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RESEARCH ARTICLE

JHUM CULTIVATION PRACTICES OF THE GALO OF ARUNACHAL PRADESH

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ABSTRACT

Jhum cultivation, which is also known as shifting cultivation, is the primitive form of soil utilization. The main characteristics are rotation of fields rather than crops, clearing by means of fire, absence of manure, use of human labour only and employment of dibble sticks or hoe. After two or three years the fields are abandoned, the cultivators shift to another clearing, leaving the old one for natural recuperation. This explains the use of the term 'shifting cultivation'. The intervening period for which a Jhum land is abandoned is known as the Jhum-cycle. Jhum cultivation is a kind of subsistence cultivation. It is an age old system of agriculture among the different tribes of Arunachal Pradesh. The Galo tribe progress to full use of the ecological and environmental conditions to their advantage. The integral nature of their socio-cultural life is thus woven around Jhum which is not merely an agricultural activity, but a way of life. This paper is an attempt to understand the Jhum cultivation practice followed by the Galo people of Arunachal Pradesh. An attempt has made to discuss the various activities that are involved in the Jhum cultivation. The present paper has also thrown light on the traditional calendar including months and all the Jhum activities that is done in all the months.

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INTRODUCTION

The term 'agriculture' may be defined as the art and science of growing plants and other crops and the raising of animals for food, other human needs of economic gain. Thus, it is the growing of both plants and animals for human needs. Agriculture is evidently the mainstay of the people, and it determined their socio-economic relations and cultural life. The origin of most important ceremonies and festivals of the tribal people can be traced back to agricultural practices and rituals, which are performed in various seasons corresponding to the different phases of crop cultivation. Shifting cultivation is an agricultural system in which plots of land are cultivated temporarily, then abandoned and allowed to revert to their natural vegetation, while the cultivator moves on to another plot. The period of cultivation is usually terminated when the soil shows sign of exhaustion or more commonly, when the field is overrun by weeds. The length of time that a field is cultivated is usually shorter than the period over which the land is allowed to regenerate by lying fallow. Of these cultivators, many use a practice of slash and burn as one element of their farming cycle. Other employ land clearing without any burning and some cultivators are purely migratory and do not use any cyclical method on a given plot.

The Galo is one of the major tribes largely inhabit in the central part of Arunachal Pradesh which is bounded by the Mishmi Hill in the east and Subansiri River in the west. The popular traditions current among the people maintained that ancestor of the Galo migrated from Tibetan regions by following frontier lower areas and finally settled at present homestead. Racially they belonged to Palae-Mongoloid stock and speak a distinct language which is broadly classified under the Tibeto- Burman family of languages. Among the Galo, *nam rumtum* (family) is the smallest unit in social structure of the society. Family is the unit of community and father is the head of family. The Galo is a patriarchal society as well as patrilocal. *The nam rumtum* (family) could be polygamous and monogamous. Generally there are two types of family system are found like that of joint family and nuclear family order. The joint family system was more prevalent in early time. The general practice of marriage is monogamy although polygamy is also prevalent. The traditional Subsistence economy of the Galo is based on shifting or Jhum agriculture. Traditionally, shifting cultivation is in the mainstay of the economic activities of the community supplemented by hunting and gathering on seasonal basis. But after the Independence, the government took a number of measures to introduce a new methods and technology including the wet rice cultivation (WRC) in the district to improve the living standard of the people. Jhum is a slash and burn type of

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agriculture being practiced by them from early times with the aid of simple tools, such as, *dao*, hoe, and dibble. A sharp tool like pen-knife is used for harvest of grains.

## MATERIALS AND METHODS

Field trips were conducted in the various villages namely, Nyigam, Gori, Soi, Nyodu, Bam, Darka, Jini, Wak, Pobdi, Bene, Pakam, Kato, Nomuk, Bogdo, Kamba, Kamki, and Kambu during the year 2014-2015. The studies were prepared during different seasons as to overlay the various stages of the Jhum cycle. Open ended interviews, prepared questionnaires, group discussions and participatory methods were used so as to elicit response from the locals that included the elder village folks, village priests (*Nyibo*), village headman (*Gaon Burahs*).

### Study area

The Galo is one of the major tribes of Arunachal Pradesh, settled largely in the central part of the state. The majority of Galo are settled in West Siang District, the south-western part of East Siang District, the southern areas of Upper Subansiri District, as well as in some few places of Lower Dibang Valley District and Changlang District of Arunachal Pradesh. However, eighty two percent of the Galo population are found in West Siang District of the state. This District is named after the mighty Siang River. It is bounded by East Siang District in the east, Upper Siang District in the north east, Dhemaji District of Assam in the south, Tibet in the North West and Upper Subansiri Districts in the west. Therefore, the area of proposed study is West Siang. The study area extends from 27° 43'N to 28° 25'N latitude and 93° 57' to 94° 56'E longitude.

### Jhum cultivation practice

Jhumming is a kind of subsistence cultivation. It is called by different names in different parts of the world. It is generally known as 'slash and burn' and 'bush fallow' agriculture. The Galo call it *Moodi Rike* (hill agriculture) or *Tumpe Rike* (dry field). Due to the rugged topography, inaccessibility and heavy rainfall, low population density and lack of other infrastructural development, the Galo people are compelled to continue shifting cultivation as a main means of sustenance. But there is a much refinement in the technique of cultivation because of the centuries of repetition of the same system. As a result, today it has not remained only to slash and burn method of cultivation. In the Jhum or Shifting cultivation system of the Galo, the entire agricultural land of a village is divided into a numbers of blocks. By opening a jhum block is meant that the trees are cut and left for drying and burning before it is taken up for cultivation. It is after the expiry of ten to twelve years, the same block of jhum land is taken up for cultivation. A village may have several hills which are taken up, one by one, for cultivation in their turn. It is possible that one family may have agricultural plots on several hills of the village. The period of jhum cycle depends upon two factors: The fertility of the land and the density of the population in that jhum area. If the land is fertile enough, it can be cultivated for two or three years consecutively with rotation of crops and then left fallow and again taken up after a period of eight to ten years. If the density of population is higher in relation to the available land,

the cycle has to be rotated after every six to eight years. As the scarcity of land forces the people to take up even those lands, which are not fully covered with trees and plants and where the fertility has not been fully restored.

There are three distinguishing features of Jhum cultivation in the West Siang district. Firstly, jhum fields which are ready for sowing. Such fields are cleared of all the forest growth except a few trunks left here and there in the jhum field. One or two rudimentary farm huts show the number of households owning the particular blocks of jhum land. Individual field boundaries are within the jhum block is made by stones, bamboo and the unburnt tree trunks. The second distinguishing feature of a jhum field is the fallow land left for regeneration of vegetation. Such fallow land is full of grasses, bushes, thin and small trees. The third type is fully regenerated jhum fields. They have tall and thick trees under growth are thick and due to huge accumulation of humus, the colour of the soil has turned black. Such fields are likely to be opened for cultivation. The nature of the Galo area is such that jhum cultivation has to be resorted to. All agricultural activities are linked with religious beliefs and one has its bearing on the other. Before sowing *Surin Ampir* is offered sacrifice. Whatever is sacrificed, a *mithun* (bos frontails), a pig or a fowl should be offered is determined by divination. The *nyibo*, the shaman or the priest is called for the rituals. The blood of the sacrificial animal is kept in a bamboo stem, its outer portion having been besmeared with it, and is placed in the fields for spirits and the flesh of the animal offered in sacrifice is consumed. The *nyibo*, for his service, is remunerated either in terms of cash or kind.

They cultivate three types of jhum field in a year. These are *Pel lek*, *docho* and *rigne*. Sometimes, the same field is cultivated for more than one year which is called *riga*. The word *pel lek* has derived from combination of two words *tepe* (maize) and *allek* (full of). Thus, *pellek* means a field exclusively meant for growing of maize. The term *docho* is a combination of two words- *donam* (to eat) and *acho* (to come first). Thus, it is the field for raising of crops for the first consumption. The size *od docho* is little larger than that of *pel-lek*. Hence, both maize as well as rice is cultivated. *Rigne*, pertains to the main field, which has also derived from the combination of two words, *rik* (field) and *ane* (mother or main). So, *rigne* means mother field or the main field. All the agricultural rituals are performed during the cultivation of the main field.

### Activities in jhum cultivation

#### Selection of Site (*Gite Konnem Kagak La*)

Selection of site is the first task in the process of activities in the jhum cultivation. The adult persons of the village assemble to decide about the hill to be opened. The meeting is attended by the village gam (village headman), leaders and other village officials. One man will initiate the discussions on the selection of the jhum field. He will tell the advantages and disadvantages of different sites and at the end he will put up his proposal for a particular site. Sometimes the entire village agrees to his proposal and select the sites in the same direction as proposed by the initiator. But often there is a division on the choice of the site selected and consequently two or three alternative sites are proposed.

**Table 1. Months and Agricultural Activities**

S. No.	Local months	Months in calendar	Major agricultural activities
1	<i>Deechi</i>	Second half of December to first half of January	Clearing the forest
2	<i>Agloo</i>	Second half of January to first half of February	Clearing of forest
3	<i>Lukww</i>	Second half of February to first half of March	Harvesting of paddy and millet, threshing and storing
4	<i>Lumii</i>	Second half of March to first half of April	sowing
5	<i>Luchir</i>	Second half of April to first half of May	weeding
6	<i>Ilo</i>	Second half of May to first half of June	weeding
7	<i>Tenlo</i>	Second half of June to first half of July	weeding
8	<i>Hoo</i>	Second half July to first half of August	weeding
9	<i>Hwwtv</i>	Second half of August to first half of September	Weeding and Harvesting
10	<i>Pwra</i>	Second half of September to first half of October	Harvesting of paddy
11	<i>Lube</i>	Second half of October to first half of November	Harvesting of millet
12	<i>Ratv</i>	Second half of November to first half of December	Storing and drying

### Wage Labour and Share Cropping

A particular household where there is less numbers of adult members to work on the land employ other adults of the village. Such employs are paid in cash or in kind. The rate of wages is as per the age and efficiency of the worker. The jhum field is also given on rent under the following conditions. If the head of the household is ill or old and unable to work, he gives a portion of his jhum land to other belonging to the same village. For that he will make some charges. The owner of the land will always remain with him. The man who takes the land on rent has no right to sell it.

### Fencing (*Holu Ragnam*)

After the selection of the site and formation of the jhum parties, the people get themselves busy in making fences around the jhum fields to avoid any kind of damages often caused by the *mithuns* (Bos Frontails) and domesticated animals and other wild animals.

### Clearing the Forest (*Rik Panam*)

It starts in the month of December and continues up to the middle of February. The big trees are cut by axe (*aggi*) and the small trees and bushes are cleared by *dao* or *orok*. The cut trees are then left in the field for drying in the sun.

### Setting of Fire (*Em Runam*)

After the trees are dried they are burnt. The fire is done by bamboo torches. Five or six persons will go with the torches and ignite the twigs from the lower slopes of the hill. The fire gradually spreads upward. It is generally done during the later half of February and the first half of March. After the jhum field are thoroughly cleared, a field hut is made inside them. All the close kins help each other in the construction of field huts. It is completed on the same day.

### Clearing of Half Burnt Debris (*Rigrom Panam*)

Clearing of the debris is done immediately after the setting of fire because half burnt logs become softer to cut. Otherwise it would become very hard after few days due to complete drying. Big logs are kept pegged horizontally on slopes to prevent the removal of top soils.

Straight and small sized logs are stored for construction of farm hut, fence and kept to be used as firewood. The rest are collected and burnt down.

### Sowing of Seeds (*Ammochinam*)

It is generally done in the month of April/May. One acre plot of land requires ten girls for sowing the seeds. Each of the girl take small basket of cane on one side and a digging stick in the right hand. In the first year, seeds of paddy, maize, millets, cucumber, jam, ginger, chillies, and tapioca are mixed and sown in the same field. In the second year, small millets, arum and ginger are sown. The girls stand in a line and gradually move up the hill while doing their work. One man follows them from behind with a bamboo leveller and covers the holes with soil. The owner goes to the field to see the conditions of the seedlings after one week.

### Weeding (*Eijee Monam*)

After the sowing is over, the people retire for a short respite, looking forward to see the seeds thriving. The time taken by the seeds to germinate is nearly one week. Weeding is generally done by women. There are two stages of weeding such as, *Morin*, and *Moro*. Some weeds grow very fast and over grow the crops. The selective removal of such weeds is called *moro*. Then follows *morin*, which is the systematic weeding where not even a single weed is allowed to remain. The weeds are uprooted and dumped in an *eipum*, a dumping point. It takes place after a fortnight of the sowing of the seeds. The useless grass and plants growing around the seedlings are cleared with the help of a weedier made of split bamboo. It is known as '*iyk*'. The *iyk* scratches the soil for half an inch and thereby the grasses are uprooted. Normally, the weeding is done twice.

### Harvesting (*Amo Lanam*)

The harvesting of paddy, maize, millets, etc., is known as *ammo lanam* among the Galo. The paddy is ripe in the month of October/November. It is then attacked by small birds that come in large groups. The Galo know by seeing these birds that the harvesting season for paddy has come. A man will go to stay in the field hut and will scare away the birds. Harvesting is done by the owners and his family. Before the actual harvesting starts, the wife of the owner will go to the field and bring some paddy. It is then kept on the fire to dry then it is husked and

cooked and thereby the members of the family know the quality of rice produced in their field. After two-three days of cooking the new rice, all the members of the owner's family will go to the field for harvesting. They go to the field with the *igin* or conical basket and pluck the paddy by hand and keep them in the basket. The stalks are left in the field. The plucked paddy is separated from the stalks by the legs. The women keep bunches of paddy stalks under their feet and trample them. The paddy brought from the field is stored in the village granary.

### Months and agricultural activities

They call month *Polo*, which means the moon. Thus their months are based on lunar calendar, from the first day of the new moon to just before the appearance of next new moon. Thus in their traditional calendar, a year has twelve months and months are of around 30 days.

### Conclusion

Agriculture is the science, art or occupation concerned with cultivating land, raising crops and feeding, breeding and raising livestock.; farming. The whole framework of the Galo society, the customs and traditions, religion and culture, in short the ways of life of the people is interwoven with jhum cultivation and the economy based on this method of agricultural production has determined the course of their social development. But, a number of modifications have been reported in the way of jhuming practice among the Galo, i.e., the decrease in the size of jhum land is clearly seen. Now a days, one may easily witness the practice of WRC and TRC in Nyigam, Gori, Soi, Nyodu and Bam villages of Basar circle, Darka, Komdo, Jini, Eyi and most villages of southern bank of Siyom river such as Wak, Pobdi, Bene, Pakam, Kato, Nomuk, Panya, Bogdo, Kamba, Kamki, and Kambu villages of Along and Darak circle mostly have permanent type of agriculture. In the circles of Likabali and Kangku, all the farmers depend on permanent type of agriculture. Along with WRC, many people still continue jhuming for other purposes. The numbers of families which completely depend on permanent type of cultivation are very few. A new tendency of raising of cash crop has been noticed in villages along the highways and in proximity of towns. In Dari circle, almost all the households cultivate extra jhum field for growing of chillies which are sold at Silapathar in Lakhimpur district of Assam. And because of that, farmers are making some amount of money by selling such crops. Villages located away from urban centre do not cultivate crops for cash. All the farmers grow same kinds of crops. But villages located near to the urban areas like, Likabali, Basar, Aalo and Tirbin grow a lot of cash crops in the field and sell them in the market. In the foothill like Likabali and Kangku circle, villagers cultivate shifting cultivation mostly for growing cash crops. However, the improvements in the technique of cultivation have led to increase in production, both in quantity and variety of crops. Thus, the general life of the farmers has also improved much better compared to few decades back.

As a result of it, the Shifting population is thus, self reliant with a high degree of economic independence and the resultant economy is almost static with little chance of rapid improvements.

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