Some Suggestions for Fall Treatment of Putting Greens

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In the sections of the country where the bents and fescues are the dominant putting-green grasses some work is required on the greens more or less continuously throughout the year. Spring, or the approach of spring, of itself suggests certain treatments to almost everyone, but the approach of fall does not seem to do so to a similar degree. Nevertheless, the fall is a good time to do certain kinds of work in connection with the maintenance of bent and fescue greens.

Weeding

During the growing season weeding is a never-ending operation, and it scarcely seems necessary to mention it specifically in connection with fall treatment. However, it is very important that weeds be removed from greens in the early fall, since at this season the weather conditions favor the growth of grass, and if the weeds are taken out the grass quickly covers the spots formerly occupied by them. Where crab-grass is troublesome (and this covers a very large part of the golf belt) special effort should be made to remove it. It is true, of course, that crab-grass is killed by the first frost, but if it has been allowed to make a good growth before this time the dead plants will result in vacant spots in the green unless they are removed in the fall. It is suggested, therefore, that crab-grass plants be pulled, raked, or cut out as early in the fall as possible. The removal of weeds from putting greens may be done incidentally to reseeding; but whether or not greens are reseeded, the weeds should in all cases be removed.

Reseeding

It is almost a universal practice to reseed thin or patchy greens at some time of the year, usually in the spring. But as a matter of fact, fall sowing is preferable to spring sowing, whether it is done on old turf or on a freshly prepared seed bed, except possibly in the northernmost part of the United States. Certainly, south of central New York the sowing of Kentucky bluegrass, redtop, and fine bents, and fescues in the fall is generally to be advised. Strictly speaking, these grasses are northern grasses. They thrive better in cool weather than in warm weather, and when sown early in the fall they make a good growth before being checked by the cold weather of winter. When spring arrives the young plants have stooled out and are in condition to grow rapidly. This enables them to compete fairly successfully with summer annual weeds. When seed is sown in the spring the young plants usually find favorable weather for a few weeks, but before they reach the stage when they have stooled to any considerable extent hot weather is upon them and they are not sufficiently active to win out in their fight against heat, drought, weeds, disease, and other pests. Briefly, this is one of the good reasons why seed of the northern turf grasses should in most cases be sown in the fall. The advantage of fall sowing will be better appreciated when it is recalled that these grasses are much the same as winter wheat in their temperature relations.

While sowing seed on thin turf is very commonly done, there is real

doubt as to its actual value in thickening the turf or in improving its quality. Like many other practices, there is too little definite evidence based upon properly checked tests to warrant the drawing of definite conclusions in connection with it. Usually reseeding is accompanied by scarifying and top-dressing, and it is probable that these features of the treatment contribute quite as much to the improvement of the old turf as does the seed. If at the time of reseeding representative parts of the greens were left for checks, some valuable information might be obtained. This is being done in a few cases, and it is hoped that more knowledge will be available on the subject in the near future.

In the absence of positive evidence of its benefits, the sowing of seed on thin turf is advised, and as an average date to do it September 15 should be kept in mind. If possible, bent greens should be reseeded with bent seed, and probably fescue greens with fescue seed, although it is a fact that bent seed germinates much more quickly than fescue seed, and the young bent plants are more hardy and aggressive than the fescue plants. Bent seed, however, is not abundant at this time. Because of this it has been suggested by some that redtop seed be substituted. Redtop, as is well known, is a coarse grass not suited for putting-green purposes except in its early or seedling stage, but those advocating its use argue that the plants resulting from reseeding on old turf succomb to the conditions that exist there while they are still in the seedling stage. Limited observations seem to substantiate this contention, and while it does not seem advisable to recommend the practice definitely, it would seem advisable to try it at least on a small area.

Since redtop plants do not last long under putting-green conditions, of course no permanent benefit to the green is to be expected. But redtop seed is cheap, and reseeding might be done advantageously both spring and fall, thereby maintaining a succession of seedlings.

The best methods of reseeding that are now practiced involve the scarifying of the turf by some satisfactory means, the mixing of the seed with compost before it is sown on the greens, and the top-dressing of the reseeded greens with compost immediately after reseeding. Light rolling and watering should follow. By mixing the seed with compost better conditions are produced for the germination of the seed and the growth of the seedlings than where seed is sown by the ordinary methods. A liberal quantity of seed should be used, but more than 3 pounds of good bent seed or 5 pounds of red fescue seed for 1,000 square feet is not recommended. If redtop is used, 3 pounds of recleaned seed should be ample.

Special seeders have been constructed to reseed old turf, but experience has not demonstrated their usefulness. In fact, it appears that the method here suggested is preferable to those in which the use of special seeders is involved.

Aerating the Turf

Much has been said with regard to the importance of aerating the turf especially in the spring and fall, and many implements have been devised for this purpose. These have been of the nature of disks, spiked rollers, and spiked tampers, but the evidence so far is not favorable to them. Some have advised the partial lifting of turf by means of a spading-fork and the sifting of compost under the lifted layers. This practice may give good results ultimately but it has at least two objections. First, it is difficult to

get the turf back in good condition for play after forking; and secondly, the plants whose roots are pulled loose from the soil usually die and therefore streaks of dead grass are left through the green. Those who are impressed with the recommendations they hear regarding forking are advised to try the method on a small scale for their preliminary experiments.

Overcoming the Effects of Brown-Patch

The occurrence of brown-patch makes fall treatment of some kind imperative; and while very little is known with regard to the best methods for producing recovery of the turf, preliminary experiments indicate that top-dressing with a compost to which some quick-acting fertilizer, such as nitrate of soda or sulphate of ammonia, is added at the rate of approximately 3 pounds to each 1,000 square feet, is the most successful treatment thus far known. Brown-patch sometimes kills the grass outright, and in such cases it is practically necessary to returf these areas by sodding.

Fertilizing

Whether or not reseeding is done, or brown-patch has been prevalent, the green should be top-dressed in the fall. It is probable that good compost to which nitrate of soda or sulphate of ammonia is added is, everything considered, the most satisfactory dressing to use at this time. A second top-dressing of compost, to which no mineral fertilizer is added, should be given late in the fall, and this should be followed somewhat later by a dressing of sand if the greens are on clay soil. The sand leaves the surface in good condition for winter, probably chiefly by improving the drainage at the crowns of the grass plants.

There appears to be a possibility of over-fertilizing turf in the fall, and at best no advantage is derived from heavy applications, especially of nitrogenous fertilizers, at this time of the year.

Drainage and Sodding

Particular attention should be given to drainage before the severe weather of winter arrives. Unless both surface—and under-drainage are good, the turf is subject to damage by heaving, which is brought about by alternate freezing and thawing during the winter and early spring. Look after the drainage. Where sodding is to be done for patching or for the remaking of greens, the fall of the year is a good time to do it; the grass will stand more severe treatment in the way of transplanting at this time than at any other time of the year.

Earthworms

Earthworms frequently are very troublesome during the fall, and greens thus infested should be treated as suggested in previous articles in this BULLETIN so that the damage from earthworms during the fall and winter may be reduced to a minimum.