A POSITIVE APPROACH TO FAIRWAY COMPACTION

by DAN HANSON
MINIKAHDA CLUB

I would like to discuss a program for fairway maintenance that has given us improved fairway conditons at Minikahda. The program was started in 1980 and has continued on an annual basis.

Minikahda is 85+ years old and has not undergone any significant changes over this time period. Consequently, traffic patterns have not changed since the course was built. In the three years prior to 1980 I felt that compaction was contributing to turf loss considerably. During the summer stress periods, turf loss was almost unavoidable in some of these high traffic areas of our fairways, namely, perimeters and approaches. After detailing the dollars spent for fairway maintenance, I felt that the Greens-Airing of fairways could easily be justified and would help reduce turf loss in these critical areas.

We began our program of utilizing Greens- Aires on fairways in the spring of 1980. Since that time I feel that the results have been well worth the effort. Aside from a noticeable improvement to our turf, there are other advantages as well.

Prior to 1980 we had utilized the Ryan pull type aerifier for fairway aeration. With 3/4" tines on 8" centers I did not feel this unit could be doing much good in eleviating compaction. The number of cores and volume of soil removed with this unit is minimal. The Greens-Aire removes almost six times the amount of soil removed by this larger unit. The 20 cu yds of soil removed per acre results in the equivalent of an 1/8" of topdressing.

Besides the difference in soil volume removed the pull type unit caused a great deal of damage in terms of turf tearing and required an extended period of time before total recovery took place.

The Greens-Aire unit is the only aerifier which will penetrate highly compacted areas to the desired depth. This unit also does no tearing, making fairway playability almost immediate.

In implementing this operation we usually utilize two and sometimes three aerifiers at a time on one fairway. The coring usually takes 8-9 hours/acre. With 31 acres of fairways this operation requires about 250-300 man hours.

Following the coring, the cores are verticut in two different directions. Starting on the perimeters where the Greens-Aires begin, verti cutting can usually be started before coring is completed.

We next apply Gypsum at the rate of 6-700#/acre. The benefits of this material as a nutrient and a soil ammendment are well worth the cost of $30/acre. We began utilizing this material in 1981.

Following the application of Gypsum, we use a keystone galvanized drag to smooth the soil and gypsum into the turf and aerifier holes.

The final procedure is to use a fairway leaf blower to remove the excess thatch and tufts. These are blown off the fairway onto one side of the rough where the Toro Rako-Vac sweeper picks them up.

When the above operations are completed, it is difficult to tell that the fairway was aerified.

In 1984 in conjunction with this program we will begin overseeding our fairways with Penneagle Bentgrass at the rate of 15#/Acre. I feel that after a period of years our Bentgrass will increase considerably. The tremendous volume of

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soil provided by Greensairing should provide an excellent seedbed for germination.

While this program may seem to be quite labor intensive, it is not as bad as it may seem. It is started the second week of September after our Greens and Tees are completed. One-half of our fairways are done in the fall with the remainder completed the following spring. Much of the coring is done by 2-3 high school students after school so we are not tying up needed labor for this operation at the expense of other things which need to be done on the course. Seldom do we have any more than two people working on this operation at any one time.

There is a long list of agronomic advantages associated with Greensairing. However, I have listed just a few of those which I feel are of major importance:

1) Reduced compaction. 2) Thatch reduction. 3) Increased root system going into summer stress period. 4) More effective performance from fertilizer and chemicals. 5) More level surface (topdressing affect). 6) Less tearing and disruption to turf in relation to other aerifiers.

Obviously, the disadvantages of this program are one of cost. I would itemize the cost factors of this program as follows:

1) Labor - 350 man hours/year (based on 31 acres). 2) Machine repair. We have found extensive repairs to be needed following 200+ operating hours/machine. 3) Gypsum -- 9-10 tons (600-700#/Acre). 4) Penneagle Bentgrass - 450 pounds (15#/Acre).

I feel the cost of this program is well justified. It has definitely contributed to a higher quality turf which can better endure over summer stress period.

POSITION OPEN

Mechanic, Dellwood Hills Golf Club
Experience in turf equipment required
Starting salary, $13,000 - negotiable
Sent Resume to Dan DeMars, Dellwood Hills Golf Club, Highway 96, White Bear Lake, Minn. 55110. Deadline for resumes is January 31, 1984.

REFLECTIONS OF THE LAST SUMMER

by MARY SISSON
IRONWOOD GOLF COURSE

"One learns to hope that Nature possesses an order that one may aspire to comprehend". Quote by C. N. Yang (1922-).

I came across this quote during one of my physic classes and although it certainly describes the orderly fashion that one hopes to learn from physical laws, it certainly describes our yearning to understand the order of Mother Nature. But she sure threw us an unorderly summer this year. The last summer was anything but normal. For you seasoned superintendents, you've seen years come and go and know that in Minnesota you are lucky to get a normal year. But for a rookie superintendent this year at Ironwood Golf Course, I had to learn to adjust quickly to the adversities of weather, stress and limited resources.

Let me begin with limited resources, as this along with the weather contributed to stressful situations. The main problem I faced this year was adequate irrigation. The irrigation system at Ironwood consists of hoses and a sprinkler on each of the greens and tees. There is one valve per green and tee. Due to the hilly terrain of the course and an inadequate water pumping system, the coverage was spotty and inconsistent. I pumped water to the course from a holding tank which takes about twenty-four hours to fill. The pump only put out about 20 gallons per minute. Needless to say, this wasn't enough water during those stressful weeks of July and August to keep a lot

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