

Role of Livestock in Ensuring Food Security in Moradabad District: A Case Study

Mohd. Daud Ahmad¹ Dr. Ashish Kumar Parashari²

¹Research Scholar ²Research Associate

^{1,2}Department of Geography

^{1,2}A.M.U. Aligarh

Abstract— Food security is the condition in which all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. In the developing the availability, accessibility and supply of food and nutrition is very low so a significant proportion of population is suffering from malnutrition. The role of livestock in ensuring the food security is immense because almost all the people consume livestock derived products directly or indirectly. The present study was conducted in four villages of Moradabad District, Uttar Pradesh and entirely based on primary data. The present study has been carried out to find out the role of livestock in changing food habits and assess the proportion of livestock derived products in diet taken by people. The results of the study show that livestock husbandry is a prominent source of nutrients and proteins for the poor and underprivileged sections of society. The consumption of meat and dairy products have increased by 40 percent 6.25 percent respectively while meat, milk, cheese, butter, curd and ghee constitute an important part of diet taken by respondents. The study also reveals that change in food habits also attributed to the growth of livestock husbandry and change food production systems.

Key words: Livestock, Food Security

I. INTRODUCTION

Food security, as defined by the United Nations' Committee on World Food Security, is the condition in which all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. The increasing demand for milk and milk products and the employment generation through dairy marketing have provided a better option of income generation to supplement the agricultural inputs and fulfill household expenditures (Khan, N. and Parashari, A.K., 2015). In the developing the availability, accessibility and supply of food and nutrition is very low so a significant proportion of population is suffering from malnutrition. Milk and meat products are the most demanded products all over the world but their consumption at global, national and regional level is different (Khan, N., et al. 2008). Most of population of India lives in the rural areas where agriculture and livestock form the main economic base. Milk production is an important operation of livestock husbandry which provides employment and nutrient for millions of livestock rearers (Khan, N. and Parashari, A.K., 2017) In the recent decades the agricultural productivity has declined considerably and fragmentation of landholding worsened the food production in the country, so, people have adopted the integrated crop-livestock production system to enhance food production.

According to latest FAO estimates in 'The State of Food Insecurity in the World, 2015' report, 194.6 million people are undernourished in India. Food security is positively correlated to food availability stability and accessibility (Rukhsana, 2011). Although, production of food grain and number of livestock has increased considerably but in comparison to these the human population has grown at much faster rate which has caused shortage of food in the country. The role of livestock in ensuring the food security is immense because almost all the people consume livestock derived products directly or indirectly. The growth and development of livestock sector has been accentuated by the technological advancements and diffusion of information (Ghosh, B., 2012). It also enhances the nutritional intake in the food and sustainable supply of food to the poor under marginalized sections of the society. Religious and cultural practices limit the capacity to increase domestic output but they also increase consumption (Bhaskaran, S., 1996). The livestock revolution has increased the role of this sector in food production while its proportion of livestock derived products in the diet has increased considerably. It is predicted by the Food and Agriculture Organisation (FAO) that by 2020, the demand for milk and meat would be doubled during 2001 to 2020. This kind of accelerating trend in demand and production of livestock products in developing countries is described as Livestock Revolution (Rollefson, K.I., 2001). The shift in the food habits from vegetarian to non-vegetarian has created huge demand for livestock sector and provided a window for expansion of this sector.

II. OBJECTIVES

- 1) To find out the role of livestock in changing food habits.
- 2) To assess the proportion of livestock derived products in diet taken by people

A. Study Area

The Moradabad district lies between 28°21' N to 28°16' N latitude and 78°4' E to 79°00' E longitude (figure 1). According to the 2011 census the population of Moradabad district is 4,773,138 persons. This gives it a ranking of 26th largest district in terms of population in India. The district has a population density of 1,284 persons per square kilometer. The population growth rate over the last decade was 25.25 per cent. The district possesses sex ratio of 903, and has a literacy rate of 58.67 per cent. For administrative convenience the district is divided into six *tehsils* (Sub divisions) having thirteen developmental blocks. Moradabad lies in the Gangetic plains and is an agriculturally developed district of Uttar Pradesh. The district possess a large livestock population with 11,78,319 heads comprising of

various species. The share of Buffalo is largest (84.92 per cent) followed by Goat (17.54 per cent) and Cattle (17.49 per cent). The presence of sheep is quiet insignificant (0.05 per cent) in the district.

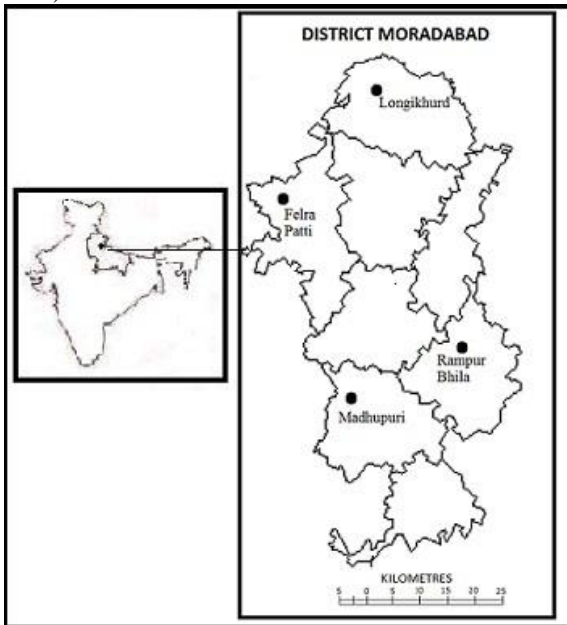


Fig. 1: Moradabad District

III. DATABASE AND RESEARCH METHODOLOGY

The data have been collected from primary as well as secondary sources. The secondary data has been collected from district statistical magazine and primary census abstract, 2011. The primary data has been collected through field survey conducted in 4 villages of Moradabad district using comprehensive questionnaire. From every village 30 households have been surveyed, thus total 120 households have been surveyed from the whole district. The simple percentage has been used to analyze data while suitable diagrams and charts have used to present data in pictorial form.

A. Discussion

India is an agrarian economy and most of food production comes from agriculture but in recent times a diversified approach has been adopted to reduce the pressure on agriculture. Livestock husbandry has been practiced by most of population of rural India in association with agriculture. The impact of globalization has also been experienced by this sector which has augmented livestock production and consumption of livestock derived production. While the global supply of livestock products has more than kept up with the human population expansion, the situation has not been the same in all regions (Livestock in Food Security, FAO, 2011). The constantly rising population has caused scarcity of food and nutrition to the marginalized and poor sections of society in the rural landscape. In India livestock is reared by nearly 70 percent of population of rural background where food and balanced diet is not available in plenty. So, livestock provides food and nutrients to these poor and under privileged people.

B. Change in Food Habits

In the rapidly changing cultural, physical, social, economic and biological environment, the change in food habits is

inevitable. The food production systems have changed so the consumption patterns have changed or preferences of people have changed so the production systems have changed. The malnutrition and food scarcity is not only related to insufficient food production but it grows due to the economic backwardness of the people as they can not purchase adequate quantities of food. Livestock is closely linked to socio-economic and cultural lives of millions of farmers for whom it provides sustainable food and monetary support. So, with change in socio-economic background the change in food habits is appeared in the Moradabad district. The table 1 shows the change in the proportion of meat and dairy products consuming households in the study area. Overall 40 percent of increase was recorded in the meat consuming households but at village level highest increase was seen in the Rampur Bhila (57.14 percent) village and lowest change was recorded in Longi Khurd (18.18 percent) village. On the other hand dairy products consuming households showed growth of 6.25 percent while at village the variations in are found as Longi Khurd recorded 3.45 percent growth and Felra Patti shown 7.14 percent growth (table 1 and fig. 1). As the demand for food and nutrients increased, people's dependence on livestock have supersized. Those households which previously did not use meat products started to include meat products in their diet. Similarly, those families which were inapt to use milk products started using it because they found milk derived products easily procurable and economically feasible.

Village	Meat Products N=30		% Change	Dairy Products N=30		% Change
	200 7	201 7		200 7	201 7	
Longi Khurd	11	13	18.18	29	30	3.45
Rampur Bhila	14	22	57.14	28	30	7.14
Madhpuri	11	15	36.36	27	29	7.41
Felra Patti	9	13	44.44	28	30	7.14
Total	45	63	40.00	112	119	6.25

Table 1: Change in Number of Households Consuming Meat and Dairy Products

Source: Field Survey 2016-17

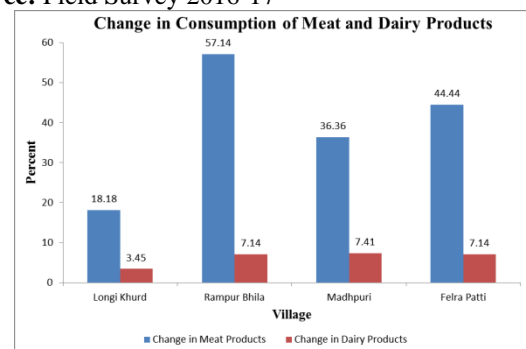


Fig. 1:

IV. PROPORTION OF LIVESTOCK PRODUCTS IN FOOD

Livestock is one the major and commonly accessible sources of food, nutrients and income generation. Almost all the population in the world takes the livestock derived products in their diet directly or indirectly. It plays a vital

role in human diet and contributes significantly in major chunk of total calories intake. In the last few decades livestock has increased considerably which helped in ensuring the food security and nutrition supply to these poor and marginalized societies. Livestock has been an important sub-sector of agriculture and playing very supporting role in eliminating the food insecurity. Livestock equip people with food, income, draught power and fertilizer and act as the major livelihood means of millions of our country, where crop farming faces challenges India is one among the fastest growing economics of the world and mainly depends on the agrarian sector as a tool for progress (Kumar, S.S. et. al., 2012). It has used to fulfill the daily food needs and to e income major share of which is spent on purchasing food items of the household. Table 2 shows the proportion of different livestock derived products in the diet per day in the study area. Meat is consumed by 66.67 percent households, meat is consumed by all the households, butter is devoured by 44 percent households, curd is used by 47.50 percent households, 15 percent consume cheese while 25.83 percent households consume ghee on daily basis in the study area. At village level 76.67 percent households of Rampur Bhila used meat while it is consumed by 56.67 percent households in Longikhurd village. Butter is used by 30 percent households in Felra Patti but it is consumed by 46.67 percent households of Madhupuri. The highest proportion of households using curd in their daily diet is found in Felra patti while lowest proportion is found in Rampur Bhila. The cheese is used in lowest proportion as it is used by 3 percent households in Felra Patti and by 6 percent households of Madhupuri while ghee is taken in diet by 16.67 percent households of Longihurd and by 36.67 households of Felra Patti (table 2 and fig. 2). Most of the households belong to lower socio-economic strata and agriculture is their primary occupation. Agriculture is the dominant occupation with livestock rearing in the study area in which about 90 percent are marginal and small farmers. These farmers can not afford to get proper amount of nutrients from other sources due to scarcity of money so they fulfill necessary amount of protein, fiber and meat from the livestock they keep.

Village	Meat N = 30	Milk N = 30	Butter N = 30	Curd N = 30	Cheese N = 30	Ghee N = 30
Longi Khurd	16.67	5.00	10.00	13.33	4.00	16.67
Rampur Bhila	20.00	7.00	10.00	3.33	5.00	2.00
Madhupuri	26.67	7.00	14.00	16.67	6.00	9.00

	0	1	2	3	4	5	6	7	8	9	10
Felra Patti	19	33	30	00	90	30	18	00	30	10	36
Total	80	66	120	100	44	36	57	45	18	15	25

Source: Field Survey 2016-17

Table 2: Proportion of Livestock Derived Products in Diet Taken by People

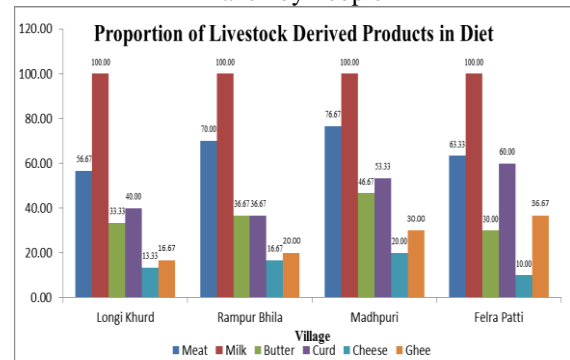


Fig. 2:

V. CONCLUSION

Population of India is increasing at a decent rate which has exerted enormous pressure on food resources so an integrated approach was needed to accelerate food production. Livestock husbandry is the main source of milk, meat and power which also considered an auxiliary to cropping system. The ownership of livestock is more evenly distributed with landless labourers and marginal farmers keeping bulk of livestock in the country. Among the livestock species poultry is the fastest growing livestock subsector followed buffalo and goat. Livestock production and efficient marketing can provide the sustainable food supply acting as buffer to economic and natural emergencies. Access to livestock food is affected by income levels and social customs. Livestock also helps indirectly in food production because it is practiced in integration with agriculture in which crop bi-products like crop residue, feed grain are used for feeding animals and animal bi-products like manure used for enriching the soils. Moreover, government policies and approach of government agencies to encourage this sector as a major food supplier influences its growth and development.

REFERENCES

[1] Bhaskaran, S. (1996), "Culture's Consequences: Dairy Market Opportunities in India" Marketing Bulletin, Vol. 7, Article 5, pp. 39-50.
 [2] Ghosh, B. (2012) Livestock Production Management, Bio-Green Books, New Delhi, India, pp. 185.
 [3] Khan, N. and Parashari, A.K. (2015) Employment Generation through Dairy Farming in District Moradabad: A Case Study, Social and Basic Science Research Review, Vol. 3, No. 1, January, pp.44-51.

- [4] Khan, N. et al. (2008) Livestock Revolution in Monsoon Asia during Post-economic Reform Period, Asian Profile, Canada, Vol.3, No. 5, pp.458.
- [5] Khan, N. and Parashari, A.K. (2017) Dynamics of Livestock Husbandry in Western Trans Ghaghara (Devi Patan region), Uttar Pradesh: A Case Study, International Journal of Research in Social Sciences, Vol. 7, Issue 1, January, pp. 314-319.
- [6] Rukhsana (2011) Dimension of Food Security in a Selected State-Uttar Pradesh, Journal of Agricultural Extension and Rural Development Vol. 3(2), February, pp. 29-41.
- [7] FAO. 2011. World Livestock 2011 – Livestock in food security. Rome, FAO.
- [8] Kumar, S.S. et al. (2012) “Strategies for sustainable Dairy farming in India: A Review” Research Journal of Recent Sciences, Vol. 2, pp. 42-44.

