Reclamation of Strip-Mined Areas in West Virginia

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STRIP-MINE operations prior to 1940 contributed very little to the total tonnage of coal mined in West Virginia. Since then, however, the tonnage derived from strip-mine operations has increased tremendously in volume and importance. As of January 1, 1947, approximately 30,000 acres of land have been affected by strip-mine operations. Although this represents only a fraction of a per cent of the total acreage of West Virginia, the problems involved in the re-vegetation of strip-mined areas assume importance because of legislation pertaining to the reclamation of these lands and because of their concentration in a relatively few thickly populated good agricultural counties.

Studies to secure information on factors involved in establishing vegetation on strip-mine spoil and the adaptability of various forage species for growth on spoil were initiated in the fall of 1943 and spring of 1944. The results of the studies were reported (4) in 1945, after two seasons' growth. Since then (1946-47), the experimental areas have been inspected frequently in order to determine the capacity of the various species seeded to maintain themselves on spoil and to note any improvement or deterioration in the matter of ground cover. It is the purpose of this report to record these observations and to give further information of interest to workers studying similar reclamation problem in other areas.

METHODS

This report is essentially a continuation of work previously reported (4) and the reader is referred to the earlier report for information concerning plot design, species planted, treatments employed, etc. Some information based on new work, however, is reported here. The methods employed in securing this will be included in the subsequent discussion of the results.

DISCUSSION OF PLOT AREAS

TYPE A SPOIL, CANYON PLOTS, MONONGALIA COUNTY, W. VA.

The Canyon plots are located on very strongly to strongly acid spoil which in northern West Virginia is designated as type A spoil. In April, 1944, this area was limed at the rate of 5 tons of CaCO₃ per acre just prior to seeding. Germination and early growth were good but within 60 days, a considerable part of the experimental area became barren of vegetation. Numerous moist spots similar to those illustrated in Fig. 1 were associated with the barren areas. Subsequent...