



Weeds Be Gone!

Weed control is a year-round endeavor for Florida golf course superintendents. The first big push comes in preparing golf courses for control of the overseeding in the fall. The beautiful lush, green ryegrass in the fairways is an unwelcome intruder in the non-overseeded roughs and tee and green slopes for those who don't seed wall-to-wall.

To protect those semi-dormant bermudagrass areas from unsightly patches of ryegrass and the blight of winter annual broadleaf weeds, a wide choice of pre-emergent products can be applied. These application dates are sometimes etched in stone from years of observation or rough estimates that shift with special events. Both scenarios depend on decent weather for success.

After the pre-emergent programs unfold and meet with varying levels of success, superintendents begin search-and-destroy spot-treatment programs to keep the highest-priority areas weed free. The good news is less herbicide is applied in this manner. The bad news is that you can miss some spots sometimes.

There is not a superintendent alive who has not worn out the blade of a pocket knife picking out juvenile goosegrass from his greens as he tours his course. In fact many courses have adopted hand pulling programs to reduce chemical use. It is labor intensive, but it is an environmentally friendly alternative that may become more necessary with time.

Some of the hardes-to-control weed pests we have been dealing with for decades are coming under control with new chemistry in products like Illoxan for goosegrass, Manage for purple nutsedge and Drive for torpedograss. They are more expensive, but the rates are lower per acre.

This is very important because some of the most universal herbicides like MSMA and 2,4,D are under increasing attack — justly or unjustly. Supporting turf research into new controls for weeds is a good investment because slowly but surely, we are losing the products we have been using for so long.

Timing of weed control programs combined with good planning of cultural practices to help maximize turf vigor and recovery is critical for the most efficient use of chemical controls. The following articles will give you some ideas for the timing, products and recommendations for weed control in Y2K.

JOEL JACKSON, CGCS

Why and How We Apply Pre-emergents to Stay A Step Ahead

Let's face it, this is Florida, greenest place on earth! Just ask the players, particularly our winter visitors, and they'll say, "We're in Florida and by golly we are going to play!" So, overseeding is not an option, it's a must. Here is where a pre-emergent herbicide program becomes important.

Most of us do not have the luxury of closing the golf course for most maintenance procedures. Generally, only hur-

ricanes and monsoons are considered course-closing events. That means that the seed goes down, players play, irrigation runs, and the rye seed is tracked everywhere.

Now you could wait to see where the unwanted seed germinates and treat it with a post-emergent herbicide, such as Kerb or Simazine, but as a wise man once said "Once you've seen the problem, it's too late, because so has everyone else."

With that in mind, let me tell you about our pre-emergent program at the LPGA International Golf Course. Fortunately, pre-emergent chemicals are good for 60-90 days. Depending on the chemi-

cal and the rate we use, we have time to plan, execute, and accomplish this task accordingly. Before we start spraying, there are a few things that must be done.

First, we establish which weeds are the problem and select the appropriate control measure. Then it's time to get the equipment checked out by the mechanic. A weather-worn hose can cause major problems. Once that is done we choose the nozzle best suited for spraying pre-emergent herbicides and calibrate our spray rig.

Because our fairways are contoured and our tee complexes are small we decided to use drop spreaders to make one pass around the fairways and tees and any areas that the spray rig can't spray effectively.

We use two Toro Multi-Pro 150-gallon sprayers with flat fan 8006 nozzles, an SDI 300-gallon sprayer with 8004 nozzles and two 36-inch wide Gandy drop spreaders to apply our pre-emergent products. We began our applications on the Legends during the third week of October and did the Champions course the following week.

This year we drop spread our fairway and tee perimeters with Team 2G at 3½ pounds per acre and sprayed Lesco Pre-M 3.3 EC at the rate of 1¼ gallons per acre on the rest of the non-overseeded areas on both courses. We also have a three-hole practice facility with our driving range. We chose to use Barricade at 1¼ pounds per acre for this area.

It is very important that the irrigation specialist be right behind you watering in the product. This will reduce the risk of golfers tracking product onto the places you want the seed to germinate, and it will wash the chemical down to the soil where it can start creating the pre-emergent barrier.

If you get any lateral movement of product into unwanted areas, a little charcoal and some more seed will take care of it. Unlike Kerb, which can be very mobile, we have experienced very little movement with the Team 2 G or Pre-M 3.3 EC.

Broadleaf weeds, goosegrass, and crabgrass come in 1, 2, 3 in an "ugly" contest in my book. I guess the order

depends on your point of view. You will never be totally rid of goosegrass so don't throw away your knife and Illoxan. This is when our second application of pre-emergent comes in.

With our second application 75-80 days later, we didn't use the drop spreaders. We just boom-sprayed everything. This application is intended to suppress the growth of winter broadleaf weeds and any volunteer ryegrass. Depending on your region in Florida, it's also going to help suppress germination of goosegrass and crabgrass.

Our third application of pre-emergent will occur 65-80 days after the second application. We will monitor soil temperatures on a weekly basis. By taking soil temperatures at a 4-inch depth we closely monitor and time our spring application when soil temperatures reach 55-60 degrees.

For this application we've chosen Pendimethalin at the rate of 3 pounds active ingredient per acre. The chemical

is impregnated on fertilizer and spread by a subcontractor. We feel this saves us time and money. We chose Pendimethalin because crabgrass is the weed that provides us the greatest challenge. If goosegrass is your problem, you might want to spend the extra money and go with Ronstar.

In summary we start our pre-emergent program just prior to overseeding in mid-October. Our second application is 75-80 days after in order to catch any volunteer ryegrass from previous overseeding and suppress winter broadleaves, and our third application is scheduled 65 - 85 days later, depending on our soil temperatures: 55-60 degrees for crabgrass and 65-72 degrees for goosegrass. By mapping and monitoring our high traffic and wet areas hopefully we can stay one step of the weeds and the golfers.

CARTER THOMPSON
Chemical Technician
LPGA International Golf Course

Editor's note: LPGA International's superintendent, John Lammrsh is a past contributor to the The Florida Green. For this Hands On topic Lammrsh challenged his pest control technician to write an article. Good idea for increasing grass roots participation in your magazine.

Weed Control Programs for Y2K Reduce Chemical Use

Pre-emergent Programs

To control both broadleaf and grassy weeds before germination including: volunteer ryegrass, crabgrass, goosegrass, bull paspalum, sedges and many types of broadleaf weeds.

1. Ronstar G: Applied late February or early March at 200 lbs. per acre. Normally mixed on a fertilizer. Applied in late evening over the overseeded turf.

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Must be watered off the leaf surface of the turf.

2. Pendulum WDG: Applied late April or early May at 2.5 pounds per acre and followed by 2.0 lbs. per acre applied in June or July as a split application to extend weed control.

3. Barricade 65 WG: Applied in October to all non-overseeded areas to control winter annuals and tracked-out ryegrass. Applied at 2 pounds. per acre.

Post-emergent Programs

No pre-emergent program will provide 100% control. We treat emergent weeds with the following materials.

1. Yellow nutsedge: Basagran T/O at 3 pints per acre.

2. Purple nutsedge: Manage at 1 oz per acre.

3. Bull paspalum: Tank mix of 2 qt/acre MSMA with Sencor 75 Turf at 2 tsp./acre with a good spreader/sticker. Mix and spray every 7-10 days until control is reached.

4. Goosegrass: Illoxan 3 EC at 1.0 oz/1000 sq. ft.

5. Broadleaves (winter annuals): Lesco Three-Way (2,4, -D, Mecoprop and Dicamba) at 1.2 to 1.5 oz/1000 sq. ft.

Mechanical/hand pulling of weeds

We hand-pull all weeds in the putting surfaces (except the nutsedges. See above). All weeds in flower beds are also hand pulled.

Wall-to-wall vs. Spot Spraying

Most all of our pre-emerge programs are treated on a wall-to-wall basis, except the fall application, which is used to treat only the non-overseeded areas.

All of our post-emergent programs are applied as spot treatments to only treat the actual weed infested areas to minimize chemical use and environmental impact.

Summary

After the last several years with properly applied pre-emergent programs we have reduced our chemical weed control to now less than 10% of our total turf acres. This effort is assisted by increasing our renovation activities and fertility programs to grow the healthiest turf-

grass possible, which minimizes weed growth.

Our major weed problems now seem to be purple nutsedge and bull paspalum. Their waxy leaf surfaces tend to resist the penetration by the herbicides, and our summer rains make it hard to keep an active product on the plant. Unfortunately, it seems our pre-emergent programs have a minimal effect on these weeds.

CARY N. LEWIS, CGCS
Renaissance Vinoy Resort

Weed Control for 2 Municipal Courses in Fort Myers

Working with superintendents Ed Stalnos at the Ft. Myers CC and Jim Hahn at the Eastwood GC, this is the program we came up with for the two municipal courses for this year.

Pre-emergent Program

We apply a 13-6-18 fairway fertilizer sparged with Barricade at the rate of 350 pounds per acre. This provides .75 pounds active ingredient of Barricade per acre. This is put down during the first week of November.

We follow up with either another 1.5 pounds per acre of Barricade or 1.5 quarts per acre of Surflan 75 to 90 days after the initial treatment. Our primary weed targets with this application is suppression of goosegrass and crabgrass germination. We also hope to slow down some of the *Poa annua*. If we get volunteer ryegrass coming up in non-seeded areas we spot treat with Kerb as a post emergent application.

Post Emergent Program

For goosegrass and crabgrass infestations we use Sencor at 3 oz per acre with MSMA at 43 fluid ounces per acre as a tank mix with good results. Illoxan at a rate of 1 quart per acre has been used on Tifdwarf putting surfaces for goosegrass control. The greens are only sprayed if hand-picking cannot control the goosegrass.

Broadleaf weeds are controlled using Trimec Classic at a 1/2 quart per acre rate.

We have been very successful con-

trolling purple nutsedge by applying Manage at 1.3 ounces per acre.

We have also had good results using the new herbicide Drive making two applications at the label rate.

Our most difficult weeds are goosegrass and a broadleaf weed called southern sida. If anyone has any ideas on control of the latter, please give me a call.

MIKE MONGOVEN, CGCS
City of Fort Myers

WEED NEWS OFF THE NET

New Product

Dow AgroSciences has recently received registration for Lontrel Turf & Ornamental herbicide in the state of Florida. Lontrel is a non-phenoxy, selective post-emergence herbicide that contains the active ingredient clopyralid. It is labeled for use on both warm and cool season turf and sod farms. Clover, thistles, and nightshade groundsel are among the weeds that are on the label with the expectation to expand it in the coming year. There is excellent turf safety with both St. Augustinegrass and bermudagrass. Lontrel may be applied as a broadcast or spot treatment.

DR. PHIL BUSEY'S TURFTALK DIGEST

Questionable spot treatment

Often I see herbicidal spot treatment of goosegrass causing considerable damage to fairways, more than a properly calibrated broadcast application of traditional selective products. I described this in an article in the September 1999 Golf Course Management, and some examples are illustrated at

<http://www.floridaturf.com/weeds/eleusine.html>

I am interested in collecting comparative data on costs, both in materials and labor, of booming vs. spot treating. I am also interested in what threshold of goosegrass infestation is used to decide between the two approaches. Please share any experiences.

Tropical Signalgrass

I've struggled for over a year talking about "that weed everyone's got" so now

I'm calling it tropical signalgrass. In golf course management it is most commonly bullgrass, yet I don't think you'll find "that weed" in any book under the name bullgrass. Meanwhile some people call it smallflowered Alexandergrass, and some call it crabgrass, which leads to more confusion because those two plants differ so much in herbicide sensitivity. To help reduce the confusion, I've posted photos of tropical signalgrass and crabgrass at: <http://floridaturf.com/weeds/urochloa.htm>

Dick Wunderlin calls "that weed" tropical signalgrass in *A Guide to the Vascular Plants of Florida*, about as authoritative book as you can find for plant names in Florida. So I didn't make it up. If you're less interested in studying it, and more interested in killing "that weed," the good news is that it's fairly easy to do in golf or sports turf, if you go back to multiple broadcast tank mixtures of MSMA + Sencor. That's something about two-thirds of Florida golf

course superintendents appear to be gunshy about, but if you keep the Sencor rate to a tiny fraction of the label, say one third, it helps wave goodbye to tropical signalgrass without hurting bermudagrass.

Emerging weed problem

It's small, but can be a big problem. Old World diamondflower is a spreading broadleaf weed that grows low enough to survive on golf course greens. Patches are most noticeable on fairways, and because the bermudagrass is already slowing down, the patches stand out late in the growing season. Before looking at possible herbicides, we must first know what weed we are talking about, and this one has been frequently misidentified. More information and photos are here:

<http://floridaturf.com/weeds/hedyotis.html>

How do weeds get around?

Hurricane Irene was a vivid reminder

that no matter how good your turf sanitation, occasional events of nature can move weed seeds around. Inspecting turf areas in South Florida, I was impressed that all were under water. When it dries out, just look at the bands of flotsam across the fairway. This is a "design feature," and we should be proud that turf serves the environment by providing groundwater recharge. But the consequence of low-lying turf areas is that in any normal year, most turf areas can suffer lateral movement of weed seeds, besides the dispersal by wind and golf cart tires. Solutions may include the growing of a strong turf canopy, to constrict weed seed germination, and the use of preventive herbicides. But what about dealing with the basic problem? Would there be a way to selectively scoop up, or neutralize, the weed seed that gets moved around?

Editor's Note: You can subscribe to Dr. Busey's OnlineTurfTalk-Digest by contacting him at: turf@ufl.edu

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