Introduction of New High yielding varieties of Tuber crops Improves livelihood of Jhumias in Mizoram.

Dr. SK Dutta Scientist (Horticulture) and Dr. SB Singh (Joint Director)
ICAR Research Complex for NEH Region, Mizoram Centre, Kolasib–796 081, Mizoram

Mizoram is a state in northeast India where most of its land is at an incline of >33º, and there is high soil erosion losses which necessitates distinctive solutions. Shifting cultivation has been a common agricultural practice in these hilly areas of Mizoram Every year, village communities slash the vegetation on selected sites during winter, wait for it to dry, and then burn it *in situ* before planting a variety of annual crops to coincide with the return of the rains. Shifting cultivation was an economically and ecologically efficient agricultural practice in earlier times when village population densities were low, and the fallow abandonment period matched or exceeded the time necessary for full recovery of the sites. But, with the increasing population, intensity of land use for shifting cultivation has gone beyond its sustainable capacity in many regions of the state. Now, it is a constant endeavour of the research community to find out sustainable yet economic solutions of farming in this difficult to grow areas.

Among various solutions cultivation of tuber crops viz. colocasia, cassava, sweet potato, elephant foot yam, taro etc are found to be very economic and sustainable in this sloppy areas. The potential of tuber crop includes food, feed for animals, ethno-medicines, agro based industries, intercropping in plantation areas like arecanut, oilpalm and rubber etc.

ICAR Took Initiative

Bilkhawthlir in Kolasib district, about 120 km from Aizawl was selected as tuber crop village by ICAR RC NEH Region, where farmers were practicing *Jhum* farming system from decades. ICAR Research Complex for NEH region, Mizoram centre adopted three villages viz., North Bilkhawthlir, South Bilkhawthlir and Chemphai under TSP to raise farm income and improve the livelihood of farmers. Centre introduced tuber crops cultivation with improved technological interventions under the project.

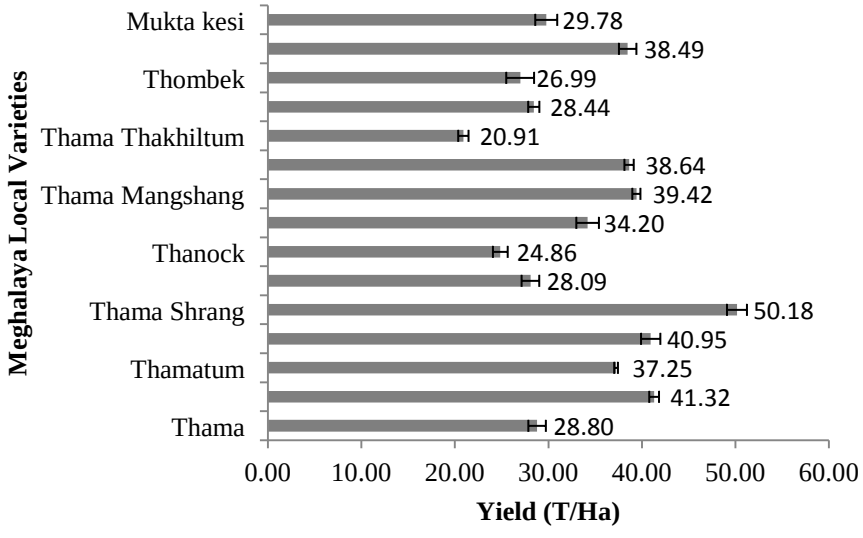
Technological Interventions Introduced

Mr. Lalnunfela (45), a farmer of Bilkhawthlir village was selected as one of the tuber crop beneficiaries of TSP in the area. Land was selected on the basis of various factors like slope, availability and vicinity of water source, length of *jhum* cycle, sun orientation etc. 50 other progressive farmers were also selected based on the suitability of resources. A total 1 Ha area was selected for each farmer. Land was cleared and pits were made and sufficiently filled with FYM. Due to inherent acidity of the soil, liming at 4.5 ton/ha was also applied.

Improved varieties of tuber crops introduced were

Tuber Crop	Variety	Quantity
Colocasia	Mukta Keshi	3000 Kg
	Thanock	500 Kg
	Thama	500 Kg
Sweet potato	Kanchangad	500 Kg
Elephant foot yam	Gajendra	200 Kg
Yam	Orissa Elite	200 Kg
Yam bean seeds	RM-1	25 Kg
Cassava	Sree Vijaya	2000 stems

Yield of local landraces of colocasia in farmers field



Local landraces recorded maximum yield of 50 T/Ha in farmers field.

Training for Farmers

Farmers were trained for disease and pest management, packages and practices, quality improvement and post-harvest technologies. After getting all the technical inputs, now Pu Lalnunfela is reaping bumper crop. He sells tuber crops in Bilkhawthlir market at Rs. 25-30/kg, also the middlemen marketed the produce in nearby districts of Cachar and Karimganz. Altogether he earns about Rs. 25000 from different tuber crops in a year. He is also now self sufficient in feed for his animals.

Others Farmers Also Adopted Innovation

Success of the 50 farmers group inspired other beneficiaries, now majority of *Jhum* farmers in the area have introduced these improved varieties in the village. The interventions have decreased the dependence of farmers on *Jhuming.* It improved the living standard, livelihood and socio-economic status of the villagers.