



DELIVERING IMPROVED BROADLEAF WEED CONTROL IN **ROADSIDE APPLICATIONS**

overdrive[®]
herbicide

Professional
Vegetation
Management

 **BASF**

The Chemical Company

Overdrive® Herbicide

Delivering Improved Broadleaf Weed Control in Roadside Applications

Overdrive® herbicide is a postemergent herbicide for the control of annual, perennial and biennial broadleaf weeds in noncrop areas, including roadside and rangeland areas.

Because it provides fast, long-term control for broadleaf weeds, **Overdrive** is particularly well suited for roadside vegetation management in guardrail, median and right-of-way areas, where cost-effective control of tough nuisance weeds is critical. Compared to other roadside vegetation management products, **Overdrive** provides greater broad-spectrum control of vegetation, including kochia, musk thistle, pigweed, Russian thistle and marehail. Plot studies have also shown that **Overdrive** can result in equal or greater weed control when used alone or in combination with other growth-regulator herbicides.

A Better Solution

A fast-acting product that provides broad-spectrum control, **Overdrive** is highly effective against tough perennial broadleaf weeds, including Canada thistle, perennial sow thistle and western ragweed.

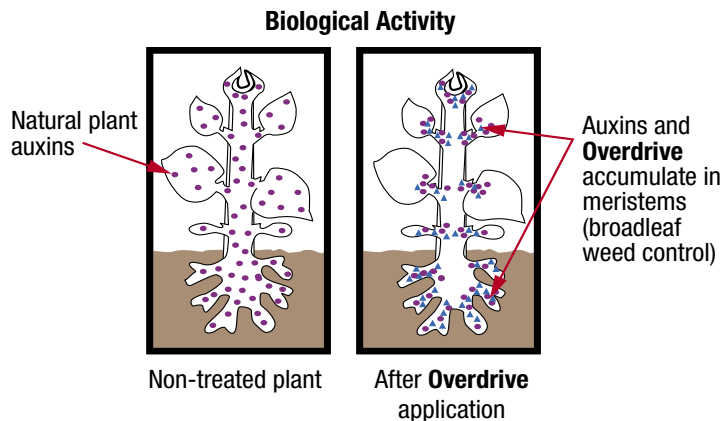
Because it can be applied in low use rates, **Overdrive** helps reduce application costs and increase weed control effectiveness, while still providing long-term control of broadleaf weeds.

How Does **Overdrive** Work?

When applied to an undesirable annual or perennial broadleaf weed, **Overdrive** inhibits the plant's ability to spread auxins — naturally occurring hormones crucial to plant development and cell growth. The active

ingredient in **Overdrive** collects in the plant's key growing points — such as the roots and areas where new shoots and stem growth initiate. This concentration at key growing points results in the plant's speedy decline. By mimicking auxins in the plant, **Overdrive** causes uncontrolled cell division and growth, which eventually destroys the plant.

Because **Overdrive** concentrates in key growing points, less herbicide is required in weed control applications. Compared to other herbicides, a lower rate of **Overdrive** can be used to successfully control undesirable annual and perennial broadleaf weeds.



How Effective is **Overdrive**?

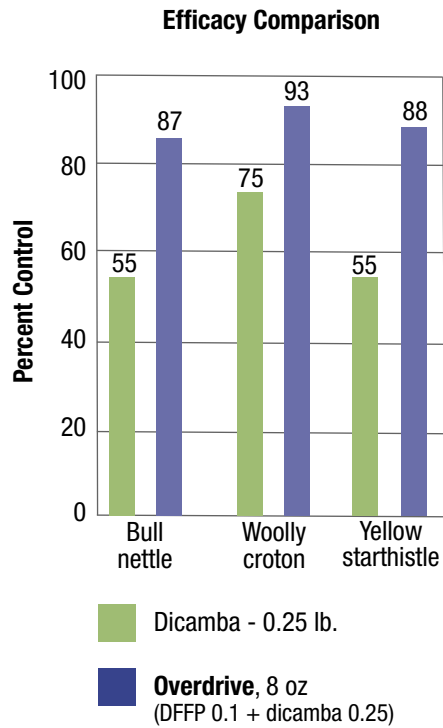
Studies show that **Overdrive** provides effective weed control. Figure 1 shows the study conducted by BASF and the University of Arkansas. The results show **Overdrive** at 8 ounces per acre was more effective at controlling bull nettle, woolly croton and yellow starthistle than dicamba alone.

The Enhanced Activity of **Overdrive**

Researchers have also found that, compared to commonly accepted application amounts for other products, a smaller application of **Overdrive** can provide long-term control that is equal to or more effective than other herbicides. Researchers from the University of Wisconsin-Madison found that an application of just 6 ounces per acre of **Overdrive** controlled 94 percent of Canada thistle in the month following application, compared to a 32-ounce per acre application of dicamba, which controlled just 48 percent of Canada thistle one month after application.¹

Researchers also found that **Overdrive** maintained its effectiveness over the long term, even though it uses less active ingredient than dicamba-only products. In a comparison conducted 10 months after

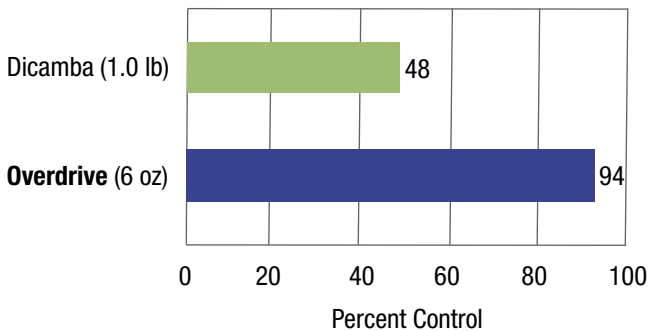
Figure 1



Source: Source: M.C. Boyles, BASF Corp., and K.L. Smith, University of Arkansas, Monticello, SWSS 2000.

Figure 2

Canada Thistle Control
Spring application, one month after treatment



Source: Tichich, R.P., and J.D. Doll (University of Wisconsin-Madison), 2001.

application, **Overdrive** maintained a 94 percent reduction in Canada thistle, compared to 92 percent control for the dicamba, which was applied in larger amounts.

What Types of Broadleaf Weeds Can **Overdrive** Control?

Overdrive controls over 90 annuals and 50 biennial and perennial broadleaf weeds. Following is a sampling of some of the key weeds that can be controlled using **Overdrive**:

Biennial and Perennial Weeds

- Musk thistle
- Yellow starthistle
- Teasel
- Canada thistle
- Curly dock
- Plantain
- Buttercup
- Western ragweed
- Horsenettle

Annual Broadleaf Weeds

- Waterhemp/pigweed
- Kochia
- Russian thistle
- Marestail (horseweed)
- Woolly and tropic croton
- Sowthistle
- Bitter sneezeweed
- Prostrate spurge
- Prickly lettuce

Overdrive provides broad-spectrum control and can help reduce application costs, while still providing long-term control for broadleaf weeds.

How Is **Overdrive** Used in Roadside Applications?

Because it provides excellent thistle and general broadleaf control, **Overdrive** is well suited for the roadside market. In general, a rate of 6 ounces per acre is recommended for roadside applications of **Overdrive**. This rate provides excellent control across a broad spectrum of undesirable plant species, affecting weeds in various stages and sizes.

Overdrive® Herbicide

Delivering Improved Broadleaf Weed Control in Roadside Applications

Application Guidelines

Intended for use as a postemergent herbicide, **Overdrive® herbicide** is usually applied in rates varying between 4 and 8 ounces per acre. In general, users may want to consider using the higher rate to control larger annual weeds or biennial and perennial weeds. No more than 10 ounces per acre should be applied per season.

Surfactant Recommendations

Two types of surfactants are recommended for use with **Overdrive** to improve the dispersing, spreading, sticking or wetting properties of the spray mixture. Which surfactant is right for a particular situation usually depends on the types of weeds being controlled and the area in which **Overdrive** is being applied:

- Non-ionic surfactant (NIS) – Standard recommendation is .25 percent v/v for use with standard broadleaf weeds.
- Methylated seed oil (MSO) – Standard recommendation is 1.5-2 pints per acre for mature perennials or larger weeds.

Mixing Order

For best results, the following mixing order should be used:

- 1 | Add **Overdrive** to a clean, half-full tank with water.
- 2 | Allow sufficient time for **Overdrive** granules to saturate.
- 3 | Add surfactant, then add remaining water.
- 4 | Agitate once granules have saturated to complete the dissolving and mixing process.
- 5 | See label instructions for other tank-mix options.

For more information about **Overdrive** or any of our vegetation management products, call your nearest BASF ProVM sales specialist at **1-800-545-9545**, or visit www.vmanswers.com.

¹Tichich, R.P., and J.D. Doll (University of Wisconsin-Madison), "Herbicide options for Canada thistle control in pasture," Proceedings, North Central Weed Science Society (v) 56 (abst) 60, 2001.

Always read and follow label directions.

Overdrive is a registered trademark of BASF. ©2006 BASF Corporation. All rights reserved.
APN 05-15-078-0003A