

GROOMING REEL GUIDE

by Helmut Ullrich, The Toro Company

1. Introduction

As you know, grooming is an old technique, but the "groomer" is relatively new. It is associated with the golfer's desire for faster, truer and healthier greens. There has been much discussion among superintendents, and articles have been written in trade publications concerning the actual benefits this tool provides. Because this management practice is so new, there has been little, if any, scientific research conducted to determine the long-term effects of grooming. It is difficult, therefore, to make precise recommendations on the use of a grooming reel. This is further complicated by the many variables which play a major role in achieving desired results. Some of the variables which must be considered are:

- General condition of the green
- Variety of grass on the green
- Season of the year
- The turf-management program
- Variation in traffic
- Stress periods, especially heat and humidity

All of these vary from golf course to golf course, and usually from green to green on the same course. The use of the grooming reel, therefore, requires a thorough understanding of agronomic aspects of the turf on the green which, in turn, determines the depth of setting and the frequency of use. It is recommended strongly that the superintendents experiment S-L-O-W-L-Y to achieve best results.

- Grooming, in essence, removes more leaf area.
- Grooming provides some of the same benefits as verti-cutting. The main difference is that the cutting blades are spaced closer than on traditional verti-cutters, and the grooming reel is used more frequently.
- The more frequent use removes more grass and helps to control thatch build-up, especially during periods of maximum growth. For this reason, care must be exercised during periods when grass growth is reduced — for whatever reason.
- Grooming, in addition to routine turf management techniques, like aerification and topdressing, may permit one to raise the mowing height without sacrificing green speed.
- By maintaining a higher cutting height, the effective rooting depth of the turfgrass is increased and the grass is in a more healthy state. Also, it is better able to withstand wear, as well as environmental stresses.

2. What a Grooming Reel Does Not Do

- Grooming is not verti-cutting in the traditional sense; it is for the use above soil level. It is similar to light verti-cutting. It provides for a frequent cutting of those elements that contribute to grain.
- Grooming has the potential to replace verti-cutting, depending on the overall management program.
- Verti-cutting will continue to be used for deeper penetration into the soil, for renovation purposes or preparation of overseeding.
- Grooming does not necessarily achieve, in all cases, increased ball speed. Ball speed is dependent on other factors, i.e., height of cut, frequency of cut, the number of daily mowings, health of turf, grass variety, etc. Some of these factors may make a bigger impact on ball roll than grooming itself.

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GROOMING REELS

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• Grooming can cause adverse effects, if used too frequently at aggressive settings (especially during environmental stress periods, i.e., heat, high humidity or traffic).

3. Grooming Reel Adjustments

A word of advice on grooming reel adjustment procedures. When adjusting a grooming reel, the following steps are recommended for optimal results:

First: Set the desired height of cut.

Second: Set one grooming reel in raise/disengage position. Set one flush with the rollers and set one 1/32-inch above the height of cut.

Third: Make several passes, preferably over the practice green or nursery, before using the unit on a regular green.

Fourth: Judge the amount of grass in the basket of number one, two and three, and readjust accordingly.

Fifth: Visually inspect the results and decide which setting to use for the best job. Make further adjustments if necessary.

Sixth: Set all grooming reels to the same desired depth.

CAUTION: A 1/32-inch depth setting can make a very substantial impact on grass removal and, more importantly, on the severity of grooming.

The user must be aware that the groomer may cause adverse effects if used frequently at an aggressive setting. This is especially true during environmental stress periods, i.e., heat, high humidity or heavy traffic.

In summary, the grooming reel may be the best tool available to the superintendent for managing the greens precisely and in accordance with the desire of the golfer. However, timing, frequency of use and depth of setting must be managed properly!

Local Toro Distributors Continue Commitment to Illinois Turfgrass Foundation

Recently, the Illinois Turfgrass Foundation was awarded one year's free use of a Toro Greensmaster 3000 riding greensmower as part of Toro's Turf College Support Program.

The program, which began in 1986, is being administered locally by Beckmann Turf & Irrigation, Chicago Turf & Irrigation, and Tri-State Turf & Irrigation.

Bruce Beckmann, president of Beckmann Turf & Irrigation, says the purpose of the program is to provide college research groups with the free use of the most technologically advanced turf maintenance equipment currently available. This year, however, finding that equipment proved to be a bit of a challenge.

Following its one-year stay at the University of Illinois-Champaign, the rental greensmower will be offered for sale at a reduced price. All warranties on the equipment will remain intact. Last year's greensmower was purchased by Satellite Services, Inc., at the Chanute Air Force Base.

"Commitment by golf courses to purchase the loaned equipment is critical to the success of the program," Beckmann said. "We commend Satellite Services for their involvement and encourage other golf courses to become involved also."

This year marks the third consecutive year that Beckmann Turf, Chicago Turf and Tri-State Turf have supplied the free use of a greensmower to the Illinois Turfgrass Foundation.

SOIL FOR TURF

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turf soils must be constructed (remember — no more natural soil, so we must construct a usable soil base from that inherited "dirt pile") to take the punishment and still grow good turf.

Here is where the soil amendments come in — to change the inherited soil to a more desirable physical condition. Briefly, to produce good turf under our demanding conditions, soils must have proper pore space. There must be pores to move water through the soil and pores to move air so the grass can "breathe." Approximately half of the soil is made up of solids (the mineral matter plus a small amount of organic matter). The other half is pore space.

Pore space is of two kinds — large (macro) pores and small (micro) pores. Air moves into the soil (and harmful gases move out) through the large pores, except after a heavy rain or irrigation. Then they may be filled with water temporarily, which soon drains out. This is the ventilation system which aerates the soil. The large pores should comprise about half of the total pore space.

Small pores (also called capillary pores) move water through the soil. These pores conduct water to the grass roots (not the opposite — roots don't "grow to water" — water must be there first), from the water table, like a kerosene "hurricane" lamp moves kerosene up through the wick. The finer the pores, the farther the water will move, and the slower.

Proper Balance of Large and Small Pores

The most important aspect of soil porosity is the proper balance between the large and small types of pores. An excessive proportion of large pores will result in a well aerated but dry soil (like most of our sandy soils). Water will move through (percolate) too rapidly and very little will be retained to grow turf. An excessive proportion of fine pores, on the other hand, will exclude air and may be waterlogged (like heavy clay soils).

Thus, once we have determined our given soil situation, and knowing the physical requirements of our turf facility (percolation rates, drainage, etc.), we can then amend the soil to meet our requirements. A great variety of soil materials are available to do this including calcined clay, vermiculite, peat, colloidal phosphate, sand, etc.).

If we are fortunate enough to take over the turf facility prior to planting, we have a golden opportunity to shape our future soil condition. If we inherit an established facility, the job is more difficult, expensive and time consuming. It can be done gradually, however, by periodically working proper amendments into the soil as topdressing following soil aeration.

The proper proportion of amendments can be determined by a soil testing procedure known as "mechanical analysis." Many soil testing laboratories and industrial firms can provide these tests, and will help you compound or construct a soil to meet your needs based on such factors as percolation rates, etc.

Once you have amended your soil to a proper physical condition, then the previously mentioned secondary symptoms such as compaction, weeds, restricted roots, etc., will be minimized. Then turf maintenance will be a more enjoyable and successful business.