



RESEARCH ARTICLE

General Structure of Cattle Farming Enterprises and Basic Care and Feeding Practices of Breeders: The Example of Çorum City Center

Şeyma Aydemir¹ • Bülent Bayraktar² • Gökşad Cemil Kotan¹ • Eren Kebapçı¹
• Emre Tekce³

¹Hitit University, Alaca Avni Çelik Vocational School, Department of Veterinary Medicine, Çorum/Türkiye

²Bayburt University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Bayburt, Türkiye

³Bayburt University, Faculty of Applied Sciences, Department of Organic Farming Management, Bayburt, Türkiye

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ABSTRACT

This study examined the general structure of cattle farming operations enterprises in the central district of Çorum city center and the basic care and feeding practices of breeders based on a survey conducted on 130 cattle enterprises between May and June 2023. Cattle enterprises in Çorum city center are generally small to medium-sized; 43.08% of these operations have a capacity of 11-30 animals, while 71.54% are owned by the breeders themselves. Breeders in these operations are predominantly male (82.31%), with the largest age group being between 31 and 40 years old, at 36.15%. Livestock farming is the population source of income for 83.85% of breeders, and their education levels are increasing, with 32.31% of breeders now high school graduates. Breeders combine family knowledge with information from official institutions and organizations as a source of knowledge and experience, and 58.46% rely on experience in their livestock feeding decisions. Animals are generally fed twice a day, with a 90% mix of roughage and concentrate, while automatic waterers (48.46%) are preferred for providing drinking water. However, since 67.69% of concentrate needs are met externally, there is external dependency, and 81.54% of breeders face a pasture shortage. 60.77% of the barns are located adjacent to or below the house, and reinforced concrete (67.69%) is used as the construction material. Regarding cleaning practices, straw (73.85%) is the most preferred bedding material in the barns, general cleaning is done 1-3 times a year, and manure is removed manually and deposited in the open areas (86.15%). 86.15% of breeders are members of breeder associations, and the most frequently received support is pedigree and preliminary pedigree support (89.23%). 68.46% of enterprises maintain an animal registration system. As a result, cattle enterprises in Çorum have a structure that combines traditional methods with modern practices. The breeders' high organizational awareness and propensity for record keeping indicate that the sector has potential for future growth. However, further improvements are needed in areas such as the use of professional nutrition resources and manure management.

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1. Introduction

The livestock sector is a broad field that covers the production, quality improvement, storage under appropriate conditions, processing and marketing of products obtained from animal husbandry (meat, milk, eggs, etc.) (Wakaso et al.,

2025). This sector is one of the most important sectors that plays a critical role in providing employment and supporting the local economy in rural areas, as well as ensuring food security and producing essential nutrients for the rapidly growing world population (Barłowska et al., 2025). In Türkiye,

✉ Correspondence

E-mail address: seymaaydemir@hitit.edu.tr

the agricultural sector accounted for approximately 14.8% of total employment in 2024 (TUIK, 2025a), while the livestock sector's share in Gross Domestic Product (GDP) is within 4.8% of the total share of the agriculture, forestry and fisheries sectors (TUIK, 2025b). Cattle breeding has an important place in the livestock sector, meeting approximately 90% of Türkiye's red meat production and 91% of its milk production, ensuring the country's food security and meeting the protein needs of the growing population (TUIK, 2023). In sustainable animal husbandry, it's essential to provide animals with all the nutrients necessary for their health and productivity through a balanced diet appropriate to their physiological stages. In cattle farming, in particular, animal nutrition directly impacts productivity and health (Akintan et al., 2025). Correct feeding programs increase the genetic potential, disease resistance and reproductive performance of animals, thus increasing meat and milk yield; however, improper feeding causes health problems, low productivity and loss of profitability (Kasimanickam et al., 2025). Breeders are the foundation of the food supply chain and rural life. They contribute to the economy and social nutrition. Breeders' knowledge of animal nutrition, health, and productivity is critical for sustainable livestock production, particularly for cattle population management and productivity (Tadele et al., 2025).

Cattle farming plays a multifaceted and critical role in the Çorum city center economy, going beyond simple agricultural production. These businesses directly support the livelihoods of farmers and their families by providing a primary source of income for a significant portion of the rural population. The sector also provides raw materials for regional processing industries, maintains the socio-economic balance of rural areas, and contributes to local food security. Given these vital economic and social contributions, a detailed understanding of the operational structures and key practices of farmers in Çorum city center is crucial for informed policymaking and developing targeted development strategies (Fidan, 1992). Çorum province, which forms the basis of the study, is located between 34°04' East meridian and 39°54' North parallel, at an average altitude of 820 meters (Figure 1). Since it is located in a transition zone between the Black Sea and Central Anatolian climates, it has a continental climate with hot and dry summers and cold and snowy winters (Environmental Management and Inspection Branch Directorate, 2022).



Figure 1. Location of the study areas.

According to 2023 TurkStat data, Çorum province holds a strategic position that significantly contributes to the rural economy, with a total of 216,951 head of cattle. Of this total, 216,951 head of cattle are registered in the Çorum city center where this study was conducted (TUIK, 2023). In this context, the aim of this study is to examine the general structure of cattle enterprises in the central district of Çorum city center and the basic care and feeding practices of breeders.

2. Materials and Methods

The research material consisted of data obtained from a survey conducted between May and June 2023 on 130 cattle enterprises in the central district of Çorum city center. Approval for the study was obtained from the Hitit University Non-Interventional Research Ethics Committee (Protocol number: 30.03.2023 date and Decision Number: 2023-87). A face-to-face survey was conducted with breeders to examine the general structure of cattle enterprises in the central district of Çorum city center and the basic care and feeding practices of breeders. The survey form included questions regarding farm information, basic care practices, and animal feeding practices.

2.1. Determination of Population Size

According to the 2023 records of the Çorum Directorate of Provincial Agriculture and Forestry, where the study was conducted, there are 16,290 cattle farming enterprises. The number of surveys conducted was calculated based on the regional distribution of producers engaged in cattle farming in the region and registered with the Animal Registration System (TÜRKVET, 2016). The proportional approach method was used to determine a representative population size. The study, titled "General Structure of Cattle Farming Enterprises and Basic Care and Feeding Practices of Farmers: The Example of Çorum Province," was conducted through face-to-face interviews with business owners actively engaged in farming in the central province of Çorum. A total of 130 people

participated in the survey. The survey consisted of four sections. The first section included scale items related to the demographic characteristics of the participants. The second section included 10 questions on the general characteristics of the enterprises; the third section included 15 questions on Basic Care Practices; and the fourth section included 12 questions on feeding practices in the enterprises. To assess the participants' responses, open-ended questions were asked by selecting options and asking multiple choices (yes/no). Using this method, the number of surveys was calculated according to the following formula (Miran, 2003):

$$n = \frac{N * t^2 * p * q}{(N-1) * \sigma_p^2 * t^2 * p * q} \quad (1)$$

In the formula, "n" represents the total population size, "N" represents the population, "p" represents the estimation ratio, and " σ_p^2 " represents the ratio variance. The total population size for the survey study was determined as 16290. This number was calculated by taking $p = 0.5$ to maximize the population size since the characteristics of the producers constituting the main mass were not known at the beginning. The distribution of the surveys by province was made by taking into account the distribution of a total of 95.48 businesses in the region. Among the terms in this formula, n = Population size, N = Number of businesses, σ_p^2 = Ratio variance (with a 95% confidence interval and a 5% margin of error to reach the maximum population size), t = Table value, p = The desired ratio to be calculated, $q = 1 - p$.

$$n = \frac{16290 * 1.96^2 * 0.5 * 0.5}{(16290 - 1) * 0.1^2 * 1.96^2 * 0.5 * 0.5} \approx 96$$

The population size was determined to be 95, and 10% was added to minimize sampling error, bringing the population size to 105. For the reliability of the study, 10% of the spare questionnaires were distributed proportionally to the business groups, and all 130 questionnaires were evaluated. Reliability analysis is conducted to examine the structural integrity of a measurement tool and the internal consistency of individuals' responses. Cronbach's alpha coefficient was used to determine the reliability of the scale in the study. According to this coefficient, a value between 0.00 and 0.40 indicates that the scale is not reliable. Values between 0.40 and 0.60 reflect a borderline level of reliability; values between 0.60 and 0.80 indicate acceptable reliability, and values between 0.80 and 1.00 indicate a highly reliable measurement (Büyüköztürk, 2018). In our study, Cronbach's alpha value was found to be 0.742. According to these findings, this indicates that the reliability of the data in the study is high. In addition, as a result of the evaluation of the data obtained from the survey, the Kaiser-Meyer-Olkin (KMO) sampling adequacy measurement value was calculated as 0.710. Findings regarding Bartlett's test of sphericity confirm that there is a significant relationship between the variables in the scale.

2.2. Statistical Analysis

The information obtained at the end of the study was evaluated using IBM SPSS Statistics (Version 29.0) software (IBM Corporation, 2022), and frequency tables were (IBM Corporation, 2022). The information obtained is presented as numerical frequency (N) and percentage frequency (%). These statistics were used to describe the demographic, structural, and operational characteristics of the businesses included in the study.

3. Results and Discussion

When the demographic and socioeconomic characteristics of the breeders are examined, of the 130 breeders who participated in the survey, 107 (82.31%) were male and 23 (17.69%) were female. In terms of the age distribution of the cattle breeders, it is seen that the largest group was between the ages of 31-40 with 36.15% (Table 1). This finding suggests a younger demographic among breeders in Çorum's central district compared to several other regional studies conducted in Turkey. For example, Yılmaz et al. (2020) found the average age of breeders in Iğdır to be 44.9. Similarly, Aşkan and Dağdemir (2016) reported an even older average age of 51.22 for dairy cattle breeders in the TRA1 level 2 region (Erzincan, Erzurum, Kars, Ardahan, Iğdır), while Aydın and Unakıtan (2016) determined the average age in the Thrace region to be 49.92. Furthermore, a study by Güven and Yavuz (2020) in the TRA2 Region reported that the largest age group was 51 years and older (34.5%). Additionally, research conducted in the Hatay province found the average age of members of the Cattle Breeders' Association to be 48.8. Although it is generally stated that the cattle breeding sector is dominated by older male producers, our field research in Çorum reveals that young and middle-aged individuals (with the largest share being the 31-40 age group at 36.15%) are carrying out these activities. This situation is largely due to grant programs, low-interest loans, and other government support targeting young breeders, along with high animal prices, which facilitate the entry and continued presence of youth in the sector.

This is primarily due to incentives, low-interest loans, and other government support for young breeders, as well as high animal prices, which facilitate young people's entry into the sector and their continued persistence. In this study, livestock farming was the main source of income for 83.85% of the breeders, highlighting the critical role of this sector in the regional economy. In terms of household size, 40% of the farms had 3-4 people, while 35.38% had 5-7 people. This suggests that livestock farming is common in family businesses and serves as a primary or secondary labor source for households. According to research by Güven and Yavuz (2020), 25.6% of cattle breeders in the TRA2 Region had primary school or less, 22.9% had secondary school, 3.6% had high school, and 4.4% had an associate's degree or higher. This indicates that 92% of

breeders have a secondary level of education or less, and the proportion of well-educated breeders is quite low. A study conducted by Aksoy and Yavuz (2008) in the Eastern Anatolia Region found that the proportion of those who had never attended school was 17.1%, the proportion of primary school graduates was 63.5%, and the proportion of secondary school graduates was 11.3%. A study conducted by Demir and Yavuz (2013) in the Western Marmara Region (WMR) and

Northeastern Anatolia Region (NOR) reported that the rate of illiteracy was 3.2% in the BMR and 16.8% in the NOR. When examining the level of education of breeders in this study, it is striking that 32.31% of breeders were high school graduates (Table 1). This can be attributed to the general increase in education levels in Türkiye over time and the increased access to high school education for individuals in rural areas.

Table 1. General characteristics of businesses.

Survey Questions	Frequency	
	N	%
Breeder Gender		
Male	107	82.31
Female	23	17.69
Breeder Age		
18-30	23	17.69
31-40	47	36.15
41-50	31	23.85
51-60 and above	29	22.31
How many people are in your household?		
1-2	23	17.69
3-4	52	40.00
5-7	46	35.38
7 and above	9	6.92
What is your educational background?		
Literate	16	12.31
Primary School	31	23.85
Middle School	28	21.54
High School	42	32.31
University	13	10.00
How many years have you been raising cattle?		
0-5	7	5.38
6-10	21	16.15
11-15	36	27.69
16-20	41	31.54
20 and above	25	19.23
What is your reason for raising livestock?		
Main Source of Income	109	83.85
Contribution to Livestock	21	16.15
How many animals does your barn hold?		
1-10	32	24.62
11-30	56	43.08
30-50	25	19.23
More than 50	17	13.08
How is your barn located within your farm?		
Adjacent to the house/Under the house/Detached	79	60.77
Detached from the house	51	39.23

Table 1. (continued)

Survey Questions	Frequency	
	N	%
What is the building type of your barn?		
Adobe	23	17.69
Stone	19	14.62
Reinforced Concrete	88	67.69
Who owns your business?		
Self	93	71.54
Tenant	10	7.69
Partner	27	20.77
Are you a member of breeders' associations and/or cooperatives?		
Yes	112	86.15
No	18	13.85
Do you receive support for your animal husbandry activities?		
Pedigree - Preliminary Pedigree	116	89.23
Bank - Loan	3	2.31
Ministry grant and support projects	3	2.31
None	8	6.15
What is the source of your knowledge and experience regarding husbandry?		
From Family	7	5.38
From Family - Official Institutions and Organizations	77	59.23
Internet - TV - Official Institutions and Organizations	46	35.38
Who handles the animal care and shepherding at your business?		
Family members	33	25.38
Family members - Shepherd	68	52.31
Shepherd	29	22.31

Barn capacity is an important criterion indicating the size and potential of a farm (Nappi et al., 2019). When the farms included in the study are examined in terms of structure and infrastructure, the shelter capacities provide important clues about the scale of the farms. 43.08% of the farms have a capacity of 11-30 animals, which indicates the prevalence of small and medium-sized enterprises. According to a study conducted by Tugay and Bakır (2006) in Giresun, they determined that 62.2% of the barns of dairy cattle enterprises were built on the ground floor of the houses and 35.7% were built separately from the houses. The location of the barns is one of the important factors affecting breeding practices. The fact that 60.77% of them are adjacent to the house or under the house is a reflection of traditional rural settlement structures. According to the research of Yılmaz et al. (2020), they reported that reinforced concrete materials (53.7%) are the most preferred materials in barn construction by breeders in the region, although traditional materials such as stone + adobe (31.5%) are also still widely used. Mundan et al. (2018) research, dairy cattle breeders in Şanlıurfa have a high preference for modern and durable materials such as concrete for barn floors (85.2%), briquettes for walls (69.7%), and

rubber mats for stall mats (81.8%). In this study, the dominance of reinforced concrete in the construction types of cattle farming enterprises at 67.69% is an indicator of the transition to modern materials and the increase in permanent investments. The fact that 71.54% of the farms are owned by the breeder demonstrates the strong family ownership and continuity of the enterprises. In terms of workforce structure, 52.31% of animal care and shepherding tasks are carried out by family members and a shepherd, indicating that the enterprises utilize both family labor and externally provided professional labor. This suggests that when family labor is insufficient, they resort to external labor. Breeders' emphasis on organization for information sharing, marketing, and problem-solving is of strategic importance in the cattle farming sector, as in all sectors. Yılmaz et al. (2020) reported that 82.1% of cattle breeders in Iğdır are members of at least one livestock organization. According to the research conducted by Yüzbaşıoğlu (2022) study, 92% of farmers in Tokat city center are members of a producer organization, 63% of which are affiliated with the Union of Chambers of Agriculture of Türkiye. In this study, 86.15% of breeders are members of breeder associations and/or cooperatives, indicating a high

level of organizational awareness and a tendency for sector actors to come together. The most common support received, at 89.23%, is pedigree and preliminary pedigree, indicating that breeders prioritize support for genetic improvement and increased productivity. The fact that breeders combine family experience with information from official institutions and organizations (59.23%) as a source of information indicates that traditional knowledge is being blended with modern practices. The fact that modern information sources such as the internet and TV are also used at a rate of 35.38% indicates increased access to technology.

In this study, the results of the survey on basic maintenance practices in farms indicate that breeders adopt various practices in barn management (Table 2). According to a study conducted by Mundan et al. (2018) in Şanlıurfa, the majority of breeders in dairy farms (85.2%) prefer concrete as barn floors. Additionally, briquettes (69.7%) are used in wall construction and rubber mats (81.8%) are used as stall mats. When examined in terms of bedding cleanliness and manure management, the most commonly used bedding type in barns is straw, preferred by 73.85% of breeders. Use is quite low within the scope of Sawdust (5.38%).

Table 2. Basic maintenance practices of the enterprises included in the study.

Survey Questions	Frequency	
	N	%
What type of bedding do you use in your barn?		
Sawdust	7	5.38
Straw	96	73.85
Not using bedding material	27	20.77
How many times a year do you perform a general cleaning of your barn?		
No	0	0.00
1-3	83	63.85
4-6	47	36.15
How do you clean manure in your barn?		
Manually	112	86.15
Mechanically	18	13.85
How do you collect the cleaned manure?		
In a manure pit	53	40.77
Near the barn and open	77	59.23
What is the construction material of the feed troughs used in your barn?		
Wood	21	16.15
Sheet Metal	49	37.69
Concrete	60	46.15
Does your barn have a feed store?		
Yes	89	68.46
No	41	31.54
Does your barn have a birthing pen?		
Yes	53	40.77
No	77	59.23
Does your barn have a milking parlor?		
Yes	36	27.69
No	94	72.31
Does your barn have a calf pen?		
Yes	74	56.92
No	56	43.08
How is your barn illuminated during the day?		
Natural	119	91.54
Electricity	11	8.46
Natural + Electricity	0	0.00

Table 2. (continued)

Survey Questions	Frequency	
	N	%
How many windows does your barn have?		
1 to 2	14	10.77
3 to 5	51	39.23
More than 5	65	50.00
How many ventilation shafts does your farm have?		
1 to 2	32	24.62
3 to 5	65	50.00
More than 5	33	25.38
Do you have a record-keeping system for your animals at your farm?		
Yes	89	68.46
No	41	31.54
What is the age at which the breeding animals on your farm were first used for breeding?		
12 Months	5	3.85
15 Months	34	26.15
18 Months	91	70.00
What is the average number of years your female animals are used for breeding?		
3	6	4.62
4	22	16.92
5	54	41.54
5+	48	36.92

When general cleaning practices were examined in this study, 63.85% of the breeders cleaned their barns 1-3 times a year, while 36.15% did this 4-6 times. Manure cleaning was generally done manually (86.15%), and 59.23% of the cleaned manure was accumulated in the open near the barn. The proportion of farms using manure pits was 40.77%. In a study conducted by Yıldız (2023) on the feeding and watering habits of cattle enterprises in Van, it was reported that the majority of respondents (58.87%) fed their animals twice a day and that this was done using sacks (68.91%). While 61.57% of the farms did not have separate feeders for roughage and concentrated feed, 49.59% of the participants reported carrying water for their animals in buckets, and 24.39% used fixed waterers inside the barn. In terms of barn structural features, concrete (46.15%) and metal (37.69%) were the most common types of feeders used in this study. While 68.46% of farms had feed storage, 59.23% did not have a maternity shed. The proportion of farms with calf sheds was 56.92% (N=74), and the proportion of farms with milking parlors was 27.69% (N=36).

Lighting is a critical environmental factor in livestock production because it directly affects animals' biological rhythms, hormonal balance, and general behavior (Bayraktar, 2020). Usta (2011) found that farm animals tend to move in dim and dark environments. Furthermore, it was determined that good lighting in animal barns can increase milk yield by 5% to 15% (Demir et al., 2020). In this study, 91.54% of the barns

were constructed using natural methods. Özyürek et al. (2014) reported that 86.3% of barns in Erzincan had ventilation shafts. Öztürk (2009) reported that 55.17% of cattle barns in Mardin had ventilation shafts, while 44.83% did not. The fact that the farms in this study had 3-5 chimneys, 50% had ventilation shafts, and the farms had more than 5 windows indicates that attention is paid to air quality.

Avsever (2016) reported the average age for first breeding in heifers in the Ereğli region of Konya as 17.84 months. According to a study conducted by Yeşil (2015) in Iğdır, 74.4% of the enterprises inseminate their heifers for the first time when they are 15-18 months old. In this study, in terms of breeding and record keeping practices, 70% of the breeders use their breeding animals for the first time when they are 18 months old, while the duration of breeding for female animals is mostly 5 years (41.54%) or longer (36.92%). The fact that 70 percent of the breeders start using their breeding animals at 18 months of age is a strategic choice both to increase productivity and to benefit from genetic superiority early. In the study conducted by Doğanay and Yanar (2024), it was found that 64.4% of the cattle enterprises in Şanlıurfa keep animal productivity records, but these records are insufficient; It was determined that 35.6% of the farms did not keep any records. The fact that 68.46% of the farms included in this study maintained an animal registration system demonstrates the widespread adoption of modern business management.

The results of the survey on breeders' animal feeding practices, information sources, and decision-making processes are presented in Table 3. Regarding feeding decisions, 53.08% of cattle breeders base their decisions on animal feeding, and 58.46% base their decisions on their own knowledge and

experience when determining feed amounts. While 24.62% of breeders consult experts on feeding, 8.46% consult with other breeders in the area. These data indicate that animal feeding decisions are largely made using traditional methods rather than modern techniques.

Table 3. Animal feeding practices.

Survey Questions	Frequency	
	N	%
What is the source of the information you use when feeding your animals?		
Based on my own knowledge and experience	69	53.08
By consulting with other breeders in my area	11	8.46
Based on information received from veterinarians	32	24.62
Based on guidance from feed factories, associations, and/or cooperatives	18	13.85
How do you meet the roughage needs of your farm?		
I grow it myself	46	35.38
I buy it	22	16.92
I both grow it myself and buy it	62	47.69
How do you meet the concentrated feed needs of your farm?		
I grow it myself	18	13.85
I buy it	88	67.69
I both grow it myself and buy it	24	18.46
How do you determine the amount of feed you give to your animals on your farm?		
By consulting with experts	13	10.00
Based on guidance from breeders in my area	41	31.54
Based on my own experience	76	58.46
Do you use feed additives on your farm?		
Yes	49	37.69
No	81	62.31
Do you use licking stones on your farm?		
Yes	118	90.77
No	12	9.23
How long do animals graze on pasture? (months)		
6	32	24.62
7-8	79	60.77
10	19	14.62
Are the pastures in the area where your farm is located sufficient?		
Yes	24	18.46
No	106	81.54
How do you water the animals on your farm?		
In a stream	0	0.00
At a common village fountain	31	23.85
I carry them to the front	24	18.46
In a fixed waterer in the barn	12	9.23
In an automatic waterer	63	48.46
How do you feed the animals on your farm?		
With a feed mixer	35	26.92
With a wheelbarrow	41	31.54
In a sack	54	41.54

Table 3. (continued)

Survey Questions	Frequency	
	N	%
How many times a day do you feed the animals on your farm?		
Once	4	3.08
Twice	119	91.54
Three times	7	5.38
How do you feed roughage and raw feed to your animals?		
Separately	13	10.00
Mixing	117	90.00

In a study examining the feed supply and animal feeding habits of cattle farming enterprises in Van province, Yıldız (2023) found that cattle farming enterprises have an average of 40.89 head of cattle and 3 head of buffalo. The enterprises partially meet their feed requirements externally, specifically sourcing 31.67% of their roughage and 50% of their concentrate from outside the farm. Regarding on-farm resources, pastures are utilized at a high rate (78.23%), and key feed crops such as alfalfa (34.75%) and silage (35.25%) are cultivated. When the feed supply and feeding practices of the breeders are examined in this study, it is seen that while some of their roughage needs are produced in their own farms, a large proportion (67.69%) of concentrate feed is purchased externally. This demonstrates a high dependence on external sources for concentrate feed. While the use of feed additives is not common (37.69%), the use of licking stones is quite common (90.77%). Regarding the feeding frequency, 91.54% of breeders feed their animals twice a day. Furthermore, the fact that 90% of the feed is mixed with roughage and concentrates demonstrates the adoption of modern approaches to ration preparation. While feeding methods vary, manual methods are largely preferred. Sack use is the most common method at 41.54%, followed by wheelbarrows (31.54%) and feed mixers (26.92%).

Meadows and pastures play an important role in animal nutrition because they are the most abundant and inexpensive source of high-quality roughage (Wróbel et al., 2025). An examination of the Pasture and Water Management practices of breeders reveals that pasture areas in the region are extensive, with 60.77% grazing their animals on pastures for 7-8 months. However, 81.54% of breeders consider these pastures insufficient. This may be due to an imbalance between pasture capacity and animal numbers, or to poor pasture quality. In traditional farms, 9% of livestock watering is done with automatic waterers (Kaba & Çanakçı, 2020). This rate is 38% in Kahramanmaraş, 75% in Karaman, and 37% in the Karacabey district of Bursa (Güzel, 2016; Kaya, 2019; Tutar, 2019). Although the use of automatic waterers has become widespread in animal watering (48.46%) in this study, traditional methods such as the common village fountain (23.85%) and manual water carrying (18.46%) are still used.

This reveals that the level of modernization varies among farms.

4. Conclusion

As a result, cattle enterprises in Çorum city center exhibit a structure that integrates traditional practices with modern methods; the high organizational awareness and record-keeping propensity of the breeders signal a strong potential for further sectoral development. However, the study identifies critical limitations: the predominantly small-to-medium scale of enterprises and the prevalence of traditional barn designs restrict efficiency, while heavy external dependency for concentrate feed (over 67%) and acute forage shortages introduce significant market volatility and cost risks. Furthermore, breeders' reliance on generational knowledge over professional consultation, along with the environmental threats posed by open manure storage, necessitates immediate intervention. Consequently, for sustainable growth, it is essential that local authorities promote targeted subsidies for the transition to modern housing systems, incentivize local forage production and managed rotational grazing, and mandate the use of professional nutritional consultancy through breeder associations. Finally, urgent investment in covered manure storage or regional biogas initiatives is required to mitigate environmental risks and ensure compliance in Çorum city center.

Compliance with Ethical Standards

The study was conducted after obtaining approval from the Hitit University Non-Interventional Research Ethics Committee (Protocol number: 30.03.2023 date and Decision Number: 2023-87).

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Conflict of Interest

The authors declare no conflict of interest.

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