

CUPPING AREA — WHERE DOES IT GO?

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Ideas have drastically changed over the last 15 years on how a green should be treated and built. Around the turn of the century the putting green was considered a part of the fair green; the putting surface was rather closely clipped by sheep which were the only lawn mowers that were used on the greens at that time. Until the invention of the lawn mower, putting greens were not treated differently from any other portion of the golf course. A periodical published in 1914 by Fred Taylor stated, "Putting greens were not especially planted or made. They were merely parts of the fair green because the natural conformation of the ground at this point was suited to putting."

Better golfing equipment and lawn mowers have changed a relatively simple approach to the golf course and its maintenance to a business where \$100,000 a year maintenance budgets are commonplace and putting green construction takes a major portion of the golf course construction budget. This drastic change in the way that golf has evolved makes it extremely important that a golf course be maintained at its peak through the golfing season, whether that season is a 5-month season or a 12-month season.

In the past few years, it seems private clubs are receiving more play than in the years past. This is a combination of the clubs accepting more members and the members staying home and playing more rounds at their home club.

More play is a very good thing for the club, but it can create serious problems for the course superintendent. Many of the older clubs, those built more than 25 years ago, have small greens that were built for relatively small memberships. Since golf has enjoyed expanding popularity, many of these club's membership rolls have doubled and the old small greens with limited cupping area have suffered accordingly.

Cupping area and green size are not necessarily synonymous. Times have drastically changed since greens were "not especially planted or made." Greens today are shaped and sculptured by the architect and they call for greater putting skill. Take for instance a green with 7,500 square feet of putting surface. If the green is relatively flat or of a constant slope where essentially all of it may be used for cupping, there is between 5,381 and 5,779 square feet available for cupping. (The USGA states that the cup should be placed no closer than five paces from the edge of the green and that the area two to three feet in radius surrounding the cup should not have any change in contour.) The differences in area remaining is that some people take shorter paces than others; these figures are based on a person's five paces ranging between 12 and 15 feet. A 5,000 square foot green, which is close to the national average, will have between 3,296 and 3,608 square feet available for cupping.

If the greens happen to be bi-level or have severe contours, much more useable cupping area is lost. Not only are the contours lost for cupping space, but an additional three feet on either side of the contour is lost because of the problem of the putting surface's grade changing within a three-foot radius of the cup.

Restricted cupping areas can lead to a variety of

problems, among them compaction and turf wear.

Compaction can affect the turf in so many ways. It destroys soil structure, restricts air and water movement through the soil profile and greatly restricts root growth and plant development. It can make the green so hard that it becomes impossible either to satisfy the golfer or to maintain quality turf. Aeration several times a year, spiking regularly through the year, and a good top-dressing program can help in relieving the compaction problem so long as weather conditions are favorable.

Turfgrass wear is another problem. We can relieve compaction, encourage growth, and pray, but so long as the grass is subjected to constant wear, it will have no chance for complete recovery. When the cupping area is limited, the turf is subjected to constant wear because the green is the one place where everyone playing the course must walk. The cupping area receives the most concentrated traffic of all. Everyone is supposed to hole out on each hole. Everyone has to retrieve his ball from the hole, and therefore every golfer must make at least one footprint, and possibly two footprints, within a three-foot radius of the hole. This means 12 beautiful spike marks for each footprint. Is there any wonder that the cup location must be changed in most cases on a daily basis?

Turf wear can be masked or covered up by over-seeding, top-dressing and fertilizing, but the only real cure is to reduce traffic. It is not very practical to stop play completely for a week or two during the season, although the practice of closing the course each Monday has great merit and gives the turf a slight breather as well as allowing maintenance work to be done. The only additional technique is to try to get the greatest possible number of pin placements on each green.

Cupping area, if not built-in, can be very hard to find. Ideally, greens should be built large enough so the minimum size would handle the maximum expected play. This calls for the officials of the club to anticipate the largest number of members that the club will have and build the course accordingly. Of course any putting green construction on the course should be done to USGA Green Section Putting Green Specifications.

Since not everyone will follow the route of rebuilding all of their greens, there must be another way. This calls for a lot of study and, if possible, referring to the original set of blueprints that were used in building the course. It is very likely that, for one reason or another, your present putting surfaces are smaller than those maintained a few years ago. Economic cutbacks may have reduced some putting surfaces. Maintenance problems such as drainage offer another reason for reducing green size. But the main reason for the smaller putting surfaces is that the men operating the greens mowers, in an attempt to avoid scalping the fringe area at the perimeter, have gradually inched in. It does not take long to lose considerable space on a green if the mowerman misses the cut by 1/8 to 1/4 inch each time the green is mowed. A green can lose six inches to a foot every year from its radius as a result of this practice. The reduction of the putting surface can be so gradual that it can very easily go unnoticed. When this occurs, the greens slowly lose their irregular shapes and all start to look like circles. A check of old blueprints or pictures may lead to some very interesting findings.

If these original references are not available, one could use a soil probe and probe outwardly around the edges of the putting surface until distinct difference in

the topsoil mixture is found. Since the chances are good that the club has built the greens in the past 75 years, it is also very likely that the soil mixture on the greens has been modified. Using this method, the original green size and shape can be determined. It is not unusual to find putting surfaces that have been reduced 500 to 1,000 square feet over the years. The greens that seem to lose the most area are the ones that were large originally. After a determination has been made that the putting surfaces have been reduced, the next step is to regain the lost area. A photographic record of the before and after product would prove of great benefit in preventing a reoccurrence of the problem, because the pictures could serve as a constant reference.

Reclamation of old putting areas can be a delicate operation. The transition from a fringe cut that is generally 1/2 to 3/4 inch in height to a cut of 1/4 inch or less is a difficult one for grasses to make.

Considerations must be given to the amount of thatch that has accumulated in the turf, the weather conditions, what type of grass is presently growing in the fringe, and last but not least, how healthy is the turf.

Weather conditions play an important role in how well the grasses make the transition. Good growing weather is needed; cool nights and warm days are ideal. Generally, this type of weather can be experienced in mid-fall and early spring in the Northeast.

Thatch removal is essential for the grasses to make the transition from a high height of cut to a low one. The thatch prevents a strong, deep root development, prevents good water and air movement into the soil and is an excellent breeding ground for disease. Thatch removal ideally should be completed prior to the height of cut being lowered. However, in most cases it is not practical from the time standpoint, because normally it takes three to four aerations followed by severe vertical mowings to effectively remove excessive thatch. The goal should be to have the thatch layer on the fringe the same thickness as on the greens so both areas will respond the same to the maintenance program.

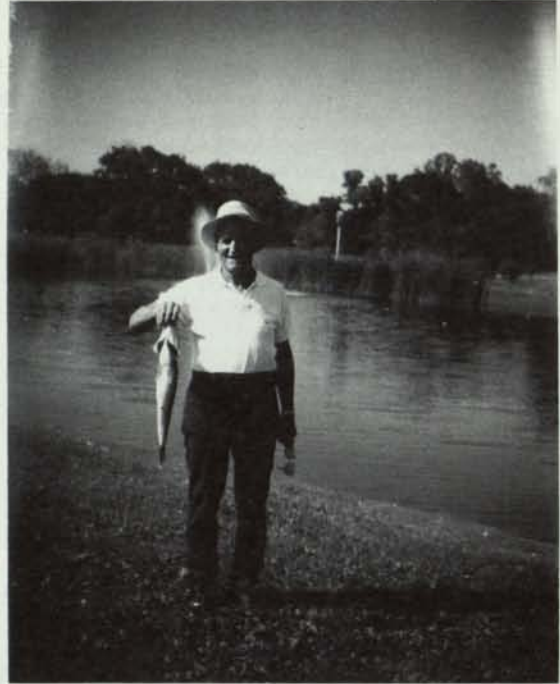
Overseeding and top-dressing are important in the reclamation process. A good, thick permanent grass stand is much easier to maintain.

Generally fall is the best time to initiate the lower cut on the fringe area. Lower the cut gradually, perhaps over several weeks time. This will give the grass a chance to recover prior to the winter weather and the entire spring to develop a strong root system that will support the grasses through the stress periods of the hot growing season.

The addition of four to five cupping areas will serve to reduce wear on other areas of the green. These new areas can serve to give overused cupping areas an additional four to five days to recover before the cup rotation on the green returns to a previously used location.

Every golf course superintendent has his own ideas of how far the cup should be moved from a previously used location. This largely depends on how much cupping area is available on any given green. Some may consider a 3-foot radius around the cup as a cupping area, other 4-, 5-, or even 6-foot radius. If these numbers are used, it means moving the cup at least six feet, and at the most 12 feet from the original location. When the 3-foot radius is used, the cupping area is 28.36 square feet; a 4-foot radius gives a cupping area of 50.24 square feet; a 5-foot radius covers 78.50 square feet; and a 6-foot radius covers 113.04 square feet. These figures show how quickly a putting surface can be used by rotation of the cup.

Many golf courses will receive at least 30,000 rounds of golf over a 6-month period. Just think how nice it would be to have 100 square feet of usable cupping area for every 1,000 rounds of golf played in a 6-month period of time. That would give the club roughly one cup placement a day for a month before the cup returned to the original location. Remembering the earlier figures, the average green is 5,000 square feet, with 3,296 to 3,608 square feet of recommended cupping area if the green is level. That would be slightly more than the 3,000 square feet these ideal figures have produced.



Frank Dinelli, retired golf course Superintendent, now the fisherman with a five pound walleye.



The BULL SHEET editor, the tomato grower.