Jhum Cultivation Scenario in Chandel District of Manipur

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Introduction

The characteristic shifting or *jhum* cultivation of the highlands of Chandel district of Manipur gets affected by a huge number of socio-economic and climatic factors. Shifting cultivation or *jhum* farming an indigenous practice of cultivation followed since time immemorial in the hilly and remote areas of the district. In this system of cultivation, after slashing and burning of the trees, crops are grown for a period of 1 or 2 years and then shifted to another field leaving the older field fallow. A range of crops are grown in the *jhum* field and which in turn helps the farmers in getting a varied range of food requirement of the farmer's family. Very often shifting cultivation is an effective form of land use practice where optimum utilization of space is made by cultivating a variety of crops in the same plot of land. Usually, it is practiced in steep slopes or places which are remote, with poor road connectivity with poor infrastructure development. Very often, *jhum* farming is compulsion by default rather than a choice to sustain the livelihood for the villagers. Of late, the *jhum* cycle has drastically declined due to population pressure on land. Changing weather has also created a serious impact on the shifting cultivation in various ways. Increasing trends of erratic rainfalls, rise in temperature, dry spell along with outbreak of new pest and diseases have affected the traditional cropping pattern thereby immensely affecting the crop yield, production and productivity.

Findings

A study was conducted to assess the perspectives of the *jhumias* in crop cultivation and impact on livelihood in the context of the changing socio-climatic situation. The staff of KVK Chandel collected data from seven *jhum* cultivating villages of Chandel district. The study revealed that early sowing and early harvesting of crops compared to farming in valley areas enabled the *jhumias* to fetch a higher price for the crop harvested. It was seen that the investments in crop production were quite minimal and were self-financed as none of the *Jhumias* had access to any sort of credit or loan facilities from institutionalised banks. Timely unavailability of agricultural inputs, little knowledge for solution for pest and disease infestation and high cost of farm labour were found to be the major constraints faced by the *jhumias*. During the past several years, climate change had caused tangible and physical changes in the resources and assets of the community which includes acute shortage of potable water, a reduction of forest area, drying up of perennial streams and farm ponds and decrease in number of livestock abundance. In order to achieve sustainable hill farming and conservation of the resources in the ecosystem, slow conversion of *jhum* land to permanent cultivation through adoption of a improved and scientific integrated farming system models would be highly effective to sustain in the backdrop of changing climatic pattern.

Very often the farmers grow a number of crops in the *jhum* which mainly include rice, maize, colocasia, groundnut, cucumber, pumpkin, ash gourd, beans, lady's finger, potato, brinjal, bitter tomato, chilli, king chilli, ginger, pea, cabbage, mustard etc. Of these rice, maize, colocasia, pea and cabbage form the major crops grown covering a comparatively larger area. Due to difference in slope and altitude and varying topography, crops are found to be sown or planted much earlier compared to fields in valley areas. Rice which is traditionally sown during June and July in valley areas are sown in the months of March and April in the *jhum* fields. Also, maize and colocasia are planted in February and March while pea and cabbage are planted during August and September. As sowing is done early, the crops are plucked or harvested earlier as compared to those in lowland areas. Very often this earlier harvesting enables the *jhumias* to sell their crops and vegetables like pea, cabbage, beans, etc at higher prices in the market. Level of farm mechanization is still very low; the main reasons being undulating and sloppy nature of landscape and there is huge dependence on farm labour. The major chunk of farm expense is incurred on hiring of farm labour for burning or felling of trees, land preparation, sowing/ planting, interculture operations, harvesting and threshing. Of all the

various farming activities, women farmers take the lead role in selection of crop, planting, weeding and other intercultural operations, while activities like tree cutting, clearing and burning are generally done by men folks.

Constraints

A whole load of constraints is being faced by the *jhumias* in crop cultivation. Undulating land terrain, remoteness and poor connectivity often hinders in crop production. Unavailability of agricultural inputs in time as and when required is the main factor demoralising the *jhumias*. Proper solution and care and management for pest and disease infestation is the next constraint affecting the farmers. Also, unavailability or high cost of hired labour especially during the planting and the harvesting season and lack of irrigation facilities too accounts as major constraints. Degraded soil conditions and lack of access to soil testing facilities were reported to be another important constraint. Also non-availability of high yielding variety seeds, low crop return, lack of storage and marketing facilities often hinders sustainable income form *jhum* farming. Very often, *jhum* fields are located in remote and interior locations and farmers need to travel to the markets in nearby towns or cities to sell their farm produce which is extremely laborious, exhaustive and time consuming. In the present times of drastic weather and climatic changes, pest and disease incidence has increased manifold, affecting the crop yield and production.

Since shifting cultivation is often characteristically labour intensive with almost all the activities done manually, there is always a dearth of labour which ultimately makes this cultivation non-remunerative.

As shifting cultivation is practiced in nature's lap in a fragile hill ecosystem, change in climate change has been vividly reported by the farmers who have witnessed it first-hand. The jhum cultivators have reported a sharp increase in temperature along with highly erratic and unpredictable rainfall. They have accounted these to be the major reasons for lack of water, shrinkage of forest cover area, drying up of perennial springs and ponds, scarcity of food and decrease in number of livestock.

Conclusion

For livelihood and household sustenance, the tribal *jhumias* practice shifting cultivation in the remote and hilly areas of the state. It is a compulsion by default rather than a choice due to the nature of the topography of the land, location of the farm and unreliable source of water. The *jhumias* often are illiterate or semi-literate. Along with crop cultivation, rearing of livestock especially poultry and piggery is being practiced which increase their risk bearing capacity. It is very rare for the *jhumias* to have access to institutional loan or credit facilities. In order to make shifting cultivation sustainable and remunerative, adoption of latest climate resilient scientific cultivation practices and use of high yielding seeds and planting material is important. Since this farming system has been carried out traditionally since ages and is intrinsically rooted with the socio and cultural psyche of the villagers, proper strategies for improvisation of agricultural practices through modern technological interventions should be in tune with the traditional mindset and sentimental attachments of the tribal farmers.

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