Dr. Carrow's cultivation research to improve compaction, water use

By PATRICK O'BRIEN

Dr. Bob Carrow, researcher at the University of Georgia Experiment Station, significantly reduced surface and subsurface compaction and improved water uptake of a common Bermudagrass turf grown on a compacted clay soil. As part of the $5 million 1985-92 United States Golf Association (USGA) Turfgrass Research program, this discovery will help turf managers develop and justify cultivation programs for tees and fairways that will ultimately result in more efficient use of irrigation water.

Numerous studies to evaluate different cultivation techniques have been funded by the USGA Research Committee at the University of Georgia. This study was performed on a Cecil sandy clay loam with 55 percent sand, 18 percent silt, 27 percent clay and a 2 percent organic matter content. Each common Bermudagrass plot was compacted with a smooth power roller and then cultivated with the Verti-drain system. From previous cultivation studies, the Verti-drain was most effective in making physical soil improvements deeper in the profile, while hollow-tine coring was best at improving soil surface conditions. The frequency of Verti-drain treatments, as well as the combination of Verti-drain and hollow-tine coring, were further explored in this new study.

Two annual Verti-drain and hollow-tine coring combination treatments consistently reduced soil compaction and improved root water extraction. Penetration resistance reductions of at least 25 percent occurred in all zones. Root water extraction was improved from 35 percent to 71 percent within the soil profile.

In very hard soils, loosening the surface initially with core cultivation will allow improved Verti-drain penetration. With the upper three inches of the profile less compacted, the Verti-drain will expend maximum energy at lower depths. After the first year, the research demonstrated core aeration could be omitted once the upper three inches are softer.

A dense root system is often thought to be the most efficient for water extraction. The Verti-drain actually decreased total root length density and total root length in this study! However, the roots left behind were more viable and extracted water from the soil more efficiently than roots in the compacted control. Root data may not always correlate well to water uptake in cultivation studies. The Verti-drain also enhanced overall water uptake as demonstrated by evapotranspiration (ET) and field measurement systems.

The right way is the cheapest way — Buchen

By MARK LESLIE

C HARLESTON, S.C. — While growing and maintaining quality turfgrass are critical to a golf course operation, groundskeeping costs can be cut in many ways, according to Terry Buchen, superintendent at Double Eagle Club in Galena, Ohio. Speaking at Golf Course News’ recent Public Golf Conference, Buchen said: “Do things the right way. That’s the cheapest way.”

He suggested a number of cost-cutting measures, including:

• Portable two-way radios for full-timers.

• “They are the biggest efficiency tool I’ve seen in years.”

We save one hour per radio per day of wasted time just trying to find each other,” said Buchen, adding that speaker microphones are installed on Double Eagle’s equipment.

• Do away with the buddy system: I usually don’t like it.

“On some projects — like running a chain saw — it works. But you get much better production without the buddy system.

• Draft a labor flow chart, including every job done in the entire year, from mowing greens to raking bunkers to aerifying. It helps you discover if the grounds crew has too many or too few people.

• Turn on the Weather Channel, and monitor it.

“It’s saved a lot. We go out and fertilize when we see the storm coming. We save pumping, electricity costs and chemical costs,” Buchen said.

“Leave it on all the time. If a storm is coming we let the storm do it,” said Buchen.

• Install several rain gauges on the course. (“I have one in my house.”)

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Distinguished Service Award

New Jersey superiors honor Kubik

The Golf Course Superintendents Association of New Jersey has presented its 1993 Distinguished Service Award to longtime supporter and Grass Roots turfgrass supply company owner Ken Kubik. A member of GCSANJ since 1976, Kubik was involved in starting The Greensides newsletter in 1983, then co-edited and wrote for it. He is a past member of the New Jersey Turfgrass Association board of directors and serves on the board of the Alliance for Environmental Concerns.
New York turf expo attracts numerous experts

SUFFERN, N.Y. — Nationally known experts on subjects ranging from golf course planning and construction to turf maintenance and athletic field management will feature the expanded Turf and Grounds Exposition at Holiday Inn here Feb. 16-17.

The New York State Turfgrass Association's conference will provide updates on current trends, procedures and the latest research results.

Products and services to be displayed include turf maintenance equipment, fertilizers, supplies, chemicals and seeds.

Stress management of turf will be the opening topic.

Other subjects will be aquatic weed control, New York State aquatic regulations, pond and lake management, grounds management, grounds maintenance, turfgrass scouting, economics and agronomics of fertilizers, flowers in the landscape.

Also, athletic fields, turf stress of 1993, environmental future of turfgrass management and environmental risk management for the turfgrass industry, product registration; new herbicides for turf and landscape use, and golf course planning and construction.

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If you're not already using AquaGro, it's time you discovered why the first wetting agent to still the best. AquaGro is available from your local Aquatrols turf products distributor.

GCSAA bringing big money to Big D

DALLAS, Texas — "Big D" will realize big dollars from the largest International Golf Course Conference and Show in the golf course management industry at the Convention Center Jan. 31-Feb. 7.

Area economy expects a $15 to $17 million infusion from expenditures by the projected 16,000 participants. Local hotel/motel, restaurant and entertainment markets will be chief beneficiaries.

More than 630 manufacturers and suppliers will display the newest products and services in the golf course management industry. Golf courses in the United States reportedly spent an estimated $4.98 billion on golf course maintenance and capital expenditures in 1993.

Money-saving tips

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"I can't tell you how many storms will water half the course and not the other half. We keep records of all four rain gauges. Sometimes we water half the course and not the other half," Buchen said.

• Install a rain switch, which costs $100 to $200, to shut off the irrigation — and save the pump as well — when it rains.

• Join a bulk purchasing program with other courses, such as the one available for members of the National Golf Course Owners Association.

• Guarantee a supplier you'll buy certain products exclusively from them if they give you a deal.

• If you own two or more golf courses, get a national account from manufacturers.

• Use Extension services. They offer expert advice free of charge.

• Plant native grasses and ornamentals where possible.

• Investigate use of a new creeping-bluegrass from Europe called Supra Nova (poa supina), which is "the best stuff I've ever seen for heavy traffic or shaded areas."

"It does not wear out. It has some real potential for the transition and Northern climates," Buchen said. While Supra Nova seed costs $50 per pound compared to $7 to $8.50 per pound for bentgrass, it can be mixed at 5 percent with other grasses.

Buchen also suggested that golf courses offer free golf to police and fire departments. "It can pay off in added security for your facility," he said.

The annual Public Golf Course Owners Conference will be incorporated this year into the new Golf Course Expo Nov. 10-11 at the Orlando (Fla.) Convention Center for superintendents, operators and developers.