

# Tifton 57: Durability, insect resistance praised

**Although athletic fields will benefit mostly from this grass, other turfgrass areas suffering from intensive use might be wise to try it.**

by Tom Mascaro

■ Tifton 57 bermudagrass has proven to be unsurpassed for football fields, baseball fields, playgrounds and other sports fields in the southern U.S., where maximum wear resistance is required.

Since its development in 1947 by Dr. Glenn Burton, it has almost faded into oblivion. Since bermudagrass development became focused on better grasses for greens and fairways, Dr. Burton eventually introduced Tifton 419, Tifton 328 and Tifdwarf. As these grasses became popular, Tifton 57 faded into the background.

However, some athletic field managers today are re-discovering Tifton 57.

"We have 7.5 acres of Tifton 57 and it is my favorite to work with," says Lanny Dixon, CPCO with the Broward County



**Lanny Dixon, left, and Ed Birch, supervisor of turf for the Broward school.**

schools in Florida. "I have found it harder than the 419, Tifway 2 and common bermuda. Our sports fields continually recover quicker under traffic stress, drought stress and any herbicide injury that we may cause it."

Dr. Burton himself, to this day, has a good-sized plot that has had no care—other than spring fertilization and thatch removal—yet still holds excellent turf after 40 years.

Tifton 57 has many qualities that make

it superior to common bermuda, among them:

- Ability to produce a denser, more weed-free turf.
- More resistance to insects and diseases.
- Longer-lasting green color.
- Less tendency to be injured from overseeding, and faster spring recovery.
- Less fertilizer requirement.
- More drought- and shade-tolerance.

"I wish that all of our fields were planted with this very durable turfgrass," Dixon continues. "I can totally understand why golf courses would be more interested in Tifton 419; but for sports facilities, I vote for Tifton 57—hands down.

"Although this turfgrass has thicker stolons and larger leaf blades and seems to experience leaf spot more frequently, I find it totally acceptable for our circumstances."

Another small inconvenience of using Tifton 57 is that of prolific seed-head production at certain times of the year. Dixon notes, "this is a little unsightly, but does not inhibit the field's playability."

Tifton 57 is, admittedly, too aggressive for golf greens and fairways. It has found a place on tees, since it can take the beating that these areas are subjected to. Many of the older courses probably still have Tifton 57 tees without realizing it.

Although athletic fields will benefit mostly from this grass, other turfgrass areas suffering from intensive use might be wise to try it.

For those who are interested, Dr. Burton has available two bulletins: "Tiflawn (Tifton 57) Bermudagrass" and "Football Field Construction and Maintenance for the South." His address is: Principle Geneticist, Dept. of Agriculture, Georgia Coastal Plains Experiment Station, Tifton, GA 31793.



**The Cooper City high school field is seeded with Tifton 57 bermudagrass. Benefits include a dense turf with long-lasting color.**



*—The author is a former golf course superintendent who is credited with inventing the first turf aerator. He lives in Oakland Park, Fla.*



# National standards for public ball fields? It could happen yet.

**Beyond lining fields, filling holes, and reseeding, facility and parks and recreation managers must take a more critical look at the whole picture.**

■ If you watch football, you've seen this—the 250-pound linebacker blasts the 220-pound running back out of bounds. The wildly spinning running back flattens a photographer. Or sends a rain of paper cups and liquid into the air as he bowls over a table just yards away from the playing field.

"There's something very wrong with this," says Francis "Bud" Cosgrove, who thinks this not uncommon scene indicates a peculiarly cavalier attitude toward safety and liability.

These types of safety issues aren't tied directly to the condition of a field's playing surface. They are field-related, however, and are ultimately the responsibility of the sports facility operator or the parks/recreation director.

Cosgrove says two excellent reasons why sports and parks managers will have to broaden their view of field maintenance are: (1) the growing awareness of participant and spectator safety issues and (2) operator liability.

Cosgrove, with the Nassau County (Long Island) Recreation and Parks Department, is working on national minimum standards for ball field design and maintenance. Under the umbrella of the American Society of Testing Materials (ASTM), he's assembled a committee to start developing these standards.

These efforts, at least initially, focus on community softball and baseball fields.

Organizations such as the American Softball Association and the United States Baseball Federation, along with several sporting goods manufacturers, say they'll support Cosgrove's effort.

"The response so far has been excellent," claims Cosgrove.

These proposed standards would



**Cosgrove: It's time to 'regroup' and establish minimum standards.**

include, but aren't limited to, maintaining the turfgrass playing surfaces.

Beyond lining fields, filling holes, and reseeding, facility operators and parks/recreation managers must take a more critical look at fences, the location of light poles, spectator seating, out-of-bounds areas, and more.

"We're going to have to be informed of not only the turf infield environment but of the entire picture," says Cosgrove.

"The first thing we as operators (recre-

ation or parks managers) should be doing is understanding our exposure. We have to analyze the kinds of activities that take place on a regular basis on our facilities."

Cosgrove suggests parks and recreation managers also develop:

● **Written emergency and accident response and reporting methods.** When accidents come to light, there should be an established procedure to respond to them and document them. "If you ever have to go to court, this will be invaluable," he says.

● **Written operation safety guidelines.** Cosgrove says parks and recreation managers should more aggressively insist that amateur ball players, particularly adult players, take more responsibility for their own behavior. This past season his community also issued a list of 12 guidelines (no alcohol, women at least six months pregnant must get a doctor's permission to continue playing, etc.) that athletes must follow for safer play.

● **Written criteria for field maintenance.** A checklist is a must. "Once these checklists are in place, it's our obligation to make sure those fields are inspected and if there's a problem that it's corrected."

Cosgrove says although his initial plan involved establishing national minimum standards for softball fields (he thinks advances in ball and bat design and materials are making many ball fields obsolete), he feels standards can be drawn for other types of fields as well.

"What we're trying to say from an operators' point of view is, 'Let's regroup and think these things out because there are a lot of ball fields that just aren't acceptable,'" says Cosgrove.

—Ron Hall



**Would minimum standards keep this from happening as often?**

# Public relations through community education

## Providing information on lawn chemicals to children, adults and community groups is a smart PR practice.

by E.T. Wandtke

The competitive nature of the 1990s requires landscapers and lawn care companies to be more service-driven and to deal with public concern regarding chemicals and their effects on the environment.

Some companies see regulation and environmental concerns as something that will hurt business. The smart companies see this trend as an opportunity to gain a new competitive advantage.

How can you use this trend of increased regulations and environmental concerns to your advantage? With public relations—providing information and/or service to a community or group of individuals.

Today, companies often return a little of what they receive to the community. But imagine the decrease in hassles if the market was educated and really knew what you were doing when you provided your services.

Educating the public is the best possible public relations strategy. You should target your efforts in three areas:

1. Educate children on the dangers of misused chemicals and the importance of proper safety procedures.

2. Educate adults on typical control products and their environmental effects.

3. Contact and inform new arrivals in the community.

**Educating children**—When considering your company's future, it is easy to see that today's children are tomorrow's customers. By remembering this principle, you will be preparing for future success.

What better way to attack misconceptions before they develop than to educate the source?

You should visit schools and discuss the following:

- Playing safely: crossing the street, playing around vehicles, explanation of lawn treatment signs and what to avoid;

- Chemical safety: household products and products typically found in garages or basements.

Plan well and make sure you bring plenty of props. By bringing actual examples (i.e., handouts, stickers and even prizes), you can maintain the children's interest longer since their attention span is typically short.

**Educating adults**—Adult education is different than that of children, since you will need to concentrate more on specifics. I suggest you visit the PTA, women's league, church groups, garden clubs, and

other groups. Preparation is again important, because typically, these groups express the most concern about the environment. Have a take-home brochure for them that explains which chemicals are dangerous, the steps lawn/landscape companies take to protect the environment, and the environmental effects of homeowner misapplication.

**Educating new arrivals**—This is perhaps the easiest: all you do is provide them with an information on what chemicals are used to service lawns in your market.

**Special event publicity**—Another effective method of securing publicity for your company is to run a special event in your community. Events can range from open-house tours to sponsoring community events. If these events are run correctly, they can increase your presence in the community.

If having a special event appeals to you, remember that planning the event is extremely critical and requires a high amount of coordination and forethought. Do not undertake this type of event for promotion if you have not read a book called "Publicity Power." Learn the ins-and-outs from experts who earn their living running special events.

**Using the airwaves**—Another public relations effort that is effective in many markets is participating in weekly call-in programs on turf and ornamental care.

At first, this may seem extremely challenging, but you might be surprised at how basic the questions can be. You do not need to know the answer to each question as it is posed; rather you need to know where to get the answer and how to execute the solution to given problems.

This is not for people who are not comfortable in verbally explaining and talking in clear and concise terms. Radio or TV can make or break a company. If you are scared, you should train, prepare, and wait for the right opportunity.

**Community involvement**—Many companies are finding that becoming involved in the community through existing organizations can be very helpful. The Rotary or Junior Achievement are but some of the types of organizations which meet specific community needs.

Community service is a good way to pay the community back for buying your services, and at the same time, secure additional company recognition.

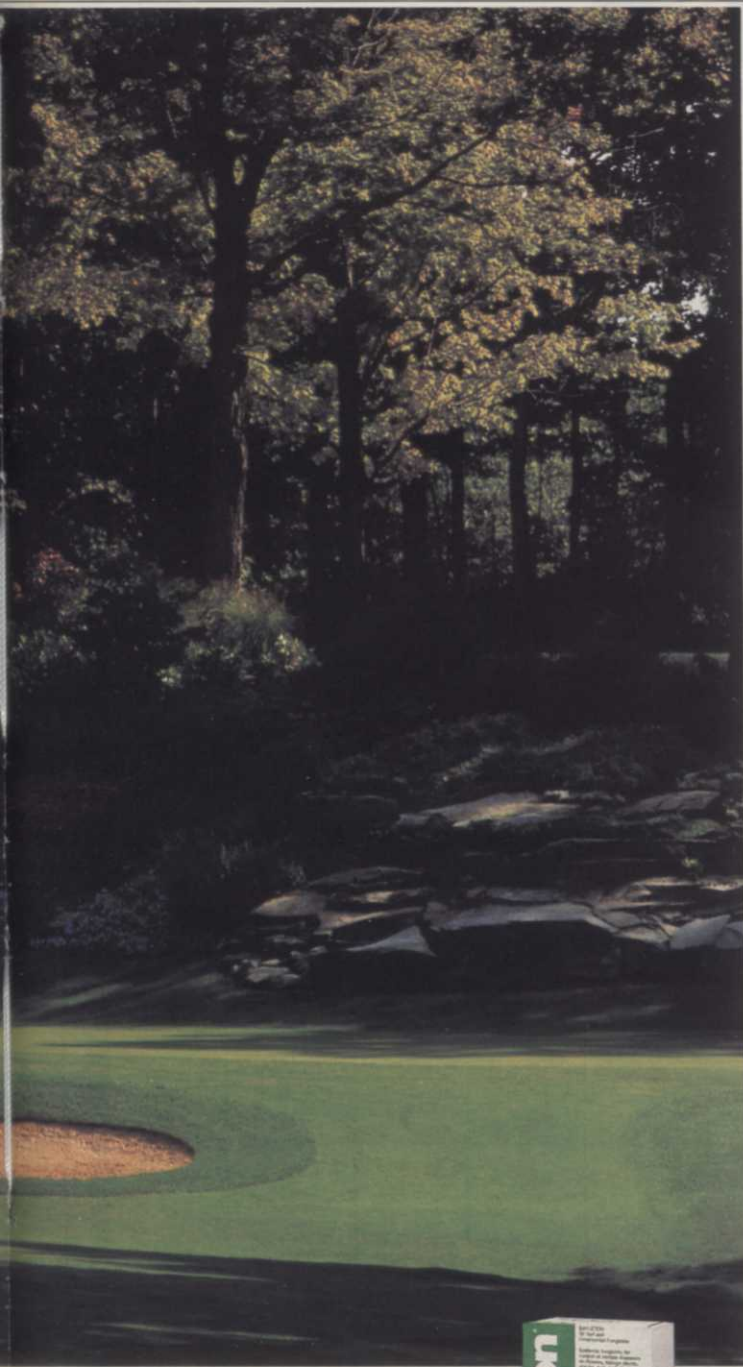
—The author is a principle in Wandtke & Associates, a management and marketing consulting firm based in Columbus, Ohio. For more information, call (800) 966-3546



Fred Hower, right, "The Ohio Nurseryman," gives lawn and garden tips on "PlanTalk" airing over seven Ohio radio stations. At left is Dave Finley, program facilitator.







Experts recommend combining a proven fungicide with smart cultural practices to create a summer patch prevention program.

If you think that's sound advice, then call for our free audio tape and brochure.



Each outlines a summer patch program that includes everything from identifying the causes to managing susceptible areas.

Also, they tell you a little bit about BAYLETON® 25 Turf and Ornamental Fungicide. For ten years, you've seen what it can do for dollar spot and many other diseases. Now discover how well it performs in a summer patch program.

For your free tape and brochure, call 1-800-842-8020. Or write Mobay Corporation, Specialty Products Group, Box 4913, Kansas City, MO 64120.

After all, summer patch control today requires that you use your head. And what better place to start than with your ears.



Circle No. 115 on Reader Inquiry Card





## Fertilizing to protect surface water quality

**Fertilizer product knowledge and familiarity with the site may help minimize or eliminate adverse impacts on water quality.**

By Robert J. Mugaas, Michael L. Agnew and Nick E. Christians

■ Few soils have enough natural nitrogen (N) to maintain desired turfgrass quality and recuperative ability through the growing season.

Nitrogen shortages can lead to slow growth, yellow plants, thin turf and increased disease. However, excessively high N levels can lead to excessive shoot and leaf growth, reduced root growth, low plant carbohydrate reserves, increased susceptibility to environmental stress and some diseases.

One of the first important considerations in using N fertilizers responsibly is to match the site conditions and the desired maintenance program with proper sources.

**Nitrogen fertilizer sources**—Inorganic fertilizers such as ammonium nitrate and ammonium sulfate are all water soluble or quick-release N sources. That is, N becomes available as soon as water is applied to the turf. Their response is predictable and results are fairly immediate. However, their burn potential is high and the effects are shorter-lived.

On sandy soils, high rates of these products combined with high irrigation or

rainfall may result in higher N losses due to leaching (the movement of water or nutrients toward—and possibly beyond—the turfgrass rootzone). Once beyond the rootzone, nitrates can continue moving through the soil and may find their way into water sources.

Organic fertilizer products, natural or synthetic, are those containing carbon (C) in their chemical structure. Nitrogen from natural organic sources becomes available only after the product begins to break down due to soil microbial action. Compared to quick-release sources, these

have a lower leaf burn potential and can be applied at slightly higher rates without damaging the turf.

Characteristics of common turfgrass N sources are given in Table 1.

**Nitrogen fertilizer use**—The amount of N required by a lawn or turfgrass area depends on the type of grass plants and management practices.

On highly leachable soils, sands and sandy loams, the N application rates recommended in Table 2 may result in excessive loss of nitrate-N due to leaching. Where soluble N sources are used on these soil types, reducing the N rates to 0.25 to 0.5 lb. N/1000 sq. ft. per application may minimize potential nitrate-N leaching. If frequent, lower N applications are not practical, slow-release N sources may be a better choice for these soils. This practice is adaptable to

TABLE 1

### CHARACTERISTICS OF COMMON TURFGRASS N SOURCES

Fertilizer source	N content %	Leaching potential	Burn potential	Low temp. response	Residual effect
<b>Inorganic</b>					
Ammonium nitrate	33-34	High	High	Rapid	Short
Calcium nitrate	16	High	High	Rapid	Short
Ammonium sulfate	21	High	High	Rapid	Short
<b>Organic - natural</b>					
Activated sewage sludge	6	Very low	Very low	Very low	Long
Manures	3-10	Very low	Very low	Very low	Long
Other natural products	3-10	Very low	Very low	Very low	Long
<b>Organic - natural</b>					
Urea	45-46	Moderate	High	Rapid	Short
Urea solutions	12-14	Moderate	High	Rapid	Short
Sulfur coated urea	14-38	Low	Low	Moderate	Moderate
Resin coated urea	24-35	Low	Low	Moderate	Long
Isobutylidene diurea (IBDU)	30-31	Mod. low	Low	Moderate	Moderate
Methylene ureas and ureaformaldehyde*	38	Low	Low	Low	Mod. long to long

\* Some products may contain urea in addition to the ureaformaldehyde component

Source: The authors

#### ELSEWHERE

**Functions of micronutrients,**  
p. 40

**Root ball proportions,**  
p. 42



### A revolutionary leap in the evolution of mowing.

To see where rotary mowing is headed, take a good look at the sleek new Jacobsen HR-5111.™ It delivers an 11'-plus, high-production cut and exceptional trimability in a rugged four-wheel-drive package.

### Built for long life in rough country.

Hydrostatic 4WD, a heavy-duty axle with differential lock, and a reliable, fuel-efficient, 51-hp diesel let the HR-5111 confidently tackle tough hills that stall the competition.

Our new box-channel steel, straight-line frame takes the pounding of tough conditions like no other mower in its class. Plus, the full-fiberglass body keeps its good looks for years, even in the harshest environments. And it's all backed by a 2-year, 1,500-hour warranty.\*

### No belts. No pulleys. No kidding.

Our revolutionary, fully hydraulic cutting system eliminates the maintenance and adjustments of belt-driven units. It incorporates individual, lifetime lubricated spindle motors which deliver more power to knock down tall, heavy grass, for a clean 1" to 5½" cut. The decks

have a unique, counter-rotating spindle configuration producing the smoothest rear discharge going.

### Smooth operator.

From the easy-to-read, full instrumentation, to the ergonomic controls, the HR-5111 redefines operator convenience. What's more, power steering, tilt wheel, cruise control and the adjustable high-back suspension seat keep the operator comfortable, for a more productive day.

For high productivity, 4WD mobility, heavy-duty durability and operator comfort, there's nothing like the HR-5111 on turf. So be sure to ask your Jacobsen distributor for a demonstration today.

THE PROFESSIONAL'S CHOICE ON TURF.

**JACOBSEN  
TEXTRON**

Jacobsen Division of Textron, Inc.

Circle No. 112 on Reader Inquiry Card



\*See your Jacobsen distributor for full warranty details.



# THERE'S NOTHING LIKE IT ON TURF



late-season N fertilization and may be especially true where sandy soils are close to surface or groundwater resources.

Watering practices that result in water movement beyond the rootzone may increase potential nitrate-N leaching. Frequent, daily irrigation during cool, moist periods can also increase leaching potential.

Irrigation practices that take into consideration the grass plant's needs during any weather cycle will be more effective. Adding enough water to compensate for that removed by plant uptake and evaporation will minimize potential N pollution problems from leaching. (Sloped areas may require more frequent but smaller amounts of water per application as they will be more vulnerable to runoff before ample water has infiltrated into the soil.)

Irrigation of 0.25 to 0.5 inches immediately after an application of a quick-release N source will help move the N into the surface soil where it can potentially be used by the grass plant. Also, it will be somewhat protected from runoff and possible volatilization back to the atmosphere.

Grass clippings should be returned to the lawn area to decompose and recycle nutrients back to the turf area. They should not be blown or raked into street gutters or onto sidewalks and driveways where they may be carried in runoff to surface water areas.

Nitrogen fertilizer product knowledge and familiarity with the site may help minimize or even eliminate potential adverse impacts on water quality.

**General fertilization practices**—Here are some general lawn fertilization practices which can help reduce potential water pollution:

- Be careful to never directly deposit or inadvertently apply fertilizer materials into lake areas. Never apply N fertilizers to frozen ground.

- Fill granular fertilizer spreaders on a hard surface where any spills can be easily cleaned up. Never wash off fertilizer spills into the street or other hard surface area where they can easily get into storm sewers and ultimately into surface water areas. Wash off granular fertilizer spreaders over turf areas. Fill and clean liquid fertilizer applicators over turf areas.

- Close the gate on the fertilizer spreader when crossing hard surface areas, or go back and sweep up the material and re-use it another time, or put it back into the spreader.

- Near shorelines, apply fertilizer around the perimeter of the property with a drop spreader to create a "buffer zone." The

rest of the area further away from the shoreline can be fertilized with a rotary spreader. Since the perimeter has already been done with the drop spreader, it is not necessary to try to get close to the shore, potentially getting the fertilizer into the water. The same kinds of precautions should be taken when using liquid applications.

- Or, a buffer zone of unmanaged grasses or possibly natural vegetation could be left growing along shorelines. This can help prevent soil erosion and may also retain some of the nutrients that might otherwise run into the lake.

- Avoid getting fertilizer into natural drainage areas or pathways on a property. These may not necessarily be hard-surfaced areas, but can carry fertilizer directly into the surface water area before having the chance to infiltrate into the surrounding turf/soil area.

Improper turf fertilizer management and use may contribute to potential pollution of surface and ground water resources. However, combining appropriate landscape management practices with a modest lawn fertilizer program may further reduce surface water pollution.

—Robert J. Mugaas is Hennepin County extension horticulturist with the University of Minnesota. Michael L. Agnew is extension horticulturist/turf with Iowa State University. Nick E. Christians is professor of agriculture with Iowa State University. This article originally appeared in "Hole Notes," a newsletter of the Minnesota GCSA.

TABLE 2

## ANNUAL NITROGEN REQUIREMENTS AND APPLICATION TIMING FOR LAWNS IN THE UPPER MIDWEST

	Nitrogen (N) to apply lbs. N/100 ft <sup>2</sup>	Timing of applications*
<b>High maintenance lawn</b> (Irrigation, clippings removed)	4	May - June, Aug., Sept., Oct. - Nov.
(Irrigation, clippings not removed)	3	May - June, Aug., Oct. - Nov.
<b>Low maintenance lawn</b> (No irrigation, clippings removed)	2	Aug., Oct. - Nov.
(No irrigation, clippings not removed)	1	September

\* Assume 1 lb. N/100 ft<sup>2</sup> of a soluble, quick-release N source applied at each application.

**Note:** Lower more frequent rates of a quick-release N fertilizer can be used on sandy to sandy loam soil. Slow-release N fertilizers could also be substituted for the quick-release types. Follow manufacturer's and/or extension suggestions for proper application rates.

Source: The authors

## The function of turfgrass micronutrients

**These small but mighty turf components control important plant functions. Deficiency symptoms are easy to spot.**

- Healthy plant growth depends on the proper amount and interaction of 16 chemical elements. Six of these elements are micronutrients: iron, manganese, zinc, copper, boron, and molybdenum.

Turfgrass can't replace micronutrients on its own, so it's up to the turf manager to be alert to the warning symptoms of deficiency.

- ✓ **Iron:** essential for the formation of chlorophyll.

- ✓ **Manganese:** absorption of CO<sub>2</sub>.

- ✓ **Zinc:** improves reproduction capabilities, oxidation.

- ✓ **Copper:** activates some enzyme systems.

- ✓ **Boron:** for plant reproduction, protein synthesis, cell wall development.

- ✓ **Molybdenum:** essential for nitrogen fixation.

Dr. Dave Davidson of Cornell explains that there are three ways to diagnose nutrient deficiency: