

## THE CONTROL OF CRABGRASS IN A CEMETERY

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In the cemetery of Spring Grove, crabgrass is the most troublesome weed. Others, such as broadleaf plantain, chickweed, and dandelion, are a nuisance but not as serious as crabgrass.

A few years ago, during a visit to the Arlington Turf Garden, we were shown some of the results of weed control treatments with sodium arsenite. Many of these treatments were so successful that we decided to make some similar tests under our conditions in Cincinnati. Our preliminary trials in 1936 showed that while both dry and spray treatments were effective, the spray treatment was more practical for our purposes. Although 1936 was a bad year for trials because of the drought, it was noted in the fall that there were decidedly fewer weeds on the test plots than on the untreated areas.

The great flood of January, 1937, deposited about an inch of silt over the test area and brought with it seeds of many weeds not present before. During that year we treated extensively for both chickweed and crabgrass. In late August and early September, before the crabgrass had gone to seed, we treated with sodium arsenite, applying 2 ounces of dry material or 4 ounces of a 50 per cent solution to 1,000 square feet. After treatment, bluegrass was seeded without disturbing the soil to any extent. The result has been a good stand of bluegrass and the almost complete elimination of crabgrass. The few plants of the latter that did appear were easily removed by hand.

During the past season, the treatments have been repeated on a larger scale. We have also treated areas of *Muhlenbergia*

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*schreberi*, which is often a serious pest here. What the result will be cannot yet be stated. At any rate, the treatment of the *Mublenbergia* made it easier to sow bluegrass seed, which is difficult unless the mat of *Mublenbergia* is removed in some way.

We found that 2 ounces of sodium arsenite to 1,000 square feet so crippled the crabgrass that it did not recover in time to produce seed. There was less discoloration of the bluegrass than when the heavier rates were applied. As little as  $\frac{1}{2}$  ounce of sodium arsenite to 1,000 square feet is often enough to control chickweed but 1 ounce is more certain to produce results. When applied during winter or in early spring, this gives better control than any other method that we have tested.

We are thoroughly convinced that chemical control of crabgrass is practical and economical when combined with good lawn maintenance practices. Whether sodium arsenite will be the chemical most suited to our needs or whether some other material will be used, is something that only experimental work will determine. Up to the present time sodium arsenite appears to be the most successful and economical. For cemetery use, it has a distinct advantage over such chemicals as iron sulphate, as it does not discolor granite or other stone.

During the 1939 season we shall make even more extensive trials on areas badly infested with crabgrass and *Mublenbergia*. We shall conduct also a series of tests looking toward the control of buckhorn plantain, the next worst pest with which we have to deal.

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The best time to remove stones from turf is early spring. Heaving brings stones to the surface and if these are removed just as the frost leaves the ground and before the grass starts to grow, the fairways can be rolled to settle the sod.