Breeding Bermuda Grass for the Southeastern United States¹

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In much of southeastern United States, Bermuda grass, Cynodon dactylon (L) Pers., is the most important pasture grass grown. Always a difficult weed to control in cultivated crop land, Bermuda grass has been despised and condemned by southern row-crop farmers for years. Livestock men in this area, however, have long recognized it as one of the best pasture grasses that can be grown. Many of them have considered it indispensable in their livestock program and have made an effort to increase its production. The recognition of the need for better varieties of Bermuda grass was responsible for the breeding project described here.

The major objective in the improvement of Bermuda grass by breeding was the development of more productive strains capable of supplying highly nutritious and palatable forage during a greater portion of the year. Resistance to disease (Helminthosporium sp.), drought, and frost injury were some of the specific objectives leading to this end. The ability to grow in association with southern legumes was considered to be an important characteristic. The desirability of creating tall-growing types suitable for hay production was emphasized by the need for an easily cured perennial hay crop in the Southeast. Sterile strains that would not seed or seed-producing strains that were non-stoloniferous were sought, since such strains would be more easily controlled and hence more generally accepted than common Bermuda grass by southeastern farmers. Since farmers had probably planted more Bermuda grass vegetatively than by seed, it was apparent that the improved strains could be economically propagated by either method.

MATERIALS AND METHODS

As far as the writer could discover, no attempts had been made to study the breeding behavior of Bermuda grass prior to this undertaking. In the absence of

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