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PROBLEMS OF AGRICULTURAL DEVELOPMENT IN TRIBAL AREAS

P. C. GOSWAMI
AND
P. D. SAIKIA

*Agro-Economic Research Centre for North East India
Assam Agricultural University, Jorhat (Assam)*

INTRODUCTION

Agricultural development in a particular region means, by and large, improvement of the productivity from land—both per acre and per man-day. In most areas this implies supply of inputs to farmers to enable them to increase the yield. In the tribal areas changes in outlook of the farmers and improvement of physical conditions are, however, more important than the supply of inputs.

The tribal areas are generally characterized by undulating terrain, dense forest, difficult communication and low population density. Each tribal group with their own social customs and dialects usually lives in a compact area. The geo-physical conditions and social and cultural background make the introduction of modern agriculture in the tribal areas a difficult task.

Although many tribal communities live in certain compact regions of the plains, they have lost many of their original tribal characteristics due to their contact with non-tribal people in the plains. So the problem of agricultural development in the tribal areas in the plains is more akin to other plain areas than to purely tribal areas in the hills. Almost all of the indigenous population in the hill areas still maintain their own characteristics. Discussion in this paper will, therefore, be confined around the problem of agricultural development in hilly tribal areas only, particularly in North East India.

CHARACTERISTICS OF TRIBAL AGRICULTURE

Agriculture in the tribal areas differs greatly with the plough farming elsewhere. Most tribal people in the hills practise a shifting type of cultivation which is popularly known as *jhum*. Social anthropologists believe that after the hunting and collecting stage of human civilization, this technique of raising crop was learnt and due to the nomadic character of the people at that time there was no fixed farm. Because of the geo-physical conditions of the hills, tribal people still practise shifting cultivation, and unless compelled by the physical and economic circumstances, prefer this system of cultivation in place of permanent cultivation.

For *jhum* cultivation the forest in the hill slope is cleared and burnt. The land is then roughly prepared with crude implements such as wooden digging stick and hoe and the crops are raised in mixture. The usual mixture are paddy, maize, cotton, millet and vegetables of various kinds. Only a few crops are grown as single crop by the tribal people. Sesamum is usually a single crop

in Mikir Hills, paddy is a single crop in Garo Hills in the second year of cultivation, sugarcane is a single crop in Mizo Hills and Mikir Hills. Table I shows the area under field crops according to type of farming in Kanther Terang village in Mikir Hills in Assam.¹

TABLE I—AREA UNDER FIELD CROPS ACCORDING TO TYPE OF FARMING IN KANTHER TERANG VILLAGE

Crop	Acreage under different crops			
	One exclusive crop	Mixture of two crops	Mixture of three crops	Total
1. Paddy	17.45 (25.50)	42.65 (62.32)	8.34 (12.18)	68.44 (100.00)
2. Cotton	—	31.10 (79.07)	8.23 (20.93)	39.33 (100.00)
3. Maize	—	40.86 (83.15)	8.28 (16.85)	49.14 (100.00)
4. Sesamum	24.81 (100.00)	—	—	24.81 (100.00)

Note: Figures within brackets indicate percentages.

For successful cultivation the slope should not be very steep as soil erosion is likely to destroy the crop (and land) within a short period. Because of the rapid loss of fertility, the *jhum* land is abandoned after one or two years of cultivation and a new plot is selected for fresh cultivation. In the process a plot once used is left fallow for a number of years to regain fertility. This is known as *jhum* cycle, the interval of which is mainly dependent upon the density of population of a particular area and the availability of suitable hill slopes. The higher the density of population, the shorter is the *jhum* cycle. Thus the *jhum* cycle in the Garo Hills of Assam is about five years, in the Mikir Hills seven years, in Khasi Hills three years, in Mizo Hills five years.² In NEFA the *jhum* cycle is usually longer.³

Apart from the loss of forest and consequent soil erosion in the hill slopes and flood in the plains, such cultivation offers very little scope for economic upliftment as it is subsistence in nature. Shifting cultivation has very little scope for specialization as diverse crops are sown in a single plot of land. Agricultural development in the hill areas would, therefore, mean gradual shift from shifting to settled farming.

Because of the mixture of crops, it is difficult to estimate the area and yield for each crop. The area is usually estimated on the basis of seed rate. In the

1. P. D. Saikia: *Changes in Mikir Society*, Agro-Economic Research Centre for North East India, Jorhat, 1968.

2. P. C. Goswami and N. Saha: *The Problems of Agricultural Development in the Hill Areas of North East India*, Agro-Economic Research Centre for North East India, Jorhat, 1969.

3. S. Roy: *Aspects of Padam Minyong Culture*, Shillong, 1960.

four hill villages surveyed by this Centre, it is observed that the average yield of paddy compares favourably with the per acre yield of Assam plains.

In certain pockets of the hill areas, tribal farmers also practise settled farming when the condition is favourable. But in most tribal areas the low-lying flat land is not available for settled type of cultivation. Angami Nagas in the Nagaland and in some areas the Khasis have been practising settled farming by constructing terraces on the hill slopes. But terrace cultivation is not popular due to heavy costs involved in construction. The yield is also low (especially in the initial stage) as the top soil is removed for construction of the terraces.

As the tribal economy is not yet wholly monetized and commercialized, productive efforts are usually directed to meet one's own requirements of cereals, and other vegetables. In certain cases if the total output in a village or a group, is sufficient to meet the requirements of the village or the groups it will not matter whether the individual household is a surplus or deficit one as it will be possible for all deficit households to get the supply from the surplus households in time of need. When the *jhum* production is not sufficient, it is supplemented by collection of vegetables, roots and tubers from the forests. All these practices are not conducive to the maximum utilization of family labour on individual farm.

LAND OWNERSHIP AND NOMADIC HABIT

Most of the hilly areas are very thinly populated and the villages are situated far apart. Although individual ownership of land is recognized in certain areas, such ownership is usually confined to homestead and settled farm land. In most tribal areas land is owned by the community as a whole. Each village, however, operates in a particular demarcated area and the power of distribution of land for cultivation to individual families is vested on the headmen or village council. It is observed that due to the non-fixity of tenurial rights, the farmers have very little attachment to the land they operate. They do not take any interest for the improvement of land for future use. A tendency for improvement of land is noticed in areas where land is individually owned and cultivated.

Among the Mikirs of Assam and some other tribes of NEFA, land is communally owned. One can cultivate a plot of land according to his choice. The village chief enjoys the power to settle disputes relating to sharing of *jhum* land among the villagers. In Garo Hills, the hill *mouzas* are divided into several *Aking*s, each under a *Aking Nokma* (headman) who technically owns land on behalf of his clansmen.⁴ The *Aking Nokma* has the power to distribute land amongst his clansmen for the purpose of *jhuming*. The district of United K & J Hills is divided into *Rajs* ruled by *Siems* (Raja), *Lyngdoh* (Priest), *Pator*, *Basan* and *Sardar* who are administrators of each *Raj*.⁵ Each member of the *Raj* is entitled to cultivate any vacant land as much as he pleases. As long as he cultivates, the land belongs to him. If a man does not cultivate land under his occupation for three consecutive years, it reverts to the *Raj* and some other person can cultivate it. The

4. N. Saha and M.D. Borkataky : Bongshidua (Socio-Economic Study of a Garo Village of Garo Hills), Agro-Economic Research Centre for North East India, Jorhat, 1968.

5. D. Gohain: Mawntnum (Socio-Economic Study of Khasi Village of K. & J. Hills), Agro-Economic Research Centre for North East India, Jorhat, 1967.

Mizos used to have a system of hereditary chiefship in the villages.⁶ The *Lal* (village chief) used to own land of the village and under the British rule used to enjoy autocratic powers in distributing land among the villagers. The *Lalship* is now abolished and the management of village land is now vested in the village council elected every three years by the villagers democratically. The land for *jhuming* is now distributed by drawing lots by the village councils.

A few hill tribes of North East India move from place to place in search of *jhum* land. A hill Mikir village, for example, is not a geographical unit because of the frequent change of site of the village. As they shift to new localities in almost regular intervals, the construction of permanent houses in particular sites is considered useless. In general, however, the villages are usually fixed in one locality but their *jhum* field shift to new place along with the *jhum* cycle. Moreover, the size of a village is unusually small. In some cases only four or five households constitute one village, which are situated 2 or 3 miles apart. It is rather difficult to take up agricultural development plans in such small, isolated migratory villages.

DEMAND FOR AND SUPPLY OF LABOUR IN TRIBAL AGRICULTURE

In *jhum* cultivation, the first operation, *i.e.*, cutting and clearing the jungle requires very hard labour and all the able-bodied persons work for more than eight hours a day throughout February and March. After this they remain idle for a short period till the onset of early monsoonic showers. From the middle of April to May the entire labour force is engaged in the preparation of soil and sowing of the seeds. During June and July weeding is done in the fields but the workload is not so heavy. Harvesting begins only in late September and ends in November. This type of engagement in agriculture shows that the people practising shifting cultivation remain unemployed for more than five months in a year.

In most of the tribal societies, one is not accustomed to work as an agricultural labour. So one is very much dependent on family labour which is the vital input under shifting cultivation. It is customary to construct the house of a co-villager by others in a group for gratis. In all such voluntary services the host offers food and drink, which however, is not considered as payment. Dearth of hired labour has stood in the way of extension of acreage under crops. It is interesting to note that in certain areas tribal people work as casual labour in urban centres.

ISOLATION FROM THE FORCES OF MARKET ECONOMY

Long isolation has compelled the tribal people inhabiting the interior areas to evolve a self-sufficient economy. In a subsistence economy, where population is sparse, there is little local demand to induce people to produce for sale.

In a village survey conducted by this Centre in the Mizo Hills,⁷ it was found that the production of cash crops is very limited due to its situation in an interior

6. N. Saha and M.D. Borkataky: *Hmunpui (Socio-Economic Study of a Mizo Village in Miz Hills)*, Agro-Economic Research Centre for North East India, Jorhat, 1968.

7. *op. cit.*

area. There is no roadway and other modern means of transport to the village which lies at a distance of 12 miles from the nearest market centre. It is observed that the sale of crops and fruits contributes 6.4 per cent of the total income, but there is very little eagerness to produce such crops as it will be difficult to sell the surplus produce. In the interior villages, even when there is some inside transactions, it is mostly on barter system or on the basis of returning the crop after the harvest. There is very little scope of monetization of these transactions. But where roads and transport have been developed the demand for goods has increased. For instance, in the Mizo Hills, ginger cultivation has extended greatly in recent years in villages by the side of the Silchar-Aizal road.

In the interior villages of NEFA, the people produce very little for sale. The Gallongs of Siang district used to produce oranges for home consumption. At the persuasion of the Agricultural Department, some of the villagers expanded their orange gardens. But marketing facilities being limited they had to sell the oranges at 30 to 40 numbers per rupee. Few enlightened Gallongs opened big pineapple gardens but they faced extreme difficulty in selling the fruits. Some of them approached the Agricultural Department and requested them to purchase their horticultural products. The Department could not help them. The cost of transporting such articles to the nearby marketing centres in the plains is almost prohibitive.⁸

Our field experience indicates that most of the tribal people react immediately and favourably to the market forces. The example of a Mikir village⁹ shows that the people produced considerable quantity of agricultural products for the fast developing market centre, even though their technique of production is very primitive. This phenomenal increase in the area and output of cash crops in the village is due to its close proximity to a fast developing township which became the headquarter of the newly formed district.

TABLE II—PERCENTAGE INCREASE OF AREA AND OUTPUT OF COMMERCIAL CROPS IN 1965 OVER 1960 IN A MIKIR VILLAGE

Crops	Percentage increase	
	Area	Output
1. Cotton	140.7	155.2
2. Maize	426.1	574.5
3. Sesamum ..	93.4	58.0

This shows that in crop production, the commercial sector has shown marked expansion. Cotton, maize and sesamum are almost entirely cash crops which are hardly grown by the Mikirs of the interior areas. But in the interior villagers cannot have the benefit of such expanding market.

8. P. D. Saikia and Others: Socio-Economic Study of a Gallong Village in NEFA (Report under preparation), Agro-Economic Research Centre for North East India, Jorhat, 1970.

9. P. D. Saikia : Changes in Mikir Society, *op. cit.*

Due to their long experience with market economy, the Khasis have proved themselves to be efficient cultivators. The Khasis supply vegetables and fruits to many places inside and outside Assam. The percentage of crops produced for sale by the people of a village in Khasi hills,¹⁰ situated near a market centre at the Gauhati-Shillong National Highway is shown in Table III.

TABLE III—PERCENTAGE OF SALE OF CERTAIN CROPS TO TOTAL PRODUCTION IN A KHASI VILLAGE

Crops	Value of production (Rs.)	Value of sale (Rs.)	Percentage of sale to production
Maize	1,462	915.00	62.59
Inferior millet	1,296	1,056.00	81.48
Vegetables	6,680	2,561.25	38.34
Pineapples	4,045	2,658.75	65.73
Sesamum	25	25.00	100.00

This shows that the traditional subsistence economy of the village is considerably affected by a process of gradual monetization. The existence of a local market and easy transport system has changed the traditional crop pattern of the village.

OPPORTUNITIES TO SAVE AND INVEST

The tribal people living in the interior areas of the hills are self-contained people. Although such interior villages are gradually being monetized, the traditional currencies are still important particularly for traditional socio-economic transactions. For instance, in Gallong and Dafla societies of NEFA,¹¹ unusual importance is shown to certain traditional brass bells, beads or *daos* which are essential for marriages and propitiatory ceremonies and other rituals. The surplus output is generally converted to such traditional goods to facilitate storing. In interior areas currency is used only to purchase goods from outside. The demand for such outside goods is limited to only a few items, *e.g.*, salt, utensils and some pieces of clothes, dry fish, etc. The desire to invest in agriculture is greatly hampered due to lack of opportunities. No improved agricultural tools and implements suitable for hilly areas have so far been developed. The application of chemical fertilizers in hilly slopes is considered useless as these will be washed away with heavy rain. Land reclamation is costly and beyond the scope of the people without heavy subsidy from the government. Having no suitable avenues of investment, the surplus wealth is diverted to procure more wives, unproductive *mithuns* (wild buffaloes), ornaments, beads, guns and transistors in certain communities like the Daflas and Gallongs. Most of these acquisitions cannot help the villagers to generate additional income in future.

10. D. Gohain : *op. cit.*

11. P. D. Saikia : *Dafla Social and Religious Life*, Gauhati University, 1964.

SOCIAL CUSTOM AND HABITS

Jhum operations are connected with agricultural rites and ceremonies. The adoption of new techniques of agriculture may not provide facilities to worship the appropriate deities. The shift from traditional type of cultivation means partial shift from their traditional way of life itself. It takes time for a tradition-bound society to come to a decision in accepting an innovation which affects their way of life vitally.

In tribal societies of NEFA the bride-price is very heavy. The bride-price is usually paid in the form of *mithuns* and those who do not own *mithuns* are required to spend their surplus income accrued from agriculture for the bride-price. A large number of *mithuns* are killed for marriage feasts. Much time and energy are lost in negotiating elaborate marriage settlements and in settling conflicts regarding non-payment of bride-price. Sickness also involves huge expenditure for appeasement of evil spirits. Many families are economically ruined in performing such elaborate ceremonial rites. In such cases, social innovation is equally important as technological innovation.

Slavery was widely prevalent among many tribes of NEFA till recent years. The Administration has abolished slavery by paying compensation to the masters. This social reform has also created certain complications in some tribal societies. Land being abundant for *jhum* cultivation, the villagers having more working hands in command can produce more crops. Under the *jhum* economy the size of a family farm is directly related to the number of working members in a family. As villagers are unwilling to work as agricultural labour, a rich man either purchases slaves or procures wives to work for him. So there is a tendency to procure more than one wife which is considered as sound investment of surplus wealth to bring more working hands. Slavery being prohibited at present, marriage is the only way left for having additional working hands for a family.¹²

A glaring example of failure to adjust to a new environment can be cited from a settlement of shifting cultivators under the *jhumia* colonisation scheme of Tripura. In Tripura, the '*Jhumia* Colonisation Scheme' was introduced in 1967 to settle the shifting cultivators for permanent house and cultivation. Under the Kathaliacherra colony scheme each family selected for settlement was given 4 acres of land and a lump sum of Rs. 500 for purchasing bullocks and agricultural implements. Houses were also built for the settlers on subsidized basis. In a study,¹³ it was observed that nearly 25 per cent of the families deserted the colony in spite of such facilities. Desertion of the colony by a sizable portion of the households indicates that economic incentives are not enough to attract the tribal people from their traditional way of life.

Laws of inheritance in two matriarchal societies, viz., the Khasis and the Garos are observed to have hampered economic growth to some extent. In the Khasi society the youngest daughter (*ka-khaddu*) and in the Garo society the selected

12. The poor families who are not able to provide bride-price and get wives for all the male members of the family have to share a wife between brothers.

13. P. D. Saikia and Others : Kathaliacherra (Assessment of a *Jhumia* Colonisation Scheme in Tripura), Agro-Economic Research Centre for North East India, Jorhat, 1962.

daughter (*nokna*) inherit the property of the father. In both the societies, a person after marriage is required to live in the house of the bride. Before marriage a person is not expected to work hard in his father's farm as he knows that after marriage he will have no right over the property of his parents. In these two societies, a person takes active interest in agricultural activities only after marriage.

Due to the reservations of certain percentage of posts in Government services and in contract and trade for tribal people, the educated section of the tribal people has few new avenues of income. That there is a marked tendency of the enlightened people of an acculturated community towards non-agricultural occupations is highlighted in a study on Sherdukpens of NEFA by Bhagabati.¹⁴ He observed that among the Sherdukpens of Rupa, there are many who have secured jobs, and others who have become construction contractors or traders, frequently both. As a result, the educated section does not take interest in agricultural development. Some educated persons of the hill areas who have taken agriculture as their primary occupation proved to be successful cultivators.

In recent years, increasing military concentration and setting up of administrative quarters in tribal areas have created new local demand for agricultural products. But the tribal people have not been able to reap the benefit from this due to the absence of any institutional agency for mass supply of vegetables, fruits, poultry, etc., from the neighbouring localities. The road building and construction activities at the Government level have also helped in augmenting income by some tribal people as contractors and military suppliers. But they have not encouraged general prosperity. Moreover, it is not yet certain how long the new prosperity to the few will last as the public works service cannot be continued for ever. It is, therefore, essential to create opportunities for investment in permanent activities so that the additional amount received by the tribal people can be retained in these areas.

INTEGRATED APPROACH NEEDED

The problems of agricultural development in the hill areas are linked with various other socio-economic considerations, *viz.*, improvement of infra-structure, changes in social habit and customs, creation of demand for goods and services and urge for development, increase in income, opportunities for investment, etc.¹⁵ To tackle these problems an integrated approach to the whole socio-economic structure is essential. At present several Government agencies like Departments of Agriculture, Forestry, Soil Conservation, etc., are engaged in the task of development of the hill areas. But there is little co-ordination amongst these agencies. In these activities the people's participation is also insignificant. For the success of various measures for development certain social reforms will be necessary.

Conferring of land right to individual farmers is expected to encourage better land utilization. Simple form of marriage ceremonies and abolition of bride-

14. A. C. Bhagabati, "Aspects of Economic Change in a NEFA Village," Paper read in Summer School of Sociology by the Delhi University at Kohima in April, 1970.

15. P. C. Goswami, "Problems of Economic Development of Tribal Areas," Paper read in Summer School of Sociology by the Delhi University at Kohima in April, 1970.

price are likely to help capital formation in the rural areas.¹⁶ Extension of medical facilities will also greatly relieve the people from heavy expenditure on ceremonial rites for curing diseases. The present system of co-operative work and land utilization according to the number of family workers can be easily institutionalized into co-operative farms.

The prospects of investment in hill agriculture should be widened by evolving improved agricultural implements suitable for the hill areas. Scope for suitable investment of the surplus wealth should be created. Terracing the gentle slope and use of manures and fertilizer on terraces should be taken in hand on a phased basis. Valley land should be reclaimed for settled cultivation. Perennial hill streams should be used for irrigating the terraces and valley land so that a number of crops can be raised throughout the year.

There is scope for a change in the cropping pattern in certain hilly areas. Stress on improvement of the traditional field crops at enormous cost should be lessened, as the hills provide excellent conditions for fruits and vegetable cultivation. Horticultural crops such as oranges, lemon, pineapples, plums and in certain areas apples are grown successfully and there is enough scope of expansion of such crops if market is created for them. The setting up of fruit processing industries in tribal areas is likely to solve the marketing problem of fruits considerably. Government-sponsored Marketing Boards might also help tribal people to market their products.

In *jhum* cultivation draught animals are useless. Moreover, most of the tribal people are not accustomed to take milk. But the hill areas are suitable for livestock and poultry farming. The Nepali settlers have fully availed of this opportunity and augmented their income through dairy farming. Bee-keeping and silk worm rearing can be other important subsidiary occupations. The tribal women are experts in weaving and there is a great potentiality to develop handloom weaving as the demand for tribal handloom products has increased in foreign countries considerably.

Agricultural development in the hilly areas is hampered due to the absence of easy, speedy and cheap transport services. As the private sector will not come forward to invest in the tribal areas at the initial stage due to lack of necessary infrastructure, the Government will have to take the responsibility of provision of improved means of transport, subsidized transport rates, marketing agencies, etc. Potentialities for agricultural development in the tribal areas are immense. The only thing necessary is the encouragement of local initiative for it.

16. P. D. Saikia, "Certain Aspects of Kinship and Marriage among Daflas and Gallongs of NEFA," Paper read in Summer School of Sociology by the Delhi University at Kohima in April, 1970.