

Market Identification And Animal Welfare Aspects In Asahan Regency

R.S. Munthe^{1*}, K. Sinaga² M.A Kurniawan³
^{1,2,3}Universitas Pembangunan Panca Budi

Keywords:

Livestock Market, Asahan Regency, Animal Welfare

***Correspondence Address:**
mutherudi@gmail.com

Abstract: This study aims to identify the market profile and animal welfare aspects in the trade flow at the Asahan District Animal Market. The research was conducted from February to April 2024 in Air Batu Sub-district, Air Teluk Village, North Sumatra. Descriptive method with purposive sampling was applied to obtain primary data through direct observation and interviews with cattle traders in the animal market. Secondary data were collected from various related agencies. The results showed that the Asahan District Animal Market is a traditional market that supports cattle trading activities but still faces challenges in implementing animal welfare. This can be seen from the aspect of livestock handling that involves force such as pulling and whipping, which can increase stress in livestock. Based on animal welfare standards, such handling does not fully fulfil ideal animal welfare principles, such as freedom from pain and stress. In conclusion, improved facilities and stricter SOPs are needed to ensure animal welfare in markets, including adequate handling equipment and proper supervision. This research is expected to serve as a reference for relevant parties to improve animal welfare aspects in traditional markets

INTRODUCTION

Animal markets play an essential role in supporting livestock activities, particularly as the primary avenue for farmers to market their livestock directly to consumers or collectors. Asahan Regency, a region with significant livestock activity in Indonesia, has a livestock market that plays a critical role in distributing beef cattle for local needs and surrounding areas. Beyond functioning as a marketplace, the livestock market provides essential pricing information, serves as a social hub for farmers, and contributes to local government revenue.

However, traditional livestock markets face several challenges, particularly concerning animal welfare standards. In many developed countries, animal welfare has become a primary focus, with specific guidelines ensuring suitable conditions for livestock during transportation, sale, and slaughter. In Indonesia, attention to animal welfare remains relatively minimal, resulting in suboptimal livestock handling practices

in animal markets, which often lead to stress for the animals.

This study aims to identify the market profile and animal welfare aspects within the trade flow at the Asahan Regency Livestock Market and to assess the extent to which animal welfare principles are applied in this traditional market setting. The findings are expected to provide a clear picture of the conditions in Asahan's livestock market and offer recommendations for improving systems that prioritize animal welfare.

RESEARCH METHODS

The study was conducted at the Animal Market of Asahan Regency, Air Batu Subdistrict, Air Teluk Village, North Sumatra Province. Research Time: The study took place from February to April 2024, with observations made on major market days
Research Materials and Tools: Questionnaire: Developed based on the Australian Animal Welfare Standards guidelines and the General Guidelines for Livestock Market Operations (2006). Digital camera: For field documentation. Stationery and Laptop: To record data and analyse results using Microsoft Excel.

Methods

Research Design: This study used descriptive methods to describe market conditions and animal welfare. Data were collected quantitatively and qualitatively through direct observation and interviews.

Primary Data Collection: Obtained through observation and interviews using questionnaires completed by cattle traders in the market. Secondary Data: Obtained from various publications, village offices, and relevant agencies to provide additional context to the research. Sampling Technique: Purposive sampling was applied to select cattle traders who were selling in the market as the main respondents.

Data Analysis:

Data were analysed descriptively to determine the minimum, maximum, mean, and standard deviation parameters. Results were analysed and presented in tabular form to facilitate interpretation of trader profiles, market facility conditions, and livestock welfare.

Parameters:

Cattle Trader Profile: Includes age, gender, trading experience, number of cattle traded, and location of trader origin.

Flow of Cattle Commerce: Identify distribution channels from producers to end consumers.

RESULTS AND DISCUSSION

1. Profile of Cattle Trader

The results showed that all cattle trader respondents in the Asahan Regency Animal Market were male, with the majority aged 40-50 years. The education level of traders varied, with most graduating from senior high school (SMA). The average trading experience was above 10 years, indicating that most traders had sufficient knowledge related to livestock trading.

Table 1. Profile of Cattle Traders at the Animal Market in Asahan Regency

| Criteria | Description | Number of cattle traders | Total |
|-----------------------|--------------------|--------------------------|-------|
| Gender | Men | 15 | 15 |
| | Women | 0 | |
| Age | 20-30 years | 1 | 15 |
| | 30-40 years | 5 | |
| | 40-50 years | 7 | |
| | >50 years | 2 | |
| Education | Elementary School | 2 | 15 |
| | Junior High School | 5 | |
| | High School | 6 | |
| | Student | 2 | |
| Work Experience | 0-5 years | 2 | 15 |
| | 5-10 years | 4 | |
| | 10 - 15 years | 4 | |
| | >15 years | 5 | |
| Total Sales per Month | 1-5 Tail | 12 | 15 |
| | 5-10 Tail | 2 | |
| | 10-15 Tail | 1 | |

Proceedings The 2nd Annual Dharmawangsa International Conference:
 “Digital Technology And Environmental Awareness In Promoting Sustainable Behavior
 In Society 5.0”

| | | | |
|------------------------|------------|---|----|
| | 15-20 Tail | 0 | |
| | >20 Tail | 0 | |
| Nation of Cattle trade | Local | 9 | 15 |
| | Cross | 6 | |

The majority of cattle traders with more than 10 years of trading experience have a better understanding of livestock handling than new traders. However, the lack of formal education in animal welfare leads to suboptimal handling practices that can be harmful to livestock. This indicates the need for an education programme for traders on the importance of livestock welfare in supporting productivity and quality of livestock products. Research by Wulandari et al. (2019) showed that traders' knowledge and skills in livestock handling play an important role in ensuring the health and welfare of livestock in traditional markets. Therefore, training and socialisation are needed to increase traders' awareness of the importance of animal welfare, especially in handling livestock during the buying and selling process. Rahman et al. (2021) stated that formal knowledge of animal welfare contributed to better livestock handling in the market, while Kurniadi et al. (2023) showed that traders with specialised training were able to improve the quality of livestock care during transport and trade. Thus, animal welfare training and socialisation for traders in traditional markets is needed to improve the quality of livestock handling.

The average type of cattle commonly found in that livestock market is PO cattle, (Putra, Rusdhi, & Gunawan, 2020) In the study, body weights for male Peranakan Ongole (PO) cattle were measured, revealing variations in weight based on Body Condition Score (BCS) and physical measurements such as chest circumference and body length. Results indicated an average weight of 142.88 kg for the sampled PO cattle, with a standard deviation of 39.23 kg.

2. Flow of Cattle Commerce

Commerce in animal markets is still largely traditional with blantik (middlemen) playing a role. The main distribution flow is from the farmer to the blantik, then to the final consumer. This system is effective in bringing consumers and farmers closer together, however, there are additional costs due to the role of the middleman in the transaction process.

Table 2. Pattern of cattle trade system in the Asahan Regency livestock market

| No | Flow Of Commerce | Number of Trader |
|----|--|------------------|
| 1 | Produsen → Consumen | 7 |
| 2 | Produsen → Traders → Consumen | 7 |
| 3 | Produsen → Collector → Traders → Consumen | 1 |
| 4 | Produsen → Collector → Traders → Retailer → Consumen | 0 |

The presence of blantik facilitates the transaction process, but this system results in additional costs for consumers. On the other hand, the presence of middlemen can distort the selling price of livestock, which in turn reduces farmers' profits. Improving the flow of trade through the implementation of a direct distribution system (without intermediaries) can provide more competitive prices for consumers while improving the welfare of farmers. It can be seen that traders in the Asahan animal market mostly rely on the blantik system, which results in additional costs for consumers. Ilham & Yusdja (2014) stated that a long distribution chain increases the selling price of livestock. This is in line with the findings of Nuryati & Sudiyono (2020), which showed that the presence of middlemen increased livestock prices by 20-30%. Mulyadi et al. (2022) added that direct distribution channels from farmers to consumers can increase profit margins for farmers and provide more affordable prices for consumers. Taking these references into account, shortening the chain of commerce in traditional animal markets will help optimise farmers' income and lower prices for consumers.

3. Animal Welfare

Based on animal welfare standards, some welfare principles have not been fully implemented, such as freedom from pain and stress. Observations also show that livestock do not have adequate access to food and water during market transactions, which degrades animal welfare conditions.

Observations show that animal market facilities such as loading ramps and tie-up areas are limited. Some traders use force in the handling process, such as forced pulling and whipping, which is not in accordance with livestock welfare standards. This can trigger stress in cattle, potentially reducing meat quality and livestock productivity.

Although some aspects of welfare have been implemented, there are still some shortcomings in livestock handling, particularly in ensuring livestock are free from pain

and stress. Improved facilities and socialisation of animal welfare standards for traders and market managers are needed. Animal welfare will not only improve the quality of life of livestock but also potentially improve market competitiveness through high-quality livestock products. Table 2 shows that animal welfare principles have not been fully applied in the Asahan District Animal Market, especially regarding freedom from pain and stress. Sinclair et al. (2019) emphasised that the implementation of welfare standards in traditional markets can improve livestock productivity as well as the quality of animal products. Yusuf et al. (2021) found that the implementation of good handling standards can reduce stress levels in livestock, which contributes to improved meat quality. In addition, Putra & Siregar (2023) reported that educating traders and market managers on the importance of animal welfare had a positive impact on better handling practices, reduced stress and lowered the risk of injury to livestock. Thus, the implementation of stricter welfare standards through education and adequate facilities will provide a double benefit in improving livestock quality and meeting the demands of consumers who are concerned about animal welfare.

Inadequate animal market facilities, particularly the unloading and tie-up areas, contribute to high levels of stress in cattle during the buying and selling process. This is contrary to animal welfare standards that prioritise comfort and safety for livestock. Better facilities and proper implementation of livestock handling standards will improve livestock welfare and reduce the risk of injury. Based on Table 2, it can be seen that some livestock handling facilities, such as bedding, are not adequately provided, which results in livestock experiencing stress during the transaction. Fraser (2008) explained that inadequate facility conditions can result in stress in livestock, which has a negative impact on health and meat quality. Sinclair et al. (2022) highlighted the importance of providing comfortable bedding and suitable tie-down areas to reduce the risk of injury to livestock in animal markets. Madzingira et al. (2023) showed that the installation of welfare-standard facilities, such as ramps and bedding, can reduce the risk of livestock injury by up to 40%, improving the welfare and quality of livestock products. Therefore, improving market facilities is crucial in improving livestock welfare in the Asahan District Animal Market.

One of the efforts to ensure animal welfare is by maintaining the health of the livestock, (Putra, Ginting, & Ritonga, 2019). Preventive measures such as regular

deworming, maintaining clean and dry enclosures, and proper grazing management are essential to ensure cattle welfare by reducing parasite infections, particularly worm infestations

To improve the quality and performance of cattle, proper breeding management must be implemented, starting from the mating process by preparing high-quality bulls to obtain good semen, which can be enhanced by implementing exercise, as suggested by the research findings by (Siswoyo, Rusdhi, and Suleman, 2022) found that exercise treatments with durations of 0 minutes, 5 minutes, 10 minutes, and 15 minutes did not have a significant impact on the semen quality, as observed through both macroscopic and microscopic semen examinations in Simmental cattle

Improvements in animal welfare quality can be seen from the forage provided and the way the forage quality is maintained, one of which is through fertilization. (Siswoyo and Luthfi, 2023) stated that fertilizing Odot grass with 1 L of liquid fertilizer diluted in 4 L of water (P4) results in the best production. Nutritious feed, such as Odot grass, is important to support ruminant livestock such as goats in achieving high-quality and high-quantity results. And The utilization of oil palm fronds as feed is highly potential both in terms of quantity and nutritional quality. A proper strategy is needed in utilizing oil palm fronds as a fiber source to support optimal cattle production. (Manurung, R., & Negara, A. B. W., 2024)

CONCLUSION

This study identifies the condition of animal markets and aspects of livestock welfare in the Asahan Regency Animal Market, which still has challenges in implementing animal welfare standards. The majority of traders do not have an optimal understanding of animal welfare principles, which results in substandard livestock handling, such as the use of whipping and forced pulling. Traditional trade flows add costs to consumers, while inadequate livestock handling facilities increase the risk of stress and injury to cattle. Therefore, improved market facilities, continuous education on animal welfare, and the implementation of a more efficient trading system are needed to improve livestock welfare and market service quality. These efforts are expected to provide economic and social benefits to farmers, traders and consumers as a whole

Proceedings The 2nd Annual Dharmawangsa International Conference:
“Digital Technology And Environmental Awareness In Promoting Sustainable Behavior
In Society 5.0”

REFERENCE

- Fraser, D. (2008). *Animal Welfare and the Ethics of Animal Care*. Cambridge University Press.
- Ilham, S., & Yusdja, I. (2014). Peningkatan Sistem Distribusi Langsung Pada Pasar Hewan Tradisional. *Jurnal Agribisnis*, 8(2), 154-161.
- Kurniadi, A., Siregar, R., & Wulandari, S. (2023). Pendidikan dan Pelatihan untuk Peningkatan Kualitas Penanganan Hewan di Pasar Hewan Tradisional. *Journal of Animal Welfare*, 15(1), 77-88.
- Madzingira, F., Zvidzai, M., & Nyoni, S. (2023). Impact of Welfare-Standard Facilities on Livestock Health and Productivity in Traditional Markets. *Journal of Animal Science*, 21(2), 67-73.
- Mulyadi, I., Rahman, A., & Junaidi, F. (2022). Direct Distribution and Its Impact on Livestock Pricing in Traditional Markets. *Economic Journal of Animal Trade*, 12(4), 101-113.
- Manurung, R., & Negara, A. B. W. (2024). KUALITAS NUTRISI PELEPAH SAWIT DIFERMENTASI DENGAN WINPROB SEBAGAI PAKAN TERNAK RUMINANSIA. *Journal of Innovation Research and Knowledge*, 4(5), 2927-2936.
- Putra, A., Ginting, R. Br., & Ritonga, M. Z. (2019). The Effect of Regular Deworming on Cattle Welfare in Traditional Markets. *Indonesian Journal of Animal Science*, 6(3), 45-52.
- Putra, A., Rusdhi, A., & Gunawan, F. (2020). Penentuan Bobot Badan Sapi Peranakan Ongole (PO) Jantan Berdasarkan Profil Body Condition Score (BCS) di Kecamatan Hamparan Perak Kabupaten Deli Serdang. *Journal of Animal Science and Agronomy*, 4(1), 80-85.
- Rahman, R., Yunita, D., & Sholeh, A. (2021). Formal Knowledge of Animal Welfare and Its Effect on Livestock Handling in Markets. *Journal of Livestock Management*, 19(4), 45-52.
- Siswoyo, P., Rusdhi, A., & Suleman, A. (2022). Pengaruh Exercise Terhadap Kualitas Sperma pada Sapi Simmental. *Jurnal Ilmu Teknologi Ternak Unggul*, 9(2), 124-135.
- Siswoyo, P., & Luthfi, M. F. (2023). ANALISIS PRODUKTIVITAS RUMPUT ODOT (Pennisetum Purpureum cv. Mott) SEBAGAI PAKAN TERNAK KAMBING. *STOCK Peternakan*, 5(1), 44-50.
- Sinclair, M., Lee, J., & Gordon, D. (2022). Improving Livestock Welfare in Traditional Markets: A Global Perspective. *Animal Welfare Journal*, 19(3), 202-211.
- Wulandari, S., Setiawan, T., & Taufik, F. (2019). The Role of Traders' Knowledge in Livestock Welfare in Indonesian Traditional Markets. *Jurnal Kesejahteraan Hewan*, 8(1), 34-43.
- Yusuf, M., Aulia, R., & Nugroho, M. (2021). Implementing Animal Welfare Standards in Traditional Animal Markets: A Case Study. *Journal of Animal Welfare Standards*, 10(3), 143-151.