

aids the bacterial activity by allowing oxygen to circulate.

By a countless number of tests with the watermelon knife and the triangular plug I have observed that the entire area around the Aerifier hole was moist to the full depth of penetration after a rain or thorough artificial watering. With such encourage-



Inspecting turf at Seaview—Warren Bidwell, Supt. Seaview CC (L) and Ed Stieniger, Supt. Pine Valley GC (R).

ment we set up an aerification program with one Aerifier three years ago. That has begun to pay off in a definite reduction of thatch. One aerification? No. After fourteen aerifications during this three year period, followed by lime at one ton per acre on two different occasions, and rather liberal amounts of fertilizer in spring and early fall, we are observing such progress that we recently purchased the triplex set of Aerifiers to cover our twenty-seven holes with a more efficient program.

Plant Food Gets Through

Subsequent examinations after the program was in operation showed ample evidence that moisture and plant food were getting into the numerous Aerifier holes and passing through the thatch into the area where bacterial activity is greatest. Thus, a noticeable reduction of thatch was not surprising, for three of Nature's most important requirements, moisture, available food and oxygen, were being supplied to the bacteria through the aid of the Aerifier.

The plow which has been standing by, just in case, will continue to gather rust except for occasional use in preparing our soil bed or nursery.

Sound Northern Practice Is Successful Basis in South

By TED BOOTERBAUGH

Supt., Lakewood Golf Club course,
Point Clear, Ala.

(GCSA convention paper)

The improvement which we have been able to make on the turf at Lakewood Golf course at Point Clear, Ala., has been accomplished by the strict application of the practices and theories which we all have learned at these turf conferences. These practices and theories all lead to one major objective, which is to develop a deep healthy root system on greens, tees and fairways.

The big problem before the golf course superintendent today is how to develop a deep root system and hold it. I believe we can learn a good lesson from nature by observing the frost action on soil. This repeated freezing and thawing of soil in the spring of the year is the best conditioner we have in preparing the soil for deep root penetration. We have all seen good healthy root penetration on northern greens in the spring, but when we start rolling and skinning our greens at 3/16 in. seven days a week, and with the added impact of rains, spray from sprinklers and the ever increasing compaction by golfers, we end up with a shallow, sickly root system during the hot months when we really need deep roots.

I believe the conclusion we should draw from this observation is that the best time to aerify is during the hot humid months. I also believe that greens should be cut 1/4 in. during the trouble months, and if your root system becomes shallow, cut your greens five times per week instead of seven. Our members will tolerate a slow healthy green a lot better than they will a sick fast one.

Having observed the beneficial results from the repeated freezing and thawing action on turf in the north, I took this lesson with me to Lakewood, and started an aerifying program second to none. I will bet you that we have the "holiest" course in the country. I think O. J. Noer, Charles Hallowell and Tom Mascaro will verify this.

The following program has given satisfactory results at Lakewood on sandy soil.

GREENS: Cut at 3/4 in. to 3/16 in. seven days per week. We skip cutting when possible. We fertilize every two weeks with light applications, followed within three days by a combination spray for disease and insect control. We change cups three times per week. We plug out weeds when they appear. Water as needed. Aerify and topdress Bermuda greens, once per month, rye greens as needed.

TEES: Cut three times per week at 5/16 in. Fertilize once per month with

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heavy application of fertilizer. Aerify and topdress three times per year. Change tee plates and towels and service ball washers three times per week. Treat for weeds when necessary. Repair divots weekly.

FAIRWAYS: Cut three times per week at $\frac{3}{4}$ in. Fertilize three times per year with 500 lbs. Milorganite per acre. Aerify four times per year. Spray for weeds two times per year; spring and fall.

ROUGH: Cut once per week. Spray once per year for weeds.

We seed our winter greens September 15th with five lbs. ryegrass per 1,000 sq. ft. after double spiking. No topdressing. Two weeks later we double aerify, seed with 15 lbs. of ryegrass per 1,000 sq. ft. and top-dress at medium rate. We do not use temporary greens during this seeding operation, and do not change height of cut on greens. We do not rake Bermuda before seeding. Fairways and tees are seeded with about 150 lbs. rye per acre.

We have 14 men on the golf course. They are used in this manner:

- 1—Full time mechanic.
- 1—Full time sand trap man.
- 1—Full time club house grounds man.
- 2—Full time watering men.
- 1—Full time fairway mower man.
- 1—Full time tee cutting and maintenance man.

The remainder of men cut greens, trim around greens, traps, trees, etc., police grounds, fertilize, aerify, topdress, spray greens, etc.

We pay our men 75 to 80 cents per hour.

Our budget runs about \$5000 a month the year around, but there's considerable construction work included in this figure. We've also had quite a job in getting the course in excellent condition as there has been much chemical elimination of undesirable grasses and weeds we've had to do.

The management of the course insists on having the best possible golf turf for players and if you've talked to anyone who has played our course I'm confident that you have learned that the maintenance policy and practices at Lakewood have been good sound business.

TECHNICAL STUDY OF TURF

(Continued from page 37)

age bent so it will be there in the hot, dry summer when poa annua goes out. "Red" Lambert told of experiments in trying to keep fertilizer near the surface so the shallow-rooted poa annua might survive the summer. Art Twombly shared in the opinion that in many places where drastic measures for poa annua elimination couldn't be taken the practical thing to do is to seek a way to keep it.

The research team began its testimony