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Assessment of economic feasibility and self-sufficiency of gaushalas in Uttar Pradesh

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Abstract

The old, stray, unproductive, infertile and injured cows are kept in shelter houses that are called as "Gaushalas". Besides providing shelter to wandering cows, Gaushala have also helped in rescuing injured, infirm and unproductive cow. To address the social and religious concerns surrounding stray cattle, the government is tackling this complex issue by constructing numerous Gaushalas equipped with ample space for their proper management. Such Gaushalas can provide shelter to large number of unproductive and old stray cattle and its functioning runs with government support and public donations. Aim of study was to know ground level appraisal of Gaushalas for identify hindrance in smooth running of Gaushalas. The present study was carried out with an objective of assessment of economic feasibility of Gaushalas that are spread across the Agra Division. An ex post-facto research design was used for the study. The study area was purposive selected and 100 Gaushalas Gaushalas were randomly chosen with the null hypothesis setting was all gaushalas don't have significant differences in dependent variable between the groups of gaushalas. The findings of the study revealed that (97.40%) of income of all Gaushalas were come from public donation and government aid and only 4.00 percent of Gaushalas were selling milk and by -products like compost, dung and medicine which were prepared by cow dung and cow urine. It was also observed that major expenses (92%) were found on feed and fodder followed by miscellaneous expenses (4.7%) as major operational expenses in Gaushalas in the study area.

Keywords: Economic feasibility, fixed cost, variable cost, net income

Introduction

India is having more than half of the cattle of the world. The census data indicates that the population of crossbred cattle has increased significantly, while the indigenous cattle population has declined. Specifically, the population of crossbred cattle has increased by 29.3% in 2019 compared to the previous census, while the indigenous cattle population has declined by 6% over the same period. This situation raises a red flag, as India's once-diverse genetic cattle base is narrowing, posing a threat to long-term sustainability. The decline in the population of indigenous cattle is mainly due to farmers abandoning cows that have outlived their milking stage and become economically unviable. These cows then become stray animals. There are several laws in place that impose a complete ban on the slaughter of these animals, making cow slaughter and the sale of beef both cognizable and non-bailable offenses. Consequently, finding solutions to these problems is complex, as they are deeply tied to social taboos and religious sentiments. Therefore, alternative methods for managing these animals need to be explored. One potential solution is the establishment of large Gaushalas, which offer a better way to care for these neglected cattle. While

Gaushalas serve multiple purposes, their primary goal is to provide shelter for stray cattle and improve the health of sick, unproductive, or abandoned animals. However, these Gaushalas face various challenges, particularly on the financial front, due to inadequate government support, delayed funding, limited space, and insufficient feed etc. Rashmi *et al.* (2021) ^[6] also reported that inadequate knowledge about balanced feeding practices (71.66%), inadequate knowledge about the importance of mineral mixture (70.83%) and problems in availing good quality feed (53.83%) were perceived as major constraints. Katheria *et al.* (2016) ^[2] reported that 56.67% livestock owner lack emergency treatment at the farmer's doorstep. Rashmi *et al.* (2021) ^[6] reported that high cost of medicines was the serious problem after that the prevalence of poor environmental hygiene and injuries due to fighting as second and third major constraint faced by gaushalas. Therefore, it is crucial to assess the economic feasibility of Gaushalas in order to identify cost-effective methods for their operation and to provide sustainable shelter for a large number of animals. While numerous studies have been conducted on the economics of dairy farms, there has been limited research on Gaushalas. Although Gaushalas are non-

profit institutions, it is vital for them to achieve positive net returns to remain operational, as they lack a regular and stable source of income. This paper aims to examine the economic conditions of Gaushalas in Uttar Pradesh by analyzing their operations, income and expenditure patterns, and ultimately evaluating the profitability of these important institutions.

Methodology

An Ex post-facto research design was followed to carry out the study since the variables chosen for the study already occurred and there was no scope for manipulation of any variable. The final sampling unit, the Gaushala, was chosen using the purposive sampling approach as part of the sampling design. Based on the information available at official site of Uttar Pradesh GauSevaAayog, Department of Animal Husbandry, a list of Gaushalas of Agra division was prepared and then 100 Gaushalas were randomly selected from prepared list with the condition that they must have minimum 50 stray cattle in Gaushala. Thus a total sample size of 100 gaushalas involved in rearing and caring of stray cattle was selected for the study. This paper is based on both primary and secondary data. Primary data was gathered regarding the covered and farm area of the Gaushalas, the quantities and prices of milk and other products, expenditures on green and dry fodder, concentrates, labor, employee salaries, veterinary costs, and inventory in each Gaushala. Secondary data was collected on the number of Gaushalas in various districts, the number of animals and their composition, public and other donations, government grants, members' contributions, and the miscellaneous income and expenditures of the Gaushalas. Data was collected for three consecutive financial years—2020, 2021, and 2022 (Triennium ending)—and averaged for further analysis.

Data Analysis

Economic feasibility of Gaushala

Study of economic feasibility is a depth investigation of the profitability of organisation. The measure of the cost-effectiveness of a Gaushala was determined using the following formula:

$$\text{Net Return/year} = (\text{TotalReturn} - \text{TotalCost})$$

Cost effectiveness was applied to estimate the Gaushalas income and expenditure pattern. It includes the revenues and funds generated by Gaushalas from various sources, along with the expenses incurred. Finally, the net income was calculated by subtracting the total expenses from the gross income. For calculation of total expenses and total income, it's fixed expenses, variable expenses and other miscellaneous expenses and income of Gaushalas only (public donations and governmental aid) were taken for calculation of net return per year.

Fixed cost/expenses

Fixed expenses are those which do not change with the quantity of production and remain unchanged. The different items of fixed cost of Gaushala were salaries of permanent employees working there, depreciation of the inventory items of Gaushalas. The salaries of employees were

computed by multiplying number of paid employees with their salaries.

Depreciation cost

It is the loss in the value of an asset due to normal wear and tear, time and obsolescence. It can be estimated by Straight Line Method. The SLN for analysis yearly depreciation of the machinery was used. The value of fixed asset is reduced gradually over its useful life. The formula estimation of depreciation is given below:

$$D = \frac{O - S}{N}$$

Where,

D = Yearly depreciation

O = Initial value of the assets

S = Scrap value (10% of original value of asset)

N = Useful life of the assets (years)

The useful life of the assets was assumed to be 6 years for both the manual and power-operated chaff cutters. For the tractor, trolley, and ambulance, the useful life was considered to be 10 years.

Variable cost/expenses

Variable expenses are those incurred on the factors of production that can change with the level of production. These costs include feed and fodder, labor, veterinary care, and miscellaneous expenditures. The cost of feeding dry fodder, green fodder, concentrates, and other feeds to animals was calculated by multiplying the quantity fed to each animal by the respective purchase price of the feed. Labor expenses cover the wages paid in cash to hired labor at the Gaushalas. Veterinary expenses include costs associated with the healthcare of animals. Miscellaneous expenditures encompass expenses for repairing fixed assets, water and electricity charges, office and kitchen costs, and any other incidental charges.

Total expenses

The total expense was calculated by summing all the fixed and variable expenses incurred by the Gaushalas.

Gross income

Gross income was calculated by adding all the income generated from various sources for each Gaushala. These sources included donations, grants from the state government and other entities, proceeds from the sale of milk and milk products, products made from cow urine and dung, and revenue from the sale of cow dung.

Net income

The net income of the Gaushalas was calculated by subtracting the total expenses from the total income.

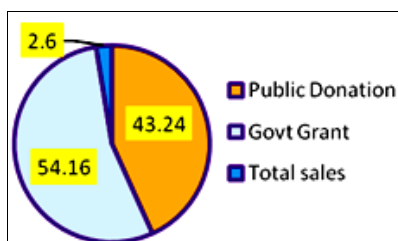
$$\text{NetReturn/year} = (\text{TotalReturn} - \text{TotalCost})$$

Results and Discussion

The economic feasibility of Gaushalas was analyzed by average revenue and expenditure of Gaushalas of last three consecutive years.

Income of Gaushalas

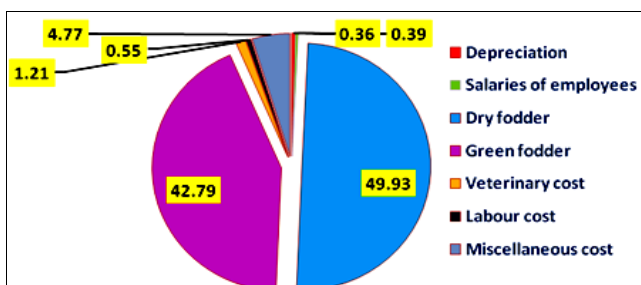
The figure 1. shows the percentage share of source of income and reveals that donation from public and government (97.40%) was common source of income among Gaushalas. Apart from receiving donations, only 4.00 percent of Gaushalas were sold milk, organic fertilizer, dung and medicine prepared by cow by-products which amounts to nearly 2.6 percent of income share. Besides cash, donations were also received in term of supplements like jaggery, dalia, wheat, etc. The record of such supplements items were not maintained in gaushalas. Mohanty *et al.* (2014) [5] also reported that share of income from cow excretion and its products is negligible (0.87%), but it is in great demand, due to its medicinal properties and rising people’s orientation towards natural products.



Sources of Gaushalas income (Percent Share)

Expanses of Gaushalas

It was observed from figure 2 that major expenses (92.00%) were found on feeding of animals in Gaushalas followed by miscellaneous expenses (4.7%). Further it was found veterinary expenses (1.21%) and labour expenses (0.55%) were nominal, whereas fixed expenses incorporating the depreciation and monthly wages of permanent employees (0.75%) percent of total expenses. Miscellaneous expenses incorporate repair and maintenance charges, fuel charges, electricity and kitchen charges etc. The fixed expenditures contribute (0.75%) percent of total expenses which includes salaries of permanent employees and depreciation of various items possessed by the Gaushalas *viz.*, power / manual chaff cutter, tractor and trolley, vehicle, generator, machine and equipments etc.



Sources of Gaushalas expenses (Percent Share)

Net income of Gaushalas

The result of all 100 Gaushalas indicates that income of all gaushalas was found less as compared to expenses, therefore net income of all Gaushalas was observed negative except Hasanand Gaushala in district Mathura had positive net income inspite of large number of animals sheltered in this Gaushala. Negative net income may be due to the fact that government is providing only Rs. 30/per animal /day as

allowance to be spent on fodder for each cow at shelter homes, which is not sufficient for one day feeding cost of cattle and second reason is that presence of large number of stray animal, which are totally depending upon public/government donations for their survival rather than initiating income generation activities like sale of dung, urine, compost and preparation of medicine by cow’s by-products (Yadav *et al.*, 2010) [8]. Hasanand Gaushala had positive net income inspite of large number of animals. This might be due to fact that Hasanand Gaushala was engaged in various entrepreneurial activities and established commercial dairy farm. They generate revenues by sales of milk and milk products. Dixit (1999) [1] in Mandya district of Karnataka and Mankar (2003) [4] in Wardha district of Maharashtra both found that the net income from indigenous cattle was negative.

Association between different groups of Gaushalas

The Kruskal-Wallis test is a non-parametric statistical method used to assess whether there are significant differences between the medians of three or more independent groups.

Table 1: Category of gaushala with number of observation and sum of ranks (N=100)

Category of Gaushalas	Number of observation in groups	Sum of Ranks
Low (>100)	35	208
Medium (101-500)	51	2152
Large (< 500)	14	2690

Calculate the Test Statistic (H)

$$H = \frac{12}{N(N+1)} \sum_{i=1}^k \frac{R_i^2}{n_i} - 3(N + 1)$$

N : Total number of observations across all groups.

n_i : Number of observations in group i .

R_i : Sum of ranks for group i .

k : Number of groups.

The test resulted in H value of 54.162, which is much larger than the critical chi-square value of 5.991 (df = 2, α = 0.05). The associated p-value is less than 0.0001, indicating a highly significant result. Therefore, we reject the null hypothesis and conclude that there are significant differences in dependent variable between the groups.

Conclusion

The differences found can be attributed to several factors such as government assistance remained consistent across the groups, this did not account for all the variations in the dependent variable. This suggests that factors other than government support may have influenced the results. The donation patterns among Gaushalas were varied, which likely contributed to the observed differences. This indicates that how resources are allocated or donated plays a crucial role in affecting the dependent variable. The number of animals also differed across the Gaushalas, further influencing the results. Variations in the number of animals

could lead to differences in the dependent variable, whether due to resource needs, management practices, or other animal-related factors. Therefore, the significant differences across the Gaushalas were likely due to a combination of donation patterns and varying numbers of animals, despite the consistent government assistance.

References

1. Dixit PK. Bovine economy in Mandya district of Karnataka state- sustainability-oriented analysis. Ph.D. Thesis. ICAR National Dairy Research Institute (Deemed University), Karnal-132001, Haryana, India; 1999.
2. Katheria D, Gangwar LS, Rashmi, Singh A. Prospects and constraints faced by small dairy holder farmers and animal health service provider in controlling mastitis. *Rumin Sci.* 2016;5(1):51-54.
3. Livestock Census. 20th Livestock Census released by the Union Ministry of Fisheries, Animal Husbandry and Dairying. Government of India; 2020.
4. Mankar GM. Economics of milk production and disposal pattern in Wardha district of Maharashtra. M.Sc. Dissertation. ICAR National Dairy Research Institute (Deemed University), Karnal-132001, Haryana, India; 2003.
5. Mohanty I, Senapati MR, Jena D, Palai S. Diversified uses of cow urine. *Int J Pharm Pharm Sci.* 2014;6(3):20-22.
<https://innovareacademics.in/journal/ijpps/Vol6Issue3/9051.pz>.
6. Rashmi, Singh SK, Singh A, Sirohi R. Challenges perceived in management of stray cattle by gaushalas. *Rumin Sci.* 2022; 11(2):331-334.
7. Rashmi, Tiwari R, Katheria D, Singh A. Factors influencing rearing of Jammunapari goat in semi-arid region of Uttar Pradesh. *Int J Livest Res.* 2021;11(8):19-22.
8. Yadav DK, Vij PK. Inventorization of gaushala resources and their use in breed improvement and conservation programmes. *Indian J Anim Sci.* 2010;80(4):343-345.