

Two Serious Problems on Southern Courses

By Cornelius S. Lee

Jekyll Island Club, Brunswick, Ga.

(Paper read at the annual meeting of the Green Section in New York City,
January 10, 1930)

The last few years have witnessed an enormous increase in the growth of and interest in the game of golf. Hardly any section of the country has not shared in this movement. With the increased interest has come a demand from golfers for perfection in course upkeep. In some localities this is a fairly simple matter; in others, due to extremes of temperature and to insect pests, good greenkeeping is a serious problem and an arduous task. The Jekyll Island golf course, situated off the southeastern coast of Georgia, has gone through a trying period the last few years. I shall endeavor to set forth our major problems.



A fairway at Jekyll Island

Our playing season lasts from the middle of December to the middle of April. During this period the temperature ranges from 25 to 80 degrees above zero. These extremes of temperature make it difficult to insure good putting greens, and, as is the case throughout the South, the greens have to be planted anew each fall. Experience and experiments have convinced us that a Bermuda grass base, top-dressed and sown in September with redtop, gives the best putting surface. The main problem lies in maintaining a proper balance between the base of dormant Bermuda grass roots and the surface of active redtop. If the Bermuda base is not scraped off sufficiently deep and the redtop is sown too early in the fall, a subsequent wet season will result in the Bermuda's crowding out the redtop. If, on the other hand, the redtop is sown too late or too much of the Bermuda base is removed, frost will damage the redtop and the light sandy soil with its insufficient base will afford a poor putting surface.

The problem of securing a satisfactory grass base over winter is one which has given us no little concern. The best results so far have been obtained by cutting off the stolons of the Bermuda grass in the fall by the use of sharp hoes; this, however, is a laborious process, and uniform results are hard to obtain. No machine has yet been devised that will just skim off the surface Bermuda. A sod-cutter

will not work properly. Any device using knives simply churns up the stolons and induces a more active growth. This season we are planning to conduct several experiments with a base. In one experiment we shall make use of fine wire as a base; in another we shall treat the surface of a plot of Bermuda grass with arsenate of lead; in another we shall burn a plot with a heavy application of sulphate of ammonia.

For fairway grasses we have found carpet grass the best, and Bermuda next. Experiments with centipede grass have yielded no tangible results. Carpet grass, while slower in germinating, makes a thicker mat, remains greener in the winter, and is damaged less by the mole cricket than is Bermuda grass.



A drive to a green at Jekyll Island

[Six or seven years ago our old course was suddenly attacked by the mole cricket, which is one of the worst pests Southern golf courses have to contend with. Overnight this insect practically destroyed entire fairways for us.] The cricket somewhat resembles a long, brown grasshopper, with short legs. Its head is covered with an armored shield. It has a powerful pair of claws, like a lobster, which it uses in cutting the roots of grass. It flies, jumps, springs, swims, crawls, and burrows. In cold weather it digs five or six inches underground. As its burrows consist of countless passages, the use of poison gas is rather ineffective in combating it. We waged a short and hopeless war against the insect, and then sent to Washington for help. On the request of the Green Section, W. A. Thomas, of the United States Department of Agriculture, was sent down and spent two seasons at our course working out control measures. The following three methods of poisoning the crickets were finally adopted: spreading arsenate of lead mixed with soil over infested areas; squirting bisulphide of carbon in the burrows on greens that had been attacked; scattering a bait made from a mixture of rice flour, cottonseed meal, and arsenate of lead, in August when the insect was flying about, or at other times during warm weather when the insect was active at night. We abandoned our old course three years ago and built a new one out on the sand dunes. After using these methods of warfare against the mole cricket, I am pleased to say we are com-

paratively free from the pest. Had the Green Section not rendered us this invaluable service in securing the cooperation of the United States Department of Agriculture in attempting to solve our problem, I know there would be no golf course on Jekyll Island today. Our old course had been utterly destroyed by the mole cricket.

Let me solemnly warn anyone building a southern golf course to make adequate provision for combating the mole cricket before he does anything else. In time the insect will unquestionably work farther north, invading even the country north of the Carolinas. At Aix-les-Bains, in southeastern France, a place almost surrounded by high mountains, the mole cricket suddenly appeared last year. I dug a few up there and was surprised to see that they were at least three inches long. As labor at that place was very cheap, they could afford to fight the pest with bisulphide of carbon, which must be squirted by hand into the burrows.

New pests are certain to appear from time to time as the game of golf grows and more courses are built in other sections of the country. It is only by broadcasting knowledge gained from various sources, in a medium such as the Bulletin of the Green Section, that intelligent and steady progress in greenkeeping can be obtained. I firmly believe that the greenkeeper today occupies the most responsible position in the game of golf. Good results can not be obtained without a good greenkeeper. Under the guidance of an inferior man thousands of dollars may be wasted and the best conditioned course may go to pieces in a few years.

In closing, I want to express my thanks for the valuable advice in the use of fertilizers, preparation of soil, and other matters given to us by the Green Section when we built our new course. By following their recommendations we saved a large sum of money and obtained most gratifying results.

QUESTIONS AND ANSWERS

All questions sent to the Green Section will be answered in a letter to the writer as promptly as possible. The more interesting of these questions, with concise answers, will appear in this column. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Section.

While most of the answers are of general application, please bear in mind that each recommendation is intended specifically for the locality designated at the end of the question.

Early spring treatment of putting turf.—After the frost is out of the ground in the spring and the greens have been rolled, should the first treatment be the application of top-dressing, mowing the grass, or scarifying the turf with sharp-tined rakes? (Ohio.)

ANSWER.—After the greens have been rolled with a roller weighing from 150 to 200 pounds to the foot and having a diameter of at least 18 inches, the first treatment should be mowing the grass. Top-dressing should be delayed until the grass is growing sufficiently to require almost daily cutting. At that time the turf should be scarified