

primary interests is to be certain that he has a supply of his true Washington bent to restolonize the area from which the sod has been removed.

During the early part of September an area approximately 50 feet long and 25 feet wide is tilled. Four rows of stolons obtained from the previous year's growth are sprigged into the area. The rows are 50 feet long and 4 feet apart. Fifty pounds of a mixture of 50% milorganite and 50% 6-12-12 are applied to the area and it is thoroughly watered.

The area is roped off and receives very little attention until the following September. It receives water only under extreme drought conditions.

The following September and prior to seed head formation, the four rows of stolons have almost grown together. A sod knife is run under each row and all the previous year's growth is thoroughly removed. The stolons are pulled apart by hand and any foreign growth such as crabgrass is discarded.

Selected vigorous stolons are planted into rows, following the same pattern of the previous fall. The remainder of stolons is used to replenish the sod nursery, to stolonize a new green or part of a green, or the excess material is given to a club member.

By following this pattern for the past 30 odd years, Mr. Coble believes he has been able to maintain his original plant-

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ing stock—unchanged. Needless to say he has a beautiful strain of bent.

An odd characteristic of this grass is that when a new area adjacent to an older established area is stolonized it will take up to five years for the two areas to develop the same color. The newly stolonized area usually retains a lighter shade of green for a few years.

Doubtless there are other good methods for maintaining a pure stock of a grass suited to a particular use. This method, as practiced by Mr. Coble, is successful and time-tested. It is described here with the thought that it may be helpful to some who may wish to have a pattern for nursery maintenance.

Golf Course Measurements

When the week-end golfer finds himself lying "two" on the green of a 500 yard hole, he is likely to glow with pride about the way he is hitting the ball. But if he is perfectly honest with himself and is inclined to be realistic, he may be just a little skeptical about how the distance was measured. His skepticism might be well-founded because there seems to be a diversity of opinion concerning the proper way to measure the distance between teeing ground and putting green.

It is important to the golf course superintendent to know also the area of his greens, tees, bunkers, etc. Only by having accurate measurements of such areas can he determine the rates of application of fungicides, fertilizers and other materials.

The distance of golf holes should be the "air line" distance from one point

to another. In other words the contours of the ground line should not enter into the computation. Such measurements may be obtained by use of a surveyor's transit with range finder, by using a steel tape held horizontally so that it is not affected by contours, or by the use of a map or photo made to scale wherein a scale rule may be used to determine yardage from point to point.

The last mentioned method has many points in its favor. By the process of reconciling previously measured distances between recognizable objects appearing in an aerial photograph, it is possible to produce a photograph or a map to a precise scale, so that distances between two given points may be measured easily and accurately.

Measurements of golf hole yardages



Turf Management of today. Arthur Anderson, Superintendent, Brae Burn Country Club, West Newton, Massachusetts, and James M. Latham, Jr., Agronomist, USGA Green Section, inspect sod of C-1 Arlington and C-19 Congressional creeping bentgrass turf at Mr. Anderson's nursery site at Brae Burn. From a nursery area of 6,000 square feet, enough sod was grown to plant more than 40 greens in the Boston area.

must have a definite starting and stopping place. It is a general practice at clubs where yardages are taken seriously to fix some sort of permanent marker at just about the middle (relative to distance) of the teeing ground. This represents the starting place for measurements and it serves as a reference point when tee markers are placed in front of or behind this point. Measurements are made from this permanently fixed point to the center of the putting green. The line of measurement follows generally the center line of the fairway. On dogleg holes, the line of measurement follows the fairway as the hole was intended to be played and does not take into account the ability of some golfers to cut across the dogleg thereby lessening the distance.

Area measurements of a golf course can also be made from a scale map or

aerial photo. While this measurement does not allow for differences caused by uneven topography, it is considered to be accurate within 1/10 of 1 percent. This degree of accuracy is sufficient for all practical purposes. A very useful instrument in computing areas shown on a map or photo is a planimeter. In using a planimeter, the operator simply traces the outline of the area concerned and the area measurement is automatically computed. The alternative method is to divide the areas into squares, rectangles, triangles and other easily measured shapes and find the sums of these areas.

The cost of an aerial photograph and scale map is nominal when it is considered that this can be used as a permanent record and that it will simplify greatly any measurements that may need to be made in the future.