

**Note**

## **Indigenous Agriculture System of Kukis in Ukhrul District**

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Agriculture has a vital place in the economy of Manipur with 52.19 percent of the workers in the State engaged as cultivators and agricultural labourers. For centuries the knowledge of agriculture among the Kukis is stored in people's memories and activities, expressed in the form of stories, songs, folklore, proverbs, dances, myths, cultural values, beliefs, rituals, chief laws, local languages, taxonomy, agricultural practices, equipments and tools. The study was conducted among the Kukis in Ukhrul district of Manipur to investigate indigenous knowledge of agriculture systems. The main objectives of the study include the activities and responsibility of "Lompi" and the way of the Kuki beliefs in gods and the reasons and process of the agriculture festivals like "Chang-ai", and the advantage of the use of indigenous knowledge of agriculture integrating with modern technologies.

**Keywords:** Thempu, Lompi, Chang-ai festival, Kukis in Ukhrul district, Indigenous knowledge of agriculture, Chang Nungah.

### **Introduction**

Agriculture sector has a vital place in the economy of Manipur. It contributes a major share to the State Domestic Product. 52.19 percent of the workers in the state are engaged as cultivators and agricultural labourers. However, the performance of agriculture in the state mainly depends on uncertain rainfall and weather conditions. Permanent cultivation is generally practised in the valley districts while terrace cultivation and Jhumming or shifting cultivation is widely adopted in most of the hills. Rice is the staple food and is grown in the hill and plain areas and it accounts for about 95 percent of the total food grain production of the state in 2009-10. The production of rice in 2009-10 is estimated at 3.54 lakh tonnes which is less than the preceding year's rice output of 3.97 lakh tonnes. In case of maize, production in 2009-10 is estimated to be 11.71 thousand tonnes as against 11.50 thousand tonnes in the preceding year.

For centuries, agriculture has been practised among the Kukis and they conserved the natural resources with instruments of indigenous cultural practices. Since

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ancient time it is the life demo of the people who are settled around. The knowledge of agriculture among the Kukis is stored in people's memories and activities. It is expressed in the form of stories, songs, folklore, proverbs, dances, myths, cultural values, beliefs, rituals, chief laws, local languages and taxonomy, agricultural practices, equipment, materials, plant species and animal breeds. Indigenous forms of statements are keys to local level decision making processes and for the continuation and spread of indigenous agriculture (Louise, 1998). This knowledge of agriculture has developed over generations through the route of men-environment interaction and its continuity depends on its transmission and the ability of the young generation to acquire and practice it.

### **Methodology and Data**

The analysis of the present work depends on the investigation of the indigenous agricultural system among the Kukis in Ukhrul district. It is mainly based on both primary and secondary data collection. The primary data is based through field works, observation and direct communication with respondents in one form or another. The secondary data is mainly based on various publications of the central and state governments, journals, books, magazines and newspapers, and reports.

The study identifies different sources of indigenous knowledge. The main sources were interactions with elderly persons, relatives and friends. Other common sources of indigenous knowledge are internet, journals and books.

### **Study Area**

Ukhrul District is bounded by Myanmar in the east, Chandel district in the south, Imphal East and Senapati districts in the west and Nagaland State in the north. The terrain of the district is hilly with varying heights of 913 metre to 3114 metre (AMSL). Ukhrul is the district headquarters and is linked with Imphal, the state capital, by National Highway-150, which is about 84 kilometre. By ordinary passenger bus it takes about 3 hours. The climate of the district is temperate with a minimum and maximum degree of 3°C to 33°C. The average annual rainfall is 108.60 cm (2003). The exact location of the district in the globe is 24°N-25°41'N and 94°E-94°47'E. The rainy season in the district is broadly from May to the beginning of October but winter is chilly. The highest peak is the Khayang peak-3114 metre (AMSL), though the more popularly known peak is the Shirui Kashung Peak-2,835 metre (AMSL). Most of the major rivers originate from the crevices and slopes of Shirui peak. The terrain of the district is rippled with small ranges and striped by few rivers. Somrah-Angkoching range is striped by Sanalok and Nambalok; Shangshak-Phungyar range adjacent to the Shokvao-Mapithel-Kasom range is striped by Tuyungbi and Taret Lok in the middle and Thoubal river in the west and Kachai-Hoome-Tampak Ngashan (Mahadev) range is striped by the tributaries of Thoubal river in eastern side and Iril river in the western side.

Tangkhum Nagas constitutes the bulk of the population, while the Kukis, Nepalese and some other non-tribes constituting about 30 percent of the district's population. The Kukis are fair in complexion and more akin to the Mongolians in facial appearance and stature.

The population of the district is 1, 40,778 (2001) and the provisional popula-

tion in 2011 is 1,83,115 with the decadal growth of 30.08. The area of the district is 4,544 sq. km. with the population density of 23 sq. km. The male to female ratio is 1000:878 with a decennial growth rate of 32 percent. The total population of the district constitutes 6.02 percent of the total population of the state, spread over about 230 villages. Literacy percentage is 73.1 (2001). Land use of the district is 15977 hectare of Gross cropped area with the net sown area of 15100 hectare and cropping intensity of 153.02.

## **Discussion**

### **Indigenous knowledge of agriculture system**

Forefathers of the Kukis did not plainly choose any place for cultivation, but precisely decide on a particular place and then try to identify whether it can be cultivated. Father in a family is responsible for the selection of agriculture field. The Chief has no right and power in this matter. They usually choose the sunward side of a mountain as they believe that it will have better yield than the leeward side. After selecting a particular place for cultivation they again try to ascertain whether they are allowed for cultivation by the gods as they believe in the presence of unseen gods. Accordingly they went to the heart of the field, beneath a big tree, clear the place and keep it neat and clean. They keep three rice seeds linking their tips and cover them with tree branches and then left them to evaluate how much size has to be cultivated and then clear the margins. They come back in the afternoon to make out what has happened to the rice seeds and if there is prohibition to cultivate the area, the rice seeds were spread and spaced out from each other. In such cases they abandon the place and choose another place. But if the rice seeds did not change their position it is taken as good omen and they are allowed to cultivate. The next day the whole family and some neighbours started clearing trees and grasses. Some trees and swampy areas were considered as bad omens and therefore they leave swampy places and restrained themselves from cutting such trees. After five or six days or a week, when trees become dry, they burn them and give offering to the gods with white cock and dogs to please them. *Thempu* (priest) dig out those bad trees from the roots and burn them down, and then offer white cock for trees and dogs for marshy places. This is called *Loulut* in Kuki language, mainly performed only by the village *Thempu*. Sometimes they offer mithuns, coins and many precious things as they believe that the unseen gods like them.

After the completion of cutting, burning and re-burning of what remained, the wife of the village Chief sow some seeds in her backyard and inform the Chief's councillor to announce that villagers should not go to the fields and should not break threads, dig lands, stitch or cut trees, neither use sharp weapons nor cut a single piece of grass to show respect to the first sown seeds in a year. Everyone pay respect and obey this practice which is known as *Muchi Lha*. However, from the following day villagers are permitted to go to fields and begin sowing and trans-planting crops.

On the day of the occurrence of first rain and thunder, which is considered to be the first blessing from Almighty God, they observe *Julnol Nit*. On that day no one is allowed to move out of the village; and if someone disobeyed the prohibition he is held

responsible for any illness befallen on the community.

Generally the sowing or trans-planting of crops is the work of *Lompi*. It is the association of youths both male and female in the village. Its membership is mandatory. In this *Lompi* the most responsible leaders are two male and they are called *Lompa*. Below them is one male named as *Mengchol Sap*. Two male named *Tollaiapao/Bollaton* are responsible for blowing *Pengkul* (Trumpet) as the sign of information to every member. The lowest post called *Twikonpah* has two male new members among them and their main works is to supply water while others are working in the field. Some leaders are also appointed among the women.

On the day of sowing or trans-planting of crops, the two male named as *Tollaiapao* blow *Pengkul* (trumpet) in the early morning for every female to return from collecting firewood in the forest. In the second blow, every members need to prepare and be ready to move out from their respective hose and at the last signal, they are required to reach the resting place called *Khomol*, close to the village. If anyone is late they are punished by swigging four to five litre of water in a big jar. If they could not swig the required amount of water, *Lompa* beats them three to four times with a big stick. From that *Khomol* all walk in a single file till they reach the field. While walking on the way if anyone needs to pee and pass faeces, they should report and ask permission from the *Lompa*, if not they must be punished. When they reach the field, *Lompa* informs every member to start working and no one is allowed to stand up while working. After sometimes when everyone is weary, *Lompa* gives an order to take rest (*Jing-ma*) for ten minutes, after which they started working till the midday. At lunchtime, with the orders from *Lompa*, everyone take rest and have lunch within thirty minutes (*Sun-ma*). While working if anyone has a problem, wants to pee, pass faeces, he/she took permission from *Lompa*. In the afternoon they took one more rest (*Nilhah-ma*) and when time comes to stop, *Lompa* inform them to prepare and get ready to leave for home. They walked back home again in a single file as they did in the morning. In the evening after dinner, the two male *Tollaiapao* blow *Pengkul* so that every member of *Lompi* rush to the house of the field owner. They started sipping the prepared ten jars of wine called *Dangka Bel* and every one should sip three times. This is the daily working system of *Lompi* and it goes daily from the beginning to the end of a year.

There are various types of rice seeds sown among the Kukis in Ukhrul district:

1. *Jou Chang* - This types of seed is grown in the forest,
2. *Silhao* - This type of seed is mainly grown by the Tangkhuls; and
3. *Phoiren* - This type of seed is mostly sown in plain fields.

As Ukhrul district is in the eastern side of Manipur the agriculture system is mostly under the dominant of south-west monsoon rains from the last part of June till in the month of September. Most of the time the monsoon is erratic, irregular, uncertain and late, and farmers facing scarcity of water without any alternative means like irrigation from tank, well, tube well, river canal, etc. The forefathers believe that all the problems were mainly controlled by the gods and that when the gods of *Koubru* rule them, there was abundance of rainfall but the year when *Thenbung* gods rule them there was scarcity of water even for drinking purpose. In order to obtain the required water for their agriculture, they had various methods of calling rains.

The *Khothempu* leads villagers to kill one mithun, white cock and present offerings to gods which live at the mouth of streams, logs and gullies. In this way they did dices called *Phunsan*. In valley paddy fields, tools were kept upside down and the other means of calling rain was that, in the streams and rivers they catch small pieces of fish called *Ngajou* (this type of fish is one of the most resistant to scarcity of water) hang them on the streets and beg to the gods in this way: *The small fishes Ngajou were thirsty, please may the good god shower upon us with abundance of rain.* Then if gods answer their prayers it rains.

When crops were assaulted by any biocides, reptiles, animals, birds, they try to stop them by killing, scaring and offering something to the gods. Among them the worst reptile was rat called *Jan-lha* meaning the night hunter. When rats attack crops, they collected some pieces of sheaves and put them together in two or three sheaves of grain and keep them near their fire-place to stop the rats from attacking. If wild animals like monkey, lion, tiger, deer, etc., attack, they make a scarecrow to scare those animals and also keep bells called *Kengkale*. On the other hand when biocides attack, they killed one bird called *Ngeichal* and keep their feathers tight and binding with sheaves of grain in various places then the animal stops.

At the end of a year when rice and other crops can be harvested, *Lompi* has to do harvesting. While cutting there are some rice plants which neither dry nor bear crops but remain evergreen. This type of rice is called *Chang-nungah* and they are the good omen and people left them untouched while others are cut down. After four or five days when the crop dries up, the family and their *Tucha* has to prepare a place to gather rice called *Phol* in one plain area as in the following day the crop must be reaped. In the morning the owner of the field, his *Tucha* and *Khothempu* came early and prepare a *Kem* (Platform/Cot) and stepladder for the *Chang-nungah*. Over that *Kem* they keep nine jars of wine called *Jutheibong* with nine sheaves of grain, after which *Thempu* came to *Phol* and *Tucha* has to carry that nine sheaves of grain. By carrying three pieces at one time he has to carry three times. When he reaches *Phol* he asks permission from *Thempu* to get in and a conversation ensued:

*Tucha: I am coming.*

*Thempu: Are you a good or bad guest?*

*Tucha: I am a good guest.*

*Thempu: what things do you carry?*

*Tucha: Tens and Thousands of Rice.*

*Thempu: If you come with tens and thousands of rice, can you fill the length and breadth of my Phol.*

*Tucha: I can fill the length and breadth of your Phol with rice.*

*Thempu: If you can do that, you can be my good guest*

*Tucha: Let me fill the length and breadth of your Phol with rice.*

After that *Tucha* came in the *Phol* and pour out what he carries. Likewise until the nine sheaves of grain are finished they have to do three times in order to complete. *Thempu* bless the rice and take one piece of the sheaves of grains and hang on the upward of *Phol* called *Pholkun* and other eight pieces has to be harvested first. The *Thempu* brought

one cock and chopped off the head and keep the cock on the floor. If the cock remains at one place and die there, it shows that the harvest of rice would be very few. On the other hand if the cock moves to every nook and corner of the *Phol*, they will have plentiful harvest of rice. Then they started collecting. *Thempu* bless the rice once again at noon and also at the end of thrashing. After they finish thrashing, one of the burly male get the sheaves of grain on the upward corner of *Phol* and squeeze it. While measuring, they keep the first one on the upward corner of *Phol* with harvesting tools called *Cheilong* over the rice and they should not pass or cross it. After they finish counting their products, they took out. This is the way in a village the agriculture system goes from the beginning to the end of a year.

### **Chang-ai Festival**

When a family in a village has a rich harvest, it is customary for the family to host a big festival called *Chang-ai* in the name of the mother. This *Chang-ai* festival is not done by every family but a family who has produced and stored rice abundantly. Generally *Chang-ai* festival was mainly performed in the month of March and April. In olden times they perform *Chang-ai* when *Bul*, *Vao*, and *Saheilaidum* flowers.

On the day of *Chang-ai* the family prepares ten jars of wine and three to four young female carry rice and spray out on the way from the house to the field. The whole village join them on this day, playing drums, singing songs aloud and they return home in the evening. When they reach home, women lock the door and remain inside the house. The crowd outside the house consisting mainly young male and female ask her to open the door and they sing the following song responsively:

*Outsider: Open the door, open the door*  
*The daughter of Thachang/Neichong opens the door*  
*We come with male and female's heads*

*Insider: We won't open the door*  
*Unless you come with wine and meat*

*Outsider: Open the door, open the door*  
*Daughter of Thachang/Neichong open the door*  
*We come with wine and meat.*

When they finish singing, women inside the house open the door and they all gather in the house forming a circle. Every one sipped the prepared wine the whole night. Older men and women sing song ehilr young males and females dance till the next morning.

### **Disadvantage of Indigenous Agriculture**

- It affects the biodiversity
- Decreases forest cover
- Poorly managed soil fertility
- It requires large land for cultivation (extensive cultivation)
- Low cropping patterns (only one rotation of crops in a year)
- Gasses emission like carbon dioxide, methane and nitrogen dioxide

- Depletion of most trees and herbs that are source of medicine
- Not effective in large scale production
- It is time consuming, requires more manual labour and less commercial
- Leguminous and Nitrogenous fixing plants are victims of recurrent burning
- Productivity of land is declining
- Sheet, rill and gully erosions are increasing every year

### **Advantage of Indigenous agriculture**

- Indigenous knowledge of products are cheap and in most cases cost free in monetary terms
- It creates social harmony and cohesion among Kukis
- It is easy to remember the concepts and practices because knowledge can be passed on orally using local language
- Manures are available locally e.g. animal wastage, ash and fermented leafs and husks
- It is not much harmful to human health
- It does not have side effects
- Indigenous knowledge of products are prepared and obtained on demand and problems associated with expired products are not of much concern
- Application of indigenous knowledge products does not always demand specialist attention like veterinary doctors or extension workers and formal education.

### **Integrate modern Techniques with the Indigenous Knowledge**

Extension workers and progressive farmers encourage farmers to use modern agricultural techniques such as planting in rows, using improved seeds like high yielding variety seeds, using chemical fertilizers, practicing soil conservation techniques like contour ploughing, mulching, terrace cultivation, etc. Diversifying their production by growing cash crops like coffee, ginger, sugarcane, pineapple, turmeric, lime, banana, passion fruit, etc., and cereal crops like rice, potato, chilli, maize, cabbage, cauliflower, tomato, groundnut, etc. Encourage using modern farm machineries and implements available in the district like tractors, power tillers, carts, pumps, threshers and sprayers. This study found that farmers want all aspects of modern technologies and indigenous knowledge that solve farmers' problems to be integrated. Agricultural production has also become more diverse and thus the need to use both modern and indigenous techniques is felt.

### **Conclusion**

The Kukis use indigenous knowledge in agriculture, medicine, soil conservation and many other fields. Farmers use wooden hand hoes for cultivation and people observe changes in the climate by watching the entire environment. Mixed cropping, contour planting and crop rotation is believed to increase the crop yield and replenish soil and long periods of fallowing land were observed. The study dogged indigenous knowledge system has enabled people to survive in the natural as well as the cultural environment. The introduction of modern technologies through formal education and training exposed many cultivators and reducing the application of indigenous knowledge and various factors like pressure on land, mushrooming of population, and changes in climatic con-

dition, market facilities and land disintegrations influence the use of indigenous knowledge with modern techniques. Countless biocides have emerged and thereby reducing agricultural productions. Therefore, cultivators become interested in promoting the indigenous knowledge of cultivation and integrating them with modern technologies in order that their needs in life are met.

### List of Interviewees

1. L. Jamsei Khongsai, aged 88 of Mongkot chepu village, interviewed on 4 July 2012.
2. L. Sokholun Khongsai, aged 87 of Jaolen chepu village, interviewed on 5 July 2012.
3. L. Holkhojang Khongsai, aged 73 of Shangkai village, interviewed on 5 July 2012.
4. L. Jamsei Khongsai, aged 88 of Mongkot chepu village, interviewed on 8 July 2012.
5. L. Lhunkhotong Khongsai, aged 75 of Mongkot chepu village, interviewed on 9 July 2012.
6. Lh. Holpao Khongsai, aged 67 of Mongkot chepu village, interviewed on 10 July 2012.

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