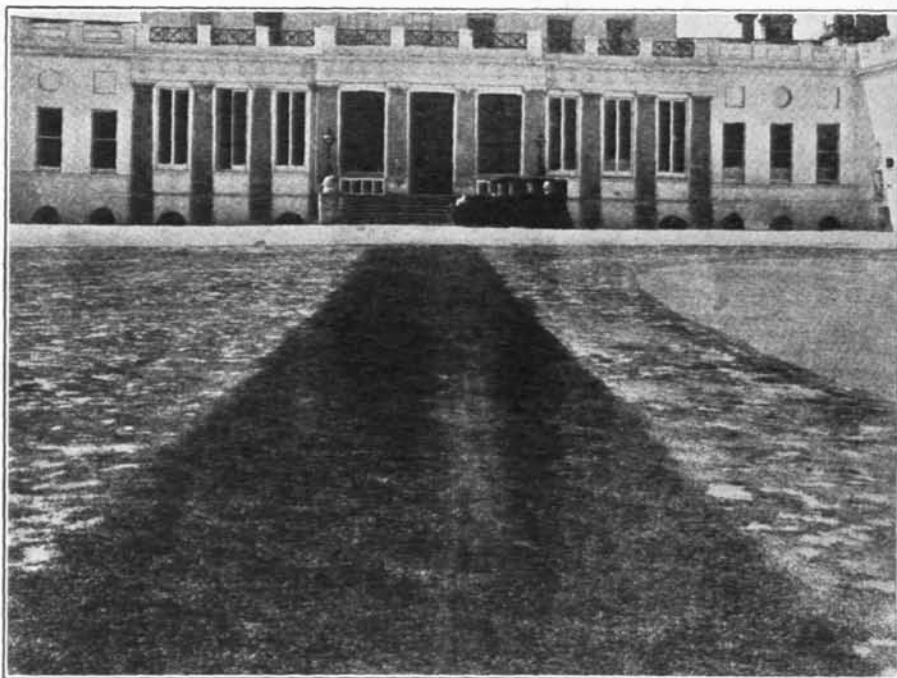


## Effect of Acid-reacting Fertilizer in Experiments at Stoke Poges

“Reference has already been made in these pages (March 10, p. 187, Vol. LXXXI) to the now well-known fact that greenkeepers in the United States have managed to produce perfect putting greens on their golf courses in spite of the fact that a continental climate is less favorable to the growth of grasses than is an insular climate, such as our own. The progress made in this direction in America is, indeed, so great that unless we take care the pre-eminence of this country for its lawns may go the way of our one time pre-eminence in the games played on them. The method which has led to the remarkable excellence of the golf greens in the United States is based on the recognition—we might almost say discovery—that the fine grasses suitable for golf greens thrive best in an acid soil; that is, under conditions which are repugnant to most cultivated plants. This discovery has been applied to the perfecting of golf greens and courses by taking advantage of the well-known fact that certain artificial fertilizers, such, for example, as sulphate of ammonia and ammonium phosphate, augment soil acidity. To bring this about liberal and repeated applications of one of these fertilizers are applied to the greens, the fertilizer being spread evenly and washed into the soil. Having regard to the results already obtained in the United States and in Canada, it seemed desirable that experiments should be made in this country in order to ascertain whether the method would prove successful here. Mr. Norman Hackett had already applied the method on the Keighley Golf Course with marked success (see *Golfing*, September 6, 1926), but a need still remained for further tests. Mr. Lane Jackson, Hon. Secretary of the Stoke Poges Golf Links at Stoke Park, Slough, who has an unrivalled knowledge of golf and of greenkeeping, was good enough to put certain greens, fairways and lawns at the disposal of Nitram, Ltd., for the purpose of experiment. The experimental areas were selected in April of this year and have been treated with successive dressings of sulphate of ammonia, similar neighboring plots being left untreated in order that they might serve as controls. The dressings of sulphate of ammonia mixed with twice their volume of sand, were put on at fortnightly intervals at the rate of 5 pounds per 1,000 square feet. Of the control plots, one received an equivalent amount of sand only, and the other nothing at all. Beside the plots on the golf greens and fairways there were others on the croquet lawn and on the lawn leading from the club house to the first tee. Our illustration shows the striking effect of the successive dressings of sulphate of ammonia on the last-named lawn. Daisies have been so checked on the treated plot that not one flower is to be seen. By June, the observer in charge of the experiment reported that the strip was by that time free from daisies and all other weeds. The result here is the more valuable inasmuch as it shows that the method of supplying uniform successive dressings is much better than the weed-killing method of making heavy applications of sulphate of ammonia irregularly over daisy patches. That was done on either side of the strip and was effective in killing out the daisies but resulted in patchiness which the illustration shows in striking manner. Careful records of the weed flora and state of soil with respect to acidity are being kept, and will be published in due

course. Already, however, the "painless extraction" of weeds by the sulphate of ammonia treatment is in evidence. Counts over measured areas of the plots under experiment show that in two months the treated patches lost 50 percent of their weed flora, whereas on sanded or quite untreated control plots the weed population had in every case increased. Accurate soil-acidity determinations are also being made, and there is evidence that the repeated dressings of sulphate of ammonia have already increased the soil acidity. This interim report of the results of the Stoke Poges experiment would appear to show that where water is available our greens and lawns may be improved rapidly by successive dressings of sulphate of ammonia or other "acid" manure. Applied at the rate already indicated, there is no risk of damage unless watering is neglected. Even where water is not available, the method may be employed provided that the dress-



ings are applied at the advent of showery weather. We hope that not only greenkeepers but also those in charge of the green swards in London parks and in college courts and quadrangles will take note of these simple means of improving their lawns. The lawns of certain colleges in our old universities, once our pride and the cynosure of every American eye, are now, alas, in many cases, fallen into the sere and yellow. It is time that they, too, were renovated, and if final results of the Stoke Poges experiments confirm the conclusion reached in this interim report there is a ready and simple means of doing it."—*The Gardeners' Chronicle*, London, July 23, 1927, p. 61.

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A natural lake of clear water on a golf course is a thing of beauty. An artificial pond of muddy or stagnant water is an abomination.