

#### [4] Origin and Development of Rice Agriculture: Perspectives from Northeast India

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Rice is one of the most important crops domesticated during the early Neolithic period and thenceforth has shaped the culture and diet and contributed towards the historical development of people of a large part of the Asian landmass. In Northeast India, rice is attached to the life of the people and deeply rooted in each and every aspect of culture such as festival, ritual, dance, song and folklore etc. enormously. In most of the languages spoken in this region, food generally means or indicates rice, and in all the meals, i.e. breakfast, lunch and dinner, rice or items made of rice are common. Against this background, the present paper aims at exploring the origin and development of rice agriculture in this part of Asia on the basis of available archaeological, ethno-botanical, ethnographic, genetic and linguistic evidence.

Northeast India is a part of the Vavilovian centre of biodiversity and has been considered as one of the places of origin of many important cultivated plant species and well known for its unique flora and fauna, high endemism and rare plants. Botanists have estimated at least 10,000 indigenous rice cultivars in this region. This region presents some diverse conditions for growing rice in terms of altitude, agro-climatic conditions, and rainfall. There are various species of wild rice such as *Oryza rufipogon*, *Oryza officinalis*, *Oryza perennis*, *Oryza meyeriana*, *Oryza granulata*, *Oryza nivara*, which are found in different ecological habitats like swamps, marshes, open ditches, rivers, swampy grassland, and rice fields. Intermediate forms such as *Tulsibaon*, *Bogibaon* and *Kekuabaon* are also observed in case of deep-water and waterlogged rice ecosystem. Different ecotypes such as *Ahu*, *Sali*, *Bao* etc. are grown in three overlapping seasons depending on the nature of the landscape, rainfall and climatic conditions they require. *Ahu* rice is directly seeded under rainfed upland ecosystem, whereas *Sali* is transplanted in lowland areas. Some of the *Bao* ecotypes, grown in the river sections, have the ability to cope with gradual rise of water due to flood and can survive for days in total submerged condition under water. Due to intense, gradual and continuous experiments, selection and care, many of the cultivars are grown in both the extreme conditions of dry and deepwater in this region.

The slash-and-burn or shifting or Swidden cultivation, locally known as '*jhum*' is the most common agricultural practice in the tropical hilly region. It is the reflection of ecological adaptation and is ideal for understanding man-environment relationship in high altitudes. This type of agriculture requires limited tools and equipments, comparatively less labour effort and entirely depends on climatic or environmental situation. For most of the tribal people, this cultivation has been in vogue for centuries and still remains as a major land use practice, which provides a basis for subsistence farming, maintenance of cultural values and social stability for the people living in low population densities. On the basis of its primitive technology and indirect archaeological data, shifting cultivation can be regarded as a distinct stage in the evolution of agriculture

and modern land husbandry practice and a transitional stage between nomadic hunting-gathering and sedentary agriculture.

Considering the presence of wild, intermediate and domestic varieties of rice species, and the existence of some primitive and some developed agricultural practices, it is coherent to investigate the role of this region in the origin and development of rice agriculture. The wild progenitor can provide very useful information regarding the genetic relationship with their domesticated counterparts, the morphological changes occurred due to constant care and control by human being, human selection and adaptation to an artificial man-made environment and the process itself through which the wild species has been changed to domestic ones.

This region is located at the crossroads of three important zones where evidence of early rice remain has been found i.e. Ganga valley of India, Yangtze basin of China and Southeast Asia. Eminent archaeologists like Peter Bellwood, T.T. Chang, Dorian Fuller, Ian Grover, H. Ikehashi, A.H.N. Sung-Mo, etc. have discussed the importance of this region in early rice agriculture and the development of rice farming societies. However, there is virtually no evidence of domestic rice in archaeological record in Neolithic context in the region recovered so far. Shouldered or tanged celts and the Cord-impressed ware, abundant in East and Northeast India, have a long antiquity in East and Southeast Asian context and are often found in association with early rice farming sites. Archaeo-linguistic and genetic theories proposed by Peter Bellwood, George van Driem and Dorian Fuller support dispersals and migration events of the ancient Austro-Asiatic and Tibeto-Burman linguistic groups and their role in the introduction of rice agriculture in Northeast India.