

farmers and others to lime soils upon which are found moss and certain other kinds of plants which are supposed to indicate acid soils.

Recently some experiments were conducted to determine the lime relations of the various common species of moss, to see just how quickly they may be eradicated by the use of lime. Much to the surprise of those who watched the experiments carefully, lime—that is, hydrated lime and also pulverized limestone—failed to check the growth of the moss; in fact, it seemed to encourage it.

In fertilizer tests that are now going into the third year at the Arlington Experimental Farm, Virginia, the plats that have received lime in very liberal applications are the plats most badly infested with moss. In fact, these plats and the check-plats are the only ones of the series in which moss is found. The grass on the plats is Rhode Island bent produced from seed, and it is clearly shown that the plats upon which lime has been applied are not only more badly infested with moss than are the check-plats, to which nothing has been applied, but that they are also more badly infested with other weedy plants and the turf is less vigorous than the untreated turf. For example, the plats that have been treated with ammonium sulfate and compost, are free from moss and practically free from other weeds. In other experiments where moss-infested areas have been treated with various fertilizers and lime, the lime has had no deleterious effect on the moss, while fertilizers such as ammonium sulfate, bone meal, soybean meal, and cottonseed meal have proved very efficacious in eradicating the moss.

In a word then, what is needed to improve mossy areas is not lime but some good grass fertilizer. The all-too-common notion that most soils are sour and need sweetening with lime before they will produce good turf should be relegated to the discard. Certainly, lime has no place in connection with the growing of bent or fescue turf; and it is now fairly well shown that what Kentucky bluegrass needs most to make it thrive is not lime but rich soil, which may be obtained by the proper use of manure or other fertilizers.

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## Care of the Greens Through the Summer

By F. G. Pickering, Greenkeeper, Myopia Hunt Club

It is very easy to keep a green in good condition. First, it should be swept and cut regularly with a sharp well-adjusted mower equipped with a grass-catcher. It should then be rolled with a light roller. The workmen cutting the greens should be instructed to take out, at all times, all major weeds, such as dandelions, daisies, plantains, chickweed, and pearlwort. This keeps the weeds in check and is a much better system than periodical weeding. The workmen should be instructed to report brown-patch and fairy-rings, so that these conditions can be properly treated. If your greens are in good condition, keep them so by applying a light dressing of good grass food as often as seems desirable during the playing season. Try to avoid cutting the greens when the grass is wet. Grass brushed and cut when wet does not stand up or give as true a putting surface. Remove worms during the muggy days in the spring and fall. There are many good worm-eradicators on the market. Corrosive sublimate is a perfectly reliable worm-killer. It does not injure the soil unless used excessively, and is much cheaper than any commercially ad-

vertised worm-killer. Its method of application is discussed on pages 26 and 92 of the 1923 volume of *THE BULLETIN*. For brown-patch and other fungous growths apply Bordeaux powder, 10 pounds to a green, once a week for two weeks. Greens should be dry when the application is made. There are several good machines on the market for use in making the application. The best way to treat fairy-rings is to remove the turf to a depth of 6 inches and replace it with good turf. The treatment for fairy-rings is also discussed on page 104 of the April, 1924, *BULLETIN*.

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### Fairy Rings at Minikahda

At the Minikahda Club, near Minneapolis, a mushroom growth commonly called "fairy rings" has caused trouble in the fairway for many years. This particular growth kills the turf where the mushrooms appear, in a circular or crescent band 2 or 5 inches broad varying from 3 to 10 feet in diameter. Where the turf is killed it is very slowly replaced, usually only after 2 or 3 years. The soil is filled with the fine, white threads of the fungus, thus making it nearly waterproof. Curiously enough, the fungus stimulates the grass just outside the ring and to a less degree that immediately inside. This stimulation has been attributed to the nitrogen formed by the fungus, and the killing of the grass in the band or ring proper to the formation of an excessive amount of the same substance. The fungus responsible is the well-known fairy-ring mushroom. This is a small mushroom with the caps 1 to 2 inches in diameter, pale brown above, the gills white, and the stems slightly hairy. When young they are edible and of excellent flavor; when old they become tough. The fairy-ring mushroom is widespread in Europe and America, and the rings it makes in lawns are well known.

A European method of destroying this fungus in lawns is to use iron-sulfate solution, 1 pound to 1½ gallons of water. Loosen the soil in the part where the mushrooms are growing and soak thoroughly with the solution. Apply again at half strength two weeks later. If the grass is killed by the fungus, replace with turf or scatter a little seed. The iron-sulfate treatment kills the threads of the fungus, but should not kill the grass.

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NEW MEMBER CLUBS OF THE GREEN SECTION.—Dells Golf Course, Kilbourn, Wis.; St. Clair Country Club, Tecumseh, Ontario; Miami Beach Golf Club, Miami Beach, Fla.; Masonic Country Club of Western Michigan, Grand Rapids, Mich.; Point Grey Golf and Country Club, Vancouver, British Columbia; Oneida Golf Club, Oneida, N. Y.; Whitin Machine Works Course, Whitinsville, Mass.; Butterfield Country Club, Hinsdale, Ill.; Niles-Buchanan Country Club, Buchanan, Mich.; Somerset Country Club, St. Paul, Minn.; Martindale Country Club, Auburn, Me.; Franklin Country Club, Franklin, Mass.; Sir William Johnson Country Club, Gloversville, N. Y.; Galveston Golf and Country Club, Galveston, Texas; Standard Club, Nashville, Tenn.; Bonnie Briar Country Club, Larchmont, N. Y.; Saucon Valley Country Club, Bethlehem, Pa.; California Country Club, Culver City, Calif.; South Hills Country Club, Pittsburgh, Pa.; Sharon Country Club, Sharon, Mass.; Alcoma Country Club, Wilksburg, Pa.; Elmwood Country Club, Warren Point, N. J.;