

AND OTHER INTRODUCED GRASS STRAINS

SECTION I

INTRODUCTION

The subject of this project formed a part of the present grassland research programme at The Imperial College of Tropical Agriculture. In recent years the emphasis in these investigations has changed from soilage grasses to pasture grasses, especially since the introduction of Pangola grass to the West Indies which has shown that cattle can be satisfactorily grazed on tropical pastures. Attention is now being paid to introductions of exotic species to Trinidad and their evaluation as pasture grasses, both in pure stands and in mixed leys. The first stage in such work consists of fairly simple observational studies on many species and strains, with the object of eliminating those less suitable before putting the promising strains forward for more formal trials. This report gives an account of observational studies carried out at the College Old Farm on the following species and strains:

Section 2 (of the report) Digitaria spp.

D. decumbens Stent. Pangola grass. S.R.633

D. pentzii Stent. (or D. decumbens). Pongola River Strain. S.R.924

D. pentzii Stent. Woolly Finger Grass. S.R.908

D. smutsii Stent. Hoenderspoor. S.R.909

Section 3 - Panicum spp.

P. maximum Jacq. Silk Guinea grass. S.R.691

P. maximum Jacq. "I.C.T.A. Cow Guinea" grass.

P. maximum var. trichoglume - Slender Guinea grass. S.R.892

P. coloratum L. Coloured Guinea grass. S.R.889

Section 4 - Paspalum notatum Flügge

Argentine Bahia grass. S.R.918

Argentine Bahia grass. S.R.926

Tifhi-1 Bahia grass. S.R.927

Wilmington Bahia grass. S.R.928

In this section of the report the methods used in the studies will be described and discussed, and in the following sections each strain will be described and its potential assessed.

### OBJECTIVES

The following requirements were borne in mind in examining the grasses in order to determine their possible value as pasture for use in pure stands or in leys:

1. Establishment

(a) By seed. Other promising or proven pasture grasses in Trinidad are substantially non-seeding, and vegetative propagation must be used.

(b) By vegetative planting.

2. Yield - Including recovery from clipping (as a small scale practical alternative to grazing), dry matter content, leaf/stem ratio and the factors affecting palatability.

3. Drought resistance.

### LAYOUT OF PLOTS

The standard observational plot at the College consists of thirty plants, in three rows of ten, planted at 18" spacing. A pathway of 3' is allowed between plots. Because some variation in soil fertility, structure and water retention was believed to occur, two plots of each of the Digitaria were laid down in most cases. This policy was justified when it was found that the Northern plots of Digitaria were consistently weaker than those in the South.

### PLANTING

Planting material consisted of either seedlings or groups of 3-4 tillers taken from earlier observation plots. Before planting the sets were trimmed off to 1-1/2" of roots and 4" of stem and leaf. Rainfall had been lower than usual in the week before planting and the soil had dried out to a depth of about three inches. Immediately after planting two or three gallons of water were given to each plot and thereafter

daily watering until growth began.