

## SUMMARY

1. Observation studies were carried out on:-

Panicum maximum

Colonial grass

Cow Guinea grass

Silk Guinea grass

Panicum coloratum

Bouteloua americana

Dicanthium caricosum

Paspalum notatum

Rottboellia exaltata.

Of these grasses only Paspalum notatum could be recommended for further research with a view to becoming a useful, economic pasture grass in Trinidad.

2. An experiment on the effect of temperature and moisture on the viability of Mexican grass (Ixophorus unisetus) seed was continued and terminated.

Although results are difficult to explain in many ways, the findings that viability is best maintained when seed is stored at 0.5% moisture with no temperature control, and at 45°F. with no control of moisture, may have some practical importance.

2. (i) The possibility of growing Paspalum dilatatum with Digitaria decumbens or Ischaemum timorense was studied.
- (ii) The yields of these mixed swards were compared with those of the three grasses grown alone.
- (iii) The effect of two levels of nitrogenous fertiliser and of two cutting intervals of 4 weeks and 8 weeks on the yield and composition of the sward was studied.
- (iv) Nitrogen fertiliser had a marked effect on the composition and yield of the sward, yields being very greatly increased.
- (v) No significant differences in yields were obtained from the two cutting intervals.

(vi) Although a mixed pasture of Paspalum dilatatum and Ischaemum timorense will not be feasible, a mixed pasture of Paspalum dilatatum and Digitaria decumbens would be a possibility. But it is unlikely that it will become of any practical importance because a sward of Digitaria decumbens is definitely superior as a pasture grass.

There is no doubt that this importance of grassland in the tropics has been realised and therefore the need for grassland research has become a vital necessity.

Past work at the Imperial College of Tropical Agriculture, Trinidad, has been concentrated on the development of forage grasses (Peterson 1933, 1935, 1936 and others), but labour costs have been rising, and, as Campbell and Bowers (1953) point out with these high labour costs the production of fodder grasses becomes uneconomic. Therefore the tendency in recent years has been to give more weight to research on pasture grasses.

The programme of grass selection and grassland research at I.C.T.A. has been mainly based on the following patterns:-

(a) Developmental studies carried out on selected indigenous and imported grasses, observations being made on the rate and form of growth, the flowering habits, the seeding ability and fertility. The observation trials are performed on small plots.

(b) Selection and bulking up of promising grasses in larger plots to supply planting material for further larger scale experiments.

(c) Performance of trials to determine the productivity, the ground cover, the palatability and the digestibility of the grass. Also the effects of cutting or grazing or of fertilisers are studied.