Bamboo occupies a place of pride, being closely interwoven with the socioeconomy of the rural life of the people in several ways. Rural life in Barak Valley is intricately related with the bamboo resources of homegarden. Hence species inventory in homegarden and knowledge of villagers priority bamboo species can outline the importance of bamboos in the socioeconomy of the homegarden owner. In the present study paddy land was encountered as major land use system and day labour as primary occupation of the villagers. Poorer families occupied by daily labourer, have fewer and almost no educated members. The farmers having more paddy land have larger homegardens and bamboo groves. Abundance and occurrence of village bamboo clumps are strongly dependent on the size of the holdings.

New shoot production coincide with the rainy season of the year and therefore the periodicity for culm emergence is seasonal and influenced by the duration of rainy months of the year. Sheath fall pattern of deciduous type in B. balcooa and B. vulgaris and persistent type in B. cacharensis and leafing pattern of periodic growth deciduous type in B. vulgaris and B. balcooa and periodic growth leaf exchange type in B. cacharensis were recognized. Phenological behaviour of bamboo in the present study offers insights into how the species subject to same environmental regime share phenological patterns to varying degrees independently of their strategies in which water and nutrients are sequestered and utilized. Almost similar phenological pattern in B. balcooa and B. vulgaris can be due to their close adaptive strategy and their difference with B. cacharensis reflects differential ecological adaptability among the species growing under the same environmental conditions possibly to reduce competition for resource acquisition. Leaf phenology responded to changes in the onset of monsoon and therefore can be used as an important predictor for climate change. Pattern of growth extension revealed the brief periodicity of culm growth.
nature of bamboo. The height growth curve of the culms of smooth S shape is described by the rate of change in culm growth at different times.

Age class distribution of bamboo clumps for the three species in homegardens and bamboo groves revealed the dominance of 5-10 and 10-15 yrs clump ages. For the three species new culm production increased with increase in clump age up to 15 years and then declined in 20 years. Clump size in relation to clump age revealed the increase in size with clump ages for the three species. Population structure of five culm age classes for all the four clump ages revealed the predominance of younger culm ages than older ones forming the shape of upright pyramid. Total number of culms per clump for the three species was highest for *B. vulgaris* followed by *B. balcooa* and *B. cacharensis*. Net change of different culm ages revealed, between 5-10 years, current year culm ages in the three species exhibited greatest change and the rate was highest for *B. vulgaris* (15.20) followed by *B. balcooa* (14.64) and *B. cacharensis* (10.22). Harvesting of bamboo culm is practised throughout the year with the greater intensity in winter. Among the 5 year clump ages of the three species, harvesting is practised in *B. cacharensis* only. Annually on an average highest number of culms per clump are felled from 20 yr old clump. On an average 27 culms /clump are felled from *B. vulgaris*, 23 culms /clump from *B. balcooa* and 18 culms /clump from *B. cacharensis* from 20 yr old clumps. Culm height and culm DBH under commercial sector differed significantly from household and craft sector. Current management system especially the clear felling strategy of clump management for higher economic return is unscientific and may lead to severe constrained socioeconomic growth and development. Therefore, there is a need of having policy guidelines for sustained harvest of this key stone rural resource. Under selective felling a culm age structure of 4:3:2:1 for one to four year culm ages should be maintained for continuous harvest over the years. The selective mode of culm cutting can lead to both increased above ground biomass production and to increased soil organic carbon.
Pattern of biomass allocation revealed culm as a major component followed by branch and leaf. Stand biomass and productivity of the village bamboo grove is within the upper limit of the values reported from different parts of the world. Stand biomass and productivity revealed the management of village bamboo as an imperative source of organic matter accumulation. Current year culm ages represented the highest proportion of the stand biomass that ranged from 16-39% of total stand biomass and together with one year culm ages constituted 59% of the total above ground biomass indicating maximum stand biomass being contributed by the younger culm ages. Present study revealed that other than stand age shoot productivity, dry matter increment with increase in culm ages and culm age structure can also enhance greater biomass productivity. Of the total stand productivity 60-75% was contributed by the new culm recruitment, 14-21% through litter production and 7-20% by biomass accumulation through changes of culm ages to its higher age classes. Nutrient concentration in relation to culm component and culm age for the three species differs significantly. Concentration of N and P was highest in leaf and K in culm component for all the three species. Total nutrient content of the above ground vegetation during 2003 was 248.2 kg ha\(^{-1}\) N, 28.7 kg ha\(^{-1}\) P and 280.4 kg ha\(^{-1}\) K that increased to 718.2 kg ha\(^{-1}\) N, 89.6 kg ha\(^{-1}\) P and 840.2 kg ha\(^{-1}\) K during 2006. The United Nations Framework Convention on Climate Change requires the parties to protect the climate system in accordance with their 'common but differentiated responsibilities' and respective capabilities (UNFCCC 1992). Greater carbon sequestration potential of village bamboos reveals the role of bamboo in CO\(_2\) sink and therefore, a good choice for carbon reduction related programmes.

Litter production over the three year study revealed an increasing trend in the production of leaf, sheath and branch litter from 2003-2006. Spearman correlation coefficient revealed number of rainy days, maximum temperature and soil moisture content are highly negatively correlated with the leaf litter production. Linear relationship between Aridity Index and different litter
components revealed the negatively significant relation of leaffall and aridity index of the study months. Standing crop of leaf litter increased over the study period whereas sheath and branch litter were not consistent. Nutrients in the standing crop of leaf litter revealed that nitrogen was present in the highest quantity than phosphorus and potassium. Rate of litter decomposition and pattern of nutrient release in leaf and sheath litter exhibited relatively slower decomposition rate and greater nutrient retention in the litter mass. Slower decomposition rate could somewhat decrease the organic matter turnover rate and therefore, slower nutrient release. As a result, fertility of the soil is maintained that in turn ensures adequate utilization by the plant.

Farmers possess the detailed knowledge of soil quality of the homegarden that in turn enables them to select the vegetation types according to soil quality and suitability. Farmers have recognized four soil types that are locally named (1) 
_kalo_ (black soil) (2) _lal_ (red soil) (3) _pathal_ (stony soil) and (4) _balu_ (sandy soil). Colour, texture and stoniness characterize each of the folk soil types. Analysis of soil types based on farmers' knowledge revealed the dominance of _lal mati_ in bamboo growing areas while the preference was highest for _kalo mati_ for better growth of bamboo. Soil physico-chemical analysis of farmers' soil types revealed that findings of laboratory analysis are in consistent with their ethnopedology. Ethnopedolinguistic features upon which farmers' soil type classification depends are consistent with the principles of modern soil science and can be incorporated as indispensable premises in land management that can enable farmers an optimal use of the land production system.

Utilization of village bamboos provides direct and indirect economic benefit through employment generation that is accessible to low income and socially disadvantaged groups. There is an urgent need of commercialization of the bamboo products through skill upgradation, quality improvement, design input and innovative marketing for upliftment of the rural socioeconomy. Some of the indigenous knowledge base system of bamboo clump management has
negative feature that can endanger the village bamboo productivity. Therefore, such knowledge bases have to be overcome by adopting scientific management practices. Thus more emphasis is essential to utilize this important village resource locally and commercially for sustainable development of the region.