

A variety of new herbicides offering broadleaf weed control have hit the market recently, most geared at providing more control with less usage.

The trend for golf turf seems to be with “combo” products that consist of a combination of three well-known products for broader control of a greater variety of weeds. PBI/Gordon Corp. claims they started the trend with the three-way Trimac product, of which there are many copies now, says PBI/Gordon product sales specialist Jim Goodrich.

“There are still two-way combos out there, and I think the reason is because it cuts down the cost a little to superintendents, but they’re leaving out a third kind of weed they could target,” says Goodrich.

Goodrich characterizes the three-way market as highly competitive, even more so now after a company typically known for

its fungicides and insecticides introduced another three-way product to the market last year. PBI/Gordon recently released Katana, T-Zone and Q4 Plus.

Katana, with the active ingredient flazasulfuron, is a warm-season sulfonylurea herbicide that offers postemergence control of kyllinga, sedges and broadleaf weeds, as well as many grassy weeds. Goodrich says it falls in the same category as Monument, Revolver or SedgeHammer and also acts as an inhibitor.

“After application, the plant will stop functioning as it stops producing enzymes and then slowly dies,” he says. “What makes it unique is it works more quickly in cooler temperatures, especially soil temperatures in which a lot of products don’t respond.”

The soil temperature Goodrich refers to is below 65 degrees, but he says Katana, unlike

other products, even exhibits good control when the soil temperature gets as low as 50 degrees.

T-Zone offers broadleaf weed control in cool-season turfgrasses. It contains four active ingredients, including triclopyr which Goodrich says is a proven ingredient for hard-to-control weeds such as wild violet, ground ivy, clover and black medic. One ingredient, sulfentrazone, offers suppression of yellow nutsedge.

Q4 Plus, a four-way product like T-Zone, is actually a re-release of Q4, says Goodrich. The difference is that PBI/Gordon increased the quinclorac load, which Goodrich says is the active ingredient in competing products such as Drive and Accelerate. In Q4, the amount of quinclorac was at ½ lb. per acre, but in Q4

THE USUAL SUSPECTS

A variety of new herbicides are taking broadleaf weed control to the next level.

By Jason Stahl



1

Doveweed



Buttonweed

2



3

Ground ivy



4

Kyllinga



Wild violet

5



6

Clover

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Plus, it's at ¾ lb. per acre.

"It also contains sulfentrazone, so you'll get broadleaf weeds as well as grassy weeds all in one shot," Goodrich says. "And unlike T-Zone, you'll get control, not just suppression, of yellow nutsedge."

Goodrich claims that Katana has gotten great reviews from superintendents, specifically regarding *Poa annua* control.

"Compared to other products, the use rate is much lower, which means you have less environmental impact but you still get excellent control," he says. "Normally, guys will go out to control *Poa* on warm-season turf, then have to come back with a separate broadleaf herbicide. But with this product, they can get it all in one shot."

Goodrich says that being environmentally sensitive is always a goal of PBI/Gordon, but the other benefit of less usage when it comes to Katana is that superintendents save roughly \$20 per acre per application.

T-Zone has also been getting raves, says Goodrich. A specialty herbicide that targets hard-to-control weeds, it's effective on weeds such as wild violet, which is difficult to kill because there are multiple layers of it. Typically, one would spray over the top and only hit the top layer and not achieve the entire killback desired. But T-Zone has been achieving better results, according to Goodrich.

"Still, you might have to come back with a second application depending on the infestation level of the wild violet," he says.

FMC Professional Solutions has launched two herbicides and changed the label on a third within the last few months.

The new *Blindside*, which offers postemergence control of a variety of broadleaf weeds, is a combination of two core active ingredients found in other products FMC offers: sulfentrazone and metsulfuron.

"These ingredients have unique properties, so we're adding them to other chemistries," says Adam Manwarren, FMC turf and ornamental product manager. "We don't just make a premix for the sake of making a premix. We try to do it if there are synergies we can outline and capitalize on."

Blindside, for use on warm-season turfgrass including St. Augustinegrass and also approved for Kentucky bluegrass and tall fescue, controls weeds such as dollarweed, doveweed, buttonweed, ground ivy, wild violet, sedges and clover.

"Metsulfuron by itself would do okay on some of those weeds but would take two to three weeks to have an effect," says Manwarren. "But put metsulfuron and sulfentrazone together and we see something within a couple days. That makes the club members happy when they see something happen sooner."

Manwarren says not only is *Blindside* fast acting, it will continually reduce the weed population the following year, allowing superintendents to go down the sustainability path. He used the example of applying *Blindside* to a 1,000-square-foot area of solid doveweed. The next year, he says supers might only see 80 percent (a rough guess, he explains, for the sake of the example) of the area covered in doveweed.

"The idea is if you treat an area and don't

have as much weed pressure the following year, you'll be applying fewer pounds of active ingredient the following year," says Manwarren. "Some people think it's because the active ingredient is hanging around in the soil, but actually it's that *Blindside* is controlling the reproductive structure of the plant."

Another thing superintendents like about *Blindside*, Manwarren says, is it's formulated as water-dispersible granules, so it's easy and convenient to measure. Supers also like its speed and control of doveweed, he says.

"They're raving about its control of doveweed, because that weed is very fast-growing and hard to control and there are not a whole lot of other products that are working well on it," says Manwarren.

FMC's *SquareOne* offers broadleaf weed and crabgrass control for newly seeded turf and consists of a combination of carfentrazone and quinclorac. The idea is to get rid of competing weeds so that the new turfgrass can get off to a healthy start.

"You can use it one day before seeding or seven days after emergence," says Manwarren. "With most herbicides, you have to wait four mowings or 30 days after emergence to treat, or at least one week before seeding. *SquareOne* really narrows that window of application."

Finally, FMC changed the label on *Dismiss South*, a combination of sulfentrazone and imazethapyr, to include control of dallisgrass.

"We had marketed it for control of purple nutsedge, but we discovered it had significant



7

Black medic



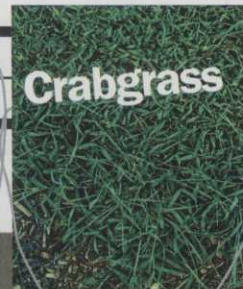
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Chickweed



9

Dandelion



10

Crabgrass



11

Goosegrass



12

Dallisgrass

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These two photos illustrate how Blindside controls buttonweed at 6.5 oz./acre. Photos were taken at the University of Tennessee 28 days after treatment.

Blindside on ground ivy at 6.5 oz./acre on the left, 8.0 oz./acre in the middle and a control at right. This was also taken at the University of Tennessee.

activity on dallasgrass," he says.

With all the combo products out there, which are essentially doing the same thing – eliminating the use of two or three products versus just one – superintendents have to sort out if the particular product is adding value for them.

"And that value would be increased weed spectrum, longer residual, easier mixing, speed and fewer pounds of active ingredient," Manwarren says.

Syngenta's new products are Tenacity, which offers preemergence and postemergence control of both broadleaf and grassy weeds in cool season turfgrass and bentgrass, and Monument, which offers postemergence activity on warm season turf.

"Tenacity can be applied at the time of seeding if you're renovating tees or areas of fairways," says Dean Mosdell, turf and ornamental western technical manager. "You can put it down and seed right into it or put it down after seeding for control of weeds that would compete with the new seeding."

Those weeds would include crabgrass, goosegrass, sedges, chickweed and winter annuals such as dandelion and clover. Mosdell is expecting Tenacity to be registered in California next year, although the product has

been available to the rest of the country for the last two years.

Monument, a sulfonylurea herbicide, only works on warm season turf and, according to Mosdell, has an entirely different mode of action, weed spectrum and turfgrass sensitivity than Tenacity. It controls sedges, green kyllinga, oxalis and various other grass and broadleaf species in Bermudagrass and zoysiagrass.

While some turf experts have called attention to the proliferation of combo products, Mosdell says he's seeing more and more individual products that target specific weeds like dallisgrass and goosegrass.

"These weeds are difficult to control, and maybe the two- or three-way combos left a couple weeds like these out of their control spectrum," says Mosdell.

Mosdell has also seen the effect of reduced budgets, which has led to reduced use of herbicides but also fertilizer, which he speculates might influence competition from weeds and lack of growth of turfgrass.

"From an herbicide perspective, [supers] might not be broadcasting as much anymore but spot treating areas that have gotten a little more weedy," he says.

Mosdell says superintendents have told him that Monument has been the best product they've

used for sedge and broadleaf weed control. With Tenacity, there has been surprise at how safe it has been to use when seeding ryegrass and Kentucky bluegrass, he says.

"When you start renovating an area, there's no competition and the weed seeds can out-compete the desirable plantings, especially considering how slow Kentucky bluegrass is," he says.

Also, Mosdell says Tenacity makes a solid tank-mixing partner. "Because of the synergistic response we see with some herbicides, [Tenacity] will pick up additional weeds, increasing its activity. Plus, [the mixing] takes away some of its whitening response – something built into it to show that it is actually working and infiltrating the susceptible species' leaves, shoots and roots."

One of Valent USA Corp.'s latest developments includes the recent registration of SureGuard for broadleaf and annual bluegrass control for dormant Bermudagrass. Its active ingredient is flumioxazin, and it has both preemergence and postemergence control of broadleaf weeds. Its real strength, says Jason Fausey, regional field development manager, is its long-lasting preemergence control on broadleaf weeds.

"But it is also rather unique in

its long-lasting postemergence control of winter annual broadleaf weeds such as chickweed, henbit, black medic and shepherd's purse," says Fausey. And that control is fast-acting, he says, within seven days, even under cool temperatures.

Fausey says this product fills a hole in the market left by other limited-use products that have been taken off the market.

"This product goes in the opposite direction of 3-in-1 products," says Fausey. "For the most part, it would control most weeds at the time you apply it. I think it's great in the summer when you use a 3-in-1 product just from the spectrum of control you get. But [SureGuard] has a single active ingredient and does a nice job of targeting specific weeds at a specific time of year."

Fausey has seen a declining number of courses due to what he says is the cost of overseeding with ryegrass in the winter months. But he believes that's where SureGuard can help.

"You can apply it in a dormant Bermudagrass area and maintain it weed-free and not worry about overseeding to maintain a nice, attractive look," he says. **GCI**

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