INTRODUCTION
The genus *Sorghum* includes a large number of species and varieties both cultivated (grain) and wild. They are economically important as a source of food and fodder. The grain sorghums are of particular value to the semi-arid regions since they thrive and produce grain and forage under conditions that cause other crops fail.

*Sorghum* is often referred to as the 'Great Millet' (Ayyanger, 1932 and 1934). Studies on the nutritive values of the grain show that it compares favourably with other cereal grains. According to McCarrison (1936), it is richer than rice in protein content, richer than wheat and far richer than rice in fat content.

*Sorghum* is extensively utilised in India as a staple food. It is mainly consumed in the form of unleavened bread made from the flour of the whole grain. In other countries where it does not form the staple food, it is used for feeding live-stock.

In recent years, the crop has been exploited for industrial purposes. During the world war 1939-45, the shortage of corn forced producers of alcohol and starch in the United States of America to utilise grain sorghum (Zipf et al., 1950). It was found that the grain could be processed much like corn. A large plant has since been erected in Corpus Christi, Texas to wet-mill sorghum grain for the production of starch,
glucose syrup and dextrose (Hightower, 1949). Sorghum malt was produced successfully on a large scale at the Agricultural Research Institute, Coimbatore (Anonymous, 1945).

Another important characteristic feature of sorghum grain is its capacity to produce pops (puffed grain) which are consumed as a delicacy. Pops are obtained by subjecting the grains to sudden heat. Some varieties pop well giving almost seventeen times the volume, while others expand hardly twice their size (Ayyangar and Ayyar, 1936). A few varieties of Sorghum are noted for their popping quality (Reddy, 1957).

Sorghum has been under cultivation for thousands of years in many countries and a large number of distinct varieties have resulted in different regions. The varieties differ not only in duration and adaptability to varying environment, but also in many morphological characters, such as height of the plant; panicle shape and size; shape and size of the glumes; shape, size and colour of the grain, etc. Based on the wide range of variation in morphological characters, Snowden (1936) in his classical work on Sorghum, has recognized 31 species, 157 varieties and numerous forms in cultivated (grain) sorghums. Though many botanists do not agree on the wisdom of recognizing these cultivated races as distinct species, suffice it to say, that distinct differences in the
grain characters exist in the cultivated sorghums. The occurrence of a large number of species in *Sorghum*, both cultivated (grain) and wild, and the existence of a wide range of variation in grain characters within a single species of grain sorghum have induced the author to take up a comparative study of the development of the caryopsis with a view to explain the different grain characteristics on the basis of its structure. It is hoped that the findings of these studies would benefit sorghum breeders who plan to breed varieties for distinct uses such as for making starch, malt, pops or bread.