

# WEED CONTROL PROGRAMS AND NEW PRODUCTS

Spot treatments are an environmentally proactive and economically practical methods of weed control.

*Photo by Joel Jackson.*

*By Joel Jackson, CGCS Retired*

Now that MSMA® is being phased out as the standard for hard-to-control grassy weeds, superintendents must rely on new products. Adding to the re-evaluation of traditional weed-control programs are the budgetary pressures from a sluggish economy. Turf managers everywhere are taking a hard look at practices and products and coming up with new approaches to weed control on their golf courses. We talked to superintendents from north, central and south Florida to get input on what they are currently doing and the products they are using.

## North: Timaquana C.C., Jacksonville

*Chris Neff, Superintendent*

We still have a proactive preemergent program at Timaquana. We have a variety of grass types in the fairways which can lead to weed infestations in the less dense off-types. In February we make a wall-to-wall application of fertilizer sparged with Ronstar sparged. We follow that up in May alternating Barricade and Pendemethalin each year, and again in August. In October/November we apply either Surflan or Barricade, alternating the products each year. We also have tried Tower recently in the May application to help control dove weed.

We also quit overseeding several years ago. We made that decision after thorough

discussions of the pros and cons, and in preparation for a U.S. Amateur event. The net result has been the ability to provide better year-around playing conditions by not having to go through seed establishment and transition periods in the fall and spring. It has definitely made overall conditions more consistent to manage.

Dove weed and purple nutsedge present our most persistent problems. The dove weed likes to inhabit the hard-to-mow and hard-to-spray areas like bunker faces and shady wood-lines. The nutsedge seems to be a perennial problem because our heavier soil profile tends to stay moist since we are near the river. We are not plagued by much goosegrass or signalgrass, thank goodness. I also think our attention to increasing fairway aeration and topdressing frequency has minimized some of the traditional weed problems.

Because of our mix of fairway grasses, uniform coverage is important so we do still do a lot of boom spraying to control

control as it is often harder to see outbreaks in the roughs.

We do a fair amount of spot treating for dove weed since it is on those hard-to-boom-spray areas like lake banks and bunker faces and any outbreaks in the roughs and naturalized areas. The assistant superintendent and the spray tech each take nine holes, then the next time they switch nines for a fresh pair of eyes looking for weed infestations. They will make runs with RoundUp or Revolver and Monument, depending on the target weeds and sites.

We stopped using MSMA two years ago in preparation for its eventual cancellation. We knew we had to develop a working trust of the new products. We alternate Monument, Dismiss and Revolver. In taking weed management classes at the Golf Industry Show over the years, I have learned from Drs. McCarty and Yelverton that it is essential to keep rotating products to minimize the chance of the weeds

building up resistance.

We are evaluating Celsius, Katana and Specticle so we can see how they work on our site, again building up that trust factor. I always

## Turf managers everywhere are taking a hard look at practices and products and coming up with new approaches

weed outbreaks, especially for *Poa annua* control in November-December. Then we look for any breakthroughs and make another widespread application. After that we will spot treat for any subsequent outbreaks. The same goes for sedge

make trial applications on our driving range. For instance Specticle is reported to have up to 6 to 9 months control. To find out how the turf will react and how the weeds respond, I use the range as our test plot before we move on to applications to

our in-play areas.

In May we will be regrassing the whole golf course except the roughs. We will be installing TifEagle on the greens, TifGrand on the surrounds and no-till Celebration in the fairways. The clubhouse will also undergo a major renovation from top to bottom. We open up again in October. It will be interesting to see what changes will be in store for our weed management program then.

## Central: Laurel Oak CC, Sarasota

*Darden Nicks, Superintendent*

We have modified our weed-control programs in response to budget cutbacks and observation of weed pressure, or the lack of it. We have been able to cut back on the perennial multiple large-scale grassy-weed preemergent applications of Ronstar® sparged onto fertilizer, that were previously employed, thus creating substantial savings in the chemical budget. We still apply seasonal preemergent, spot-spray applications of Barricade® to some roughs and bunker faces to help control broadleaf

weeds and Poa annua.

Our biggest weed problems are nut sedges, tropical signalgrass, dove weed and some bull paspalum. We do apply some Dimension® preventively around the clubhouse and driving range perimeters to control tracking of ryegrasses used to overseed those areas.

To control our cool-season grassy weeds, we apply tank mixes of Celsius® (3 oz/A) and Katana® (2.5 oz/A) via boom spray in roughs and on bunker faces.

In the summer season to combat dove weed, signalgrass and sedges, we increase the rates to 5 oz/A of Celsius® and add 12 oz/A of Dismiss South®. Sometimes we will replace Katana in our Celsius® mix with .88 oz/A of Monument® when spraying sedges, broadleaves and late season Poa.

We also go after dove weed with the label rate of Buctril and spot spray outbreaks found usually in shady areas, mulch beds, bunker faces and north-facing mound slopes.

Fortunately we do not have a big goosegrass problem, but if we have the need to treat for goosegrass, we use a mix of

Revolver® with a “pinch” (less than 1 oz) of Sencor®.

The bulk of our weed-control efforts are done by spot spraying from utility carts with small volume electric spray tanks. The spraying is done by the superintendent or assistant as part of a concerted program to target any current weed outbreaks. The weed infestations are scouted, sprayed, logged and monitored for control effectiveness.

We definitely take the IPM approach to our weed-control programs and we have found that our region of the county tends to have heavier blue/grey clayey soils, so the product stays in place longer and requires less frequent follow-up applications. We no longer use MSMA for grassy weed control. The heavier soils have the added benefit of having lower nematode populations. But that's another story.

## South: Boca West CC

*Steve Wright, CGCS Head Superintendent and K.C. Henderson, Superintendent Fazio II Course*

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**HANDS ON**

input on herbicide programs on seashore paspalum turfgrass. Overall, Boca West like many others have adjusted their programs not only because of budget crunches but also based on the increased prices of the newer, more selective, herbicides.

While Boca West still boom-sprays for weed control, that too is done with a spot-treatment approach by targeting the higher-traffic, damper areas that are more prone to weed infestation.

Follow-up treatments of sporadic outbreaks are done with the smaller electric 15-gal. sprayers; 2.5-gal. backpack sprayers are used when treating paspalum encroachment into the bermudagrass.

One of Wright's chief priorities is the overall safety factor regarding turf responses to products, making sure to minimize any root pruning effects. He tries to maintain a uniform inventory of products that will give results on both grass types. As a last resort, Wright and K.C. are not bashful about using a pocket knife to administer the *coup de grace* on persistent or stray weeds.

In the paspalum on the Fazio II course, signalgrass and crabgrass are the biggest headache in the summer and *Poa annua* in the cooler months. Henderson says if they go after the signalgrass in the cooler months beginning in October, he has good results just using salt to knock back the plants. The procedure is to wet the signalgrass clumps lightly with water from a spray bottle and then sprinkle granular salt over the plant. The cooler weather prevents the plant from regenerating quickly. He also says even if the plant does not completely die, it is easily pulled out once it weakens.

On the bermudagrass courses, signalgrass, goosegrass and crabgrass are the biggest offenders.

Back in 2009 and 2010, with the looming cancellation of MSMA, Wright said they tried everything on the signalgrass and crabgrass, but MSMA with a little Sencor was still the most effective product. Combined with Monument, it also worked well on controlling encroaching paspalum in the bermudagrass. Of course MSMA is no longer a viable option as inventories of the old turf-labeled materials are being used up.

Now Wright and company are using tank mixes of Celsius (12 oz/A) and Dismiss South (5 oz/A) to control the big three weed pests in bermuda and it took multiple applications to affect the signalgrass. Henderson uses a Dismiss (*not* Dismiss South) and Drive, a mix called Solitaire to control goose and sedge in paspalum. He said that the product worked best in the early spring with temperature in the 70s. Once the temps starting getting up into 80s he could see some turf burn.

Boca West also maintains an active preemergent program. Formerly using Ronstar and Dimension mixes, Wright discovered that the new Tower product is working quite well. They make three applications a year; March, May and late August or early September. These applications help suppress goosegrass and signalgrass in the warm months and *Poa Annua* in the cool season. As Wright noted, "Timing is everything."

Currently Wright is also evaluating Specticle, another new preemergent product to see how it might fit into their program.




# ROTATE, ROTATE, ROTATE!

By Todd Lowe  
USGA Florida Region Senior  
Agronomist

*Goosegrass removed from a Texas putting green that was later confirmed to be resistant to a sulfonylurea herbicide.” Photo courtesy Gary Brooks, Bayer Environmental Science.*

Golf courses constantly battle weeds in our region due to subtropical conditions that favor rapid establishment and growth. Eradication of weeds however, is economically and environmentally impossible. Thus a philosophy of maintaining an acceptable level of control is required and the use of herbicides is a necessary part of an integrated pest management program. Weed management programs on most Florida golf courses generally includes two to four preemergent herbicide applications for warm-season and cool-season weeds, and spot treatments of postemergence herbicides to kill infestations of established weeds.

There are a variety of herbicides that are effective on turfgrass weeds in our region. Factors that are often considered when purchasing herbicides include cost, safety, efficacy, and ease of application. However, an additional factor that is overlooked is mode of action. It is human nature to continue using products that provide consistent results, or are the least expensive, but we



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may be doing more harm to our golf course in the long run.

Some annual weeds like goosegrass and annual bluegrass produce thousands of seeds that can be quite genetically diverse. Some seedlings may have a herbicide-resistant gene, and if the same herbicide is applied each year, this gene can be passed along to future generations. To date,

goosegrass and annual bluegrass resistance has been confirmed with several different turfgrass herbicides.

For goosegrass, resistance has been documented with Illoxan (*diclofop*), Fusilade II (*fluazifop*), Dimension (*dithiopyr*), Pendulum & others (*pendimethalin*), Barricade (*prodiamine*), Surflan (*oryzalin*), Balan (*benefin*) and Team (*trifluralin*). For annual bluegrass, they include Dimension, Pendulum & others, Barricade, Surflan, Balan, Team, Prograss (*ethofumesate*), Princep & others (*simazine*), Aatrex & others (*atrazine*) and Sencor (*metribuzin*). There has been a recent report of sulfonyleurea herbicide resistance in goosegrass as well, but results are not yet published (*see picture*).

Rotating different modes of action is recommended to reduce the development of herbicide resistance. An example might include rotating

Ronstar into a preemergent Barricade program, if it has been applied consecutively for several years. Pendulum and Surflan would be poor choices for rotation in this scenario, as these

**It is human nature to continue using products that provide consistent results, or are the least expensive, but we may be doing more harm to our golf course in the long run.**

chemicals have similar modes of action as Barricade. Some basic knowledge of herbicide families is necessary to make an informed decision, but these are easily accessible via the internet or turf management textbooks.

Consider your weed control programs and whether reduced control of a particular weed like goosegrass or annual bluegrass has occurred. If the same herbicide has been applied for several years consecutively, then there may be a chance that resistance is occurring. Rotate herbicides with different modes of action to reduce the likelihood of herbicide resistance and improve weed management efficacy at your golf course.



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