



South Florida Sunshine



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“A SUPERIOR PUTTING SURFACE”

The one area of the course where over 50% of the game of golf is played is the green or putting surface. By “score-card design”, 50% of the strokes of a par round are supposed to be putts. Further, taking into consideration approach shots and chip and run shots, one can see that the putting surface is where a majority of golf is played.

A good putting surface is one that permits the ball to roll true. A good green will also “hold” a well hit shot. If I possessed a perfect putting stroke, I would not expect the putting surface to adversely affect the roll of the ball.

A perfect surface for putting might be a 5,000 square foot pool table. I could accurately predict that the ball would roll exactly where I hit it. It might be a little on the fast side, but it would be a true test of putting skill.

A turfgrass putting surface could not be nearly as perfect as a pool table because of some of the inherent consistencies of a growing plant. But a putting surface as near to those standards would exhibit perfection.

There are many superior putting surfaces in existence and there are certain agronomic and mechanical practices that contribute to a high quality putting green.

The variables that will be discussed are mowing, verticutting, topdressing and fertilization. There are certainly a multitude of other variables such as irrigation, aerification, pesticide programs, cup changing and a host of others. I do not wish to downplay these areas. These areas are very important, however, the items we will discuss make the major difference between a good and a superior putting surface.

A superior surface is generally one that is fast. All slow surfaces are not bad nor are all fast surfaces good, but as a general rule the truest putting surfaces are the faster ones.

Fast greens are a by-product of a correct balance of mowing, verticutting, topdressing and fertilization. If any area gets out of balance, quality suffers.

Mowing at low heights is essential — on healthy turf. I do emphasize healthy because I would not want someone other than a golf course superintendent to mandate low mowing on turf that is not healthy and not in a growing condition conducive to low mowing. Mowing heights from 3/16” to as low as 1/8” on a daily basis are not uncommon.

“Tournament” courses sometimes mow as low as 5/64” for short periods of time.

Low mowing heights reduce the amount of friction the grass plant has on the golf ball, and allows the ball to roll faster and thereby truer. There must be enough leafblade density to keep the ball on course, but we will touch on that effect when we discuss verticutting.

Mowing direction should be changed daily to prevent the leafblades from laying in one direction and cause more upright growth.

Mowers should be sharp, and lapped at least weekly. The height of cut, and reel to bedknife settings, should be checked daily. Dull, improperly set mowers can cause extensive leafblade damage that is both unsightly and unhealthy.

The use of grooved rollers is also encouraged. To quote the U.S.G.A. Green Section; “Grooved rollers encourage more upright growth habit of grass. The surface area of the grooved roller is tremendously reduced, thus they do not lay the grass down as much in front of the bedknife.”

Some of the finest Bentgrass and Tifdwarf Bermuda Greens I have played have been maintained most of the season at 1/8”. Tifgreen surfaces were maintained at slightly higher heights — 5/32” through most of the growing season.

Vertical mowing or verticutting is also a beneficial mechanical process that removes and helps to control undesirable thatch in greens. A small amount of thatch is desirable between the grass plant and soil surface, however, excessive amounts provide for a spongy and undesirable putting surface. On a good green, infrequent “maintenance levels” of verticutting keep out excessive thatch buildup.

Thatch is generally caused by one or all of the following practices; overwatering, overfertilizing, infrequent mowing or by mowing at excessively high mowing heights. Putting green quality grasses are designed to withstand low mowing heights and will tend to build up thatch levels if not maintained at these levels.

If these conditions exist, verticutting will be a necessity. Ideally, the fewer number of verticuttings we must do, the better. Fred Klauk, in several talks he has given on putting surfaces, stresses the importance of leafblade den-

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Excessive verticutting decreases leafblade density and adversely affects the roll of the ball. We desire dense leafblade coverage. It helps the golf ball roll true.

Another aid that helps to smooth a putting surface is topdressing. Light frequent topdressings do more to improve a putting surface than any one single maintenance practice. Topdressing also aids in thatch decomposition and can thus help to reduce verticuttings.

There are courses with superior putting surfaces that topdress lightly and as frequently as every two to four weeks. Light topdressing after it is worked into the turf is hardly noticeable, other than a smoother, faster putting surface. With the newer topdressers on the market eighteen greens can be topdressed in a matter of hours.

On slow play days, we will close the back nine in the morning, topdress, drag and mow before the golfers can turn from the front to the back. We then do the other nine ahead of afternoon play. Thanks to technology, topdressing is not the tedious task it used to be several years ago.

Fertilization is the management practice that varies so drastically from course to course. I believe that proper fertilization techniques can reduce the need for excessive verticutting because of thatch buildup. So many times we used to fertilize at 3/4 to one pound of nitrogen the beginning of the month, get a tremendous flush of growth that tapered off at the end of the month.

We were a victim of peaks and valleys of growth and thereby putting surface inconsistency. If we were to determine the nutritional needs of the grass plant and divide that equally by 30 days in a month, ideally we would be applying on an as needed basis. The grass would grow at consistent, manageable rates. We would not have to use corrective measures for under or overfertilization.

What is really desirable is *just enough* growth to provide dense, uniform, healthy turfgrass.

Monitoring clipping removal on a daily basis is an excellent method of determining growth. Excess growth, and we may be dumping our grass baskets every green, too little growth and we may be dumping after several greens.

One method of more closely attaining light, frequent applications of fertilizer is the use of liquid fertilizer. Many courses including Inverrary have used this method successfully for years.

If we determine through observation of the turf that 3/4 pound of nitrogen, coupled of course with the other essential elements for growth, can provide adequate nutritional needs for the plant, we will apply it in weekly doses.

We use a 100 gallon sprayer with a field jet nozzle calibrated at 100 gallons/acre. Greens are sprayed as needed, or for practical purposes let's say once a week at 3/16 pound of nitrogen. If our needs were 1/2 pound N per month then we would apply 1/8 pound N per week. The combinations are infinite.

Using a 8-0-8 formulation, we can spray 1 to 10 gallons per acre and attain from .018 pound N/1000 square feet to .18

pound N/1000 square feet. (The formulation weighs 10 lbs. per gallon). The frequency could be once a week to several times a week. The application is quick, ties up only one man to fertilize, and only requires a light syringe to wash the fertilizer into the soil.

The affect is predictable, manageable growth. We eliminate periods of large flushes of growth that build thatch. We find our flexibility is greatly increased using this method of supplying plant nutrition. It is certainly not the only method, but it assists us in fine tuning growth and thereby provide a more consistent, uniform putting surface.

It is challenging to try to attain a superior putting surface and fortunately with the increasing technology in turf-grass research, chemical research and product and equipment advances, we are able to better produce quality greens. By simply comparing notes with fellow superintendents, we can mold our own programs using the best ideas.

It all amounts to better putting surfaces for our golfers. I hope that management or organizations, greens committees and other interested parties can financially support the programs that ultimately help produce the better greens and golf courses that we desire. I believe we all strive for perfection and a better golf course. Superior greens are a by product of routine maintenance, technology, communication and the continued efforts of research organizations that need our support. ■



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