SEED PRODUCTION OF SEVERAL SOUTHERN GRASSES
AS INFLUENCED BY BURNING AND FERTILIZATION

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FOR the past 2 years the demand for southern grass seed has far exceeded the supply. Until recently, almost the entire production of carpet and Bermuda grass seed has been absorbed by the various war agencies. Many farmers have been unable to purchase seed of Dallis and Bahia grass. Grass seed has been and may well continue to be a bottle-neck in the pasture improvement program of the South unless more effective methods of increasing seed production are found and utilized.

Bahia grass and some of the other southern grasses tend to reach a peak in seed production the year after they are seeded. Seed yields decline rapidly in subsequent years and by the third or fourth year Bahia grass that has grown on good soil and has not been closely grazed produces very little seed.

Several workers, including Evans and Calder (4), Evans (3) and De France and Odland (2), have studied the influence of fertilizer mixtures upon seed yields of several of the northern grasses. They agree that, generally, seed yields may be increased by moderate applications of nitrogen and that phosphorus and potassium have negligible effects upon yields of seed either alone or with nitrogen. Burton (1), studying some of the factors influencing seed setting in 10 southern grasses, found that fertilization had no significant effect upon the percentage of florets to set seed. He observed, however, that seed yields, as measured by the number of heads per unit area, were usually influenced little by applications of phosphorus and potash but were increased materially when nitrogen was added to the basic phosphorus and potash treatment.

In an experiment designed to measure the effect of fertilization upon seed setting in 10 southern grasses, fire was used each spring, beginning in 1938, to remove accumulated top growth. It was observed that some of the grasses in this test, particularly Bahia grass, continued to seed much better than usual. That fire might be responsible for these continued high seed yields became evident in the fall of 1941 when W. O. Sheppard, Junior Range Examiner, U. S. F. S. at Tifton, Ga., pointed out that such native grasses as Aristida stricta and Sporobolus curtissii, which rarely flower in old sods, flower profusely after the sod has been burned. So far as the author is aware, this reaction has not been previously described in the literature.

1Cooperative investigations at Tifton, Ga., of the Division of Forage Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U. S. Dept. of Agriculture, the Georgia Coastal Plain Experiment Station, and the Georgia Experiment Station. Also presented at the annual meeting of the Society at Cincinnati, Ohio, Nov. 10 to 12, 1943. Received for publication January 4, 1944.


3Figures in parenthesis refer to "Literature Cited", p. 529.