

# How to Establish New Stolon Bent Greens Quickly

By R. R. BOND

More interest has been shown in the past two years in establishing new bent greens than for many years. In analyzing this interest we have reached the conclusion that many new men have and are entering the greenkeeping profession.

We have come through a period of ten years of depression and four years of war, during which time very few golf courses were constructed and only a few old golf courses rejuvenated. At the same time there has been a terrific turnover in greenkeepers, some have passed away, many have retired, quite a few have changed their occupations, many went to war, some did not return, and in the meanwhile the new men coming into the field to fill these vacancies found established greens where there was no necessity to learn or practice the art of planting and establishing new greens. So, we have a period where many greenkeepers have been in this business, two, five, ten, and even fifteen years, who have never had to plant a new green until recently. The past two or three years have brought about many changes. Hundreds of new golf courses are being constructed, hundreds of old courses that were closed for the duration and laid dormant are re-opening. Hundreds of old greens are being rejuvenated. Thousands of greens are on their last legs and must be rejuvenated soon. It is understandable why there is so much interest shown in planting new greens.

The subject under discussion is the planting of stolons and developing a putting surface. Our objective toward which we are striving is to establish perfect bent greens as fast as we can help and force nature grow the grass, and I believe a program can be planned, one which has been tried and tested for many years, in which playable greens can be established in eight weeks or less, and near perfect greens in nine or ten weeks. To obtain this goal we must have rapid and continuous growth of grass.

A week before planting, spread dry ammonium sulfate over the green at the rate of eight pounds per thousand square feet, either by hand or spreader. If it does not rain during the week gently rake the green in and wet down the night before planting. If the green is fairly well packed the men can work on it by wearing rubber or rubber soled Keds or heavy socks over their shoes, but if the green is not well packed or solid

and is apt to show heel prints it is best to work on wide boards. Run a line of boards the full length of a green from the apron to the back and in about the middle of the green. Then lay two rows of boards about a foot apart starting the first row two feet from the very edge of the green. These two rows of boards are laid horizontal to the boards running down the middle to form a huge letter T. In this manner work from the back of the green with all materials in front near the apron.

## Materials Needed

The materials needed depend upon the help available. One man, of course, can plant a green—it just takes longer. Five men are a good unit. Eight men make a better planting unit and eight men can plant nine average greens in less than two days. For these eight men an adequate supply of stolons is needed, one wheelbarrow, four bushel baskets, four tin pails, two rakes, one fairly heavy roller, a hose with an extra fine nozzle, about ten wide boards ten or twelve feet long, and a cubic yard of ready mixed, sieved topdressing, composed of 50% coarse sharp sand, 20% fine cultivated peat and 30% good dirt. Mix with the topdressing 200 lbs. of Milorganite and a few shovels full of potash, or if available, some old well rotted manure, at least four or five years old, if you are fortunate enough to obtain it. The manure can take the place of the peat.

The additional fertilizer disintegrates slowly and is a continuous feed for the young roots as they are going down. You will note the first topdressing is very friable. The object is to have it so porous that a newly sprouted node can come through the soil wherever it sprouts instead of crawling along under a crust until it finds a crack in the soil for an opening.

## Planting the Stolons

Now, for the actual planting. First rake the part of the area between the first row of boards and the end of the green to about  $\frac{1}{4}$  inch deep. Spread the chopped stolons through your fingers at the required rate. Roll the stolons down and topdress to no more than one-eighth inch and roll again. The object is to have the stolons packed between two layers of dirt much as a gardener would pack down the soil after planting seeds. About one-third to one-fourth of the stolons will show above ground. This is as it should be because the

nodes that are above ground will sprout into leaves and new stolons, while the nodes under ground will sprout into roots as well as new stolons. The topdressing must not be thrown on with a shovel but must be laid on. If you have a topdressing spreader, fine; if not, drop it on as evenly as possible by working the material through the fingers. It is very true you can have quicker greens by not using any topdressing at all. Simply roll the stolons into dampened soil, but in so doing you run the danger of the stolons blowing or washing away before the tiny roots can adhere to the soil. Now, move the first row of boards back about one foot behind the second row of boards. This will give you a planting area of about two feet in width which is about all the average man can reach while doing his planting and proceed as stated before. First rake, 2nd plant, 3rd roll, 4th topdress, 5th roll again, and 6th move your boards back again.

It is very important that the stolons are scattered evenly. It is an exacting job because if planted too sparsely it will take longer for the growing stolons to cover the ground and if too thick the stolons will bulge when they stool out and then you have a job of rolling them down each morning until the roots take hold.

We suggest the stolons be planted to a thickness of ten bushels to a thousand square feet. At this rate the green will thicken out very rapidly before the weeds have a chance. You may save a little money at first by planting the stolons at the rate of eight or even six bushels per thousand square feet but it slows up the green and gives the weeds a chance, and any one who has had the experience of hand picking a green knows of the labor and expense involved. To get the correct thickness take a bushel of the chopped stolons and spread it evenly over a plot 10 x 10 ft., which is 100 sq. ft. This is at the rate of ten bushels per thousand square feet. After getting the knack of planting this area with this amount of stolons you could go ahead and plant all your greens feeling pretty sure you are planting to the correct thickness.

#### Use Fine Mist Spray

If the day is windy or warm or sunshiny, start spraying before the green is half planted. This spray should be an extremely fine mist, one through which rainbows can be seen. It isn't the amount of water put on the green that counts but the frequency of moisture, because, after all, you do not have to water over a depth of  $\frac{1}{4}$  inch, and at no time must the top layer of this soil become dry, not even for an hour, but must be kept moist for a period of at least four days. On the other hand don't over water as the topdressing will be washed off the stolons and rivulets will form on the green.

This is so important that the best man on your force should be given the task of doing the spraying. Generally it is best to leave one man to spray on the first green while the second green is being planted and he can alternate his time between the two greens until a third green is ready for him. One man can take care of the spraying of three greens by just making the rounds. The first four days tells the story and is the most important. If the top layer of soil becomes dry and the tiny roots dry up the green is lost. After the first four days of almost constant and continuous spraying from before sunrise until after sunset you can slow up spraying to about every hour or so, depending upon the winds and the hot sun. If the weather is cool or the sky overcast it is natural that the ground will not dry out so quickly and you will not have to spray as often.

#### Roll Green Before Mowing

On the fourth day new shoots will show all over the green. There is nothing to do for the next two or three weeks except, of course, spray. Watch the greens carefully and whenever the new stolons become an inch or two long it is ready for another shot of ammonium sulfate at the rate of five or six pounds per thousand square feet. Use dry or mixed with damp sand, and be sure to wash off the blades. Whenever the stolons grow to a length of three or four inches they are ready for the first mowing. This may be three or four weeks after planting depending upon warm, growing nights and days. Before mowing roll the green to force as many of the stolons into the soil as possible and then mow, first with an ordinary mower, following it up with a putting green mower set to a height of  $\frac{1}{4}$  inch. Leave the clippings fall where they may, scattering some of the clippings that may be too thick over the places that are too thin. Then roll the clippings down and topdress with the same mixture of topdressing as stated before, and not over  $\frac{1}{8}$  inch thick. Do this once a week for four weeks. This is called "building sod." After this remove the clippings with a carrier and your green is ready for play. The last three topdressings should be dragged in to level and smooth the green. The program outlined is an eight week schedule but it may be slowed up a week or two or advanced a week or two, depending upon the warm days and nights.

Having progressed this far, lower the mower to  $\frac{3}{16}$  of an inch and change the topdressing mixture to more dirt and less sand.

Chopped stolons are preferred to shredded stolons because they lay almost flat on the ground and do not need nearly as much topdressing to hold them down until the roots take hold.