

## I. INTRODUCTION.

This report is concerned with the inheritance of seed coat colour and pod colour in some varieties of the cow pea (Vigna unguiculata (Linn.) Walp.). In October 1955 I was supplied with seed from four varieties of cow pea, namely Blackeye, Gub Gub, Blackseed and African Red. These varieties had been grown at the College farm for several years, in close proximity to one another. Each year, seed was collected for sowing the following year. In 1954-55, R.E. Wyatt used such seed to investigate Trinidad Mosaic disease in the cow pea. From Wyatt's seed, K. Shepherd isolated variants within both Blackeye and Gub Gub types in respect to seed coat colour and pod colour.

The cow pea is normally self-pollinated, but when two or more varieties are grown side by side, some natural out crossing may occur. Thus the variants within the Blackeye and Gub Gub types may be due to (1) new  $F_1$ 's from such natural out crossing (2) segregation from earlier out crossing or (3) mixed pure lines within the type. I intended to test these possibilities by (a) selfing plants grown from my original seed (b) back crossing with the true varietal type i.e. normal Blackeye or Gub Gub and (c) making crosses between normal seeded plants of the four varieties provided. It was clearly necessary to grow two generations, as seed coat colour is a maternal character.