

# **Before** Brushing

Normal Clippings. Bentgrass green was cut at .138 before brushing with the MG72. These clippings are of a finer texture than clippings that are removed after brushing. Even though the long horizontal blades of grass are always present the mower simply can't cut them. Brushing lifts long blades and allows the mower to trim them at the correct height.

## **Edge of Mower Cut Line**



Un-cut turf lifted by the MG72 brush.

This side has been cut after lifting turf.

#### Turf Blades are Lifted.

Long blades were present but unable to be cut. The right side has been cut after brushing.

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# After Brushing

Long, Coarse Clippings. Green mowed at the same height as first mowing. Brushing lifted the long blades that were growing horizontally so they could be cut at the intended height. Old, dead turf and other debris also loosened and removed by the mower. A consistent brushing program with the MG72 Multi Groomer will continue to improve density and trueness of ball roll.

# **True Ball Roll & Healthy Turf**

#### **Un-brushed Greens.**

Turf blades are allowed to grow horizontally. Blade length is inconsistent. Optimal density is inhibited, and the canopy has old dead turf and other debris. Ball roll is inconsistent, possibly bumpy or rough, and speed is artificial because the ball rolls over this variety of turf lengths and debris.



#### Early Stages of Brushing.

Long blades are lifted so mower cuts them at the correct height. Old, dead turf and debris are loosened & removed by the mower. But, there are voids left where the long flat blades inhibited density and where old dead turf and debris were removed. Ball roll and speed will still be inconsistent.

### Optimal Ball Roll.

Consistent brushing helps keep turf blades growing vertically. Over time density increases. With a denser turf the ball can roll over the tips of the blades of grass, producing the optimal ball roll and healthier turf. Green speeds are more consistent and true.



### **Demonstrating the Benefits of Brushing with the MG72**



For demonstrating the results of brushing greens and the effectiveness of the MG72 Multi Groomer a green is mowed three times and brushed twice to compare clippings removal. Mow at normal height, and keep clippings from each cutting. After each brushing/mowing sequence compare the amount and composition of the clippings that are removed.

It's possible (as in this example) that the volume of clippings from the 2nd and 3rd cuttings will be equal, or even greater volume, than the 1st mowing. This is because the MG72 lifts the long, horizontal turf blades so they can be cut. It also loosens old, dead turf fibers and other imbedded debris which are removed when mowing.

Brushing greens one to three times a week on a consistent basis before mowing will improve consistency of ball roll, encourage vertical growth of turf, increase density, improve green health, reduce grain, reduce stress, and remove dead turf and debris, etc.

Mow 1st Time, normal height, and keep clippings.

Brush the Green (see diagram)

Mow 2nd Time - normal height and keep clippings. (Mow at 90 degrees to brushing angle)

Brush the Green (see diagram)

**Mow 3rd Time** - normal height and keep clippings. (Mow at 90 degrees to brushing angle)

### **Common Results of Demonstration:**

The 1st Cutting will look normal and will be a fine texture. Then, notice the large volume of clippings from the 2nd and 3rd cuttings. The brush lifted the long, coarser, horizontal blades making them easier to cut. The clippings also include old, dead, turf and other imbedded material loosened by the brush. This process opens area for new turf to grow and encourages an increase in density.

The truest ball roll is produced on turf that is Dense, Healthy and has Turf Blades Growing Vertically.

**Did You Know:** When the PGA commits to a course for an event they inspect the course months in advance and almost always insist they start a brushing program to obtain optimal Ball Roll. The USGA understands the advantages of brushing greens, and they know that the benefits take time to develop.

NOTE: If you have not been brushing greens regularly then it is possible for your green speeds to go down temporarily (week or two) before then speeding up.

Improve Ball Roll.
Improve Mowing Quality &
Consistency of Cutting Height.
Reduce Stress and Promote Green Health.
Reduce Turf Grain that develops from constant
mowing, rolling, etc.

Reduce the Frequency of Verti-cutting.
Disperse Dew Quickly & Easily.

Brushing Process. Keep from dragging unwanted debris onto the green.

You should either stay on the green at all times when brushing, or, if you want to go off and back on then raise the machine when you get to the edge, pull off and make your turn, then lower the machine back down after you have re-entered the green.

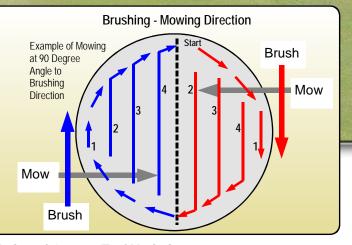
Split the green in two halves. Groom half in one direction and the other half in the opposite direction. In future brush / mowing sessions you should choose different directions just like you do when mowing.

**Mowing at a 90 Degree Angle** to the Brush/Groom angle will achieve the most consistent Direction of Cut with the mower.

Mowing Against the Grain of the Brush is the Most Aggressive

Direction of Cut (removes more clippings).

Mowing With the Grain of the Brush is the Least Aggressive Direction of Cut (removes less clippings).



#### Why Greens Need to be Brushed. Characteristics of Greens Turf Varieties.

- A) Horizontal Growth. Greens Turf Varieties naturally want to grow horizontally (or lay flat).
- **B)** Grass Blades Grow Longer than Desired. Left to grow horizontally, blades that lay flat grow much longer.
- C) Inhibit Density of Turf. Horizontal blades inhibit growth of new, younger, more vibrant blades. Even though a greens mower might be set to .125" cutting height, these long blades lay too flat to be cut.
- D) Older blades of turf are more susceptible to disease than their younger counterparts.
- **E)** Inconsistent Turf Lengths = Inconsistent Ball Roll. Turf consists of short vertical blades (desired), longer flat blades (undesirable), old dead turf and imbedded debris. The ball isn't rolling over consistent turf blades. This inconsistent mixture is less healthy, creates a false ball speed and an inconsistent putting surface. Optimal ball roll is not achieved.
- F) Horizontal blades artificially raise green speed. A ball rolling on long flat blades has little resistance creating a false green speed & inconsistent ball roll.
- G) Rolling greens can add to natural sideways growth of the turf. Rolling greens has advantages, but can also encourage horizontal growth.
- H) Greens Develop "Grain", or memory from constant mowing, rolling, etc.

NOTE: Green speeds may slow down for a week or two before speeding up when starting a brushing program.

