Cashew (Anacardium occidentale L.) Family, Anacardiaceae is a native of Brazil and it was introduced in India in the early sixteenth century. Portuguese discovered cashew in Brazil and spread first to Mozambique and latter into India between sixteenth and seventeenth century. (Bhaskara Rao, 1996). At present it was commercially cultivated in the tropical areas for the great commercial importance of its kernels. In global trade, cashew kernels worth US $500 million dollars are traded, while at the consumer level the value has been estimated to be US $1000 million (Nomisha, 1994).

It is one of the first fruit trees from the new world to be introduced in the Old World (Purseglove, 1988) and has a long history as a useful plant. But only in the present century, it had become an important tropical tree crop. India was the the first country to exploit the international trade of cashew kernels in the early part of this century and was the largest exporter of cashew kernels. However, India has been importing raw nuts from African and other countries to meet the huge demand of established cashew factories. Small scale exploitation of the cashew for nuts and cashew apples is going on more than 300 years in Asia and Africa.

In recent years, the commercial importance of cashew is gaining momentum. In India, the cashew apples and nuts are being used by local people. Cashew wine making from the apples is a common practice in Asia and Africa (Johnson, 1973). The apple juice of cashew can be used for the treatment of peptic ulcer (Kubo et al, 1990). Due to the hardy nature of plant, it is utilized in different countries for soil conservation, afforestation and wasteland development. It is known as Devil’s nut by the Maconde tribe of Mozambique. It is used as a gift at wedding banquets as a token of fertility. It has high Vitamin-E and protein content and further improvement in this characters is possible (Massari 1994). So, in order to keep our prime position in international cashew trade and to make the prices of the Indian cashew competitive
at international market, there is a urgent need to increase the productivity of cashew per unit area through selection of improved types from the evaluation of existing germplasms. More plantations with such improve types are essential to increase the total production of cashew. Cashew is grown in any type of soil under marginal condition of management due to its hardy nature. It suffers from founder effect as the present cashew have developed from the limited stock material introduced by the Portuguese in the sixteenth century. So its genetic base is narrow and diversity is very limited. Moreover gene pool of cashew available to the breeders is meagre (Mishra, 1984).

India is the first country, which initiated a systematic research in the early 1950 and this has been further strengthened in 1970 with the establishment of Central Plantation Crops Research Institute, Kasaragod (Kerala). In 1986 an independent Research Centre for Cashewnut at National level was established at Puttur (Karnataka) by the name National Research Centre for Cashew (NRCC - Karnataka). Latter on different Research Institutes have also been established in India at Bapatla (Andhrapradesh); Vittal, Shantigodu, Ullal, Chintamani (Karnataka); Anakkayam, Madakkathara (Kerala); Vengurla (Maharashtra); Bhubaneswar (Orissa); Vriddachalam (Tamil Nadu); Jhargram (West Bengal); and in abroad also, at Australia (CSIRO Research Centre - Darwin); Vietnam (Cashew Training Research Centre - Binh Duang); Brazil (Centro Nacional de Pesquesa de Caju/National Research Centre on Cashew, Fortaleza); Tanzania (Tanzanian Agricultural Research Organisation - Research Institute, Nalicidele Mt wara); and China (Hainan Cashew High Yield Research Centre, Hainan), (Nomisma, 1994; Bhaskara Rao, 1996).

In the National Research Centre for Cashew, the germplasms were raised from seeds. So due to cross pollinating nature of the species, some amount of genetic variation was noted even within each accession. The National Cashew Gene Bank (NCGB) established by National Research Centre for Cashew has planted different promising
cashew accessions and exclusively engaged in the development of improved accessions. At NCGB, out of a total 392 accessions, 153 accessions were identified as promising germplasms for Indian soils (Swamy, et al., 1998).

Cashew has been cultivated on commercial scale in Brazil, India, Kenya, Mozambique, Madagascar, Myanmar, Thailand, Tanzania and Vietnam. In most areas evaluation through yeild basis were continued. In India, only twenty three (23) selections and eleven (11) hybrids were released as varieties (Swamy et al., 1996, Bhaskara Rao, et al., 1996).

The yield of any crop is the ultimate result of a series of biosynthetic processes which are influenc'd by environmental factors. So for the improvement of the crop, attempt should be made to identifv the important factors and their interaction with genotypes.

Based on ecophysiological factors, the cashew growing areas of world have been grouped into five regions (Johnson, 1973); of which the largest one is 'A' type includes the east zone of India, Indonesia, East Africa (Tanzania and Mozambique), North West Malayaysia, West Africa, Cariben Islands and Central America. Cashew is a drought resistant species which can grow in zones with rainfall varying between five hundred to three thousand five hundred milimiter (500 - 3,500 mm) rainfall. Sandy lateritic and rocky soil which are unsuitable for other crops can be used for cashew. Good drainage and absence of brackish conditions are essential for cashew. It is sensitive to frost as well as hot, dry weather. (Argles, 1969, Jhonson, 1973, Morton, 1961).

Extensive studies need to be undertaken to evaluate and identity high yielding germplasms of cashewnut regarding chemical and biochemical composition of nuts and apples of cashew.

In this context, the present investigations have been undertaken with the objective of studying morphological architecture of the plant, floral biology and its interaction with environmental conditions and their relations to productivity in some Indian cashew germplasms (cultivars) grown under local conditions with a view to identify criteria for the selection of high yielding genotypes.