

Patching

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Fine turf is maintained only by constant and intelligent attention. Even under the best of care it goes bad in spots which require more or less heroic treatment to bring about recovery. No putting-green is so perfect that it is not at some time in need of repairs. A season of trying weather conditions, disease attacks, weed incursions, and hard play, followed by a winter of disuse and more or less severity, frequently leaves the green at the beginning of spring ragged and rough especially in spots. The remedies that occur first to the green-keeper are to reseed and to top-dress. These are excellent homeopathic remedies, and as to the efficacy of the second there can be no doubt. But it often happens that weeds have established themselves in places or fungous diseases have completely denuded small or even large patches that can not quickly be brought back to good playing conditions by either remedy. Such patches can best be restored by replacing them with good sod. In recent years the hole cutter has been used very effectively for patching such spots as may be occupied by pearlwort, chickweed, or other pestiferous putting-green weeds. The weed-covered spots may be cut out by the hole cutter and a piece of good sod put in its place by the same means. It is really surprising how much improvement one man can make in a green in a day if he uses the hole cutter properly and has an ample supply of good turf from which to take plugs. This method of repairing greens is commonly called "plugging."

If the patches needing repair are too large to be handled by a whole cutter they may be sodded after the usual manner of sodding new greens, careful attention being given to taking out the old sod to a uniform depth and trimming the new sod so that it will fit evenly but not so snugly that it will buckle. Whether the patching be done by the hole cutter or the sod cutter and the spade, it should be the first treatment given in the spring. Certainly patching should precede rolling and top-dressing. If the patching is done while the surface of the green is in a loosened condition, due to the frost action in the soil, and if the green is then rolled and top-dressed judiciously, the result will be a true surface almost immediately ready for play. The greatest objection to much of the patching that is done is not due to the mechanical work, for this is frequently as neatly done as the piecing of an old-fashioned patch-work quilt, but it is due to the quality of the sod that is used. More than once it has happened that the sod selected for patching was little better than the sod removed from the green. Generally speaking, it is a poor practice to transfer the sod from the near approach to the green and replace the sod thus removed with the discarded weed-infested or the disease-infected turf. This is too frequently done when the hole cutter is used, and the result is a focus of infection from which weeds and diseases later may spread through the greens.

If clubs would only maintain well-kept turf plots from which to draw patching material, their repair work would be much more simple and satisfactory. Such plots, several in number if necessary for convenience, could easily be provided by propagating a good strain of carpet-bent vegetatively. The method is simple and those who have tried it have found the results convincing. Turf thus developed has two outstanding qualifications for repair work. It is of excellent quality so far as texture

and trueness are concerned, and it establishes itself in its new position with aggressiveness. Vegetatively planted areas for supplying repair sod are so easily established and maintained that a club located in the northern turf-grass belt can not afford to be without them. If a good strain of carpet-bent is selected and a little intelligent care used, a supply plot may be maintained indefinitely, since the grass will soon returf the places from which sod was removed. Some clubs already have established vegetative repair plots and have found them exceedingly useful; a considerable number have signified their intention of doing so. For the benefit of those who may not be familiar with the vegetative method of propagating bent-grass turf, attention is called to the July 20, 1921, issue of *THE BULLETIN*. The time is drawing near when the maintenance of plots of good turf for repairing putting-greens will be just as much a regular feature of golf courses as is the making of compost piles.



Harvesting bent seed in Germany. Note that the grass is growing in open woodland and that the crop is gathered by very simple methods

Rate of Seeding Fine Grasses

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The rate of seeding any broadcasted crop may be determined in two different ways. The first method and the one commonly used by agronomists is to sow like plots to different amounts of seed. For example, a series of ten one-tenth acre plots may be sown respectively with 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20 pounds of seed. By observations on these plots and by comparing the yields, the best rate of seeding is determined. This method is frankly empirical and the conclusion is reached regardless of any theory. Indeed the best rate of seeding is found to be different in different places and on unlike soils.

The second method of determining the rate of seeding is purely theoretical. If it be found that a perfect stand of alfalfa averages 15 plants to the square foot, an acre will contain 6,384,000 plants. As one pound of