

APPENDIX A

OVERSEEDING TESTS IN THE NATIONAL CAPITAL PARKS

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A series of seeding tests was conducted on roadsides in the National Capital Parks to determine efficient methods for establishing a satisfactory cover of permanent grasses on weed-infested sites. The tests were made on the roadsides near the approaches to the Virginia end of the Memorial Bridge.

As part of the highway construction program, the area had been graded, topsoiled, and seeded under contract in 1942. The work was completed at a season unfavorable for sowing permanent grasses, so the entire area was seeded with a mixture of ryegrass and common lespedeza. A good cover was obtained but the ryegrass largely disappeared after the first year. The lespedeza persisted and during the summer months it provided as much as 95 percent coverage, while in other places crabgrass became the dominant summer cover. During the winter and spring months the small winter annuals took over most of the area. Bermuda grass invaded some sections.

In September, 1950, one large section was heavily topsoiled, disked thoroughly, well graded, fertilized, and seeded in the usual manner. On September 29, 1950, a large area which was covered chiefly with crabgrass was overseeded with the same seed mixture (75 percent Kentucky bluegrass, 20 percent redtop, and 5 percent colonial bent) as the large section; and another similar area was seeded with only Kentucky bluegrass. The seeding rate was 150 pounds per acre. Parts of these test areas were fertilized with a 10-6-4 fertilizer like the large section that had been topsoiled and well cultivated, and parts were left with no fertilizer.

In the overseeded plots there was no disturbance of the surface. The only operations involved were a single pass of the seeder over the area and a single pass of the fertilizer spreader over the portions that were fertilized. Normal mowing operations were continued over the overseeded section to keep down the late growth of crabgrass and weeds.

An excellent stand of turf was produced on the overseeded section; it was fully the equal of that which was produced on the section that was topsoiled and thoroughly disked. The test sections that were fertilized produced a better cover of turf and developed fewer weeds than did the portions of the test plots where no fertilizer was applied.

On October 15, 1951, other overseeding tests were made near the 1950 test areas. One set of tests was placed in a section where the cover was predominantly lespedeza and one set was on a stand of over 90 percent crabgrass. In these tests, plots using Kentucky bluegrass alone were compared with areas seeded with a mixture of 75 percent Kentucky bluegrass, 20 percent redtop, and 5 percent colonial bent, and other areas seeded with a mixture of 90 percent Kentucky bluegrass, 5 percent redtop, and 5 percent colonial bent. These areas were seeded at three different rates: 50, 100, and 150 pounds per acre.

An excellent growth of seedlings developed during the early spring of 1952 on all of the test areas overseeded in October 1951. Minor differences in the turf could be seen in the bluegrass turf and the two combinations with redtop and bent. However, for all practical purposes, these differences were of no importance in either the areas seeded in 1951 or in the tests seeded in 1950.

A larger number of seedlings developed in the more heavily seeded plots than in those where only 50 pounds of seed per acre were sown. However, this difference was apparent only on very close examination. For all practical purposes the 50-lb. rate produced turf that was just as good as that produced from the 100 or 150-lb. rate. In these tests, as in the 1950 tests, the seedlings showed a definitely favorable response to applications of fertilizer.

Plots were sown in April, 1951, and in March and April, 1952, with the above combinations of seed and at the above rates in areas adjoining the fall seeding tests. The late growth of winter weeds and the early growth of crabgrass and lespedeza provided too much competition, so these spring seedings all failed completely to produce a stand of any of the seeded grasses.

During the fall of 1950 moisture conditions were favorable for seedling development, but the severe drought in the fall of 1951 delayed germination and seedling growth; nevertheless final results in these tests were essentially the same even though the fall growing conditions were so different.

The results of these tests demonstrated the practicability of overseeding roadside areas at the right season where soil conditions are favorable, in spite of extremely heavy growth of summer annuals. They showed that a good stand could be obtained by simply seeding and fertilizing without applying topsoil or scarifying the surface in any way. This procedure avoids not only much extra cost but also the disturbance of the surface which opens the area again to damage from surface erosion. The tests also showed that the use of excessive quantities of seed on such roadside areas adds to the cost without adding anything to appearance or protection.

The tests further demonstrated the importance of overseeding only during the most favorable season, the fall, in the Washington region; and the futility of overseeding in the springtime which ordinarily is regarded as a reasonably dependable season for new seedings in this region.

Overseeding provides an economical method for establishing desired species of grasses on roadsides where grading work is completed during months that are unfavorable for the sowing or development of permanent grasses, but where some temporary cover is needed immediately to protect the graded surface from erosion. However, when the overseeding method is to be used, it is important that a satisfactory finished grade be provided for the temporary cover so that there will be no necessity for regrading to produce a smooth surface that can be mowed efficiently when covered with the overseeded permanent grasses.