

SUMMARY

1. A collection of groundnut varieties from Nigeria, St. Vincent, Jamaica and Florida were grown on a small scale under field conditions at River Estate and St. Augustine. Soil and meteorological data were obtained for the two centres and field notes were kept during the season. The field notes included,

- (i) Time to flowering,
- (ii) Time to maturity,
- (iii) The incidence of groundnut rust (*Puccinia arachidis*) and Leaf-spot (*Cercospora personata*),
- (iv) Germination data.

2. Measurements were taken of habit, yield components, oil content of the nuts and yield.

- (i) The vegetative characters,
 - (a) Lateral spread of the plant,
 - (b) Leaflet size,
 - (c) Lateral spread of the primary axis,
 - (d) Density of the plant,
 - (e) Height of the bulk foliage

were shown to differ significantly between varieties.

- (ii) Yield components,

- (a) 1000 nut weight,
- (b) Pods per plant,

and (c) Percentage of shelled nuts in the yield

were analysed. The 1000 nut weight was the only component in which varietal differences proved significant at the 5% level.

- (iii) Oil analyses were carried out on seven varieties.

Varietal differences were not significant, but the mean oil percentage on an equivalent dry matter basis was significantly higher at the 5% level at River Estate.

(iv) Analysis of yield showed large error variation and no conclusions were drawn. Plot size was too small for an adequate assessment of yield to be made.

3. The method of hybridization used in Senegal was tried and found to be reliable. Other experiments concerned with hybridization were carried out.

(i) Wet compared with dry hand pollinations were tested on a small scale. The tentative conclusion was that the wet method showed no advantage over the dry method.

(ii) Pollination of the cut style was attempted without success.

4. The possible application of these methods in breeding work was discussed. Points concerning the suitability of the crop to Trinidad were also considered.