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 ahead of the weeds and the golfers.

**CARTER THOMPSON**
Chemical Technician
LPGA International Golf Course

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**Editor’s note**: LPGA International’s superintendent, John Lammrish is a past contributor to The Florida Green. For this Hands On topic Lammrish 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.
Programs to grow the healthiest turf—now less than 10% of our total turf acres. This effort is assisted by increasing fertility and fertility programs to grow the healthiest turf.

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. Broadleafs (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 nuttizes. 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 turfgrass possible, which minimizes weed growth.

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 ½ quart per acre rate. We have been very successful controlling 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

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