## THATCH REDUCTION

Thatch - a tightly intermingled layer of dead and living stems and roots that develops between the zone of green vegetables and the soil surface. The recommended thickness of the thatch layer on a putting green should range from .125 to .25 inches, this providing the appropriate resiliency desired for proper ball bounce. In addition the thatch layer increases wear tolerance and helps to stabilize the greens micro-climate during temperature extremes.

At this time I would like to shift from the text book facts to the realities some superintendents are facing, thatch layers ranging from .5 to 1.5 inches. Four years ago the putting greens at my golf course were at the upper extremes of this range. At that time I wished to develop a program to reduce this thatch layer which was effective; yet, workable within my budget limitations. My goal was to reduce the thatch to the recommended thickness in three years time. The plan went as follows:

### Year One - May

- 1. Deep groove verticut (knives set .25 inches below the putting surface)
- 2. Double cut greens to remove runners
- 3. Topdress with a 7-2-1 mix (this mix is comparable to the greens original construction mix.)

### September

- 1. Aerify greens, remove all cores
- Topdress heavily and drag in until the aerifier holes are completely filled.

The following spring I found I had excellent results in thatch reduction, but, one must realize the initial reduction in my case of over fifty percent of the original layer which becomes more difficult.

In year two I changed the plan slightly. I did not verticut as deep because I felt the insuing puffiness and scalping were undesirable. The actual plan went as follows:

- 1. Verticut (knives set .125 inches below putting surface)
- 2. Topdress lightly
- 3. Verticut once per month thereafter including July and August
- 4. Mow greens with combs down at all times
- 5. Aerify in September remove cores and topdress heavily.

The following spring of 81 I found this program had limited success in diminishing the remaining thatch layer; which was on the average of .5 inches. So, after doing some more research on the subject I set up the third year's program.

- 1. May verticut (knives .125 inches below putting surface)
- 2. Topdress lightly
- 3. Verticut once per month thereafter
- 4. Fertilize greens with a soluble nitrogen source on a weekly basis, rates as needed. Mine varied from .25 lbs. of N per 1000 sq. ft. to .10 lbs. per 1000 sq. ft.
- 5. September aerify, verticut cores and drag back in.
- 6. Topdress lightly two weeks later.



As of the spring of 82, I am pleased with my results. Since, I did achieve my goal in the third year I have a tendency to attribute my success to the addition of the weekly applications of soluble fertilizer which provide a carbon/nitrogen ratio in the thatch layer more conducive to the decomposition of stem and crown matter. I do not think it can be stressed enough how important this factor is in the decomposition of thatch due to the constant leaching of nitrogen from this layer of the greens profile.

To summarize I would say I found that the problem of thatch reduction was much more difficult that I had imagined. One might find it very easy to be satisfied with the initial results and then curse the insuing struggle to reduce this layer any further without the manpower or the money to topdress on a more routine basis. However, one will find that persistence in this case has many benefits for the golf course. The obvious being the improved playability of the greens. Other factors include reduced use of wetting agents, dramatic increaases in fertilizer efficiency, marked reduction in disease activity, and less sleepless nights.

> David Behrman **Deer Creek Golf Course**

Credit: "The Bull Sheet" August, 1982 Vol. 32 No.3

### LIFE

. . . is like a TV series. A predictable plot, familiar characters, a few laughs, a few thrills, a few tears, a few golden moments to sell yourself and then just as you're beginning to feel at home with it - it's cancelled.

### Little Known (But Pretty **Interesting) Facts About Golf Courses**

Ecologically, the golf course provides some pretty fantastic help to mankind, in addition to just giving him a place to exercise and enjoy life. For example:

An average 18-hole golf course, approximately 150 acres, can produce enough pure oxygen through photosynthesis for at least 100,000 people for the entire year. On a smaller scale, that means a well-maintained lawn 50 by 50 feet liberates enough oxygen to meet the needs of a family of four, day after day.

That same average golf course of 150 acres can effortlessly absorb 12 million gallons of water during a three-inch

Grass also provides a cooling effect. A 2000 square foot plot releases as much as 120 gallons of water through a method called evapotranspiration. This release of water reduces the heat factor. Grass absorbs only 50-60 percent of the incoming solar radiation while buildings and pavement absorb 90 percent.

Grass and tree leaves also help cleanse the atmosphere because of their ability to trap dust particles through static electricity of dense foliage. Rain then washes the particles into the soil.

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