

## Research Needs on Native Plants of Economic Importance

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Mother Earth has gifted immense treasure of native plants to mankind that possess economic importance in one or other way. The Almighty has bestowed upon with huge biodiversity, however it is finite and diminishable. Thus, there is necessity to conserve and utilize them in a sustainable manner.

Ever since the evolution of mankind various native plants, such as edible plants, medicinal plants, vegetables, fibre yielding, ornamental plants, edible fungi and others for their daily necessities, which are overexploited and most of which are on the verge of extinction. Very little attempt has been undertaken to conserve and propagate. Few examples of such native plants have been narrated in the following text. In Northeast arid lands of Mexico, *Agave lecheguilla* Torr. and *Yucca carnerosana* (Trel) are overexploited for the production of fibres called "Ixtle" having great economic importance in arid lands of Mexico. This may lead to extinction. Similarly, wild chilli, 'Chile piquin' (*Capsicum annum* var *aviculare* (Dierb) is overexploited by farmers, who collect these chillies from their wild habitat. Owing to the presence of dormancy this plant cannot be cultivated in the field. An efficient technique for breaking seed dormancy and propagation in the field has been developed for the first time in the world by Maiti and coworkers. Many species of *Cactus* are endangered. Maiti and coworkers also developed simple techniques for inducing germination and propagation of more than 60 species of *Cactus* which is being utilized by owner of Cactus Green House in Puebla, Mexico. It is interesting to note that "nopal" (*Opuntia* spp), a spiny cactus is cultivated in arid lands in Mexico as important vegetable which have several medicinal values. This cactus is grown extensively in India which we can exploit after evaluation of its nutritive value. A large number of medicinal plants are used traditionally in Mexico, but little research is undertaken on phytochemistry of these for verifying its efficacy. A concerted research activity is needed on medicinal plants including ethnobotany, pharmacognosy,

phytochemistry of these species and finally select most efficacious plants. It is strange to know that several plants are used by different quack doctors to alleviate diseases like diabetes and other diseases without knowing the efficacy of each of these species. Therefore, there is a necessity of systematic research on these medicinal plants. Though, we are aware that some research inputs are undertaken in different countries on these aspects but sporadically. In Mexico, several species of *Amaranthus*, such as *A. viridis*, *A. retroflexus*, *A. palmeri* are grown in wild conditions. Maiti and his team have evaluated them in different aspects, botany and nutritional values and finally selected these species to have high nutritional value without any anti-nutritional factors such as phenolic compound, oxalate etc. There is a necessity of domestication of these species in future research.

In wet temperate region of south western Himalayas, a wild fern (*Pteridium* spp.), commonly known and 'lingrhi' or 'lingarh' in local dialect in Himachal Pradesh (India), grows profusely in shady and damp places in forests. Fronds, the young fleshy shoots, are extensively collected by the rural people and sold in local markets. The climatic conditions of these areas are highly conducive for the cultivation. However, cultivation of this plant cannot be done because no propagation and production technology has been developed so far. An extensive basic research on mode of reproduction and applied research on propagation techniques are urgently required to first domesticate and subsequently to increase the productivity in term of quantity and quality. Furthermore, a concrete post harvest strategy need to be planned to have improved sorting, grading, packing and transport so that it can reach the far away big markets and fetch premium price. In Mexico, few native crop species *Heliantus annus*, *Brassica campestris*, *B. campestris*, *Phaeolus* spp. are grown extensively in wild conditions. These native crops are sources of biotic and abiotic resistances. Maiti and his team undertook systematic

research on distribution, botany, anatomy, germination technique and physiology of some of these species. There is a need for domestication of these species. Similarly, his team studied taxonomy, botany and anatomy of few fibre yielding plants in semi-arid lands of Mexico namely *Agave lecheguilla*, *A. asperimma* and *Agave fourcroydes*.

Therefore, we need systematic inter-disciplinary research on native plants of economic importance. In remote villages and in forest people are using edible fruits and vegetables but these are not evaluated scientifically to judge their efficacy.

Forest dwellers use them for dare necessity in the absence of other foods without judging their true nutritional value.

In view of the above discussions, there is a great necessity of systematic research on native plants of economic importance. Such research outcomes will surely benefit the rural folks. The International Journal of Economic Plants invites papers on various aspects of economic plants. Interested reader may communicate to The Chief Editor of the journal at ratikanta.maiti@gmail.com.