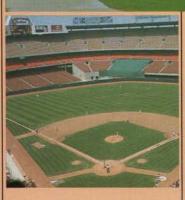
TIFGREEN TOUGH!





Sports fields and schoolyards are child's play when you've made the grade with the pros.

Durable, dense, resilient, Pacific Sod's Tifgreen is the choice of most Southern California athletic stadiums. It's also a favorite of parks, playgrounds and active people! That's because this finetextured hybrid bermuda knows how to play rough and keep on coming back.





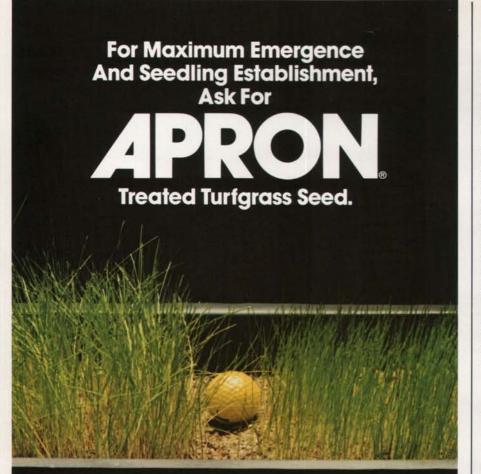
So go ahead . . . bring on your soccer team, your pets, your barbecue and your heat wave. Tifgreen is tough enough to take it!

Main Offices: Southern California 305 W. Hueneme Rd., Camarillo, CA 93010 • (800) 762-3027 Northern California 2006 Loquat Ave., Patterson, CA 95363 • (800) 692-8690 Part of the growing world of Pacific Horticulture





More professionals choose products from Pacific Sod than any other sod company in California. We bring you the best.



Apron Treated

Untreated

Apron, a systemic seed treatment fungicide, works on contact to control *Pythium* on the outer surface of turfgrass seed.

As the seed starts to germinate, Apron is systemically translocated throughout the entire growing seedling.

Since Apron systemically protects young plants from *Pythium* infection, you get maximum emergence and seedling establishment. This allows you more maintenance time for your green and tee establishment program.

After seedlings are established, it is recommended that you follow up with fungicide treatments of Subdue[®] to maintain *Pythium* control in turf.

Call your seed distributor and ask for Apron treated seed for all your professional turfgrass plantings.

Gustafson (>)

P.O. Box 660065 • Dallas, Texas 75266 • (214)985-8877

Apron and Subdue are Reg. TM's of CIBA-GEIGY. Gustafson (logo) is a Reg. TM of Gustafson, Inc.

BILL MAY PROTECT COACHES FROM LAWSUITS

A bill recently introduced in the Pennsylvania House and Senate would provide immunity from certain negligence lawsuits to coaches, umpires and other volunteers for sports teams sponsored by non-profit organizations.

Sponsors of the bills said the legislation would reduce high liability insurance rates paid by the Little League and other sports groups run largely by volunteers. Pennsylvania Senator Michael Fisher said, "It is unfair for us to expect qualified adults to give up their spare time and then be in jeopardy if some parent decides to slap them with a suit for something over which they had no real control." The legislation is similar to existing 'Good Samaritan' laws in which people who help accident victims receive immunity from simple negligence.

Fisher said parents must realize the inherent risks involved in sports and be willing to accept the possibility of injury to their children, even it the coach is at fault.

NEW JERSEY FIELD DAY CANCELLED BY DROUGHT

The purpose of a summer field day is to show turf managers special plots of turfgrass so they can see the differences in turfgrass varieties and maintenance practices. But, this summer, Dr. Henry Indyk, extension turf specialist at Rutgers University in New Jersey, felt that the continuing drought in the East made such comparisons unfair. As a result, the Rutgers Turf Field Day was cancelled.

The field day is held every August at Rutgers Stadium and golf course. "The drought has had a staggering effect on our plots," said Indyk. "With all the damage, there just wasn't much to show, so we decided to cancel this year's event. We have not had any significant rainfall since the third week of April."

GEORGE FAZIO

George Fazio, veteran of the professional golf tour and recognized golf course architect for more than 25 years, died this summer at his Florida home at the age of 75.

Fazio is best known for designing Butler National Golf Club in Oakbrook, IL; Palmetto Dunes Resort Course on Hilton Head Island, SC; Fox Run Country Club in Muttontown, NY; and Jupiter Hills Club in Jupiter, FL. He designed, owned and operated The Reserve Golf Club in Fort Pierce, FL.

While on the tour, Fazio placed in the top five of the U.S. Open three times and won the Canadian Open in 1946. He was a member of the tour until 1959.

MASTER AND SATELLITE SYSTEM ...the natural evolution of the MC concept!

From the same people who developed the "state-of-the-art," computerized MC Series irrigation control systems now comes the ultimate Master and Satellite System, the CMC3200. In addition to unsurpassed ease and versatility of programming and 12, 18, and 24 station satellites capable of independent operation, you'll find many unique features available for the first time in a competitively-priced product. Prominent among these is the first reliable cassette tape interface and printer option. For additional information, contact Irri-Trol.

The CMC 3200, see it soon.



27940 Beale Court, Valencia, California 91355 • (805) 257-2333 • TELEX: 662600 IRTROLMFG VALE

CONTROLLERS . VALVES . VALVE ACTUATORS



The golf course is surrounded by the condominiums of Heather Gardens adult community. Residents say it is the main feature that separat the Denver area.

or years, golf course superintendents started their careers operating a mower or hosing down greens in the afternoon heat. They were taught the way to do things by the superintendents they worked for on their way up.

In the past decade this has changed. Many golf course superintendents today skip much of the old apprenticeship by earning degrees in turf management or ornamental horticulture from Land Grant colleges and universities. It's not unusual for graduates of these programs to step right into an assistant superintendent's job at an 18-hole golf course.

Guy Auxer, superintendent of Heather Gardens Golf Course in Aurora, CO, took a different route on his way to becoming a superintendent. His suppliers and fellow superintendents think this could be the reason why he is more receptive to new products and ideas than those who came up the conventional way. This image was strengthened recently when he shunned conventional drainage methods to be the first golf course superintendent in the U.S. to try a new type of drainage system for his greens.

In his mid-30s, Auxer is a newcomer to the golf business. His first taste of success came during the building boom in Lubbock, TX, in the early 1970s. To pay his tuition for classes in architecture at Texas Tech, Auxer worked for an apartment building developer doing framing and trim. The demand for his services was so great he started his own framing company which specialized in custom homes. "I realized that I was making more money than I ever could as an architect," said Auxer, "so I stopped taking classes and devoted all my attention to my business."

In 1972, the building boom in Lubbock fizzled out and Auxer relocated to Denver where construction remained strong. He met a builder of custom homes there and quickly worked his way up to construction foreman. "I learned how to deal with wealthy people," says Auxer, "and how to provide them with what they wanted in a home. It was very detail-oriented work."

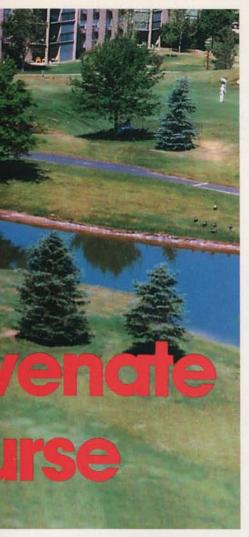
For six years, Auxer managed the construction of more than 20 custom homes per year. But at the age of 30, he learned that construction liens do not assure contractors will be paid. The company's cash flow could not keep the business alive and he was once again out of a good job.

Suddenly Auxer, a person used to dealing with thousands of details, found himself with nothing to do. To get out of the house and to keep his mind off his problems he played golf. Auxer watched with interest as the crews groomed the various courses he played.

He played golf so often he became close friends with the assistant golf professional at Meadow Hills Golf Course in Aurora, CO. "I guess I asked him so many questions about maintenance of the course he finally introduced me to the superintendent," Auxer jokes. "The next thing I knew I was on the seasonal crew to find out first-hand what golf course maintenance was all about."

Soon thereafter Auxer joined the Rocky Mountain Golf Course Superintendents Association and met Jim McPhilomy, who was superintendent at Valley Country Club, in Englewood. "He took me under his wing and gave me a job as his assistant in training," Auxer said gratefully. McPhilomy recognized Auxer's construction experience and taught him all the fine points about pumps, controllers, sensors, design and drainage. The architect in Auxer quickly grasped the details.

Less than a year later, McPhilomy left to become an irrigation consultant and Tim Bullard, the assistant superintendent was promoted. Auxer, after a very short apprenticeship, was named assistant. "It was a great experience to work with Tim since we were both new to our positions," Auxer



ther Gardens from other adult communities in

states. "We installed a new pump station and automatic irrigation system. We did most of the work ourselves, including construction of a four acre lake. I realized then that this was a career I wanted to pursue as far as it could take me." To learn more, Auxer joined the Golf Course Superintendents Association of America (GCSAA) and enrolled in a two-year correspondence course in horticulture offered by the University of Guelph in Ontario, Canada. The course is the equivalent of a two-year degree with more than 45 credit hours and three supervised examinations. "It was the only program I could find where a working man can get an education in horticulture," Auxer reveals.

With a degree under his belt and a thirst for more responsibility, Auxer applied for the superintendent's position then open at Heather Gardens in Aurora. "During my first interview, Selby Myers, general manager of both the golf course and condominiums, asked a lot of questions about water. He was concerned about the large amount of water that the nine-hole course was using each year and the annoying number of wet and dry spots on the course. My tutelage under McPhilomy probably got me the job."

The golf course had been purchased in 1983 from the developer who built it and the surrounding 2,200-unit adult commu-



By noon the sod was back in place and the green was back in play. The complete job took only four hours.

nity in 1971. The Heather Gardens Association created a metropolitan district to gain the authority to tax residents for the purpose of retiring the bond issue used to purchase the golf course and a 42,000-squarefoot community center. This required the association to make the golf course public. A board of directors for the district was elected by the condominium residents.

Recalling his days as a construction foreman, Auxer inspected the course thoroughly and wrote a 35-page proposal on the current conditions of the course and improvements needed.

He told them the course had a serious thatch problem, a poorly maintained irrigation system and inadequate drainage in some areas. He explained why the course had required so much water for the turf and took so long to drain after rains and snows.

At the same time he pointed out that these problems could be solved and that course revenue would increase as a result. The board gave Auxer the job, and, in two years the income of the course has nearly doubled. Reports have become a regular and major part of Auxer's job since.

The first day on the job in 1984, Auxer discovered that there were no organized files, just receipts from bills and payroll. He developed a filing system and started to write a daily log. He hopes to share a computer system soon with the superintendent in charge of the streets, parks and buildings so all records will be easily accessible.

At present, he keeps track of manhours according to a simplified version of a job

Less than three hours after starting, the trenches were ready to receive the six-inch TerraFlow.

identification system. Auxer is most concerned about seven categories: mowing, irrigation, aeration, equipment repair, sand traps, drainage and administration. His records show a shift in the percentage of total labor hours—away from mowing toward aeration, irrigation and drainage. Where once mowing represented 32 percent of total manhours, it now is only 15 percent. Labor for drainage leaped from less than one percent to nearly six percent. Aeration also jumped from four percent of the total to 13 percent while irrigation increased to 20 percent of labor hours from ten percent.

continued on page 27



When we develop a perennial ryegrass, we mean *business*



- THRIVES UNDER D LOW MOWING HEIGHTS

EXCELLENT MOWABILITY

DARK GREEN

Quality doesn't just happen it is the product of years of careful research and extensive evaluation. That's what it took for researchers to develop Fiesta, the outstanding turf-type perennial ryegrass that meets the demands of today's turf manager.

The results:

Dense, dark green turf

THICKER STAND ... FAST

- Fine leaf texture
- Thrives under low cutting heights

RAP D ESTABLISHMENTI A

- Excellent resistance to leaf spot, brown patch and many other diseases
- Outstanding winter hardiness combined with tolerance to summer stress
- High seed count up to 330,000 seeds per pound–20-25% higher than most other varieties

Fiesta – for permanent turf or overseeding – rapidly becoming the first choice of turf professionals.

Pickseed also produces

TURE TYPE

and other fine turf grasses. available nationwide from quality seed suppliers.



GOOD WEAR

TOLERANCE

Circle 126 on Reader Service Card

Heather Gardens continued from page 25

The golf course crew consists of Auxer. assistant superintendent Todd Jeffers, one full-time laborer and six summer workers. When he needs more help he can get it from the Heather Gardens roads and grounds crew.

Auxer directed his attention immediately to the three biggest problems: drainage, irrigation and thatch.

Since the entire course is on a three to five percent slope and the greens are highly contoured, many spots were too dry while others were too wet. Auxer discovered three different types of soils on the course ranging from blow sand to spongy muck. These areas needed separate irrigation, drainage and maintenance programs.

The bentgrass greens had more than one inch of thatch, were spongy in low spots and hard as a rock in high spots. They had not been built according to USGA (United States Golf Association) specifications. Auxer found the soil on the greens to be 50 percent fine sand, 30 percent silt and clay and 20 percent organic matter. The soggy turf in the swales on the greens had to be aerified just to keep it alive. Golf balls chipped onto low spots got buried in the damp thatchy bentgrass while those landing on the high spots would bounce without holding at all. Auxer needed a solution to the problem without high cost or the need to close the course for days.



The installation process started by cutting a herringbone pattern in the bentgrass green with a sod cutter.

Aerifying the greens once a month with a Banks Multicore, removing the cores and topdressing with sand has reduced the thatch and softened the high spots to a degree. But, the low spots still did not drain well and the soil remained waterlogged. In another effort to increase the sand content of the greens, Auxer has his crew fill the old holes with pure sand when they move cups. The soil that is removed when the cup is cut is discarded.

This spring the Denver area was un-

seasonably warm and humid. The poorlydrained greens guickly succumbed to pythium. Auxer called in the Jefferson County turf extension agent who sent samples to Colorado State University (CSU) for analvsis. Three different strains of pythium were found. Treatments with Subdue eliminated two out of the three strains. Auxer, encouraged by Dr. William Brown of CSU to alternate fungicides, is trying Aliette, which just received a turf label. But he still needcontinued on page 28



Phone (203) 271-1682

Telex 643708

Heather Gardens

continued from page 27 ed to improve the drainage on the greens.

While attending the GCSAA Show in San Francisco, Auxer saw a new type of drainage device. Instead of a round tube with slits, this device was a strip of plastic indented like a waffle and wrapped in a geotextile fabric. The 1½-inch-wide device came in various heights and fit easily into a two-inchwide trench. He reasoned that he could install this narrow, upright drain system faster than conventional round PVC drain tubing and with less soil disturbance. This could solve his problem on the greens and help him save on labor and equipment costs. Unfortunately, there was no distributor for the company in the Denver area.

Greg Fast, salesman for Turf Irrigation Supply, was familiar with Auxer's problems on the course. He supplied both the golf course and the the condominiums with products.

When Turf Irrigation Supply became a distributor for Warren's Turf Nursery this spring, Fast, recalling Auxer's problems, along with Emory Hunter, manager of Warren's Seed and Special Products division, called on Auxer to show him a sample of a new drainage product. Hunter showed Auxer his company's new TerraFlow drainage system. It was the wrapped, waffle-like drain Auxer had seen at the show. Auxer didn't need any selling, he placed an order on the spot and started planning to install it in the green swales.



The geotextile fabric surrounding the wafflelike core provides ten times more effective drainage surface than four-inch perforated drain pipe.

Heather Gardens would be the first golf course to use the product on golf greens.

The new drain system operates on the principle that the polyester, geotextile wrapper provides ten times more effective drainage area than the slits in four-inch perforated drainpipe. Once water passes through the non-woven fabric, it flows along the core with the slope. The fabric wrap filters out any soil particles large enough to clog the core.

On a Monday morning in early April, Auxer and his crew installed 450 feet of TerraFlow on the worst green in just four hours. First he moved the cup onto the approach so the hole could remain open during repair. The crew used a sod cutter to remove the bentgrass sod from the green in a herringbone pattern. The sod was fragile since it had been aerified twice that winter.

A small walk-behind trencher was rented to cut trenches 12 inches deep and two inches wide. Lateral trenches, eight feet apart and perpendicular to the slope, fed into a single mainline. A standard minimum slope of 1.5 percent is required for proper drainage. After the soil was hauled away, six-inch-high TerraFlow was inserted into both the laterals and mainline. In his first installation, Auxer ran the material in the mainline into a dry well away from the green.

No special fittings were needed. The material was overlapped and taped together with duct tape at joints.

The trenches were then backfilled with sand, and packed. The sod was laid over the sand-filled trenches, rolled, topdressed with more sand and watered. By noon the green was back in play.

The process was repeated on a second green the next morning. In this case, the material was connected with duct tape to older drain lines that had been cleaned out with a high pressure hose the week before.

"Within three weeks you couldn't even see where the sod had been cut," says Auxer. In fact, few golfers realized what he had done, they just knew the wet spots were gone. They'll find out in the next associa-



Submatic announces a new subsurface irrigation system that is proving to be the most efficient, economical and easy-to-install system on the market. The Dripline emitter is a labyrinth-type, self-cleaning turbulent flow dripper with a built-in strainer. It is made of the same polyethylene as the Dripline which is tough, lightweight and very flexible. The emitter is enclosed and inseparably welded to the inside wall of the tubing as it is extruded-resulting in a one-piece, jointless, emitter-enclosed Dripline. The emitters can't be dislodged or separated due to water pressure or handling.

SUBMATIC P.O. BOX 246 • LUBBOCK, TX 79408 TOLL-FREE: 1-800-858-4016 IN TEXAS: 1-800-692-4100

SUBMATIC OF CANADA 7620 WOODBINE AVE. MARKHAM, ONTARIO L3R 242 416-475-3270

28 sportsTURF

Circle 124 on Reader Service Card

tion newsletter. "I think a superintendent has to let the members know how hard he is working for the course. Too many jobs aren't noticed. Many golfers think we just mow grass."

The test came four days later when a freak storm dumped two feet of heavy, wet snow on the course. The snow melted steadily over a four-day period. As the last traces of snow melted, a check of the green showed the swales to be firm and not soggy as before. "Since this is the first time the product has been used on a golf course green, we had to learn as we went," says Auxer. "On the next installation we are going to put the trenches on six-foot centers instead of eightfoot. The system seems to work best in this soil within three feet of either side of the drainlines."

Auxer called Fast and ordered enough material to do another green. The process was repeated in June with similar success. He is set to do two more greens this fall. "The best part about the TerraFlow is it can be installed faster and with less disturbance than drain pipe," boasts experimenter Auxer. "I figure it took one third the labor of installing four-inch perforated drainpipe."

More than 2,500 cubic yards of thatch was removed.

On the fairways Auxer faced a mottled combination of perennial ryegrass, Kentucky bluegrass, tall fescue, creeping red fescue, sheeps fescue and hard fescue with more than two inches of thatch in some areas. Besides the appearance, the thatch made the turf susceptible to the shortest dry spell, more prone to disease and too soft for good golf. Far too much water had to be applied to compensate for the effects of the heavy thatch layer. This only served to make the problem more severe.

With the typical budget of a nine-hole course, Auxer had a lot to do without a lot of money. Using a Dedoes drum aerifier pulled by a truckster, Auxer went over the fairways 12 times with half-inch tines spaced $3\frac{1}{2}$ inches apart. The inch-deep cores, which were mainly thatch, were picked up and hauled away. Within the first year the thatch layer was cut in half by aerifying, removing the cores, mowing more frequently and decreasing nitrogen fertilization. Auxer estimates that each time the fairways were aerified more than 2,500 cubic yards of thatch was removed.

The pH of the soil in the fairways was a healthy 6.5 to 6.9, but Auxer felt it lacked biological activity so he sprayed them with Bovamura, a composted soil amendment.

He also injects Naiad wetting agent into the irrigation system six times per year to make sure the water enters the soil instead of running off the sloped surface.

Auxer wants tight control of fertilization to prevent lush growth and thatch buildup. In the fall he makes one application of IB-DU (Par-Ex) for early spring green-up and then spoon feeds the turf the rest of the year with Nutriculture and straight urea.

"We spray a 50-foot-wide swath each pass with Broyhill Boom Jet nozzles attached to a Bean sprayer," explains Auxer. "It may increase our labor cost by ten percent, but we save more than half by buying individual components. We put down only what we need, which amounts to three to four pounds of nitrogen per year plus six pounds of sulphate of potash. Micronutrients are contained in the soluble Nutriculture, which we apply as needed."

Auxer has prepared and submitted a proposal to renovate the fairways. "The fairways were overseeded with perennial ryegrass four years ago," he explains. "The seed must have been broadcast onto the bluegrass and not drilled in as it should have been. The resulting ryegrass is in patches which stand out and provide an irregular surface for golfers." Annual bluegrass is also a problem on the fairways.

"I told the management there are two ways we can go," says Auxer. The fastest and continued on page 30

What gives landscapers the professional edge?

Edg-King!

Designed and manufactured with the professional's needs in mind . . . proven reliability, durability, flexibility and strength are the major advantages of EDG-KINGTM.

We're talking about superior edging with features like thicker wall construction to eliminate kinking and create great straight lines or tight curves. Four frost heave grooves and heavy duty, non-bending steel anchoring spikes keeps the edging where it belongs — in the ground.

The idea is to give the professional a quality edging that works the way it is supposed to work . . . competitively priced, with drop shipment available to any point in the United States.

EDG-KING is the difference that gives landscapers the professional edge!

For more information on commercial or retail edging, samples or specifications write or call collect 312-833-3033 (outside Illinois) 1-800-EDGINGS.

Oly-Ola Sales, Inc.

54 East St. Charles Road Villa Park, IL 60181

DISTRIBUTORS WANTED

Heather Gardens continued from page 29

least expensive route is to use glyphosate (Roundup) to kill all the fairway turf and reseed with a blend of Kentucky bluegrasses. The other is a three-year program utilizing growth regulators when they become available to slowly eliminate the annual bluegrass. All costs were spelled out in the report so there would be no surprises. Based upon this report, the board can make the decision this fall when they approve the 1987 budget."

With so much attention required to get the greens and fairways back in shape, Auxer has not been able to devote the amount of time he would like to the tees. With the exception of two tees, he has been able to keep the turf healthy through aerification, better fertilization and careful irrigation. He recently enlarged the two problem tees to distribute the wear.

Irrigation

Auxer's major concern, and the one that got him hired in the first place, was the irrigation system. In his original proposal to the board he pointed out major adjustments needed for the pumping system, the controllers and head locations.

In his opinion, the general layout and selection of heads and valves was was good. "The main reason the system was in poor condition when I arrived was due primari-



No special fittings are required to join together pieces of the drainage material, just duct tape.

ly to lack of periodic maintenance," Auxer points out. "Sprinkler heads are designed to run for three to five years with just occasional flushing and surface cleaning. After this length of time they should be removed and repaired by replacing all washers and worn or broken parts. The return spring arms need to be adjusted to manufacturer's recommendations. When you have 450 heads on a nine-hole golf course, it's a big job to keep them all working properly."

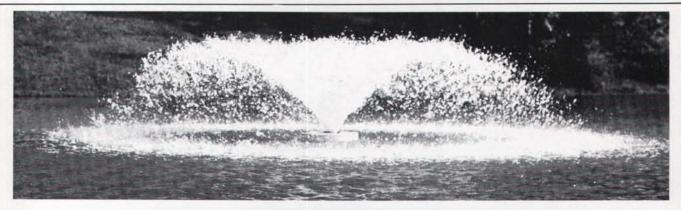
More than half the heads were incorrectly set either below grade or not level. Many were spaced wrong which contributed to poor coverage and caused wet and dry spots on greens, tees and fairways. By relocating and adjusting the heads many of these problems were solved.

When his crew started the repair work they discovered the heads were originally installed with galvanized steel swing joints. The idea of a swing joint is to let the head sink when stepped on or run over with a cart. These joints are now rusted solid and will not move. If they do move, they start to leak and cause wet spots. Auxer has replaced more than 100 of the steel swing joints with plastic.

The pumping station presented a more complex puzzle: it had been installed with insufficient controls and without a surge tank. As a result, the system was not constantly pressurized. Pin hole leaks in the main lines and leaking valves went undetected. When the pumps went on the chance of surge or water hammer damage was great.

Auxer's proposal to add a surge tank was accepted and one was installed in 1985. Once the system was pressurized, the crew was able to locate the leaks and make necessary repairs. Auxer also discovered 26 valves which needed to be rebuilt or replaced out of the 156 on the course.

continued on page 46



OTTERBINE DAY OR NIGHT...SUMMER OR WINTER



OTTERBINE® Aerators can help you keep unsightly algal growth and objectional odors under control naturally. The fact that OTTERBINES also create beauty—is just one of the many benefits of using our Spray Sculpture™ Floating Fountains.

WE CREATE BEAUTY WHILE SOLVING PROBLEMS

BAREBO, INC. PO. BOX 217 • EMMAUS, PA 18049 (215) 965-6018 USA



Circle 122 on Reader Service Card