INTRODUCTION.

Mr. H. C. Sampson of the Royal Botanic Gardens, Kew, organised the collection of Cowpea varieties from most of the British Colonies. In 1935 the seed of 168 varieties was sent to the Imperial College for study under uniform conditions with a view to elucidating the problem of the classification of the Vigna genus. This paper is an account of the present position of the work after two growing seasons.

The Cowpea grows wild in most parts of Africa south of the Sahara, and has been cultivated since prehistoric times in India, China and Malay. The origin of its cultivation is masked by the antiquity of the crop; hence the number of varieties is, as would be expected, extremely large. The commoner types fall into three main classes, constituting the three species into which the cultivated members of the Vigna genus has been divided by most authorities. The most important diagnostic character for this classification is the angle at which the pod is held. The type of pod, size and shape of the seed, appear to be correlated with this feature to give the following groups (Piper).

1. The Cowpea type. Vigna unguiculata. Seeds mostly 6 to 9 mm. long varying from subreniform to sub-globose; pods 8 to 12 inches long, early becoming pendent, not at all flabby or inflated when green.

2. The Catjang type. Vigna catjang. Seeds small, usually oblong or cylindrical, and but slightly kidney-shaped, 5 to 6 mm. long, nearly as thick as broad; pods small, not at all inflated when green, mostly 3 to 5 inches long, erect or ascending when green, remaining so when dry or becoming spreading or even deflexed.

3. The Asparagus Bean type. Vigna sesquipedalis. Seeds elongated, kidney form, 8 to 12 mm. long, thickness much
less than breadth; pods pendent, much elongated, 1 to 3 ft. long, fleshy and brittle, becoming more or less inflated, flabby and pale in colour before ripening, and shrinking about the widely separated seeds when dry.

The recent tendency is to regard these three as subspecies, in which case the specific name is *Vigna unguiculata* Walp., since the specimen thus named in the Linnaean Herbarium undoubtedly belongs to this species. The remarkable range of gradations found in the collection under consideration supports this view, for there is no clear-cut line between the Cowpeas, Catjangs and Asparagus beans; many plants can be classified only as intermediates, having some characters of one subspecies and some of another.

C. W. R. McCreary took over the collection on its arrival from Kew, and grew the varieties for this season. First of all, a sample of the seed of each variety was taken, and these remain in specimen tubes for comparison, though in many cases badly attacked by insects, and always somewhat different in colour from fresh seed. They are labelled with the name of their Colony, district, and local term, and numbered 1 to 168.

The remainder of the seed was grown chiefly with the intention of bulking up the seed, but botanical notes were taken. The varieties were planted in pots in the greenhouse, 25 seeds being sown per pot. Owing to the limited accommodation the seed could not be sown all at the same time, so that the varieties could not subsequently be compared under similar conditions.

A germination count was made after a week's growth — the appearance of the cotyledons above the soil being taken as the criterion of germination. Ten varieties failed to germinate; the actual figures obtained may be of use in the future and are appended in Table VIII.