



## Analysis of Profits and Break-Even Point of Jamnapari Goat Farming

Niuzi Khan<sup>1</sup>, Mehmood Hussein<sup>1</sup>

<sup>1</sup>Faculty of Animal Husbandry and Veterinary Sciences, Sindh Agriculture University, Pakistan

\*Corresponding Author: Niuzi Khan



### Article Info

#### Article history:

Received 7 May 2021

Received in revised form 16

June 2021

Accepted 30 June 2021

#### Keywords:

BEP

Goat Farming

Profit

### Abstract

*This study discusses profits and break even point of jamnapari goat farming. Goat and sheep husbandry offers an excellent image that may demonstrate how it might promote a wide range of economic activity. Goats are simple to breed, need little initial capital, require little animal feed, and are easily adapted to their surroundings. The goat is a kind of animal that provides many advantages to the society. Goats are an alternate source of revenue for goat farming businesses looking to expand their operations. The Jamnapari Crossbred goat is a kind of indigenous goat that has strong development potential and may help to boost the income of the surrounding area's farmers. Diversification (multi-commodity farming) is an alternative to carrying out business efficiency on relatively fixed land areas while increasing productivity.*

## Introduction

The growth of the livestock industry is an inextricably linked to the development of the agricultural sector, which in turn is linked to the development of the entire economy. Overall, economic development seeks to raise people's living standards, expand job possibilities, enhance income distribution within a community, and strengthen economic connections. Thus, in the quest of profit and growth, every livestock business activity has a duty to consider the aims of mankind, human welfare, and the preservation of natural resources, in addition to its own objectives. The agriculture sector plays a critical role in the expansion of regional economic growth (Msuya et al., 2017; de Moraes et al., 2017).

Economic development at a rapid pace is anticipated to boost people's productivity and income as a result of the creation of new jobs and business possibilities (Decker et al., 2014). This sub-sector, particularly goat and sheep husbandry, offers an excellent image that may demonstrate how it might promote a wide range of economic activity. For example, industries that may be developed to drive the food business, the leather industry, the bone meal manufacturing industry, the blood meal industry, and even the tourist sector and other industries.

Current commercial applications for raw materials derived from goats and sheep are restricted to three specific industries: the leather industry, dairy manufacturing, and tourism. In addition to these challenges, the growth of the leather industry has encountered many barriers, including the availability of raw materials, which is becoming more complex and costly. Livestock is any animal that is intentionally maintained for the purpose of providing food, producing industrial raw materials, or assisting humans in their job. Animal husbandry is the business of keeping animals, and it is considered to be a subset of agricultural operations in general (Vanhonacker et al., 2010). Cows, buffaloes, lambs, goats, pigs, rabbits, chickens, ducks, quail, silkworms, and honey bees are among the many species. Each of these animals may be used, and the outcomes are positive. The goat is a kind of animal that provides many advantages to the society.

Goats are animals that are usually maintained by members of the general public because they are simple to breed, need little initial capital, require little animal feed, and are easily adapted to their surroundings (Kosgey, 2004). As a source of animal protein, goats are one of the most important livestock commodities in maintaining national food security. It is possible to sell goat livestock company goods in the form of goat meat or goat milk. Aside from goat husbandry, additional sources of revenue for goat husbandry entrepreneurs include company growth, such as the sale of processed goat meals and slaughtering services, as well as the provision of cooking. In order to fulfill these requirements, proper goat farming management is required. Application of agribusiness methods to the production of livestock

Goats are an alternate source of revenue for goat farming businesses looking to expand their operations (House & Goodwin, 2012). The Jamnapari Crossbred goat is a kind of indigenous goat that has strong development potential and may help to boost the income of the surrounding area's farmers. Generally, farmers in rural regions raise Jamnapari Crossbred goats as a source of income. It is essential to improve productivity in PE goat farming in order to grow the PE goat population, which will in turn raise the revenue of farmers, since this is the primary issue in PE goat farming. The primary emphasis of animal husbandry is on output, particularly in light of the poor productivity associated with traditional economic methods in the industry.

As a result of changes in land function, as well as population growth, the land component in agricultural assets tends to suffer limits from year to year. Such circumstances will have a direct effect on the narrowness of the available cultivation area, as well as on the production system, which is represented by the poor revenue of agricultural operations. Among the measures that must be taken in anticipation of a sustainable farming system are diversification (multi-commodity farming), one example of which is the pattern of integration of plants and livestock, which is an alternative to carrying out business efficiency on relatively fixed land areas while increasing productivity, resulting in the creation of added value for the farmer. from a variety of economic areas that work together to assist one another.

The average amount of meat consumed per person is 3.16 grams per day. The consumption of this meat has risen considerably from year to year, rising from 65,216 pounds in 2012 to 66,990 pounds in 2013. (temporary data in 2013). The growth in goat meat output is inversely proportional to the increase in national demand for goat meat. A contributing factor to this is the market demand for meat, which is expected to continue to rise in tandem with population expansion. Because of the significant contribution made by goats, there is the potential to promote the expansion of goat raising enterprises in line with the available carrying capacity of the environment.

Farmers' actual income may be increased by increasing the size of their operations and shifting their business orientation toward a commercial-intensive model (Mariyono et al., 2020). This will improve production efficiency and allow them to earn more money. As a result, it is anticipated that business patterns would shift in a more intense direction. Economic, social, and cultural benefits of goat merchants are extremely substantial in their respective contexts. The magnitude of the value of resources generated in the goat trade to increase the income of a farming family can reach 14-25 percent of the total family income; however, the greater the level of expansion of goat land, the greater the magnitude of the value of resources generated in the goat trade.

Within the community, this condition may be seen. Goats are utilized as a form of savings since they may be used to fulfill a variety of household requirements, such as paying school tuition, child marriage and birth expenses, (Tsegaye, 2009; Altieri et al., 2012).). and medical expenses, among other things. According to the circumstances in the field, the Jamnapari goat livestock

agro-industry, which is owned by farmers, is still at a very low or even break-even position in terms of production. The poor revenue received by farmers is a result of the low yields achieved by the farmers. It is believed that a lack of knowledge about the Jamnapari goat industry is contributing to the poor output yield.

### **Jamnapari Goat Farming**

Community empowerment has been used by several Millennium Development Goals (NGOs) throughout the 1990s, it was not until the 1995 Beijing summit that the government adopted the word as its official terminology. Social scientists offer diverse formulations of empowerment in various settings and areas of research, allowing for a better understanding of empowerment.

The Jamnapari goat is a breed of goat indigenous to the Jamnapari area of India. This goat is the most common in Southeast Asia, and it includes the dual-purpose kind, which can both produce milk and meat at the same time. There are many features, including a big body posture, long dangling ears, convex facial shape, very thick thigh hair, and a male body weight of 90 kg and a female body weight of 60 kg. Lactational milk production reaches a maximum of 235 kg/ms. Jamnapari Peranakan goats will be produced as a result of improving the quality of local goats.

Goats are the world's oldest domesticated animals, having coexisted with humans for more than 1000 years and interacted with them. Goats are ruminants with even nails and a pair of curving horns. They are also a member of the goat family. Goats are mountain animals that dwell on steep slopes and have a high degree of adaptability to shifting weather conditions. This goat is a hybrid between the Jamnapari goat from India and the common goat, which has a similar appearance to the Jamnapari goat but is smaller in stature. The Jamnapari Crossbred goat is used for two purposes: as a producer of milk (dairy) and as a producer of goat meat. The Jamnapari goat is named after the Jamnapari area in India, where it originated. As a result, this goat is sometimes referred to as the Jamnapari goat. Among the goats of Southeast Asia, the Jamnapari goat is the most widely bred. In its place of origin, the Jamnapari goat is a kind of goat that may be used for both milk production and meat production. Among the characteristics of the Jamnapari goat are its big body posture and long hanging ears, as well as its convex facial form and very long hair on the back of its thigh. Among the characteristics of the Jamnapari Crossbred goat are a convex face with a bearded chin, long, flabby ears that hang and are slightly folded at the ends, the tip of the horns that are slightly curved, a tall and flat body with a back line that waves backwards, long hair on its neck and shoulders, back, and thighs as well as long and thick fur. There is a single coat color that is white, black, and brown, although it is very uncommon to find. The majority of them are made up of two or three color patterns, such as black stripes, brown stripes, and black and white stripes, among others. The Jamnapari Crossbred goat is a breed of goat developed via a cross between a goat (with high adaptability) and a Jamnapari goat (originating in India) (which has high milk production). During its two-year lifespan, the Jamnapari Crossbred goat has the ability to give birth three times. The number of offspring born in a single birth is variable, ranging from 1-3 tails

### **Methods**

The sample for this research was determined via a case study combined with a survey approach combined with participatory observation methods. The sampling technique was tested out via the use of a case study using the Jamnapari goat industry in Rajasthan.

The kinds of data that were utilized in this research were both quantitative and qualitative in nature. Data that appears in the form of words is collected in a variety of ways (observations,

interviews, digests, documentation and audio recording tapes), and it is processed before it is ready for use using recording, editing, and writing instruments. Qualitative data analysis is still done with words, but it does so in a more formalized manner. The words listed above have been grouped into extended forms.

Primary data was gathered via direct interviews with farmers who had a connection to the study material as well as direct observation of research-related activities in order to get new information to supplement current data. Secondary data is gathered from farmers using the resources they have available at the time, which may include: land resources, human resources, and production statistics.

A data collecting method in which researchers conduct firsthand observations of the symptoms of the topic under investigation is known as observational research. The method of direct observation is often referred to as direct observation. An interview is a method for gathering data that involves directly asking respondents to acquire information from sources who have been questioned. The interview method was carried out with the help of a list of questions that had been prepared in advance of the interview. Documentation, Documentation is a technique of helping in the collection of data in an attempt to acquire information. Researchers have recorded certain events or occurrences that may be used to explain or explain away certain situations. The revenue and break-even threshold of Jamnapari goat farming will be determined via quantitative analysis.

## **Results and Discussion**

Among the phases involved in the growing of Jamnapari goats at Farmers are the construction of cages, cleaning of cages, forage feed, and post milking, as well as the care and health of the goats themselves. Jamnapari goats are a kind of livestock that has been grown for a long period of time, and the methods for growing them are similar. Keeping goats is not difficult since all you need to do is ensure that they have access to food, excellent seeds, and other necessities. The following are the procedures that must be followed in order for Jamnapari goat farming to be successful.

When it comes to the Jamnapari goat raising method on the Farmer's farm, it is carried out intensely; that is, the goats are housed in a cage where they are provided with constant access to food, water, and health care. At the Farmer's farm, the cage is designed in the shape of a stage cage, with a minimum height of one meter above the surrounding ground level. The cage is made permanent by using bamboo as the cage's basic material, which is used to construct the cage. The floor under the cage is slanted, allowing goat dung to flow straight down into the pit below. A wooden structure serves as both the walls and the floor of the cage, with a zinc roof covering the whole structure. The walls are built with gaps to allow for excellent air circulation, and the floor is built with holes so that goat dung falls straight to the bottom, making it simpler for soil to be gathered at the bottom.

Farmers' farms have a number of factors to consider when selecting goats to be used as seeds (Kearney et al., 2016). The goat must be in excellent health, with its head constantly erect, good development, a glossy coat, and be free of illness when it is chosen. The form of the goat, particularly for female goats, must be big, its motions pleasant, and the goat must be docile. Male goats, on the other hand, are aggressive and show no signs of anomalies in their genitals. Livestock Grass is the type of fodder that farmers use. The quantity of feed provided to goats may equal to as much as 10 percent of the goat's body weight in certain cases. Farmers' Farms goats have an average body weight of 30 kg, which means that the quantity of feed provided in a day of 3 kg in a year needs 1,905 kg in a year. Feed is provided twice a day, in the morning

and in the evening. Green feed is not provided in large quantities at once. Farmers' Farm provides forage feed in the form of grass and vegetable waste, with a per-kilogram charge for forage feed. 1.0.

Mastitis and ringworm/scabies are two diseases that often affect goats on Farmers' Farms. The cost of health care for one person each month is about 5.0. Mastitis and ringworm/scabies are two diseases that often affect goats on Farmers' Farms. The cost of health care for one person each month is about 5.0.

### **Jamnapari Goat Farming Benefits**

Gaining profits or making a profit from the livestock business is one of the goals that must be met in order for the livestock company to be successful. All phases of labor in the cattle industry necessitate the incurring of expenses that must be taken into consideration. These expenses are divided into two categories, namely fixed costs (fixed costs) and variable costs (variable costs) (variable costs). Costs spent that may be reused in the manufacturing process on many occasions. While the expenses are not set (variable costs), they are incurred in a manner that has an impact on the size and level of output. Revenue is the outcome of a company, and it is calculated by subtracting the expenses spent from the revenues received, which is done via receipts less the costs incurred throughout the manufacturing process. The difference between total revenue and total expenses incurred by agricultural actors is referred to as income. Amounts received in powdered milk for each period from the business of Jamnapari goats (Milk Powder) on a scale of 15 heads were used to calculate the income in this study, with the total operational costs, which included both variable and fixed costs of producing powdered milk, being deducted from the total revenue.

In this case, the cost and income of Jamnapari goat business (Fresh Milk) on a scale of 15 heads produces 523 liters of milk per month at a fresh milk price of 30.0 per unit with a monthly revenue of 15,690 acquired from the fresh milk business each month. A month's worth of variable expenses total 4,010, which include Jamnapari Crossbred goat parent costs (tail) of 450 per month, fodder feed (kg) of 1,350 per month, vitamin prices of 210 per month, and labor costs of 2,000 per month, among other things. Whereas the fixed expenses incurred in the business of Jamnapari goats (fresh milk) on a scale of 15 heads are 196/month, with equipment depreciation of 113/month and cage depreciation of 83/month being the majority of the expenditures. As a result, the entire cost of rearing Jamnapari goats (milk powder) on a scale of 15 heads per month is \$4,206. The business income of Jamnapari goats (fresh milk) on a scale of 15 heads is calculated as follows: the receipt of powdered milk is 15,690/month; the total business costs of Jamnapari goats (milk powder) on a scale of 15 is 4.206/month; the operating income is 11,483/month; and the per head income is 637/month.

On a scale of 15 tails, revenue or profits from the business of Jamnapari goats (fresh milk) gain or do not suffer losses when the monthly income and monthly income per head offer advantages from the fresh milk business are higher than the monthly income and monthly income per head. Because of the difference between the total revenue and total cost, the R/C ratio of the Jamnapari goat (fresh milk) scale with 15 heads is 3.73. Because the R/C ratio is more than 1, it indicates that every one dollar that is given as a cost will result in an income of 3.73. As a result, keeping Jamnapari goats (fresh milk) on a scale of 15 heads may be lucrative as a commercial venture.

### **Break Even Point of Jamnapari Goat Business**

Depending on the quantity of products produced or sold, or on the amount of revenue in money, the level of break even may be determined. The BEP (Break Event Point) value of Jamnapari

goat business in producing fresh milk on a scale of 15 goats can be calculated using data on fixed costs, variable costs, and income from respondents. The BEP value of Jamnapari goat business in producing fresh milk can be calculated using data on fixed costs, variable costs, and income from respondents.

When the production BEP is calculated, the findings indicate that the break-even point of the production unit is 140.21 liters. This means that the Jamnapari goat (fresh milk) agro-industry company will break even if the output achieved is 140.21 liters or more. However, it can be seen in the revenue table that the quantity of fresh milk produced is 523 liters, which is a significant amount. In this particular instance, the Jamnapari goat (fresh milk) agro-industry company is profitable or does not suffer a loss, indicating that the business is profitable or does not suffer a loss. Furthermore, the price has a break-even threshold of \$8.04 per share. That threshold corresponds to that of the Jamnapari goat (fresh milk) agro-industry production unit in the sense that this company will break even if the selling price is set at \$8.04 per kilogram of milk produced. Although it seems from the revenue table and the findings of interviewing informants that the selling price per liter is 30 cents, this implies the Jamnapari goat (fresh milk) agro-industry is operating above the break-even threshold or that it is not incurring losses and is generating profits.

## Conclusion

It may be inferred from the findings and discussion that the business revenue of Jamnapari goats (fresh milk) on a scale of 15 heads generated an operational income of 11,483/month, with a per head income of 637/month based on the data and discussion. Break-even threshold of production unit is 140 liters, which means that a production of 140.21 liters will enable the Jamnapari goat (fresh milk) company to achieve break-even status. The price has been set at 8.04, which represents the break-even point. Similarly, the break-even point of the Jamnapari goat (fresh milk) production unit is 8.04 per liter, which means that this company will break even if the selling price for this product is 8.04 per liter.

## References

- Altieri, M. A., Funes-Monzote, F. R., & Petersen, P. (2012). Agroecologically efficient agricultural systems for smallholder farmers: contributions to food sovereignty. *Agronomy for sustainable development*, 32(1), 1-13.
- de Moraes, M. C. P., de Mello, K., & Toppa, R. H. (2017). Protected areas and agricultural expansion: Biodiversity conservation versus economic growth in the Southeast of Brazil. *Journal of Environmental Management*, 188, 73-84.
- Decker, R., Haltiwanger, J., Jarmin, R., & Miranda, J. (2014). The role of entrepreneurship in US job creation and economic dynamism. *Journal of Economic Perspectives*, 28(3), 3-24.
- House, J., & Goodwin, H. I. (2012). The Arkansas Meat Goat Enterprise Budget. *Discovery, The Student Journal of Dale Bumpers College of Agricultural, Food and Life Sciences*, 13(1), 17-27.
- Kearney, P. E., Murray, P. J., Hoy, J. M., Hohenhaus, M., & Kotze, A. (2016). The 'Toolbox' of strategies for managing *Haemonchus contortus* in goats: what's in and what's out. *Veterinary Parasitology*, 220, 93-107.

- Kosgey, I. S. (2004). *Breeding objectives and breeding strategies for small ruminants in the tropics*.
- Mariyono, J., Abdurrachman, H., Suswati, E., Susilawati, A. D., Sujarwo, M., Waskito, J., ... & Zainudin, A. (2020). Rural modernisation through intensive vegetable farming agribusiness in Indonesia. *Rural Society*, 29(2), 116-133.
- Msuya, C. P., Annor-Frempong, F. K., Magheni, M. N., Agunga, R., Igodan, C., Ladele, A. A., ... & Ndiaye, A. (2017). The role of agricultural extension in Africa's development, the importance of extension workers and the need for change. *International Journal of Agricultural Extension*, 5(1), 51-58.
- Tsegaye, T. (2009). *Characterization of goat production systems and on-farm evaluation of the growth performance of grazing goats supplemented with different protein sources in Metema woreda, Amhara region, Ethiopia* (Doctoral dissertation, Haramaya university).
- Vanhonacker, F., Van Poucke, E., Tuytens, F., & Verbeke, W. (2010). Citizens' views on farm animal welfare and related information provision: Exploratory insights from Flanders, Belgium. *Journal of Agricultural and Environmental Ethics*, 23(6), 551-569.