Re-Thinking **Selective Vegetation Management**

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Re-Thinking Selective Vegetation Management

Energy companies seeking continuous improvement in their vegetation management programs are taking IVM a step further by combining the use of selective herbicides with selective application methods.

This approach reflects rights-of-way (ROW) manager's evolving philosophies towards vegetation management. Historically management objectives have simply focused on removing incompatible plant species without much interest in how it affects the remaining ecosystem. Now ROW managers also want to preserve and encourage growth of low growing, stable plant communities consisting of grasses, forbs, and certain shrub species because they understand the value of maintaining these plant cover types.

"The reason for Integrated Vegetation Management (IVM) is to create, promote, and conserve sustainable plant communities that are compatible with the intended use of the site, and manage incompatible plants that may conflict with the intended use of the site[1]"

Low volume foliar application using **non-selective** herbicides

Selective Application Methods Alone May Not Be Good Enough

The use of non-selective herbicides, even when combined with a selective application method like low volume backpack foliar, can result in substantial site disturbance, elimination of compatible plant species, and create openings which allow incompatible species to get established especially when targeting clumps of brush or when incompatible stem densities are relatively high.

This is not only counter to the goals of IVM and what's considered industry best practice, it keeps utilities from realizing a suite of benefits that come from transitioning a ROW corridor to more desirable plant cover, like grasses, forbs and shrubs.

Low volume foliar application using **selective** herbicides

The preferred approach combines selective methods of application with selective herbicides. While there are numerous selective herbicides to choose from, **a tank mixture of Vastlan™ and Milestone® herbicides frequently serves as the foundation mixture. This herbicide combination has proven effective across a wide range of woody plant species from the coastal plain, piedmont, and mountain regions of the U.S.**

Additional tank mix partners such as Tordon® 22K, imazapyr, and metsulfuron methyl may also be considered based on geography, target species, site conditions, and desired level of selectivity.

Proper Application and Adjuvant Selection Are Important

As with any herbicide application, proper coverage of the target species is important for best results. We have found that adding a premium adjuvant which aids in product spreading, penetration, and translocation of the herbicide works best. Talk to your local Corteva Agriscience™ Vegetation Management Specialist for the product and rate combination that would work best for your area.

[1] ANSI A300 Part 7 (2018), §70.2

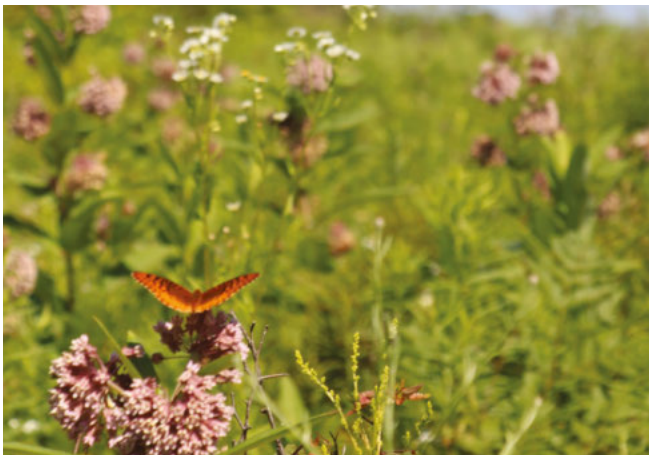
Reap the Benefits of Chemically Facilitated Biological Control

As incompatible vegetation is removed and compatible plant community populations become more prevalent on the rights-of-way, biological control can play a major role in helping reduce future tree invasion and subsequent maintenance costs.

"All life forms of compatible plants (e.g., grasses, ferns, herbs, shrubs) can suppress incompatible trees through interference (competition) and by providing habitat for seed and seedling predators[2]."

Benefits of Selective Vegetation Management

- > Reduced Maintenance Costs
- > Risk Mitigation
- > Improved Pollinator and Wildlife Habitat and Plant Biodiversity
- > Erosion Control
- > Supported by Industry Standards and BMPs
- > Improved Reputation and Public Image
- > Increased Freedom to Operate



Long-Term Rights-of-Way Studies Indicate:

- > Plant cover types dominated by dense patches of grasses and herbaceous plants are highly resistant to tree invasion[1].
- > Reducing tree density (trees per acre) will lower the cost and increase the effectiveness of ROW maintenance[1].
- > Major factors interfering with tree seed germination and seedling growth were wildlife depredation and plant competition by the dominant plant species of the forb grass cover type.

[1]Source: "Resistance of Plant Cover Types to Tree Seedling Invasion on an Electric Utility Transmission Rights-of-Way", W.C. Bramble, W.R. Byrnes, and R.J. Hutnik
[1]Bramble, William C., Journal of Arboriculture, March 1996

The case for selective vegetation management can also be found in the Industry Standards[4] and Best Management Practices[5] for IVM. These references are valuable resources and should be used to develop vegetation maintenance specifications that establish requirements and practices used to maintain ROW vegetation in a manner consistent with intended use of the ROW.

2 THE COST-EFFICIENCY OF IVM, A Comparison of Vegetation Management Strategies for Utility Rights-of Way (2019), J. Goodfellow
3 Bramble, William C., Journal of Arboriculture, March 1996
4 ANSI A300 Part 7 (2018) Integrated Vegetation Management
5 ISA BMP Integrated Vegetation Management, second edition 2014, third edition expected in 2020

Integrated Vegetation Management (IVM) is Good For Your Budget, Business, and Ecosystem

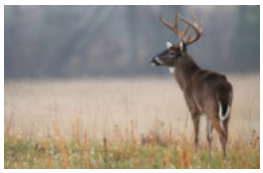
IVM is a well-developed process for managing vegetation that relies on a combination of methods including the use of herbicides to promote sustainable, stable plant communities compatible with the intended use of the site.

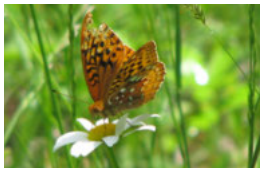
Adopting a true IVM approach encompasses a management strategy based on managing for an outcome vs. simple control of a problem. This involves caring as much about the compatible vegetation as the incompatible plant species. Once a stable, low growing plant community is established, biological control begins. This type of approach leads to an efficient system requiring fewer inputs over time.

Utilizing selective herbicides and application methods can demonstrate to internal and external stakeholders your commitment to creating and maintaining habitats critical for a variety of wildlife and insect species such as bees, butterflies, songbirds, wild turkeys, and small mammals.

The proper use of herbicides within a ROW maintenance program can provide a wide range of ecosystem benefits. Long-term ROW research has shown judicious use of herbicides can have a positive impact on wildlife and insect species abundance and diversity as these ROW corridors provide habitat essential to their survival. Other benefits compared to physical vegetation removal include reduced soil compaction and erosion, increased plant biodiversity, and reduced carbon emissions.

Selective herbicides used in combination with selective application methods preserves and encourages plant biodiversity which creates habitats favorable for a variety of wildlife and insect species.





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