



Fertilizing the 'Green' Way

BY JOEL JACKSON, CGCS

Chemicals today. Fertilizers tomorrow. There are groups taking dead aim on the use of fertilizers in today's environmentally sensitive climate. Nitrate and phosphorus pollution are the focus of some of these initiatives. With TMDLs and nonpoint-source pollution standards being drafted as we speak, people who use fertilizers are going to have to make sure they are not part of the problem.

Enough research has been done to show that golf courses can use products and practices that will not create excessive nutrient leaching or runoff. In this issue, learn how nutrients are managed on a variety of courses from a high-volume public course to a multi-course resort complex. Florida's newest USGA Agronomist Todd Lowe also pitches in with some facts to help you spread the truth about turf fertilizers.

Winter Pines GC Fertility Program

Granular & Liquid Program for Greens

Our granular fertilization program on greens maintains a 1-0-1 or 1-0-2 ratio of N-P-K depending on the greens and their grass variety. We have some different strains of Tifdwarf on some greens as we rebuild them a few each year. All granular applications are made with a Scott's R8A walking spreader.

Some of the analyses we use are 19-0-16 with IBDU and sulfate of potash (SOP) in the winter for a slow feed at .5 lbs of N/1000 sq. ft. applied biweekly. We also use Lesco Novex 18-2-16 at the same rate. Milorganite is used at overseeding time and when cold nights are expected also at .5 lbs N/1000 sq. ft. Certain greens are supplemented monthly with Sul-Po-Mag at 5.0 lbs/1000 sq. ft. monthly and 0-0-50 at 2.0 lbs. K/1000 sq. ft. based on soil test results.

During transition we use "hotter" mixes at .5 lbs N/1000 sq. ft. weekly like Harrell's 12-4-12 or 14-2-14 and some ammonium sulfate (21-0-0) also at the .5 lb rate per 1,000 sq. ft.

We use a weekly liquid program during the winter months to supplement the dry fertilizer. All applications are made with a Smithco Spray Star 1600 with 8008 TeeJet nozzles. Our two basic programs: 1) 2.5 gal. of 12-0-12 plus 1.25 gal. 2-0-25 plus 1.25 gal. 7-0-0 plus 2 qts. 6-20-5 per acre per week and 2) 2 gal of 28-0-0 plus 10 lbs. 13-0-44 plus 10 lbs. 0-52-34 plus .5 lbs. Microplex per acre.

During transition or on weak greens we will help extend a granular application by applying 1.25 gal. of Lesco 12-0-0 + Iron or 1.5 gal. 18-3-6 from Growth Products as needed.

Program for Tees

Our granular program for tees consists of monthly applications of 9-2-9, 15-0-15, and 6-2-0 at 1.0 lbs. of N/1000 sq. ft. High traffic areas

are done at the same time to minimize wear damage to the turf. Since our tees only average 1,500 sq. ft. keeping the nutrition levels high is necessary to help them recover more quickly.

Most of the granular applications are made with the Scott's rotary spreader, but occasionally we will use our Massey Ferguson 230 tractor with a 600 lb. capacity hopper to cover tee tops, teeslopes and wear areas in one pass.

We use liquid applications of 1.25 gal. of 12-0-0 + Iron or 2 gal. 16-4-8 at 2.0 lbs./acre to supplement the granular applications or for better color on problem tees.

Program for Fairways

All fairway applications are made with our tractor and 600 lb. spreader. For a good spread pattern and coverage applications are made at 250-330 lbs of product per acre. We use a 9-2-9 fairway blend with Milorganite and Sulfur Coated Urea (SCU) in the winter to help green up the turf since we don't overseed our fairways and we don't have wall to wall cart paths.

In the spring we use Scott's 32-3-10 to get our fairway turf going before we renovate. Some years we will apply a 15-0-15 blend with Ronstar on the fairways if we have been having a weed problem. But spot treating with today's herbicides has made post emergent control a lot easier. A 4-2-23 fairway blend is used in the summer to start preparing the turf for cool weather in the fall, then when fall is here we usually apply 15-0-15 with Barricade to control *Poa annua* and "walked off" ryegrass from our overseeded areas.

The only liquid nutrient used on the fairways is the addition of iron to our Primo growth regulator applications to avoid any yellowing or bronzing of the turf.

Natural and Bio Products

We have tried some of the natural products on our new greens and problem areas on the older greens but there was nothing I saw that made me say, "This stuff really works!" Most of the time we quit using it after 3-4 applica-

tions if we didn't see any significant results. I'm willing to try something new if its not too expensive, hoping to see some benefit, but after reading Dr. Elliot's report on testing being done on biologicals, I go back to the basics and with a little help from Mother Nature everything comes back.

IPM Considerations

IPM is always taken into consideration no matter what we are applying. All big tractor applications of fertilizer maintain a setback or buffer zone along the water hazards. We fill in with walking spreaders or sprayer for better control. Additionally we apply Primo and iron along the lakes and canals to keep flymow work to a minimum so less fertilizer is needed.

We select our fertilizer blends to keep the amount of quick-release nutrients to a minimum to avoid any runoff problems from an unexpected downpour. We allow our last fertilizer application on our tees and greens to run out and we make a "spoon feeding" liquid application to hold color until the next granular application kicks in.

Soil tests are done once a year on six greens, tees and fairways and on any problem areas. Tissue testing is done periodically on any greens where the products do not appear to be working and the turf remains weak.

Summary

Winter Pines is a public golf course which is open 365 days a year from sunup to sundown. We try to work around our players as much as possible. Most of our morning players are regulars so they understand what we are doing when we might have to hold them up to water something in.

Every year we evaluate all the fertilizer products we use and we stick with what has given us the biggest bang for our bucks. New products come out every year and we will try some to see how they perform for us. All in all, how our turf looks and responds to what we do is the bottom line.

BY JOE ONDO, CGCS

The Nitrate Truth Shall Set You Free

I am preaching to the choir when I say that golf courses are good for the environment. We have known for years that turf is a filter for pollutants and loose sediments (dust) even though in some instances chemicals must be ap-

plied to support its growth. If it were not for turf, many of our waterways would be environmental hazards.

The USGA remains the largest supporter of turfgrass research. To date, we have funded over \$20 million in research and will continue to provide this support into the next millennium. Protecting the environment is the major goal of our funding by producing improved turfgrass

If You're Looking for Improved Pest Control . . . Du Cor has an Easier Solution!



New Du Cor LEMWET can help improve your pesticide spray application! LEMWET is a lemon extract attractant and surfactant for use with most pesticides. LEMWET attracts nearby pests to your spray. In addition, it's non-ionic surfactants improve spray penetration and bring your pesticide into close contact with pests!

For over 35 years, Du Cor has been coming up with products to fit our customers needs. From liquid micronutrients, humates and fertilizers, to specialty dyes, surfactants, odor counteractants and more, we take pride in finding special solutions that help our clients.

So if your looking for something special to attract a nuisance, or maybe just a different solution to help you grow, give Du Cor a call. We may already have just the solution you need!



Du Cor International Corporation

P.O. Box 593298, Orlando, Florida 32859
407-859-4390 or Toll Free 1-800-382-6735