

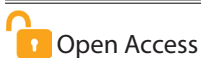


The Mithun (*Bos frontalis*): A Review of Its Significance as 4 Ms (Meat, Money, Milk and Marriage) of Naga Tribes of India

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Abstract

Mithun, a state animal of Nagaland, playing predominate role in lives of tribes. Mithun is semi-domesticated animal reared by the tribes which is a major source of livelihood for them in terms of 4Ms (Meat, Milk, Money and Marriage). As a meat majority of the people in Nagaland are consuming Mithun which adds to the main component of food security among Naga Tribes. As milk, it can play a vital role in enhancing food as well as economic security of tribes. Mithun milk is of higher nutritional value which can be consumed but tribes are unaware of the health and economic benefits of Mithun's milk. By using this unrealized potential, tribes can pick up several entrepreneurial opportunities through value addition and by identifying demand for Mithun's milk and meat which may be source of economic livelihood among farmers. Hence, Mithun plays a pivotal role in enhancing livelihood security tribes of Nagaland.

Keywords: Marriage, Meat, Mithun, Money

Introduction

The Mithun, scientifically known as *Bos frontalis*, is a majestic and culturally significant animal native to the hilly regions of Southeast Asia, particularly found in countries like India, Myanmar, Bhutan and Bangladesh. Also known as the "Cattle of the Mountains" or the "*Bos frontalis*," Mithuns hold a unique place in the ecosystem and local communities due to their distinctive features and cultural significance. Traditionally, Mithun has been semi-domesticated and is reared by local communities for various purposes. It serves as a valuable source of meat, milk, hide and other by-products. Mithun plays an essential role in the socio-cultural fabric of the communities inhabiting the region. It is often considered a symbol of wealth, prestige, and social status.

Currently, there are 0.26 million Mithun population residing in India. Mithuns can be found in Arunachal Pradesh, Nagaland, Manipur and Mizoram, the four states that make up India's North-Eastern Hill Region (NEHR). Only the state of Arunachal had 70.25% (1,24,194 heads), following Manipur (9.42%; 16,660 heads), Mizoram (1.47%; 2,594 heads) and Nagaland has 18.86% (33,445 heads) (Mondal *et al.*, 2014).

In Nagaland, Mithun can be observed in 10 of 11 districts. Among these 10 districts as per the latest data obtained from the statistical handbook of Nagaland the district like Tuensang followed by Zunheboto and Mon are the highest number of Mithun animals located. Aos, Changs, Konyaks, Khiamningans, Sangtams, Sumi and Yicchunger of the Naga tribes are majorly rearing Mithun for their livelihood.

Importance of Mithun among Naga Tribes

In the economic, social, and cultural lives of several indigenous Naga tribes, Mithun plays a ceremonial role. Folklore among the Naga tribes' elders claims that the man and Mithun shared the same womb and hence appreciate each other (Apum and Nimasow, 2015). According to tradition, unlike herds of other animals, the Mithun will never trample a person while running. In the past, when villagers sought to build a new hamlet, they would let the Mithun lead the way in believing that the bovine would locate the most advantageous location for them to relocate.

Mithun as a Meat Product

Mithun is also called the "Cattle of the Mountain" and it

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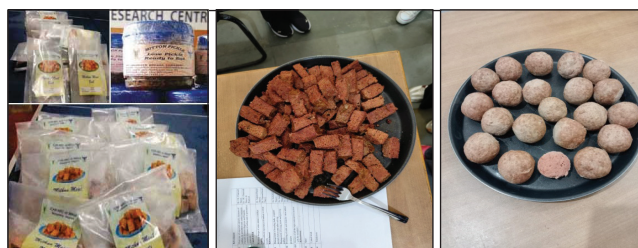
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is mainly reared for meat purposes and is considered as a tenderer as compared to other species. In rural areas due to poor economic conditions, the availability of protein sources is difficult but rearing Mithun is a way to provide nutritional security to the poor farmers. The conversion efficiency of forest biomass to meat is very high for Mithun. Mithun meat has low fat compared to other available meat sources which makes it healthier (Table 1). Mithun meat is considered special among indigenous tribes and has high demand in rural areas. There is ample scope for value addition of Mithun meat such as Mithun meat pickling, Mithun meat nuggets, meat ball, etc. which will fetch higher income in the market (Figure 1).

Table 1: Comparative carcass quality

Items	Mithun	Buffalo
Live weight (kg)	High	Low
Skin weight (kg)	High	Low
Meat Quality		
Slaughter weight	High	Low
Dressing %	High	Low
Body fat (kg)	Low	High
Adjusted fat thickness (cm)	Low	High

(Source: Annual Report, 2022; ICAR-NRCM)



a) Meat pickle b) Nuggets c) Meatball

Figure 1: Value-added products of Mithun meat produced by ICAR-NRC on Mithun

Mithun as Financial Security

Farmers rear Mithun for financial security. The Mithun animal is considered special in the indigenous society which makes Mithun high in terms of economic value. On a good day, one Mithun alone can fetch a good price for the farmers. Though farmers don't sell Mithun often, keeping a Mithun is like bank insurance for the farmers. It gives farmers a sense of security for the future. Mithun rearing is considered low maintenance but gives a high return. In certain regions, Mithun is akin to money as it can be barter with value products. It holds a gold status in the barter system. Similar to the high social status that comes with money, farmers with more Mithun hold a superior status in the indigenous society.

Mithun as a Source of Milk

Though farmers don't consume Mithun milk due to traditional taboos, the nutritional value of Mithun milk is considered to be higher than other milk sources. Mithun can produce 1-1.5 kg milk day⁻¹. It is high in solids Not Fat (SNF) (18-24%), protein (5-7%) and fat (8-13%) (Table 2). 1 kg of Mithun milk equals 2 kg of cow milk in terms of energy value. Mithun milk has a high lactoferrin content, which is an antibacterial component associated with its therapeutic properties. The milk of the Mithun is thicker than the milk of many other domestic animals. It can be used to make a variety of high-quality milk products, including Lassi, Barfi and Rasgulla (Figure 2).

Mithun as Marriage Gift

Mithun is not only reared for meat and milk but it is also given as gifts during marriages and ceremonies. In certain tribes in Nagaland and Arunachal, Mithun is given by the bridegroom to the bride's parents as bride price (Nirupoma, 2021). The number of Mithun to be given depends on the status of the bride in the society (Figure 3). Mithun is also sacrificed during other ceremonies and festivals of the

Table 2: Composition of Mithun milk and its comparison with other species

Particulars	Mithun	Cow	Buffalo	Goat	Sheep	Yak	Human
Fat	7.52	4.4	8.0	3.5	6.0	7.2	3.6
Protein	4.09	3.4	4.5	3.1	5.4	5.3	1.8
Lactose	5.88	4.8	4.9	4.4	5.1	5.0	6.8
Total Solids	17.49	12.6	17.4	11.0	16.5	17.5	12.2
SNF	10.52	8.2	9.4	7.5	9.5	10.3	8.6
Ash	0.9	0.7	0.8	0.8	1.0	0.9	0.1

(Source: Annual Report, 2022; ICAR-NRCM)



a) Lassi b) Rosgulla c) Barfi

Figure 2: Value-added product of Mithun milk produced by ICAR-NRC on Mithun

tribe. In some indigenous societies, it is the most sought-after animal during marriages and festivals it serves as an important dish of the festive feast. Therefore, Mithun not only improves the economic status of the farmers but also plays an important role in the socio-cultural activities of the farmers. Hence, Mithun as marriage in 4 Ms is rightly justified.



Figure 3: Mithun donation during Naga tribe marriage

Conclusion

In the past few decades, the increasing human population and constant deforestation, have forced the Mithun population to decline. Due to decreasing forest area, Mithuns have started entering the agricultural crop fields and destroying the crops which have resulted in the Mithun-human conflict. Because of this situation, some farmers have started to abandon Mithun rearing leading to a decline in the Mithun population.

The pressing priority to tackle the present scenario is the time to bring a free-range Mithun-rearing system to a semi-

intensive Mithun-rearing system. Efforts must be made to educate the farmers and popularized the semi-intensive system. It is a promising venture to increase the Mithun population and at the same time resolve the Mithun human conflict.

Adoption of a semi-intensive model will also help in the proper management of the Mithun. This will help in the higher production of meat and milk which will in turn improve the livelihood of the farmers.

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