

the stolons may be planted very much thicker than two feet apart, and the results will justify the expense.

Most important is the weeding of the green during the first few weeks, thus giving the Bermuda full opportunity to spread and cover the ground. When the grass has completely covered the ground, top-dress with good soil. This will be food for the growing grass and will also help to obtain the proper surface for the green. It is then time to cut with an ordinary lawn-mower. After a few days of constant cutting, another and lighter top-dressing of sifted soil is necessary. When the grass begins to come through, begin the use of the regular putting green mower. I advise daily cutting, especially through the spring and early summer.

A period of 100 days will ordinarily elapse from the time the stolons are planted to the time the green is ready for putting.

After a stand is once obtained there is little trouble from weeds and other grasses, as, at least in Oklahoma, Bermuda brooks no competition.

Although, as I have stated, Bermuda will do fairly well in any soil, constant vigilance and intelligent attention are necessary in order to maintain a good turf of steady and luxuriant growth. We can not maintain good turf with fertilizing. For this reason I strongly advise using the mowers without grass catchers. By all means let the clippings remain on the turf. If greens are cut each day, as they should be, the clippings will never be noticeable and artificial fertilizers will be needed less often. When you feel that it is necessary to stimulate growth it can easily be done by top-dressing with good soil mixed with well-rotted stable manure. This is best done in early spring.

Bermuda turns gray with the first frost and remains dormant until spring. In order to produce turf during this period of dormancy, I sow from twenty to thirty pounds of Italian rye-grass seed on each green in September, and a very satisfactory winter green is thus obtained.

In closing, let me emphasize again the importance of the selection of the finer strains of Bermuda grass. This is the first essential in obtaining good Bermuda putting turf. This is a matter to which very few of the southern greenkeepers have paid attention, and I believe that the immediate future will show great advancement in this direction.

Preventing Crab Grass From Going to Seed

Paper Read by Robert Scott, Greenkeeper, Baltimore Country Club, at the Annual Meeting of the Green Section, January 5, 1924

Crab grass is a pestiferous annual weed. Its marvelous ability to produce seed is the great obstacle to be overcome in controlling it. If by any means its prolific seeding can be prevented or even held in check, one can be reasonably sure of better greens. Where crab grass is not too thick, the best method of getting rid of it is by hand-weeding as soon as the young plants are big enough to handle; but where it is so thick that this can not be done without tearing out the good grasses, other methods must be employed. The greens used to get so thick with crab grass at the Baltimore Country Club that they resembled a coco-fiber door-mat. Only a small area in the center of each green was weeded, and these areas were growing smaller each season as from all sides the crab grass kept advancing toward the center. The following method of combatting this

weed was used there successfully and may be useful to others who have similar conditions.

Twenty pounds of ammonium sulfate were dissolved in 50 gallons of water. This solution was strained through cheese-cloth into a spray pump. For large areas a power pump would be necessary. The crab grass was sprayed with this solution before it had begun to blossom. This early spraying is necessary, inasmuch as the end to be obtained is the prevention of seed production; moreover, at this early stage of its growth the grass has not become so vigorous as to smother the good grasses.

To obtain the best results, the sprayer should be equipped with a fine nozzle. The spraying must be done on a bright, sunny day. The crab grass should be sprayed two or three times, or until the leaves are as wet as when the dew is heavy. In places where the crab grass is very thick it is advisable to brush it with stiff stable brooms before spraying, in order to permit the solution to reach the underside of the leaves. In a few minutes after the spraying, the leaves of the crab grass, as well as of all other vegetation sprayed, will begin to turn dark and soft, and in a day or so will have a scorched, burnt appearance. In about a week, however, the crab grass and other grasses will be growing again. The spraying should then be repeated, and repeated a third time after a similar interval. Three sprayings will usually be sufficient in a latitude where frost can be expected by the middle of October; but where frosts are unusual at that time, the better practice is to use a stronger solution, killing all vegetation where used and then reseeding the area so treated, if the soil and foundation of the green are good. In either case, after the last spraying has taken effect, the treated area should be well raked both ways with iron rakes, cut as close as possible with a 6, 7, or 8-blade high-wheel mower with grass catcher attached, rolled with a spike-roller, seeded or stolons of creeping bent put on, and then covered with a top-dressing free from weed seeds. The crab grass which is not killed will be so retarded that it will not have time to grow and mature seed before frost arrives; and if the greens are composed of perennial grasses at least fifty per cent will come back from their rootstocks, making a much better stand than if allowed to be choked out by crab grass.

The greens thus treated at the Baltimore Country Club were never out of play, and, although unsightly during the treatment, were in much better playing condition than if the crab grass had been allowed to grow, produce seed, and die out naturally, leaving the greens rough and brown after the first frost and full of seeds of crab grass to produce further trouble. The year following, what little crab grass appeared on the greens so treated was removed by hand-weeding, and the greens have been kept clean since by the same method, the amount of crab grass decreasing each year. So it seems to prove that greens entirely smothered by crab grass can be treated by this method and then reseeded much more cheaply and effectively, and with greater satisfaction to the golfers, than by rebuilding or resodding.

RULINGS ON GROOVED AND SLOTTED CLUBS AND ON STEEL SHAFT CLUBS.—The following notice was issued by Cornelius S. Lee, Secretary, United States Golf Association, under date of April 15, 1924:

“The attention of the members of your club is respectfully called to the following rulings, made by the Executive Committee: