

Verticutting & Vertigrooming:

Verticutting (vertical mowing) is a cultivation practice involving the use of vertically oriented knives mounted on a rapidly rotating, horizontal shaft. (A. J. Turgeon. *Turfgrass Management*, third edition).

Verticutting and vertigrooming are not the same and should not be considered equal as turf management tools. Verticutting is a necessary cultural practice probably equal to aerifying in its importance to quality turfgrass and putting surfaces. Vertigrooming is a fine-tuning of the playing surface that will enhance the ball roll and appearance of the turf.

Verticutting

The objectives and benefits of verticutting varies, depending on the depth and spacing of the knives and the turf manager doing the job.

Major objectives of verticutting are thatch removal, reduction of grain, and compaction relief. Most turf managers agree that controlling thatch and reducing grain are the primary reasons for verticutting. Others contend that stimulation produces new leaf growth, making the putting surface more manageable.

Other problems that can be solved with verticutting: breaking up algae on putting surfaces; accelerating spring transition by injuring ryegrass and promoting bermudagrass; aiding overseeding to reach the soil during fall overseeding projects and, to some extent, removal of *poa annua* seedheads, thus improving the appearance of the putting surface.

Consideration should be given to the condition of the putting surface prior to the initiation of a verticutting operation. Shallow rooted turf can be seriously damaged by verticutting. The turf should be healthy and vigorously growing at the time of the operation to speed recovery.

Another factor is the disruption of the putting surface and the negative reception from the members and golfers. Be sure to properly notify everyone concerned of the scheduled operation and its effects.

What is Vertigrooming?

A new equipment option from major manufacturers, a vertigroomer is part of a cutting unit designed to simultaneously vertigroom while the mower is cutting.

HANDS ON



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Generally, the depth of the knives is limited and the vertigroomer is incapable of deep verticutting. The “brush” or “comb” traditionally found on the cutting unit is replaced by the vertigroomer. It is debatable whether the same objective applies to these attachments. Brushing stands the grass blades up allowing for a smoother cut. The vertigroomer may accomplish this as well, but many feel this is a side effect of vertigrooming with the main objective being a minor reduction of leaf surface. Some believe this reduction reduces friction allowing additional speed and more consistent ball roll. In addition, the stimulation of the turf increases microbial activity at the soil surface resulting in better gas exchange and increased turf vigor.

Comparing Verticutting and Vertigrooming Operations

Verticutting usually has more visual impact to the golfer, while vertigrooming can be accomplished without the visual effect. Since vertigrooming can be done more often with less visual impact, it is not always necessary to notify anyone of the procedure.

Most turf managers prefer to lightly topdress following verticutting. This also helps decompose thatch and smooth the surface. The addition of topdressing increases the negative visual effect to the golfer. Many perceive the green speed to be reduced on topdressed greens. The opposite is generally true.

The topdressing fills irregularities in the putting surface, i. e., unrepaired ball marks, scuff marks, and minor tire depressions. This contributes to speed and “trueness” in the putting surface.

Scheduling of verticutting should be

based on the need to verticut and the turf’s ability to recover. Most superintendents agree that twice annually would be the minimum. Vertigrooming can be carried out more frequently since the process is less severe with little obvious impact.

Manufacturers suggest that vertigrooming be done two to three times weekly. Obviously, the lighter the setting the more often the vertigrooming can be done. Vertical mower attachments for triplex greensmowers are the most popular equipment because they are fast and usually trouble free. Other types include walk-behind units and tractor mounted, PTO (power take-off) versions.

Each equipment selection should be based on the suitability of that unit for the particular golf course and the function it is to perform. Vertigrooming equipment is an extra cost option on greensmower reels, walk-behind and triplex. Triplex mowers can be equipped with vertigroomers and have interchangeable verticutting units. Again, these choices should be made with consideration of the intended use and suitability for the site.

Most turf managers agree that double verticutting (two directions per operation) is more beneficial and keeps the putting surface consistent. Because vertigrooming can be accomplished several times over a one week period it only requires one direction for its effect.

The depth of cut varies from one turf manager to another, but have common criteria. For example, the major verticutting operations conducted each year should be deep enough to remove thatch and allow top dressing to be incorporated into the thatch layer, enhancing decomposition. If reducing grain is the objective, a lighter touch is recommended. Usually setting the knives at or fractionally above the bottom of the roller is sufficient to accomplish this.

When verticutting greens, a crossing pattern at 90 degrees produces a pattern that members and golfers will find tolerable.

Vertigrooming on the other hand can be done in any direction for consecutive days. Emphasis should be placed on

Different operations with similar names

straight lines to minimize negative responses from players. If baskets are used, some of the material will be collected and clean up labor will be reduced. A large vacuum/sweeper can also be used to collect debris. Generally, labor costs are minimal when light verticutting or vertigrooming is done. The more severe the procedure, the more costly the project in terms of time and labor.

Verticutting Tees and Fairways

It should be noted that verticutting is also necessary for the same reasons on tees and fairways and (if you have the luxury) even roughs. Thatch build-up in tees and fairways can be a problem. The plant vigor and appearance can be greatly enhanced with a regular program of verticutting in these areas. To date, vertigrooming equipment is not available for fairway mowers, but, verticutting equipment is.

The degrees of verticutting will regulate the amount of time and labor needed to complete the operation and clean up

the debris generated in the process. A verticutter set to enter the soil is likely to leave large amounts of material on the surface.

This material is usually a mixture of decomposing thatch, clippings, and soil. One method of clean up is to drag the this material back into the grooves created by the verticutter, effectively re-incorporating the material and accelerating the decomposition process. Another method is to mow the area with baskets to collect the material.

Remember that the benefits can easily be offset by damage if the turf cannot recover. Turf under stress from weather, insects, and/or disease has lower carbohydrate reserves and a lower tolerance to additional stress. Hot, dry weather causes rapid dessication of the grass plant following verticutting and turf loss is a real possibility. Wet, rainy weather saturates the soil, closing pore spaces and increases susceptibility to inoculation by disease organisms.

Contracting Services

Recently, contractors have begun offering verticutting and de-thatching services to golf courses. Opinions range from very positive to extremely negative about the use of contractors. A common thread running through groups of superintendents is that a turf manager that would contract spraying, aerifying, sod work, and other services would be more likely to contract verticutting.

There are some advantages in the use of a contractor. First, this is his specialty and he must be efficient if he is to make a profit. Second, hiring a contractor will free up labor, allowing golf course maintenance to continue uninterrupted. Third, there is usually recourse for the golf course if the job is not properly done or if unreasonable damages result from poor performance or materials. These questions should be asked of contractors prior to entering into any agreement about service.

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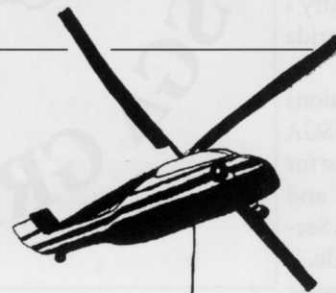
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