



Concept of energy efficient bamboo houses for livelihood support of farmers through agro tourism

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Modern lifestyle has increased curiosity about agriculture, horticulture, forestry, fisheries; sources of food, plant, animals, village culture, traditions, dresses and rural life. Hence, agro tourism could play an important role in such situation. The urban population looks forward to get rid of pollution and stressful life of working days. The components of Agrotourism revolve around farmers and rural environment. Agrotourism satisfies the curiosity of tourists. The Bamboo house is one of the components of agrotourism which is made by local material and hence cost effective. The adoption of bamboo for house construction helps to preserve the environment.

In the past agro touristic attractions were natural sights and plantations but the new agro tourism concept involves a system bringing together the tourism sector and the agricultural sector as a model of regional development. World Tourism Organisation (WTO) predicts that international tourist arrivals will increase from year to year, from 1 billion tourists in 2010 to 1.6 billion people in 2020. The motivations of tourists to visit destinations have changed dramatically and now tourists are more interested in specific things, enthusiastic activities and, most importantly, in the quality experience of touristic products and services.

The farmer along with crop produce can generate handsome income by erecting Bamboo Houses in farm. The techniques of chemical treatment of Bamboo and erection of Bamboo House could be easily learned by local artisans.

In India Bamboo forest occupies about 1,00,300 sq.km area with an annual bamboo production of 4.5 million tons. Over 136 species in 30 genera occur in India. In the past bamboo houses are mostly constructed as one of the useful structures in water logged areas and in earthquake affected areas. However, due to abundant availability of raw material, least cost of construction and as technology is made available bamboo houses can be conveniently constructed in hilly region so that it can boost agro tourism. Secondly bamboo house construction and selling can come up as a new enterprise in all regions of India. It can help for the economic upliftment of farmers.

Agro tourism is very important for rural communities as well as urban areas. It can provide several advantages like income, employment, natural resource conservation, recreation and education. Agro tourism intends to obtain higher standards of living for rural communities especially through increased income for people who work in agriculture. More and more, bamboo houses are becoming the next trend in homebuilding to replace traditional building materials with renewable sources that can do the job as well or better. Humans have been utilizing bamboo as a construction material for millennia as it is light but very strong, extremely resilient to shear forces like those of earthquakes and hurricanes, and grows back very rapidly once harvested. The construction materials for building a bamboo house are readily available and accessible. The bamboo based house has a very low weight therefore foundations can be minimised. For wall construction bamboo mat boards shall be used assembled from hot pressed bamboo sleeves mats. Bamboo can tolerate high values of deformations in the elastic range i.e. possesses high elasticity. Therefore bamboo houses when properly constructed are ductile i.e. being able to sway back and forth during an earthquake, without any damage to the bamboo poles.

Bamboo is an important resource in India. There is growing demand of engineered bamboo as a sustainable building material. The value addition products of bamboo are bamboo handicrafts, bamboo furniture and bamboo structures. The most productive benefit of developed bamboo houses is for livelihood support to farmers through agro tourism. The benefits of agro tourism are environment sustainability, intensifying and diversifying economic activities, employment opportunities, poverty alleviation, sustainable development and village community development.

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