



IMPORTANCE OF MILCH CATTLE METHODOLOGY IN DAIRY FARMERS AND LIVING STANDARD

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ABSTRACT

The purpose of this study was to identify the variables influencing the cost of milk production and the living conditions of dairy cow farms. Multiple regression analysis was used to examine the data. The results of the multiple regression model showed that some variables, including the amount of time spent on a dairy cattle farm, the experience the farmers had with dairy farming, their educational background, the amount of feed they purchased, the presence of livestock diseases, and the production of maize silage on the farms, had a significant impact on milk production costs. With over 48 million animals, India has the greatest number of dairy cattle in the world, yet there hasn't been any systematic analysis of their wellbeing published. Essential amino acids and other necessary elements for humans are concentrated in milk and dairy products in highly sustainable amounts, but the amount of milk produced per dairy cow globally is insufficient to fulfil future demands. In conclusion, these factors were explained to have important impacts on decreasing farmers' milk production costs.

KEYWORDS: Environment, Genetics, Health, Management, Reproduction, Indian Dairy farm, Cattle farm.

INTRODUCTION

For decades, dairy farming has been a crucial component of agricultural practises, providing a consistent supply of nutrient-rich milk and dairy products. To supply the demand for milk across the world, milch cattle, also known as dairy cows, are essential in the dairy farming industry. These cow friends have a big impact on dairy producers' ability to maintain a high level of living. Let's examine the significant effects that milch cattle have on dairy producers and how they help to raise standards of life.

First and foremost, milch cattle are renowned for their capacity to produce copious amounts of superior milk. They have been carefully developed and enhanced for milk production, resulting in cows that consistently produce large quantities of milk. Milch cattle provide a quantity of milk, which enables dairy farmers to make a reliable living and provide for their families.1. Introduction.

India is the world's largest milk-producing country, with a 20% share in global production. Milk production in India differs from most countries in that more than half of the milk produced is from buffaloes (*Bubalus bubalis*), followed by indigenous cows (*Bos indicus*) and crossbred cows.

The wellbeing status of farm animals is being evaluated and tracked using protocols that have been created and approved by science. For instance, Welfare Quality, the largest-ever animal welfare research initiative in Europe, established standardised welfare criteria measurements that were included into evaluation protocols. After a brief training period, anybody may use the Welfare Quality evaluation methods in a practical manner and conduct them promptly and accurately.

A perspective on Efficient and Sustainable dairy Herds and Cows

The availability of milk from milch cattle empowers dairy farmers to establish a diverse range of income streams. Beyond selling raw milk, farmers can also process milk into various value-added dairy products such as cheese, yogurt, butter, and ice cream. This value addition not only increases the profit margins but also adds value to the milk, enabling dairy farmers to cater to a broader consumer base and meet the diverse demands of the market. Consequently, milch cattle influence farmers to develop entrepreneurial skills and expand their businesses, thereby uplifting their economic status.

Moreover, milch cattle also have a positive impact on the overall standard of living for dairy farmers. The income generated from dairy farming allows them to improve their housing conditions, access better healthcare

services, and provide quality education for their children. Dairy farming, especially when backed by a reliable milch cattle population, can be a significant catalyst for rural development. It stimulates local economies, creates employment opportunities, and enhances infrastructure, resulting in an overall improvement in living standards for the entire community.

Milch cattle are not only providers of milk but also contributors to sustainable farming practices. Their

manure serves as a valuable organic fertilizer, enriching the soil and promoting healthy crop growth. By practicing integrated farming systems, dairy farmers can utilize the manure produced by milch cattle to nourish their crops, reducing the dependence on chemical fertilizers. This eco-friendly approach not only benefits the environment but also helps farmers save on input costs, further enhancing their profitability.

Table 1: Examples of prospective high-performance dairy cows and herds that are Sustainable, Challenges, Concerns and Potential mitigations.

Focus	Expectations	Examples of problems and issues	Examples of mitigation
Cow welfare	<ul style="list-style-type: none"> Unlimited availability of feed & water 	<ul style="list-style-type: none"> Mismatch of cow's genetics & herd's environment 	<ul style="list-style-type: none"> Precision diets, adequate space of water and feed bunks per cow
	<ul style="list-style-type: none"> Display normal behavior 	<ul style="list-style-type: none"> Environmentally induced behavioral anomalies 	<ul style="list-style-type: none"> Automatic tracking & separation of cows; big data
	<ul style="list-style-type: none"> Free from fear or pain, clean, comfortable 	<ul style="list-style-type: none"> Cow movements that disturb social orders & poor husbandry 	<ul style="list-style-type: none"> Smart housing: clean, comfortable, temperature control & lighting
	<ul style="list-style-type: none"> Minimal production-related diseases 	<ul style="list-style-type: none"> Inadequate surveillance and treatment 	<ul style="list-style-type: none"> Efficient diagnostics, bio-therapeutics
Farm resources	<ul style="list-style-type: none"> Land, transportation infrastructure & internet 	<ul style="list-style-type: none"> Climate change; access to water and poor connectivity 	<ul style="list-style-type: none"> Lower environmental footprints through management & technology
	<ul style="list-style-type: none"> Water, forage, feed, wastes & lower climate impacts 	<ul style="list-style-type: none"> Feed wastage & poor manure & nutrient management 	<ul style="list-style-type: none"> Farm-to-farm collaborations in crop production & waste management
	<ul style="list-style-type: none"> Access to input/output supply chain 	<ul style="list-style-type: none"> Access to inputs, processors, and consumer markets 	<ul style="list-style-type: none"> Farm & herd located in active milk producing area
	<ul style="list-style-type: none"> Labor supply & management 	<ul style="list-style-type: none"> Poor communication, delegation & rewards for employees 	<ul style="list-style-type: none"> Staff training; automation for drudge jobs; praise
	<ul style="list-style-type: none"> Financial resources 	<ul style="list-style-type: none"> Inadequate return on investment 	<ul style="list-style-type: none"> Entrepreneurial sharing of risks &

Milk market	<ul style="list-style-type: none"> • Efficient market regulation • Payment more than cost of production • Consumer perceptions 	<ul style="list-style-type: none"> • Insufficient producer control • Disruptions in supply chain to consumers • Undersupply of local milk 	<ul style="list-style-type: none"> • Greater collaboration • Effective innovations & regulation of supply chains • Education; ethical governance
Dairy products	<ul style="list-style-type: none"> • Liquid • Cheese, butter • Powder; byproducts (e.g., whey) 	<ul style="list-style-type: none"> • Improper storage of products • Seasonal variations in fat & protein • Surplus production & poor distribution systems 	<ul style="list-style-type: none"> • Process for longer shelf-life • Balanced use of milk constituents • Objective regulation & management of dairy supply chain

MATERIAL AND METHODS

1. Effective dairy farming techniques

The breeds of farm animals' usage of the latest technology, veterinary care, dairying equipment, and record-keeping methods are only a few of the numerous factors that high-performing dairy herds throughout the world have in common.

2. Factors that affect sustainability

Several factors, such as cow welfare, dairy farming size and resources, access to milk markets, and dairy product portfolios, affect the sustainability of the dairy industry (Table 1). Because many elements of sustainability vary among geographic and climatic areas, dairy farmers, their advisers, their dairy supply chain, their milk purchasers, consumers, and policy makers should design scorecards to measure dairy farming sustainability specifically for their regions or nations. In dairy herds in northern latitudes, high-performing cows are frequently kept part- or full-time. In dairy barns, comfortable stalls, flooring, and lighting boost animal welfare.

Moreover, dairy farming promotes sustainable land management practices that benefit the environment and human well-being. Many dairy farmers prioritize the health and well-being of their animals, implementing ethical farming practices and ensuring proper animal welfare. Additionally, dairy farming encourages the preservation and conservation of natural resources such as water, soil, and biodiversity. Sustainable farming practices, such as rotational grazing and manure management, not only reduce environmental impact but also enhance the resilience and long-term viability of farming systems. By safeguarding the environment and adopting sustainable practices, dairy farmers contribute to the overall well-being of their communities and future generations.

Future farming with dairy cows

Long an integral part of agriculture, dairy farming serves as a critical supply of milk, cheese, butter, and other

dairy products for local communities. Beyond feeding people, dairy farming is essential for improving the quality of life for farmers and their communities. Let's examine how dairy producers raise living standards and the different variables that affect this beneficial effect.

Cows with genes that are suited for their circumstances and that place a balanced emphasis on fitness and milk component output are the foundation of high performance herds and cows. The use of genomic selection will produce new breeds or improved varieties of current breeds that will fill global dairy production niches, increasing cow productivity and reducing environmental impact. By implementing systems that transform manure and wastewater into drinkable water, bioenergy, and nitrogen fertilisers, dairy farms will continue to reduce their negative environmental effects. These systems will be affordable for bigger farms or may be shared by smaller farms. By improving the proteins and fats in milk, the health advantages of milk will be increased. The dairy sector can provide the milk we'll need in the future through sustainable intensification.

Additionally, the presence of milch cattle encourages the preservation of traditional farming practices and rural traditions. Dairy farming has been deeply rooted in many cultures worldwide, and milch cattle play a central role in sustaining these traditions. They are a symbol of agrarian heritage, representing the close connection between humans and animals. By preserving the tradition of dairy farming, farmers pass down essential knowledge and skills to future generations, ensuring the continuity of their way of life.

RESULT

One of the primary ways in which dairy farming raises living standards is through economic empowerment. Dairy farmers not only generate income from selling milk and dairy products but also contribute to the local economy. The demand for dairy products creates employment opportunities, from farm laborers to milk

processors, distributors, and retailers. This job creation stimulates economic growth, reduces unemployment rates, and fosters entrepreneurship within rural communities. As a result, dairy farming provides stable livelihoods and economic stability for farmers and their families.

In addition to financial benefits, dairy farming also enhances living standards through improved infrastructure and social development. Successful dairy operations often require investments in modern facilities, equipment, and technology. As farmers seek to maximize productivity and efficiency, they contribute to the development of local infrastructure such as roads, electricity, and irrigation systems. These improvements not only benefit the dairy industry but also have a positive spill over effect on the overall quality of life in the region. Access to better infrastructure, including reliable transportation and utilities, improves healthcare services, education, and communication, thereby raising the living standards of the entire community.

CONCLUSION

Milch cattle have a profound influence on dairy farmers and their living standards. These bovine companions not only provide a consistent source of high-quality milk but also enable farmers to establish diversified income streams. The economic stability achieved through dairy farming allows for improved housing, healthcare, and education opportunities, uplifting the overall standard of living. Furthermore, milch cattle promote sustainable farming practices, contribute to environmental conservation, and preserve traditional rural traditions. The importance of milch cattle in the dairy farming industry cannot be overstated, as they play a crucial role in shaping the lives of farmers and their communities.

Dairy farming is a vital contributor to raising living standards in farming communities. The economic benefits, infrastructure development, sustainable practices, social cohesion, and technological advancements fostered by dairy farming all contribute to an improved quality of life. Dairy farmers, as stewards of the land and providers of essential dairy products, play a vital role in nurturing their communities and shaping a prosperous and sustainable future.

REFERENCES

1. Effects of nutrition and genetics on fertility in dairy cows, *Reproduction Fertility and Development*, 2018; 31: 40-54.
2. Review: Welfare of dairy cows in continuously housed and pasture-based production systems, *Animal*, 2017; 11: 261-273.
3. National Code of Practices for Management of Dairy Animals in India. Available online: https://www.worldanimalprotection.org.in/sites/default/files/in_files/english-national-dairy-code.pdf
4. Welfare Quality Assessment Protocol for Cattle. Available online: <http://edepot.wur.nl/233467>
5. Lundmark Hedman, F.; Hultgren, J.; Röcklinsberg, H.; Wahlberg, B.; Berg, C. Non-Compliance and Follow-Up in Swedish Official and Private Animal Welfare Control of Dairy Cows. *Animals*, 2018; 8: 72.
6. Popescu, S.; Borda, C.; Diugan, E.A.; Spinu, M.; Groza, I.S.; Sandru, C.D. Dairy cows welfare quality in tie-stall housing system with or without access to exercise. *Acta Vet. Scand*, 2013; 55: 43.
7. OECD and FAO 2018 OECD-FAO Agricultural Outlook 2018–2027. (Chapter 7) Dairy and Dairy Products. Available online: http://www.fao.org/3/i9166e/i9166e_Chapter7_Dairy.pdf
8. Sharma, A.; Kennedy, U.; Schuetze, C.; Phillips, C.J.C. The welfare of cows in Indian shelters. *Animals*, 2019; 9: 172.