



GREENS AND TEES

Dennis Divot answers questions about Irrigation and Tees.

Secretary At Work: March 2004 *(reviewed January 2012)*

Q: There has been discussion in the club over the winter as to whether the winter greens should be cut well away from the main green or use the front green apron as part of the winter green. Your views please?

A: Much depends on the underlying nature of the soil and the reasons why the club has “winter greens”.

On sandy based soils the gritty nature of the particles prevents them from binding together to produce compaction. The principal reason for having a winter green on such a course is to prevent frost damage. The only damage done if the apron forms part of the winter green is that by foot marks of the golfers as they recover their over-hit approach shots from the main green.

On a clay or heavy soil, prevention of compaction is as important as preventing frost damage. When the water table is high, as it tends to be in winter, the passage of feet and trolley wheels over the same area squeezes the soft particles together forming an impermeable layer on the surface, often producing a thin layer of mud. If there are no airways through the soil, next season’s grass will form a poor sward.

The walkway areas are usually on the fairway round the outside of greenside bunkers and it is on these areas the golfer will be faced with a “nitby” (not in the bunker yet!) from a hard thin lie during the summer. On such courses, the siting of the winter green should be well away from the main green and chosen to provide a different access route to the next tee. Such a green should be properly prepared during the autumn, fairly level and large enough to accommodate at least two pin placements. It should be top-dressed and cut regularly before use.

Another adverse effect of using the front of the main green is that compaction becomes concentrated there and on the approach. These areas need to be as porous as possible to allow summer approach shots to “hold”. If they are compact and solid, the ball pitching at the front will bounce on.

Q: Why are our British greens always slow and bumpy at the start of the season when the greens at the Masters in Augusta are true and fast?

A: The crucial difference is the soil temperature at the depth of the grass roots. Grass needs a root temperature of 8 to 10 degrees C to grow.

At Augusta, the annual maintenance procedure is directed at preparing for just this one event. The Masters occurs toward the end of their growing season following several months of suitable soil temperatures when the greens are at their tournament best.

In Britain we are coming out of the winter and, in most parts, the soil will have been subjected to ground frost and the root temperature will be too low. Many greenkeepers have a dial soil thermometer and keep records of their green temperatures, 6 to 9 inches down, as a matter of course. Greens in the shade of trees will be slow to warm up in spring and the grass on them later to show signs of growth. British greens are predominantly mixtures of different types of grasses with differing root depths, as the soil temperature increases in spring, there is a temperature gradient down from the green surface. Some grass types start to grow before the others, usually the shallower rooting broad-leaved before the deeper rooting fine ones - hence the greens become "tufty". Only when all grass types have started to grow can the greenkeeper begin to work them, fertilizing, lightly top dressing and verticutting to produce a truer more level surface. This is more likely to be in May/June than the traditional Augusta April date.

Q: The Club has a considerable capital sum tied up in its irrigation system, yet if we have a dry spell at the start of the season the greenkeeper is reluctant to use it. Why?

A: The answer is related to the one given above, soil temperature, 8 to 10 degrees C for sustained growth. At the start of the season the greenkeeper is anxious for the grass on the greens to start growing. He wants as high a root temperature as possible.

Water from the irrigation system will be at a temperature of 4 degrees C or so when it leaves the sprinkler head and the application of water cools the soil down and suppresses grass growth - the opposite of what he is trying to achieve at the start of the season.

Q: The members are very unhappy when the greenkeeper sets the tee markers across half the width only, denying them the full width of the tee. Why does he do it?

A: Given free reign, golfers will all play from the same patch which gives them the easiest line down the fairway, that's why they are unhappy at their loss of choice! The greenkeeper does it to try to keep as much grass on the tee as possible, for as much of the playing season as possible. He will have his own pattern of tee marker movements to try to ensure that re-seeded worn areas will have the best chance of recovery. Ideally, half the tee width could be used for play one year, with the other half being re-seeded and given 12 months without play for the grass to fully recover. It is essential for him to re-seed with a grass species which will best stand up to the heavy wear endured by the tees and allow as much time as possible for deep grass root establishment.

Many of the well-established members clubs were founded at the turn of the last century, or shortly after, when considerably fewer rounds of golf were played per year than currently.

The teeing areas, as designed, were, and in many cases still are, totally inadequate for the amount of golf presently being played. As an illustration, if each player takes a 2 ins by 2 ins divot on a short hole, then if 40,000 rounds are played per year, the area of turf removed is 125 square yards. On a teeing ground 20 yards wide by 15 yards long, ie 300 square yards, the loss is 42 per cent. However, if the tee is rectangular and has a distance point on it, then the usable areas is reduced by the unusable perimeter area: $(2 \times 20) + (1 \times 20) + (2 \times 1 \times 10)$ square yards, ie 70 square yards. The area of usable area lost is 54 per cent.

The greenkeeper has only the growing season when soil temperatures are high enough to make good that loss. STRI have minimum design areas for tees on new golf courses, 400 square metres on par 4/5 holes and 450 square metres on par 3s. Forward-looking clubs will have an ongoing tee rebuilding/extension program to increase the teeing area at the greenkeepers disposal and give him a chance to maintain grass on the tees. Excessive abnormal wear occurs on tees in winter, there is no grass re-establishment until spring.

Turning feet cause compaction and damage. Members even stand on the tee waiting to play when they and their trolleys could remain on the hard core path by the side of the tee until it is their turn to tee off. There are sufficient good quality winter mats available at a sensible price to eliminate winter damage. Members, however, fail to see the advantage to them in having firm level grass covered areas to play from throughout the summer, and continue to insist on playing from grass tees in winter when conditions are unsatisfactory.

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