

## Fairway Vertical Mowing To Improve Turfgrass Quality

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In the past few years we at Birmingham Country Club have become increasingly concerned with the accumulation of thatch in our fairways. Our history has been such that our fairways have traditionally been lost to summer stress or disease infestation. Fortunately insects have not been a factor.

Two years ago while speaking with a representative of Lawn Equipment Corporation, I was made aware of the advent of vertical mower attachments for my Roseman Hydro-gang.

Selling a purchase of this type to my members turned out to be surprisingly easy. Mention was made of the dramatic improvements to putting surfaces since verticutting had been initiated. Consequently the vision of improved fairways became the only encouragement needed for this acquisition.

As previous speakers have mentioned, thatch is an excellent environment for disease and insect problems. Cold, heat and drought stress, as well as puffiness and scalping are other situations attributed to dangerous thatch buildups. At Birmingham we have a generous environment for all of these conditions. Many of our fairways have anywhere from three to four inches of thatch.

The fertilizer program at Birmingham calls for 3.0 to 3.5 pounds of nitrogen per growing season. The soils are adequate, with pH levels well within range, and the drainage is in general average. With these variables our decision was to supplement our fairway aeration and topdressing programs with physically removing the thatch.

A few problems had to be resolved prior to beginning our operation. First, since our Roseman mower is nine years old and we found that the power demand on the tractor and hydraulic pump was far greater than for ordinary mowing. Consequently, we purchased a new hydraulic pump and we were able to run all seven units with satisfactory power. Secondly, after much trial and error, we found that the units should be set at zero cutting height, so that the weight of the units will cut deeply enough to pull up the maximum thatch without bogging the tractor down. The initial operation was to take one fairway at a time and go over it as many times as possible until little or no material was being pulled up. Usually it took three passes, alternating directions. The result was a thick blanket of ripped up thatch. The time needed to do one fairway obviously varies with size, but generally one hour was needed in our case. It should be noted that we needed to stop for 30 minutes after every two hours of operation to let the hydraulic oil cool. At Birmingham we attempted to do this operation on Mondays and for a half a day on Tuesday. Therefore we were able to complete six or seven fairways per week.

The next stage of the operation was blowing the clippings into windrows. To do this we used a Jacobsen Model 40 blower. Once in windrows, we went over the piles with a Toro Rake-o-vac. The blower and leaf rake in combination made for a very clean operation and little interruption of play. Special provisions should be made to stockpile yards and yards of thatch. Ultimate disposal of these clippings is another problem to many of us.

After all the fairways had been completed once, we started going over them again at the same setting, but in only one direction. This enabled us to pull up some thatch, but not enough to warrant blowing and vacuuming. This process occurred weekly until the first of June, at which time the late spring temperatures made such an operation dangerous. The project began again in mid-September in same order as the spring.

The results of vertical mowing were very satisfactory to our members. Many comments were made as to the improvement of lies the players were getting. The disease problems were controlled more than ever before. It should be noted however that my preventative spray program was not altered, so I cannot attest to a savings in fungicide. I cannot attest to the eradication of insect nests in the thacch because fortunately there hasn't been a problem. But, I can say that the scalping and puffiness were greatly diminished. I must emphatically say that vertical mowing is not a one year battle. My thatch problem is by no means solved. It will take years to reduce thatch levels to acceptable. Aeration and topdressing are still needed and encouraged. I certainly hope that after the next few seasons we can determine that vertical mowing our fairways is a beneficial and worthwhile program and not another passing fad.

In all fairness to Jacobsen, it is my understanding that vertical mower attachments are now available to the owners of their hydraulic fairway mowers.