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Impact of Dairy Farming on Rural livelihood with special reference to Sadiya Sub-Division in Assam

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ABSTRACT

Livelihood generation in rural areas of Assam has become increasingly difficult due to multiple factors like population increase, shrinkage of cultivable agricultural land and eco- fragility like draught and flood proneness. Rapidly growing markets for livestock products in general and dairy products in particular has opened new avenues for enhancing rural incomes. Dairy farming plays an important role in sustaining the rural livelihoods. The importance of dairy farming in Sadiya hardly needs emphasizing. It is a traditional pocket for milk and milk products of high quality which is famous in upper Assam districts. The product 'Mawa' a base material for making 'Peda'(sweet) is regularly being supplied to and is in great demand in Bokakhat an important business center in the whole of North- East. The villages located in the bank of Brahmaputra river tributaries favors rearing of cattle as there is abundance of succulent green fodder as well as for cattle throughout the year. The cattle are being kept *in-situ* in the grazing areas day and night in sheds temporarily built on river bank. Cattle housed under this free range system are not usually confined except those cows that are in milk. No concentrate feed is provided apart from grass & common salt in the evening on their return from grazing. Milking is done in the morning. This system does not involve much investment or labor and hence is popularly adopted by the villagers since last several decades. Village households depend on this open range system called *'khuti'* system of rearing cattle in Sadiya. This provides not only milk but also plough bullock for sale. Apart from paddy and winter crop cultivation dairy farming has been a major agricultural activity in Sadiya. It provides a sizeable economic return to rural household families. An attempt has therefore been made to study the impact of this traditional '*khuti*' system of dairy farming on livelihood generation.

Key words: Open range system, Intensive close system, Khuti..

Introduction

The sustenance of rural livelihoods is currently at stake than ever before, in the face of economic liberalization. Livelihood options are shrinking in rural areas in general and more so in eco- fragile regions affected by drought, flood and other natural calamities and also in under developed/ backward districts. Rapidly growing markets for livestock products in general, and dairy products in particular (owing to raise in per capita income) are opening new avenues for enhancing rural incomes. Dairy farming plays a significant role in sustaining the rural livelihood. However, some of the dairy based flood prone districts made rapid strides in ameliorating poverty by substantially contributing to the district/state agriculture economy.

The importance of dairying in our country hardly needs emphasizing. The vast resources of livestock in the country play an important role in the national economy as well as in the socio- economic development of millions of rural households. Livestock sector provides employment to 18 million people and nearly 70 per cent of them are women around the country. Further, dairy sector is the major source of income for an estimated 27.6 million people. Among these, 65 to 70 per cent are small, marginal farmers and land-less laborer. Apart from employment generated by rearing of animals, the procurement of milk and its processing also provides substantial employment.

Recognizing the importance of dairy farming in its substantial contribution to the agriculture economy and to the livelihood of resource poor farmers/ rural population, high priority is attached in several locations to strengthen the milk marketing infrastructure, veterinary services for breed improvement and health care, extension support for capacity building of farmers, developing entrepreneurship, technical skills and knowledge on scientific dairy farming practices, etc. several programmers have been launched from time to time by state/ central Government for promoting the sector. Although the impact of such programmers varied widely. It may be noted that the importance of livestock rearing is highlighted of late in the development issue of food security, equity and decentralized governance through people's participation. Livestock rearing is a means for sustainable livelihoods in rural India, more in eco- fragile regions. Therefore, to explore and examine the impact of dairy farming, the present study is designed with the following objectives.

Objectives: -

1. To examine the role of dairy farming in rural economy on flood prone areas with reference to Sadiya.
2. To suggest measures to improve rural livelihoods through dairy farming.

Literature Review: -

Animal husbandry has been an integral part of agrarian economy since time immemorial. For many Indian tribes, animal husbandry is the sole activity for survival. It provides multiple benefits to both farming and non- farming households, including provision of draught power, farmyard manure, nutrition, and income **(Vaidyanathan, A. (1988).**

Draught, transport and milk are the most noteworthy income sources as resulting from livestock **(Campbell *et. al.*, 2002).**

Ultimate purpose of livestock rearing and livestock management practices is to earn income for the live hood sustainability as income generated help in improving livelihoods **(Butler *et. al.*, 2007).**

Smallholder dairy production was found to be an important and have the potential to poverty alleviation, food security, improved family nutrition and income and employment generation (**Uddin *et. al.*, 2012)**.

Livestock is significantly contributing to livelihood and food security of more than a billion people in different parts of the world. However, the performance has been poor in many developing countries, due to various reasons. The Indian experiences of improving cattle and goat husbandry to generate sustainable livelihood, has been very successful in empowering the poor **(Hegde, N., 2019).**

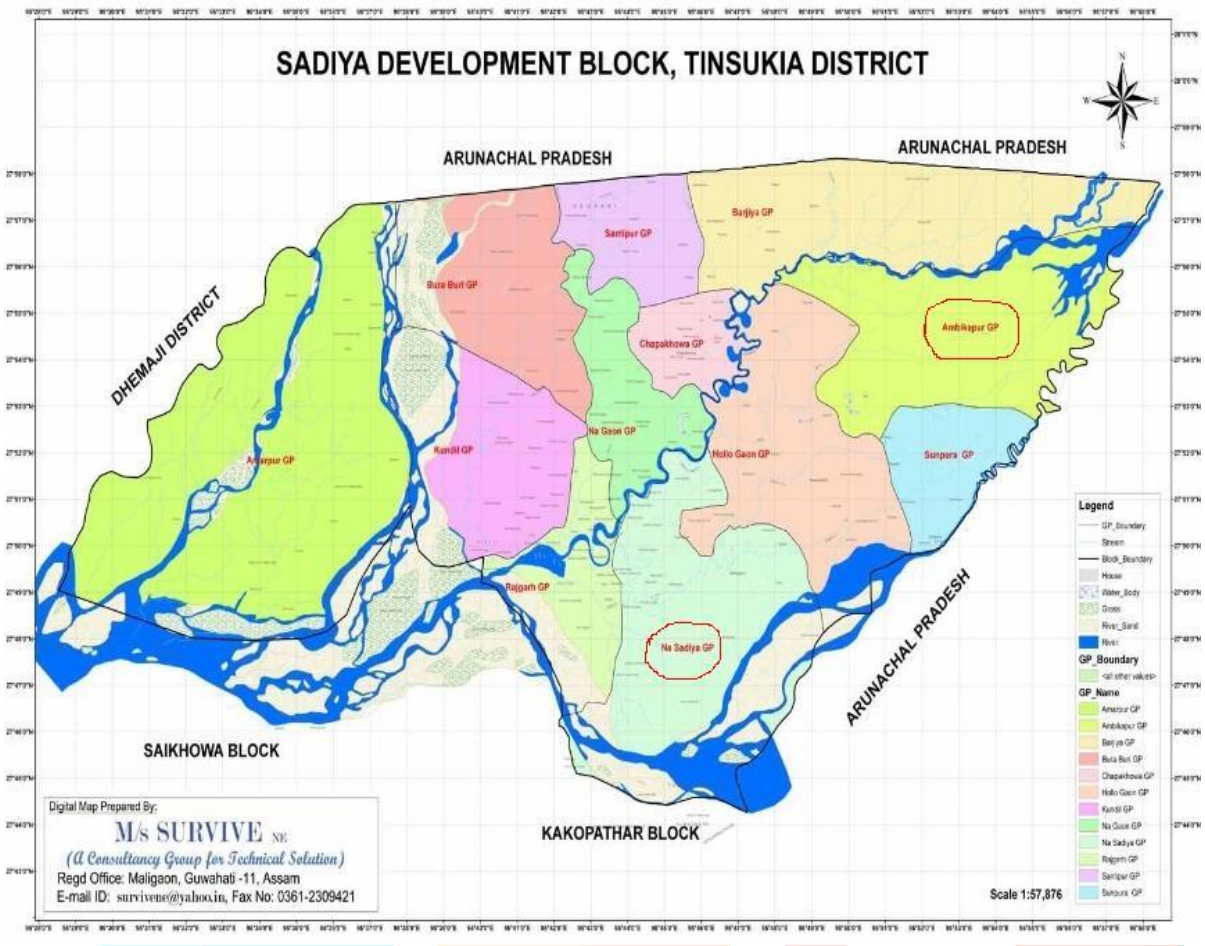
Methodology: -

Data Collection: - The present study was taken up in two Goan Panchayat areas leading on milk production namely Ambikapur and Na-Sadiya of Sadiya development block. The criteria for selection of Gaon Panchayat was determined in consultation with the department of A.H. and Veterinary Sadiya Sub-Division with their progress in dairy performance, existence of contrasting milk production systems and geographical similarity.

The primary data were collected through questionnaires and so also secondary sources of information were collected from official documents, records, registers and reports of Department of Animal Husbandry and veterinary and milk unions/ private dairies. Discussions were held with officials of these departments, non-dairy farmer groups, progressive farmers, etc. to elicit their views, ideas and opinion on the important issues pertaining to dairy farming.

Pilot area: -

Sadiya is an agro based and potential subdivision situated in eastern Assam having no industry to generate employment avenues for unemployed educated mass. As such people devote themselves in agriculture and allied sectors. Since time immemorial, livestock are reared for requirement of protein in their food basket as most of the populations are non- vegetarian. Further, livestock especially cattle and buffalo play an important role as an insurance cover for the farmers during stress period. Composite farming in Sadiya Sub- Division involves livestock, poultry and agriculture.



Livestock Holding Pattern and yield: -

The rural people in the study area are wholly cultivators depending mainly on paddy cultivation and occasional winter crops hence they need plough bullocks and plough buffaloes for tilling the low lying cultivable areas and hence usually every household keep a pair or two plough bullocks and at least one pair of plough buffalos. A pair of plough bullock is generally retained for 4 to 5 cultivation rounds after which it is disposed and replaced by a young and sturdy pair of plough bullock. Likewise, a pair of plough buffalo can provide service up to 5 to 6 years after which it is disposed and replaced by a new pair. The existing market price of a young and healthy pair of plough bullock id around Rs. 30,000/- and that of plough buffalo is Rs. 40,000 to 50,000/-. Hence, average household is unable to afford such a huge amount. As an alternative, they keep female cows and buffaloes to get male calves and of course good quality heifers. As such a medium level farmer holds 10- 12 nos. of cows and 2 to 3 nos. of buffaloes.

The average milk yield of the local breed of cows is very low, ranging from 400ml to ½ litre and that of a she buffalo is 2 to 3 litres.

Apart from cows and she buffaloes people in these areas rear country hens for meat and eggs. Local variety duck is also reared in some households as duck eggs and meat fetches good price and require no elaborate feeding and management. Pig rearing is a popular practice in this area and almost all households keep 1 to 2 castrated mate pigs for meat purpose and females for litter. Local country chicken lays 70 to 80 eggs and duck 50 to 60 per laying season. The average market weight of such castrated pig is 60 to 70 Kg and it is sold @ Rs 200 per kg.

Goat can be termed as poor man's cow as it gives a little milk and also an adult female goat fetches Rs 1500/- to 2000/-.

Cattle transported by boat for sale

The male kids are castrated and retained for 18 to 20 months and is sold at a premium price of Rs. 6000/- to 7000/-. Most of the landless households and those having very little cultivable land use to keep 2- 3 nos. of adult females and 1 or 2castrated bullocks.

Management practices followed by dairy farmer families in study area: -

Grazing field

Traditional open range system is largely practiced by the farming families under which cattle are let loose in the early morning for grazing. In 'Khutis' lactating cow and suckling calves are kept confined and provided with rice polish and common salt along with grass and drinking water.

Housing System : Assam type all sides open sheds are provided for night shelter and in 'Khutis' where river wind current is very strong sides are covered with barrier made of reeds. Locally available materials like bamboo

and thatch, are being used for construction of such sheds. No elaborate feeding is practised. Since main health problem arises due to stomach worm infestation, people uses deworing medicines atleast twice in a year for adult cattle and after every alternate month for growing calves.

Income of rural household maintining dairy cows mainly comes from sale of milk and cattle. A major part of yearly expenditure is covered from selling culled cows and bullocks and to some extent form sale of milk.

Health Coverage :-

Flood prone areas like Sadiya are generally endemic to infectious baccterial diseases like *Haemorrhagic Septicemia* (HS) ' Golbera' and *Black Quarter* (BQ) 'Jaharbat' and *Foot and Mouth Disease* (FMD) 'Sabaka' a viral disease also plays havoc in the study area. Annual vaccination against these diseases is done by the Veterinary Field Assistants (VFA) posted in State Veterinary Dispensary, Na- Sadiya and Sunpura Veterinary First Aid Center.

Other veterinary emergencies faced by the dairy farmers in the study area are grass poisornig due to accidental ingestion of a poisoneous weed Called *Lantana Camera.* Treatment for such emergency is provided by the veterinary staff posted in the area.

During disaster like flood there occurs an acute shortage of fodder grass as the grazing land remain submerged under water and as the flood water receeds heavy siltation deposit linger this problem until next heavy shower of rain water.

Present status of dairy cows in study area :-

Due to availability of good succulent fodder grass, cattle rearing as a whole is less problematic than other ventures. It gives good return with practically no investment and minimum labor. Large herds of dairy cows are seen in all times with the exception in the year 2012. There occurred a devastating flood which caused death of a large number of cattle in sadiya as a whole. Approximately 10,000 heads of cattle were lost either due to wash away, drowning, being stuck up in silted mud, non-availability of feeds and fodder and post flood diseases.

It has again come to the original status during last 2-3 years.

Impact of dairy farming on social development: -

Dairy animals in particular and livestock as a whole has become the driving force of rural household families in the study area. The household income on an average is mostly contributed from dairy farming. Typically, a male member from every dairy farmer household with one or two helper maintain traditional dairy farms called 'Khuti'. As the market price for milk and dairy cows is increasing the level of income of dairy farmer families is substantially increasing and it has been contributing greatly for return of social stability peace and prosperity in these insurgency prone areas. These areas can be developed more if the following constraints are removed.

Area of concern:

- Road connectivity still pauses as a major problem in Sadiya as a whole and the study areas in particular. Bicycle and boats are the means available for transportation of milk up to motor able road. During summer, milk gets damaged as milking is done during early morning hours from 4.00 am to 5.00 am and it reaches final destination like Digboi and Tinsukia.

- Being in highly flood and earthquake prone zone the dairy farmers are always at risk and no apparent pre-flood preparedness, during and after flood mitigation system is in place to prevent such heavy loss to the rural economy.
- In adequate livestock health service infrastructure and manpower are another major hurdle for development of dairy farming.
- No organized procurement, storage processing and marketing service is available to the dairy farmers for sadiya as a whole.
- No financial support is available to them as the existing bank branches decline to provide finance due to want of security.

Suggested measures for development: -

- Improvement of link roads connecting the Khutis in the study areas under central Govt. sponsored MGENREGA scheme involving local residents of villages on daily wage basis which will also give an additional employment.
- High rise platforms for temporary shelters are needed to be constructed under the same MGENREGA schemes.
- Safe guarding the community grazing land would remove fodder scarcity.
- Additional veterinary Hospital / Dispensaries are needed to be constructed with sufficient deployment of technical manpower.
- Bulk Milk Cooling Units (BMCUs) run on Solar system can remove the problems of temporary storage of milk.
- A tripartite agreement among milk producer, handler and bulk consumer/ purchaser will remove the problem of giving security to Bankers for bank finance.

Concluding Remarks: -

Daily use of nutritious milk has become an urgent need for safe guard of health. So, there is a great potential in shifting focus to this sectoral development. If proper measures are taken, the study area would become a potential milk pocket generating employment, increased income and growth of rural economy.

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