



**Indian Farmer**

Volume 12, Issue 04, 2025, Pp. 187-191

Available online at: [www.indianfarmer.net](http://www.indianfarmer.net)

ISSN: 2394-1227 (Online)

---

**Survey Report**



**Economics of Maize Silage Production of two Organized Dairy Farms of Begusarai**

**Vipin\*, N.N. Patil, Ram Pal And Pragya Bhadauria<sup>1</sup>**

*Krishi Vigyan Kendra, Begusarai, Dr. Rajendra Prasad Central Agricultural University, Pusa, Smastipur-848125*

*<sup>1</sup>ICAR-Agricultural Technology Application Research Institute, Zone IV, Patna*

*\*Corresponding Author: [vipinsingh729@gmail.com](mailto:vipinsingh729@gmail.com)*

*Received: 05/04/2025*

*Published:08/04/2025*

---

**ABSTRACT**

This study examines the cost structure of silage production at two dairy farms, Barauni Dairy and Ganga Dairy, with a particular focus on the factors contributing to the overall production costs. The analysis reveals that fodder procurement is the primary cost driver for both farms, with Ganga Dairy experiencing a 15% higher fodder cost compared to Barauni Dairy. In addition to fodder procurement, other key factors contributing to silage production costs include handling loss, labour costs, and the cost of packing materials. Handling losses, in particular, highlight inefficiencies in the harvesting, transportation, and storage stages, while labour and packing material costs further influence the financial outcomes. The findings suggest that optimizing fodder procurement processes and addressing inefficiencies in handling, labour, and packing materials could potentially lower overall production costs, thus improving profitability for both dairy farms.

**Keywords:** Maize, silage, production cost, profitability

---

**INTRODUCTION**

The production of maize silage is a crucial aspect of livestock farming, particularly in dairy operations, as it provides a high-quality, nutritious feed that supports the growth, health, and milk production of dairy animals. In the Begusarai district of Bihar, maize has become an integral crop not only for human consumption but also for silage production, benefiting dairy farms with its high yield and nutritional value. This survey focuses on the economics and production of maize silage at two organized dairy farms in Begusarai popularly known as Barauni Dairy (Bihar State Milk Co-operative Federation Ltd.) and Ganga Dairy Ltd. Both farms are key players in the region's dairy sector, where the integration of maize silage in livestock feeding systems is becoming increasingly significant due to its role in enhancing milk yield and supporting sustainable dairy farming practices. The purpose of this survey is to analyze the production processes, costs, and profitability associated with maize silage at these two dairy farms. By examining their operational methods, fodder sourcing, production

efficiency, and economic outcomes, the study seeks to provide valuable insights into the feasibility and economic viability of maize silage production in the region. This survey also aims to highlight the factors influencing the success of maize silage as a feed resource, including the impact of technology, resource management, and market dynamics.

Through this survey, the potential benefits of maize silage as an alternative to conventional fodder, its role in improving dairy productivity, and the economic implications for small and medium-sized dairy farms in Begusarai will be explored, contributing to a deeper understanding of how silage production can be optimized for both economic and environmental sustainability in the dairy industry.

**Details of dairy farms taken under study**

This survey examines two prominent dairy farms in Begusarai, Bihar: Barauni and Ganga Dairy. Both Barauni and Ganga Dairy have adopted baled silage technology for the production of silage. This method of silage production offers several advantages, including improved storage, preservation, and transportation, which are especially crucial for dairy farms in Begusarai, where fodder availability can sometimes be a limiting factor. These farms were selected due to their established presence in the region's dairy sector and their involvement in maize silage production as a key feed resource for livestock. Table 1 represents the details of both dairy farms.

**Table 1:** Details of dairy farms included under study

Attributes	Ganga dairy	Barauni dairy
Production capacity (tons/day)	50.0	80.0
Purchasing maize fodder (Rs./kg)	3.90	2.85
Bale size (kg)	50 & 400	50 & 100
Selling pricing (Rs./kg)	6.0	6.0
Harvesting stage	Milk stage	Milk stage

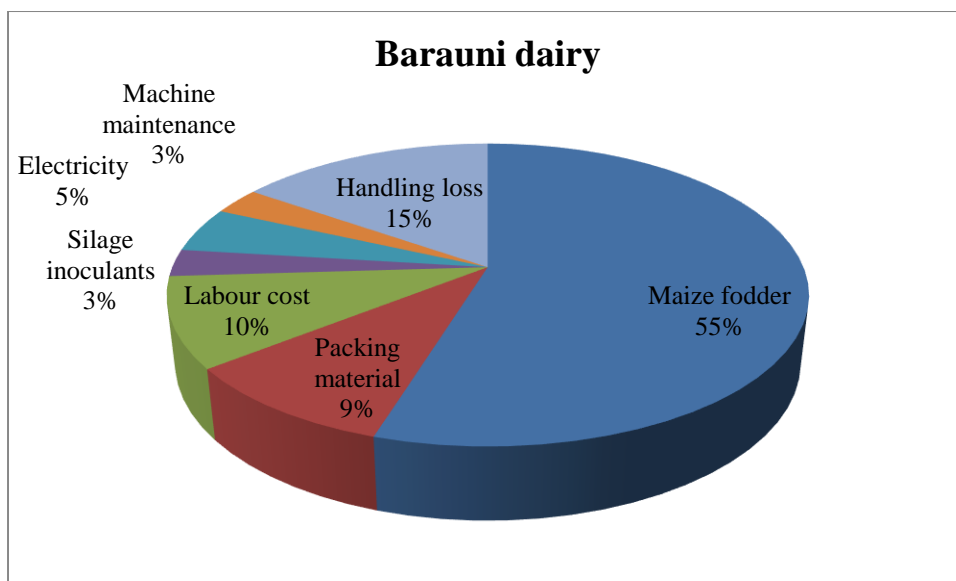
**Economic of Maize silage production**

The economics of silage production were analyzed through a combination of questionnaires, interactions with farmers, and data collected directly from the Barauni and Ganga Dairy. These approaches provided insights into the cost structure, profitability, and overall economic feasibility of maize silage production for both farms. The details are provided in Table 2.

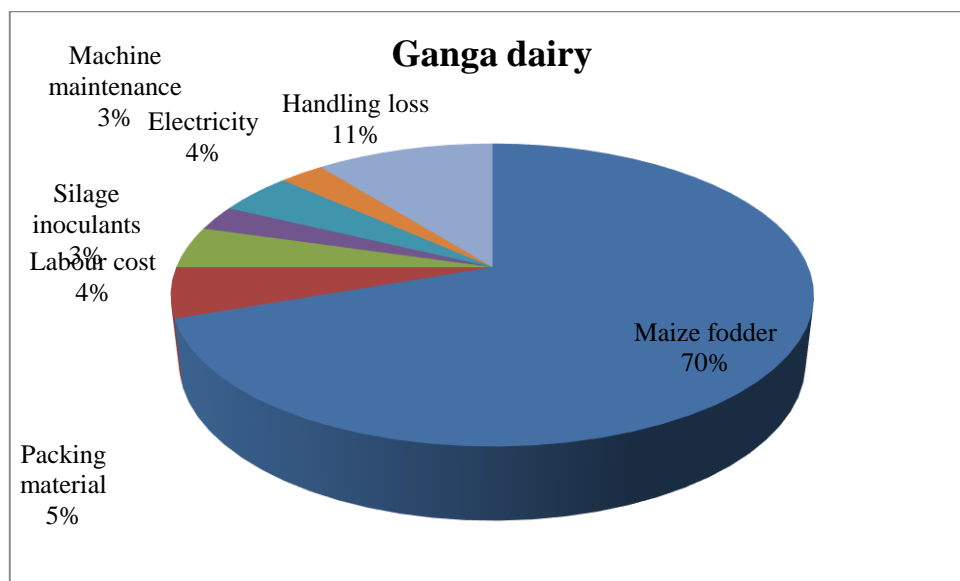
**Table 2:** Economic of silage production in dairy farms included under study

Particulars	Barauni dairy	Ganga dairy
<b>Cost (Rs./kg)</b>		
Maize fodder	2.85	3.90
Packing material	0.50	0.30
Labour cost	0.50	0.25
Silage inoculants	0.15	0.15
Electricity	0.25	0.25
Machine maintenance	0.15	0.15
Handling loss	0.80	0.60
Total expenditure	5.20	5.60
<b>Income (Rs./kg)</b>		
Supply rate	6.00	6.00
Profit	<b>0.80</b>	<b>0.40</b>

The main cost for silage production at both Barauni and Ganga Dairy was fodder procurement. However, the cost of fodder procurement was 15% higher at Ganga Dairy compared to Barauni Dairy. This difference suggests that Ganga Dairy may be facing higher expenses in sourcing fodder, possibly due to factors like supplier pricing, less efficient fodder production practices, or regional challenges. In addition to fodder procurement, other significant contributing factors to silage production costs included handling loss, labour cost, and packing materials. These elements, which encompass the losses incurred during harvesting, transportation, and storage of fodder, the wages of workers involved in the silage production process, and the cost of materials used for packaging the silage, were crucial in determining the overall cost of silage. The details of the contributory factors (%), for both dairy farms are presented in Figures 1 and 2.



**Figure 1:** Contribution (%) of different inputs in silage preparation at Barauni dairy



**Figure 2:** Contribution (%) of different inputs in silage preparation at Ganga dairy

The economics of silage production at Barauni and Ganga Dairy reveal key differences in profitability and cost structures.

### **Profit analysis**

The economics of silage production at Barauni and Ganga Dairy reveal key differences in profitability and cost structures. Profit per kg of Silage for Barauni and Ganga Dairy was a profit of Rs 0.80 and 0.40 per kg of silage produced. Therefore, Barauni Dairy's profit was 50% higher than Ganga Dairy's, indicating better efficiency or cost management at Barauni Dairy. The higher fodder cost at Ganga Dairy suggests either a greater reliance on external sources for fodder or higher transportation and storage costs compared to Barauni Dairy. This shows that Barauni Dairy had a lower total cost per kg of silage produced, indicating that it may be achieving greater economies of scale or operating more efficiently in silage production.

### **CONCLUSION**

Based on the survey, it can be concluded that Barauni Dairy's profit is 50% higher than Ganga Dairy's. This suggests that Barauni Dairy is operating more efficiently or has more favourable cost structures, leading to higher profitability. The main contributor to this higher profitability is the lower cost associated with silage production at Barauni Dairy compared to Ganga Dairy.