AD Hingankar
Department of Animal
Husbandry and Dairy Science,
College of Agriculture, Latur,
Maharashtra, India

DS Chauhan
Professor, Department of Animal
Husbandry and Dairy Science,
College of Agriculture, Latur,
Maharashtra, India

SS Gawali
Department of Animal
Husbandry and Dairy Science,
VNMKV, Parbhani,
Maharashtra, India

Shivraj JP
Department of Animal
Husbandry and Dairy Science,
VNMKV Parbhani,
Maharashtra, India

Studies on constraints faced by the gaushalas in Parbhani and Latur districts

AD Hingankar, DS Chauhan, SS Gawali and Shivraj JP

Abstract
The present study conducted on "Studies on Management Practices Adopted by Gaushalas in Parbhani and Latur districts". Data were collected from 40 selected Gaushalas and grouped into 3 categories based on total number of animals as small (100 animals), medium (300 animals) and large (>300 animals), 15 Gaushalas in small whereas 15 Gaushalas medium and 10 Gaushalas in large category in Parbhani and Latur districts. About 37.50 percent of the Gaushalas possessed medium herd size (between 300 cattle), followed by 37.50 percent with small herd size (below 100 cattle) and 25.00 percent with large herd size (above 300 cattle). Gaushalas have also been identified as the centres for conservation of declining cattle breeds. It is important to mention that, majority (100%) of the Gaushalas comparised of indigenous cattle in general and among them most of them were found to be unproductive and old which could be related to their primary objective to serve the old, infirm and unproductive cattle. Among the indigenous cattle maintained in the Gaushalas, most of them were old and unproductive cattle in small (33.33%), medium (56.12%) and large sized Gaushalas (49.51%). For proper management of Gaushala and care of cattle, enough manpower is essential. The cattle's current feeding habits in the Gaushalas region of the research. It was noted that cattle in small, medium, and large Gaushalas were fed an average of 2–5 kg/day of dry fodder, 2.0–4.0 kg/day of green fodder, 0.1–0.4 kg/day of concentrate, and 50 gms of mineral mixture.

Keywords: Gaushalas, management practices, constraints, welfare

Introduction
Gaushala are the protective shelter for stray, abandoned, handicapped and infirm cattle, it prevents road accidents and crop damages, prevent immature death of these cattle due to consumption of polythene bags along with they also provide rescue and treatment of sick, injured and accidental animal. A few fore-front Gaushalas, however, are striving to maintain indigenous purebreed cows like Sahiwal, Gir, Hariana, and kankrej, and produce quality males, thereby contributing to the improvement and conservation. But most of these are primarily catering to the needs of non-lactating, weak, unproductive, infertile, chronically sick and stray cattle having some physical or reproductive or mammary problem and are economically unsustainable either at individual owner household or at organized farm (Chandra & Kamboj, 2022) [1].

The first gaushala in India was established in Rewari, in the 1880. In 1882 the first society for the protection of cattle was established in Punjab. At present India is having more than 4500 gaushalas registered under animal welfare board of India (AWBI) according to Rastriya Gokul mission, (2014) development of integrated indigenous cattle centers.

In a recent study at National Bureau of Animal Genetic Resources several gaushalas have been reported as potential centers for breed conservation and improvement. Some Gaushalas in the country have followed innovative methods for raising additional income through various income generation activities *viz*, enhanced utilization of bull power for rural activities and electricity generation, production of young bulls for export to other States, production of Gobargas, and production of Panchagavya, vermicompost and bio- pesticide for use in natural and organic agriculture. Large scale practice of such value additions may lead to transformation of Gaushalas to play an additional but vital role in conservation of indigenous breeds of cattle. (Sharma *et al*. 2020) [6].

Corresponding Author:
AD Hingankar
Department of Animal
Husbandry and Dairy Science,
College of Agriculture, Latur,
Maharashtra, India

Material and Methods
Location
Maharashtra with a total area of 3,07,713 sq.km. is the third-largest state by area in terms of land area and constitutes 9.36 percent of India's total geographical area. The state lies between 15°35'N to 22°02'N latitude and 72°36'E to 80°54'E longitude. From the state of Maharashtra, we selected the Gaushalas from Parbhani and Latur districts.

The sources and collection of data
The data for present investigation i.e. Management practices, constraints, profile of Gaushalas was recorded from 40 Gaushalas of the Parbhani and Latur districts. The data of Gaushalas was collected by actual questioning with respondents of Gaushalas.

Compilation of data
The data accumulated on selected parameter by questioning with respondents of Gaushalas with the help of schedule. For this study 40 Gaushalas were randomly selected from Parbhani and Latur districts of Maharashtra. The selected Gaushalas for the study were classified into small (less than 100 cattle), Medium (between 100-150 cattle), and Large

Gaushalas (more than 300 cattle). Thus, the selected 40 Gaushalas were comprised of 15 small sized, 15 medium sized and 10 large sized Gaushalas. The selected Gaushala-respondents were interviewed personally with the help of well-structured and pre-tested interview schedule in order to get relevant information. The detailed information required for the study was collected from each of the selected Gaushalas during the year 2022-2023.

Analysis of Data
Then, the data collected were tabulated and analysed using Garret ranking technique to interpret the results.

Result and Discussion
Constraints imply the problems or difficulties faced by Gaushala management while adopting day-to day good animal husbandry and management practices in their Gaushalas. For the study, the constraints were studied under five categories *Viz.*, breeding, feeding, healthcare, institutional and general management constraints in Gaushalas ranked by stakeholders in the study area were collected and analysed by using Garret ranking technique and results are presented in Table 1 to Table 5.

Table 1: Constraints faced by the Gaushalas in Housing practices

Sl. No.	Constraints	Small		Medium		Large	
		Garrett Score	Rank	Garrett Score	Rank	Garrett Score	Rank
1	Less space (shade)	58.33	2	58.33	2	56.50	2
2	Less space (open)	58.66	1	59.66	1	60.00	1
3	Poor quality roofing material	41.33	4	41.33	4	42.20	4
4	Lack of cleanliness	39.53	5	36.13	5	39.00	5
5	Lack of provision of cooling summer	51.13	3	53.53	3	51.30	3

In general, there were five important constraints expressed by the Gaushalas in adoption of housing practices. From the Table 1 it could be inferred that, in small sized Gaushalas 'less space (open) used for was the first constraint since most of the Gaushala Less space (shed) 'was the second major constraint of the cattle by the Gaushalas management lack of provision of cooling summer was the third major constraint of

Gaushala. In the case of medium sized Gaushalas, 'less space (open) was the first major constraint, 'less space (shed) was the second and 'lack of provision of cooling summer was the third major constraint. In the case of large sized Gaushalas, less space (open) was the first major constraint, 'less space (shed) was the second and 'lack of provision of cooling summer was the third major constraint.

Table 2: Constraints faced by the Gaushalas in breeding practices

Sr. No.	Constraints	Small		Medium		Large	
		Garrett Score	Rank	Garrett Score	Rank	Garrett Score	Rank
1	Inferior bulls used for Natural Service	54.00	1	52.00	3	54.90	1
2	Inadequate supply of quality breed specific semen	52.20	3	54.13	2	53.70	2
3	Timely heat detection	54.60	2	55.73	1	51.50	3
4	Incidence of reproductive disorders in cattle	40.20	4	39.13	4	42.20	4

In general, there were four important constraints expressed by the Gaushalas in adoption of breeding practices. From the Table 2 it could be inferred that, in small sized Gaushalas 'inferior bulls used for Natural Service' was the first constraint since most of the bulls in Gaushala herd maintained were old and inferior bulls. 'Incidence of reproductive disorders in cattle' was the fourth major constraint as very less attention was given towards reproductive health management of the cattle by the Gaushalas management. 'Timely heat detection' was the second major constraint since

most of them lacked awareness and experience to detect the heat symptoms. In the case of medium sized Gaushalas, 'problem of heat detection' was the first major constraint, 'incidence of reproductive disorders in cattle' was the fourth. In the case of large sized Gaushalas, 'inferior bulls used for Natural Services' was the major constraints followed by 'Inadequate supply of quality breed specific semen' was the second major constraint as there were incidence of poor conception rate in Gaushalas.

Table 3: Constraints faced by the Gaushalas in feeding practices

Sr. No.	Constraints	Small		Medium		Large	
		Garret Score	Rank	Garret Score	Rank	Garret Score	Rank
1	Inadequate supply of green fodder round the year	59.00	1	57.66	2	57.50	1
2	Non-availability of good quality concentrate feed	56.00	2	59.00	1	55.50	2
3	Low availability of dry fodder	43.46	5	46.20	3	46.80	3
4	Non-availability of land for fodder production /grazing	45.66	3	45.33	4	46.20	4
5	Inadequate knowledge on balanced feeding	44.86	4	40.80	5	46.60	5

In general, there were mainly five important constraints expressed by the Gaushalas in adoption of feeding practices. The results in Table 3 indicate that, in small sized Gaushalas, 'non-availability of land for fodder production/grazing' was the fourth major constraint, as majority of the small and medium sized Gaushalas had less land holding so there was acute shortage for fodder/grazing land. 'Inadequate supply of green fodder round the year' was the first major constraint; which might be due to acute shortage of green fodder during the off season also majority of the small Gaushalas which are depending on local farmers for green fodder supply.

'Inadequate knowledge on balanced feeding' was the fourth major constraint, which might be due to lack of awareness about balanced feeding in cattle and knowledge of quality of local feed stuffs. In the case of medium size Gaushalas, 'non-availability of land for fodder production/grazing' was the fourth major constraints, 'inadequate supply of green fodder round the year' was the second and 'inadequate knowledge on balanced feeding' was the fifth major constraint. This is attributed to inadequate availability of grazing/fodder land, seasonal availability of green fodder and inadequate knowledge about balanced feeding pattern among cattle.

Table 4: Constraints faced by the Gaushalas in healthcare practices

Sr. No.	Constraints	Small		Medium		Large	
		Garret Score	Rank	Garret Score	Rank	Garret Score	Rank
1	Poor knowledge about cattle health management	47.46	3	47.46	3	46.20	3
2	Lack of timely access to veterinary services	48.73	2	51.26	2	50.00	2
3	Prevalence of poor environmental hygiene	53.80	1	52.53	1	53.80	1

In general, there were mainly three important constraints expressed by the Gaushalas in adoption of healthcare practices. The results in Table 4 inferred that, in small sized Gaushalas, 'prevalence of poor environmental hygiene' was the first major constraint, followed by 'poor knowledge about cattle health management' as the third and 'lack of timely access to veterinary services' was the second major constraint. This might be due to the ignorance and lack of experience among the small sized Gaushalas towards animal healthcare practices and also due to lack of timely access to veterinary services were the second major cause of the constraints.

In case of medium sized Gaushalas, 'lack of timely access to veterinary services' was the second constraints followed by 'poor knowledge about cattle health management was the

third constraints and 'prevalence of poor environmental hygiene' was the first major constraints. This might be due to lack of access to veterinary services in the local Gaushalas and inadequate knowledge and awareness about good animal healthcare practices. Since, they followed indigenous method of treatment which was not effective in treating their cattle.

In the case of large sized Gaushalas, 'lack of timely access to veterinary services' was the second constraints followed by 'poor knowledge about cattle health management' third and 'prevalence of poor environmental hygiene' was the first major constraints. This could be attributed to the distant location of veterinary clinics, ignorance and insufficient knowledge of good animal healthcare practices. Similar findings were observed by Gupta (2017) [2] and Mandi and Subhash (2020) [3].

Table 5: Constraints faced by the Gaushalas due to institutional constraints

Sr. No.	Constraints	Small		Medium		Large	
		Garret Score	Rank	Garret Score	Rank	Garret Score	Rank
1	Difficulty in registration procedures	50.53	2	54.46	1	51.60	1
2	Inadequate infrastructure	47.86	3	42.80	3	47.30	3
3	Insufficient trained technical manpower	44.13	4	42.20	4	44.70	4
4	Inadequate credit facilities/ funds/ donations	52.00	1	54.00	2	50.60	2

In general, there were mainly four important constraints due to institutional constraints. The results in Table 5 indicated that, in small sized Gaushalas, 'inadequate credit facilities/funds/donations' was the first major constraint as they relied basically upon individual donation which was not sufficient enough to meet the daily expenses in Gaushalas. 'Difficulty in registration procedures' was the second major constraint as it was time taking and cumbersome, 'insufficient trained technical manpower' was the fourth major constraint as majority of the manpower were daily labourers with less technical expertise. In the case of medium sized Gaushalas, 'inadequate infrastructure' was the third major constraint as

there was inadequate capital or fund for investment in Gaushala infrastructure development. 'Insufficient trained technical manpower' was the fourth major constraint. 'Difficulty in registration procedures' was the first major constraint. Whereas, in case of large sized Gaushalas 'insufficient trained technical manpower was the fourth constraints 'inadequate credit facilities/funds/ donations' and 'inadequate infrastructure' were the most important perceived constraints. Meena and Fulzele (2006) [4] carried out Constraints perceived by Meena tribes in adoption of improved dairy farming practices and lack of knowledge about proper amount of concentrate feeding

Table 6: Constraints faced by the Gaushalas due to general constraints

Sr. No	Constraints	Small		Medium		Large	
		Garret Score	Rank	Garret Score	Rank	Garret Score	Rank
1	Inadequate capital for infrastructure development	47.46	4	47.86	4	46.30	5
2	Inadequate knowledge of cattle waste management	52.53	3	52.13	2	52.00	3
3	High rate of calf mortality	45.33	5	42.33	6	44.00	6
4	Inadequate Government support for training and development	54.26	2	50.40	3	58.50	1
5	High cost of inputs	44.06	6	45.60	5	46.90	4
6	Inadequate knowledge of scientific management	56.33	1	61.66	1	52.30	2

In general, there were mainly six important general constraints faced by Gaushalas. The results in Table 6 indicated that, in small sized Gaushalas, 'inadequate capital for infrastructure development' was the fourth major constraint, 'high cost of inputs' was the six major constraint and 'inadequate Government incentives to support Gaushalas' was the second major constraint. In the case of medium size Gaushalas, 'inadequate capital for infrastructure development was the fourth major constraints', 'inadequate Government incentives to support Gaushalas was the third' and 'high price of inputs' was the major constraints. This might be due to the reason that in most of the small and medium size Gaushalas they had insufficient sources of funding due to which they lacked funds for creation of infrastructure facilities. Whereas, in the case of large sized Gaushalas 'inadequate knowledge of scientific management' was the second major constraint, followed by 'inadequate knowledge of cattle waste management was the third and 'inadequate Government was the first major constraints.

Support for training and development of Gaushalas were the major constraints. this might be due the reason that majority of the large sized Gaushalas were not much aware about the implementation of practice to reduce, reuse or recycle farm waste and followed conventional method of cattle waste management i.e. preparation of Panchagavya, Vermicomposting etc. and also majority of them lacked training facilities from the developmental agencies.

Conclusion

The present study revealed that the composition of herd maintained in all the Gaushalas, 100 percent comprised of indigenous cattle. Data were collected from 40 Gaushalas selected and grouped into 3 categories based on total number of animals as small (100 animals), medium (300 animals) and large (>300 animals), 15 Gaushalas in small whereas 15 Gaushalas medium and 10 Gaushalas in large category in Parbhani and Latur districts Gaushalas maintained 'to serve the needs of charitable institutions'.

About 37.50 percent of the Gaushalas possessed medium herd size (between 300 cattle), followed by 37.50 percent with small herd size (below 100 cattle) and 25.00 percent with large herd size (above 300 cattle) The 40 registered Gaushalas were selected and covering 2 districts. For the purpose of primary data collection, well-structured, standardized, data collection tool interview schedule was constructed which included development of schedule to assess adoption of GMPs in Gaushalas. In case of overall adoption of GMPs, most of the large sized Gaushalas performed better than medium and small sized Gaushala. The results of this study clearly show that cattle in all of the Gaushalas were hungry because they did not follow the recommended level of feeding pattern. This could be because there was insufficient land used for fodder cultivation or because the farmers were not aware of balanced feeding practices.

References

1. Chandra S, Kamboj ML, Singh M, Singh R, Lathawal SS. Feeding practices and availability of storage space for feed and fodder in Gaushalas of Haryana. Indian Journal of Animal Sciences. 2022;92(4):523-526.
2. Gupta J. Adoption of Good Dairy Management Practices with reference to Animal Welfare in Central Plain Zone of Uttar Pradesh [Master's Thesis]. National Dairy Research Institute, Karnal; c2017.
3. Mandi K, Subash S. Adoption of good management practices by the Gaushalas (Cow-Shed) in Karnataka State, India. Asian Journal of Agricultural Extension, Economics and Sociology. 2020;37(4):1-9.
4. Meena HR, Fulzele RM. Constraints perceived by Meena tribes in adoption of improved dairy farming practices. Indian Research Journal of Extension Education. 2006;6(1&2):52-54.
5. Singh M. Production system analysis and viability of Hariana cattle in its breeding tract [Doctoral Dissertation]. National Dairy Research Institute, Karnal; c2018.
6. Sharma A, Schuetze C, Phillips CJ. The management of cow shelters (Gaushalas) in India, including the attitudes of shelter managers to cow welfare. Animals. 2020;10(2):211.