gallon product)

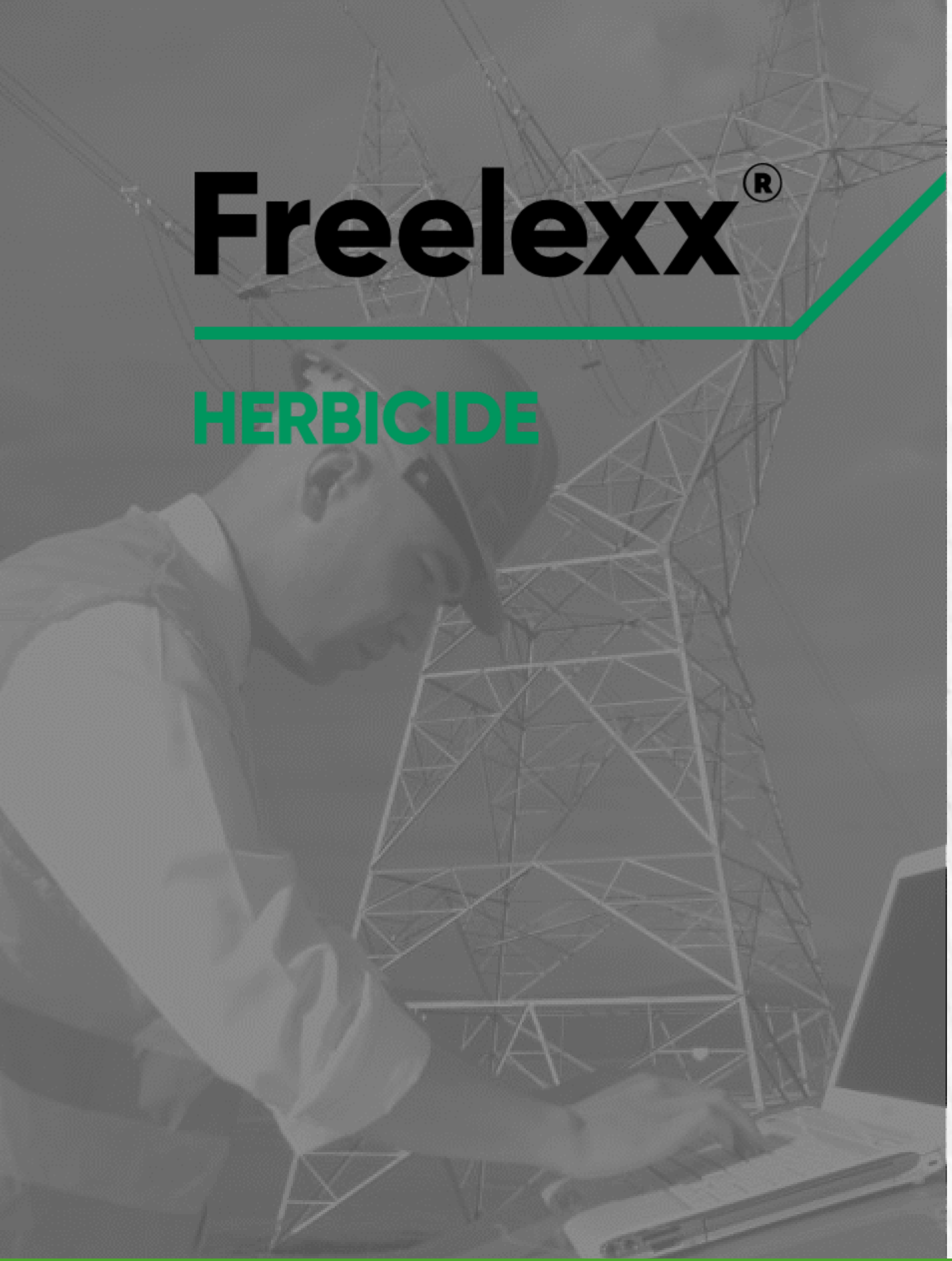
Greenhouse Volatility Test



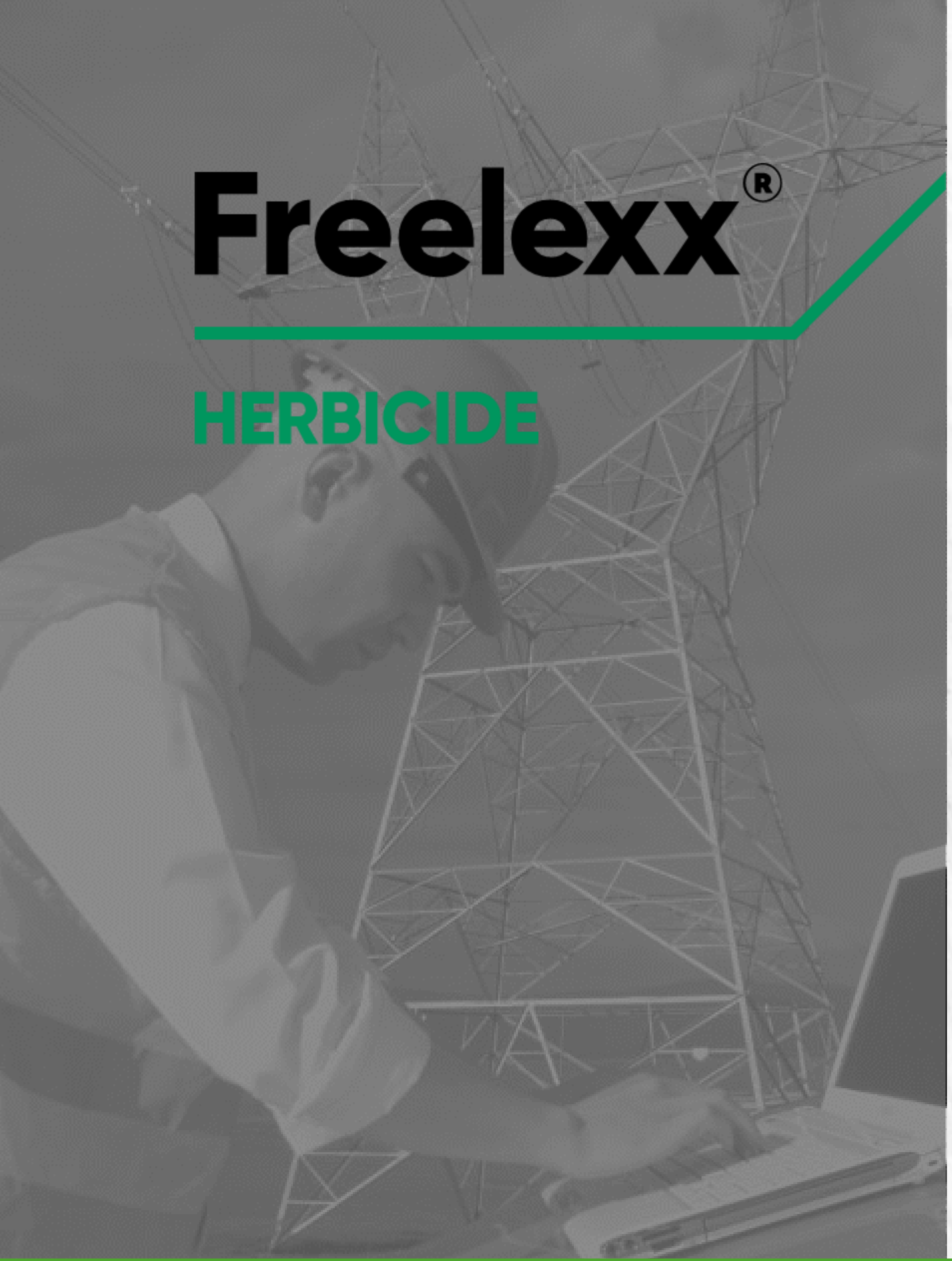








- **3.8 lb/gal 2,4-D Choline Salt**
- New proprietary choline technology
- **Reduced Odor**
- Mode of action: Group 4 Herbicide
- **Near Zero Volatility**
  - "Practically non-volatile"
  - Safety under and around trees and shrubs
- Aquatic use-sites



Forestry
Forest site preparation, forest roadsides, brush control, established conifer release (including Christmas trees and reforestation areas)

Application Method	Freelexx	Use Directions
annual weeds	2 - 4 pt/acre	Apply before the bud stage when weeds are small and growing actively. Apply when biennial and perennial species are in the seedling to rosette stage and before flower stalks appear. For difficult to control perennial broadleaf weeds and woody species, use up to 1 gallon of Freelexx and 1 to 4 quarts of Garlon® 3A herbicide per acre. For conifer release, apply before budbreak of conifers in early spring when weeds are small and actively growing.
biennial and perennial broadleaf weeds susceptible woody plants	4 - 8 pt/acre	
spot treatment to control broadleaf weeds	1.28 fl oz/gal of spray solution (see instructions for Spot Treatment)	To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the specified broadcast rate and spray to thoroughly wet all foliage. Mix 1.28 fl oz per gallon of spray solution and apply through pump up sprayer or backpack sprayer. Addition of a non ionic surfactant is recommended to improve coverage. See rate conversion table and instructions for Spot Treatment and use of hand-held sprayers under Application Directions.
conifer release species such as balsam fir black spruce jack pine ponderosa pine red pine red spruce white pine white spruce	1 1/2 - 3 qt/acre	To control competing hardwood species such as alder, aspen, birch, hazel, and willow, apply from mid- to late summer when growth of conifer trees has hardened off and woody plants are still actively growing. Apply with ground equipment using sufficient spray volume to ensure complete coverage. Because this treatment may cause occasional conifer injury, do not apply if such injury cannot be tolerated.
directed spray: conifer plantations including pine	4 qt/100 gal	Apply when brush or weeds are actively growing by directing the spray so as to avoid contact with conifer foliage and injurious amounts of spray. Apply in oil, oil-water, or water carrier in a spray volume of 10 to 100 gallons per acre.
basal spray (may also be used in rangeland, pastures, and non-cropland areas)	8 qt/100 gal or 2.5 fl oz/gal of water	Thoroughly wet the base and root collar of all stems until the spray begins to accumulate around the root collar at the ground line. Wetting stems with the mixture may also aid in control.
cut stump surfaces (may also be used in rangeland, pastures, and non-cropland areas)		Apply as soon as possible after cutting trees. Thoroughly soak the entire stump with the 2,4-D mixture including cut surface, bark and exposed roots.
frill and girdle (may also be used in rangeland, pastures, and non-cropland areas)		Cut frills (overlapping V-shaped notches cut downward through the bark in a continuous ring around the base of the tree) using an axe or other suitable tool. Treat freshly cut frills with as much of the 2,4-D mixture as they will hold.
tree injection (may also be used in rangeland, pastures, and non-cropland areas)	1 - 2 mL per injection site	To control unwanted hardwood trees such as elm, hickory, oak, and sweetgum in forests and other non-crop areas, apply by injecting at a rate of 1 mL of undiluted Freelexx per inch of trunk diameter at breast height (DBH) as measured approximately 4 1/2 ft above the ground. However, inject as close to the root collar as possible and the injection bit must penetrate the inner bark. Make applications throughout the year, but for best results, apply between May 15 and October 15. Do not treat maples during the spring sap flow. For hard to control species such as ash, maple, and dogwood, use 2 mL of undiluted Freelexx per injection site or double the number of 1 mL injections. **Note:** No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

Additional Resources

FREE self-paced modules at Vegetationeducation.corteva.com

1. Herbicide Mixing, Handling And Storage
2. Minimizing Off-target Movement
3. Communication Effectively About Vegetation Management
4. Managing Herbicide Weed Resistance
5. Why Herbicides Sometimes Fail
6. Understanding Herbicide Toxicity
7. Creating And Maintaining Pollinator Habitat
8. What Is Integrated Vegetation Management And What Are The Benefits
9. Wildfire Prevention & Mitigation
10. Pipeline Management

Scan to learn more about VegetationEducation.corteva.com

Additional Resources – Notify Your Neighbor

NOTIFY YOUR NEIGHBOR

Effective and ineffective communication How to videos

1. How to handle difficult situations
2. Addressing landowner concerns
3. Homeowner notification
4. Public key messages
5. Pollinator impact

Printable Downloads

1. Resource Guide
2. ROW Brochures
3. Pocket resource card
4. Plant and Animal community response to long-term vegetation management practices on ROW

Scan to learn more about Notify Your Neighbor

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THANK YOU!

Warren Gawlik

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Vegetation Management