

NIP IT IN THE TUBER



Echelon® Herbicide: The *Poa Annua* and Crabgrass Treatment That Fights the Growing Problem of Sedges

A single sedge tuber can produce thousands of new tubers in a single year. It's no wonder growing sedge pressure has reached epidemic proportions on golf courses across the country. Once these weeds become established, they are difficult to control. But what if you could “nip it in the tuber” and help prevent sedges without making any more applications than you do currently? It's possible when you choose Echelon® herbicide for your spring preemergence or fall *Poa annua* program. Formulated for maximum efficiency, Echelon goes beyond conventional crabgrass and *Poa annua* control to provide excellent **preemergence and postemergence nutsedge control** — including both annual and perennial sedges. No other preemergence treatment can deliver this kind of performance. Echelon even provides pre- and early postemergence goosegrass control.

Echelon® Herbicide
EXPECT MORE FROM YOUR PREEMERGENCE PROGRAM

Product	Pre crabgrass control	Pre <i>Poa annua</i> control	Early post* crabgrass control	Pre nutsedge control (Perennial)	Pre goosegrass control	Early post goosegrass control	Post sedge activity at <i>Poa</i> timing
Echelon®	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent
Dimension®	Excellent	Fair	Excellent	None	Good	None	None
Barricade®	Excellent	Excellent	None	None	Good	None	None
Ronstar®	Good	Fair	None	None**	Excellent	None	None
Specticle®	Good	Excellent	None	None**	Excellent	None	None

*1-4 leaf stage.

**Limited to annual sedge only.

Prevent Sedge for an Edge

Formulated with sulfentrazone and prodiamine, Echelon not only eliminates weeds from the root up and the foliage down, it impacts underground reproductive structures to reduce future populations of weeds. With sedge more prevalent and more problematic than ever before, getting preemergence and early postemergence sedge control with your spring or fall treatment keeps your labor and herbicide costs down and your golfers happy.

Echelon is the first product in its category to provide preemergence control of perennial sedges like yellow nutsedge and green kyllinga for an impressive 3 to 5 months after application. In the side-by-side comparison below, you'll see that at 135 days after treatment, both Barricade® and Echelon show no signs of crabgrass breakthrough. But while Echelon is free of sedges, Barricade could not stand up to the sedge pressure.



*Echelon 4SC, 0.57 lbs ai/a
Applied 4/15/08*

*Barricade 4FL, 0.5 lbs ai/a
Applied 4/15/08*

Photo taken 135 DAT



Did you know?

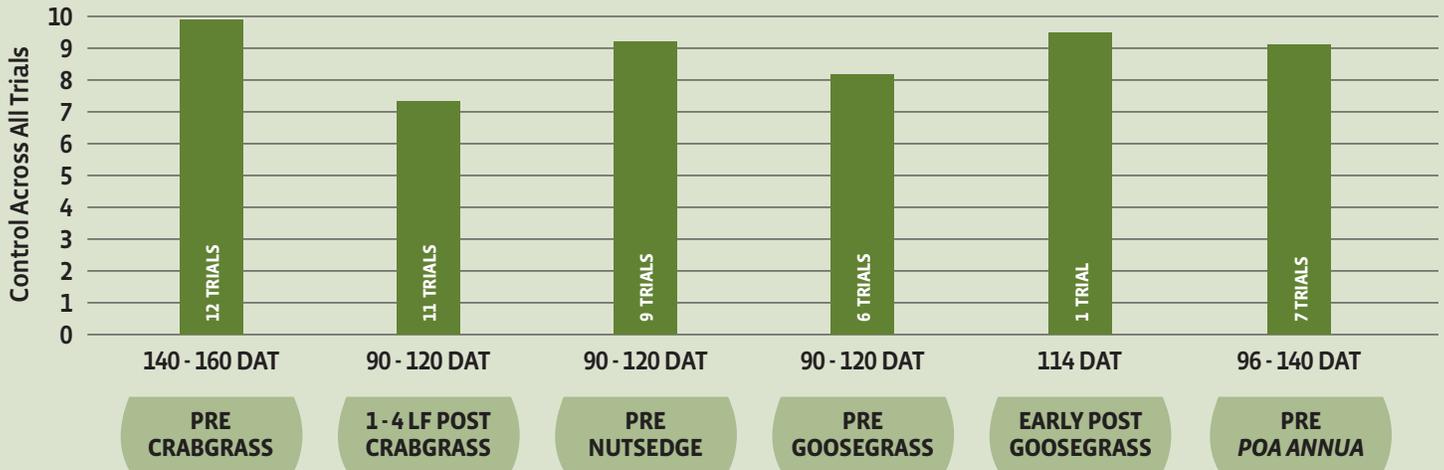
In a 1961 field study, researchers discovered that just one yellow nutsedge tuber planted in spring produced 1,900 shoots and 6,900 tubers in a single year. Echelon herbicide works below the soil's surface to help prevent these tubers from seeing the light of day. *Source: Tumbleson & Kommedahl, 1961*

Consistently Goes Above and Beyond

This composite view of university research conducted across the United States helps illustrate the added value of Echelon. As you can see, Echelon achieved over 90% preemergence control of nutsedge across 9 trials, over 90% preemergence control of *Poa annua* across 7 trials and nearly 100% control of preemergence crabgrass across 12 trials.

Echelon® Herbicide

COMPOSITE VIEW OF UNIVERSITY RESEARCH



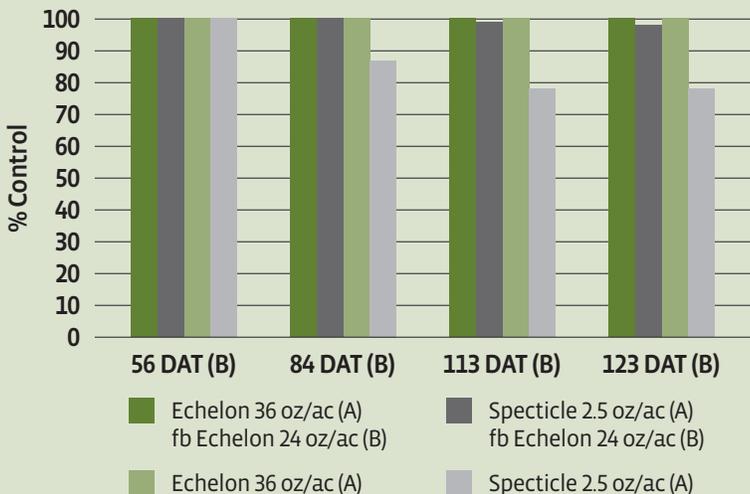
Control is represented as normalized data across all plots where 0 = no control and 10 = 100% control

Proven, Long-Lasting Crabgrass Control

Despite all of the extra advantages of Echelon, you won't sacrifice a thing when it comes to spring crabgrass results. In university trials, Echelon has consistently delivered performance that is equivalent to or better than Dimension®, Barricade, and Specticle® in warm- or cool-season turfgrass. As the chart on the left shows, Echelon also works well in a single or split application program. And as you'll see in the chart on the right, Echelon even delivers impressive performance against early postemergence crabgrass, whether applied as a sprayable application or a dry application on fertilizer.

Pre Crabgrass Control

ECHELON DELIVERS RESULTS AS A SINGLE OR SPLIT APPLICATION

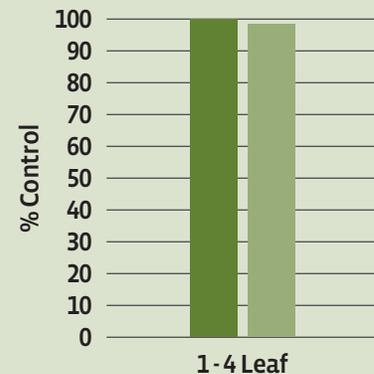


A = September 26, 2012 B = March 14, 2013

Source: University of Tennessee 2012-2013

Early Postemergence Crabgrass Control

ECHELON QUICKLY AND EFFECTIVELY CONTROLS EARLY POSTEMERGENCE CRABGRASS



VIRGINIA TECH

Echelon 4SC, 24 oz/ac
Echelon Fert, 0.75 lbs ai/a

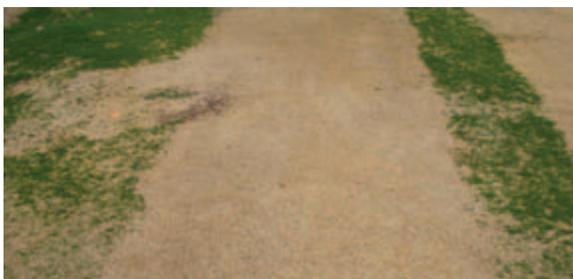
Source: Virginia Tech, 2008. Smooth Crabgrass Ratings taken 94 days after treatment

High-performance *Poa Annua* Protection

The photos below demonstrate how Echelon delivers preemergence *Poa annua* control that stands up to the competition in both efficacy and residual. A full 14 weeks after treatment, the area treated with Echelon shows no signs of *Poa annua* breakthrough. The chart on the right demonstrates the increased residual control Echelon delivers in an application program.



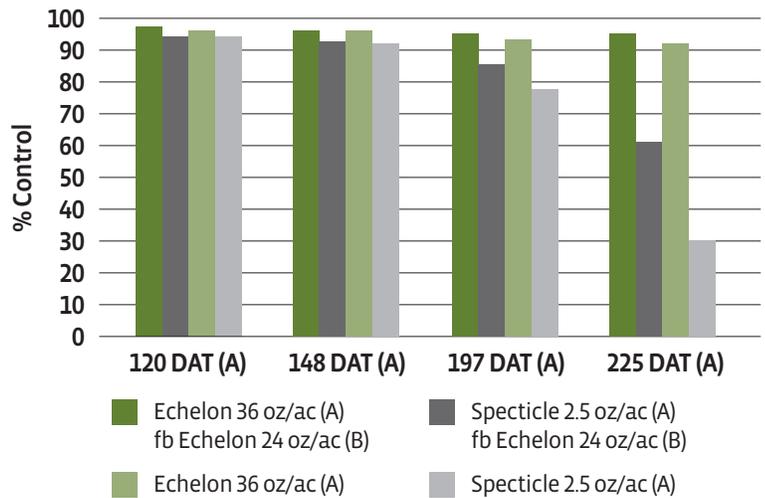
Untreated Check



Echelon 4SC, 0.75 lbs ai/a
14 Weeks After Treatment

Pre *Poa annua* Control

APPLICATION PROGRAMS WITH ECHELON DELIVER RESIDUAL CONTROL



A = September 26, 2012 B = March 14, 2013

Source: University of Tennessee 2012-2013

But what truly sets Echelon apart from the competition is its surprising efficacy against postemergence sedges and other weeds present at the time of application that you normally have to clean up later. In fact, a fall application with Echelon could be the last treatment you make all year!

Don't change your routine. Change your herbicide.

Imagine being able to fight the growing problem of sedges without having to add more treatments to your schedule. It's possible when you "nip it in the tuber" by choosing Echelon herbicide for your spring or fall applications. Only Echelon combines superior crabgrass and *Poa annua* performance with sedge control and prevention, plus control of pre- and early postemergence goosegrass.



For more information on Echelon herbicide, scan this code or contact your FMC Market Specialist or local FMC Sales Agent.



fmcprosolutions.com

