**Damage from the Army Worm in the South.**—Serious damage to greens has been reported from Florida due to the depredations of a small worm. This is doubtless the army worm, or grass worm. Control of the army worm is discussed in the article on page 166 of the BULLETIN for July, 1924. Southern golf clubs experiencing trouble from this insect will do well to follow the suggestions contained in that article.

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**Spiking turf.**—In experiments with spiking turf under a great range of conditions only harm has resulted. It is, nevertheless, possible that under certain conditions good results may be obtained from spiking. Therefore we would advise the use of spiked rollers only experimentally. Its benefits, if any, can be ascertained by spiking a portion of a putting green and comparing the spiked portion with the portion not spiked.

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## Effects of Certain Fertilizers on Soil Acidity, Quality of Turf, and Weed Control

By H. L. Westover

It is doubtful if any single characteristic of the soil has caused more discussion in recent years than its acidity, particularly as regards its relation to the vegetative growth. There has long been a popular belief, and to some extent justified, that certain plants, as for instance sorrel and dock, grow only on acid soils while other plants such as clovers, alfalfa, Kentucky bluegrass, and others thrive only on alkaline soils. Such plants are never more than indicators of acidity or alkalinity, and sometimes not even that. It is probably true that the sorrels are more frequently associated with acid soils, particularly soils that are poor, but they will grow perhaps equally well on alkaline soils. Many other plants supposedly preferring acid soil conditions thrive on alkaline soils, and vice versa. There are other factors, such as humus and the various plant food elements, which exert as great or perhaps even greater effect on the character of plant growth than does acidity. However, it has long been known that some plants, such as alfalfa for instance, require neutral or alkaline soils; but only rather recently has it been realized that for certain other plants acid soil conditions are almost as essential. Recognition of these differences created a demand for some simple means of detecting acidity and alkalinity, and for many years the litmus test has served this purpose quite satisfactorily. The big objection to the litmus test is that it shows acidity or alkalinity without indicating the degree, which is quite important. Other tests have been developed, but for the most part they have not been much if any improvement over the litmus test. However, the relatively recent discovery of the "dye indicator test," which depends upon changes in color of dyes of known acidity range, has been quite a step in advance. In this test the degree of soil acidity is shown by changes in color and is indicated as PH, or hydrogen-ion concentration. An explanation of the chemistry of PH is entirely too technical for this paper. All that is necessary is to regard PH as marks on a scale, with a little less than PH 7.0 as the approximate neutral point.