

# Challenges and Opportunities: Cattle / Sheep Farming Business in the City (Case Study of Good Cattle in Depok City)

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## ABSTRACT

This research investigates the challenges and opportunities associated with cattle and sheep farming businesses in urban environments, particularly emphasizing outstanding cattle farming enterprises in Depok. The study aims to provide an in-depth analysis of these businesses' strategies to address existing challenges and leverage potential opportunities. By exploring the innovative practices and adaptive measures employed by urban livestock farmers, this research seeks to uncover effective methods for breeders to navigate market dynamics, enhance operational efficiencies, and sustainably improve the productivity and quality of their livestock operations. Focusing on success stories from Depok, the study highlights how exemplary cattle farming businesses have thrived despite the constraints of an urban setting. It examines the role of technology, community engagement, and sustainable farming practices in driving their success. The findings offer valuable insights and recommendations for breeders, policymakers, and stakeholders on fostering a resilient and prosperous urban livestock farming sector. Ultimately, this research contributes to the broader discourse on urban agriculture, providing lessons on sustainable growth and productivity enhancement in urban livestock farming.

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## 1. INTRODUCTION

Using natural richness, strong market demand, and government policy backing, Indonesia's livestock industry provides many chances for business owners to pursue. Even though obstacles exist, entrepreneurs can succeed and make essential contributions to the country's economy, provided they use the appropriate approach and remain committed to innovation.

Urban livestock also has the potential to develop due to the urban population's need for livestock products. The development of the livestock sector in urban areas can be an effort to ensure Indonesia's food security in the future. In running a livestock business in urban areas, business people will face several challenges that require strategies to find opportunities.

With an extensive and varied cattle population, Indonesia has significant

untapped potential in the livestock industry. According to information from the Central Statistics Agency (Badan Pusat Statistik - BPS), in 2022, the total number of livestock in Indonesia reached around 18.9 million heads. This figure includes 5.8 million dairy cattle, 4.5 million beef cattle, 3.5 million sheep, and 3.5 million ducks.

Additionally, livestock in Indonesia has a significant role in enhancing the quality and quantity of food items, including milk, meat, and eggs, among other things. Milk, for instance, has developed into a significant component of the diet of the Indonesian people, and the production of milk in 2021 is projected to reach 946.4 thousand tons on average. Meat production in Indonesia is expected to reach 4.5 million tons in 2021, with beef cattle and lamb being among the most popular types of meat consumed there. [1].

One of the primary obstacles is the scarcity of land in metropolitan regions, necessitating inventive approaches to land management and livestock infrastructure. Additionally, meeting animal welfare standards is a difficulty for business professionals. Hence, it is essential to develop techniques that can effectively surmount these challenges and capitalize on the prospects presented by urban cattle/sheep husbandry.

This research will examine the issues faced by livestock enterprises in the urban context, utilizing the case study of Sapibagus in Depok City as a focal point. Furthermore, this study will comprehensively understand companies' tactics to address these problems and capitalize on possible possibilities. Therefore, it is anticipated that the findings of this study will make a substantial contribution to the development of urban cattle and sheep farming businesses, as well as provide practical recommendations to entrepreneurs and other relevant stakeholders.

## 2. LITERATURE REVIEW

Improving the quality and yield of dairy cattle relies heavily on good management. The three main components of

dairy farming management are management, feeding, and breeding. Producing cattle breeds that achieve production goals is the responsibility of breeders; providing appropriate and balanced feed is the responsibility of feeders, and managing livestock entails ensuring their health, welfare, and productivity. [2]. The GDFP (Good Dairy Farming Practice) idea is only one example of how dairy farmers in Indonesia, like those at KUB Tirtasari Kresna Gemilang, have put excellent management into their dairy farming company. [2]. Nevertheless, some breeders have failed to adopt proper feed management practices; for example, those in Sejaro Sakti Village feed their horses grass, do not concentrate, and use the wrong feeding frequency and techniques. [3].

The selection of high-quality cow breeds is of utmost significance in enhancing the quality of goods derived from cattle. To achieve their production objectives, cattle producers are required to choose cattle breeds that are of high quality. [4]. A comprehensive care plan is essential to ensure that cows receive high-quality feed. Administering appropriate therapy can prevent the onset of illnesses that can lower the overall quality of the cow. Vaccinations are one example of care that can be provided to cattle. It is essential to control diseases to prevent them from spreading among cattle. One way to do this is by using pesticides to target the insects that carry the diseases. [5].

The cows are used for dairy production in different nations, such as Bangladesh. Livestock production in Bangladesh is hampered by six challenges, which have been regarded as the most significant hurdles. Climate change and natural disasters, poor veterinary care, limited resources for breeding and management, marketing and international trade, and the pandemic are some issues that are now being faced. The solutions to these challenges, which include shelters for hazardous weather, increased surveillance of biosecurity for farms and markets, and collaborative efforts between non-governmental organizations, government organizations, and private

organizations to educate and assist farmers, need to be directed toward specific regions where the solution would have the most significant impact concerning the situation. These regions include the areas where the problems are most severe [6].

The move toward sustainability is a strain that incumbents, such as livestock producers, are under in Germany. Based on institutional theory, a single case study is conducted via farmer interviews. Because incumbents depend mainly on routine and sensemaking agency, participating is believed to be the most probable endogenous change. Address the ambiguous role that incumbents play in these transformation processes and the embedded agency they possess. The concept of strategic agency and the capacity to conceive of alternate courses of action are both essential components of the perception of agency during transitions. Therefore, there is a need for regional policymakers and agents of change to collaborate with farmers to develop alternative imaginations for livestock farming that can disrupt established practices and institutions. These imaginations should be able to generate structural and emotional change. [7].

### 3. METHODS

This study employs a qualitative research methodology. Qualitative research will provide a comprehensive, accurate, and in-depth explanation. When gathering data via literature studies, information is collected from various textual sources such as books, journals, scientific papers, semi-scientific articles, images, reports, and so on. This study will examine and evaluate other literature on entrepreneurship and cattle management. A literature review is a methodological approach that gathers data by critically analyzing and assessing pre-existing books, literature, notes and reports relevant to the subject under investigation to provide a comprehensive and detailed explanation.

Upon thoroughly examining the literature research, use descriptive analysis to provide a comprehensive and detailed

description and explanation. If relevant data is discovered, it is analyzed using descriptive analytic techniques. Therefore, we will use descriptive analysis to elucidate the literature research findings and provide comprehensive explanations without broad generalizations about the data.

## 4. RESULTS AND DISCUSSION

### 4.1. Challenges Faced

In running a cattle farming business, entrepreneurs will face several challenges. Urban livestock development involves several challenges that require in-depth attention to achieve success. This includes land challenges, human resources, feed ingredient needs, animal health, productivity, and vital interrelated elements.

Urban farming poses more significant challenges related to limited natural resources. Demand for livestock products can pressure natural resources, such as water and land. [8]. Therefore, livestock development in urban areas must be managed by considering the global impact and its contribution to overall food security. Water shortages are also a challenge in the cattle farming business in Sapibagus; the difficulty of getting water, especially during the dry season, makes it difficult for managers to have water reserves that can be used as feed and drink for livestock. Human resources are also a challenge in the good cattle business, and some workers still have not mastered the skills of caring for livestock by market demand. It is difficult to develop skills in terms of marketing agribusiness well. So, training is needed to develop skills in caring for and managing the marketing of the Sapibagus business.

The next challenge lies in the limited land in the city [8]. Limited and expensive land makes it difficult for livestock farmers to provide sufficient space for efficient livestock operations. Competition with other land uses, such as housing or commercial businesses, can hinder expanding or maintaining urban livestock. Sapibagus is a livestock business located in the center of Depok City. Sapibagus

has several challenges regarding land, which is inadequate to accommodate all livestock, both sapi and goats. There is a land shortage due to the area's dense housing population, making it difficult to find new land that good cattle can use. Limited land also results in problems related to feed or food for livestock consumption, such as sapi and goats; lack of land results in insufficient grass and infertile soil so that grass does not overgrow and is of quality according to standards for livestock feed.

Human resources are also essential to developing city animal husbandry. Finding workers with adequate animal husbandry knowledge and skills is a challenge. Improved training and education in the livestock sector is the key to improving the quality of human resources in this industry. [9].

The need for feed ingredients is an essential aspect of dealing with limited forage land in urban areas. Waste management and recycling are the main strategies to meet the need for feed ingredients, such as grass and dregs, while minimizing environmental impacts. Innovative solutions, such as alternative feed that can be grown indoors or utilizing organic waste as a feed source, are crucial to overcoming the challenge of food needs amid limited land.

In terms of other internal challenges, Sapibagus still applies traditional systems in care due to the lack of qualified technological equipment; the lack of mechanical technology equipment that can help monitor livestock is still minimally used by Sapibagus, so livestock development is not fast and productivity in the livestock business has decreased. Business efficiency is not in line with objectives or is not optimal.

Apart from internal matters, several challenges Sapibagus faces in the external aspect are competition in the cattle and sheep farming business, which is fierce; many livestock businesses have the same quality as Sapibagus, so consumers are divided in purchasing cattle and sheep. Market conditions are increasing regarding business competition, so market or consumer demand is divided. Consumer demand for the quality of cattle and sheep is increasing; consumers

are asking for quality beef products without any disease or epidemic affecting cattle or sheep. External challenges are related to domestic competition and the significant demand for imported cattle as obstacles to advancing and prospering the good cattle business.

The existence of a policy of importing cattle from outside Indonesia creates challenges for good cattle. Namely, there is a decline in the population of local or Indonesian cattle, and a decrease in demand for local cattle causes an uncertain price increase for cattle and sheep, according to the theory that an increase in local beef production will lead to a very high rise in the interest of farmers in increasing the productivity of cattle farming businesses. [10]. Another external challenge is that uncertain market prices for cattle and sheep will reduce sales and productivity when managing the good cattle business.

Challenges in terms of capital are also a considerable aspect of influencing agribusiness welfare, especially cattle and sheep farming. Sapibagus feels a lack of capital, especially in improving cattle feed. Capital is needed for business development regarding land, feed, maintenance, and cattle and sheep farming marketing. Thus, a solution is required to increase capital to optimize livestock business development.

#### **4.2. Livestock Business Opportunities**

After collecting data through interviews, observations, and literature studies, several opportunities can be obtained from the development of livestock businesses in Sapibagus, namely as follows:

- 1) **The Need and Interest in Beef, Lamb, and Milk.** The need and interest in beef, lamb, and milk always increase yearly; according to the Central Statistics Agency, in 2020, Indonesia consumed 695,000 beef, and in 2023, there will be a significant increase. The increasing public need and interest in beef is an opportunity for entrepreneurs and breeders to start cattle and sheep farming businesses, as well as continue to improve the quality of cattle production so that they can produce quality, nutritious cattle and satisfy consumers who buy or

consume beef as well as sheep [11]. Additionally, increasing cattle imports can allow farmers to continue producing quality cattle as much as possible so that cattle imports experience a decline and there is no policy on cattle imports.

- 2) **The Need for Sacrificial Cows.** The increase in the need for sacrificial cows during the 2023 Eid al-Adha celebration by 2 percent compared to the previous year indicates a shift and growth in society. One factor that can influence this increase is population growth. With an increase in population, the need for meat as a source of protein will naturally increase. Apart from that, changes in lifestyle and rising economic levels can also cause an increase in the need for sacrificial cows. Increasingly developed societies tend to increase consumption of animal protein as part of a healthy diet. Increasing economic levels in several segments of society can also trigger demand for animal products, including sacrificial beef, as a symbol of prosperity. Thus, the increasing need for sacrificial cows during Eid al-Adha creates opportunities that can be exploited wisely.
- 3) **Feed Needs in Urban Areas.** The need for animal feed is a challenge; providing fresh feed using the cut-and-carry method is problematic because it requires limited resources and energy, the remainder of the farmer's main business. Therefore, the alternative often taken is to use concentrate as a substitute for animal feed needs. As fortifying foods, Concentrates offer the advantage of providing more prosperous and concentrated nutrition. With increased food content, concentrate can be an efficient solution to meet the nutritional needs of livestock, especially in limited urban environments. Common concentrate feed ingredients include grain, agricultural, and specific industrial waste. Concentrated grain feed ingredients, such as corn or soybeans, are often used because of their high nutritional content. The availability of this grain in urban markets makes it easier for farmers to get a supply of quality feed without having to depend

on limited forage land. Providing this concentrate can help increase livestock growth and productivity. By understanding and managing animal feed needs in urban areas, primarily through concentrates, farmers can improve the efficiency of their business, ensure livestock health and productivity, and contribute to environmental sustainability amidst limited resources and space.

- 4) **The Need for Medicines and Vitamins for Livestock.** The development of livestock businesses in medicine and vitamin needs for livestock opens up great opportunities to improve the welfare and productivity of livestock. The need for medication and vitamins in animal husbandry is not only related to meeting animal health needs but also plays a vital role in increasing growth, nutritional balance, and livestock resistance to disease. One of the main opportunities in the livestock business related to the need for medicines and vitamins is providing environmentally friendly and high-quality products. Apart from that, business opportunities can develop by providing consultation and education for farmers regarding the appropriate use of medicines and vitamins. With increasingly sophisticated communication technology, online consultation services or digital education platforms can provide information that is more easily accessible to farmers.
- 5) **Big Profits.** Because demand for and demand for cattle continues to increase, it will result in very high profits if farmers continue to produce good quality meat and milk. Certain seasons increase the opportunity for business owners to continue developing their cattle business, especially during the Eid al-Adha and Eid al-Fitr seasons because cattle purchases and beef purchases continue to increase due to community needs.
- 6) **Availability of Technology Facilities.** Technology continues to improve in various fields, one of which can help farmers increase productivity in producing quality cattle and sheep; apart

from that, technology will make it easier for farmers to care for livestock effectively and efficiently [12]. It requires a lot of capital, but the benefits can be very profitable for the business owner, as he can produce quality cattle and sheep and increase huge profits.

- 7) **Availability of Labor.** Many human resources have the potential to raise livestock well and are skilled in caring for livestock. Business owners must utilize human resources to help generate profits for the livestock business. Human resource skills must constantly be improved to minimize losses or damage to livestock, for example, to avoid outbreaks or disease. Human resources or the workforce needs to continue to upgrade their skills due to changes in developing science and technology to continue overcoming changes, produce quality cattle and sheep, and increase profits.
- 8) **Processed Beef and Sheep Products.** Increase There are many processed products or semi-finished or finished goods that come from cows or sheep, such as leather crafts that use cows or sheep, processed products such as shredded meatballs, meatballs, milk, ice cream, candy, yogurt, crackers, and so on are processed products that come from cattle and sheep, so the interest in cattle and sheep is increasing. This is why the cattle and sheep business owner set up a cattle and sheep farming business in the city of Depok.

#### 4.3. Solutions to face livestock business challenges

In running a cattle farming business, business actors will face several challenges that require appropriate strategies and handling. The three main categories of challenges involve production or cultivation, finance, and marketing.

- 1) **Cattle Production or Cultivation: Choice of Quality Breeds and Optimal Nutrition.** Cattle breeders will face the first challenge focusing on production or cultivation. This stage requires selecting healthy and quality cattle breeds. Ensuring the right

breed can be the cornerstone of business success, so a deep understanding of the characteristics of the desired cattle needs to be gained. Apart from that, understanding feed nutrition is also crucial. Including aspects of protein, fiber, energy, vitamins, and minerals in the cow's daily ration is an essential step. Maintaining cow health is crucial for preventing and overcoming potential diseases that hamper production.

- 2) **Financial Aspect: Investment and Daily Operations.** The second challenge, which is no less critical, is the financial aspect of the cattle business. Farmers must manage significant investments such as purchasing land, building pens, and other facilities. Apart from that, working capital for buying feed and daily needs is a considerable concern. There are also various costs associated with daily operations, such as electricity bills and fuel costs. Understanding and efficiently managing this financial aspect is essential in maintaining business continuity.
- 3) **Cattle Marketing: Daily and Seasonal Strategies.** The final challenge cattle farmers face is marketing. Understanding how to market cattle effectively is the key to successful product sales. Marketing can be divided into two main types: daily and seasonal. Daily marketing involves transactions in the market or direct purchases by butchers. Meanwhile, seasonal marketing is related to selling cows for sacrificial purposes, such as during Eid al-Qurban. Understanding customer profiles and designing efficient delivery strategies is a determining factor in facing this marketing challenge. Although the cattle farming business brings many challenges, with in-depth understanding and the right approach, farmers can overcome these obstacles and succeed in this promising industry. Cattle businesses can grow and provide satisfactory results by focusing on optimal production, wise financial management, and effective marketing strategies.

#### 4.4. Community Solutions

Some of the solutions used to face challenges in the cattle and sheep farming business, both internal and external, are as follows:

- 1) **Innovating in Managing Cattle and Sheep Feed.** Farmers add or innovate to improve animal feed, one of which is by using concentrate. The concentrate is animal feed made from several feed ingredients and has a balanced proportion of quantity and nutritional content. The concentrate is a mixture of several feed ingredients. For example, coconut, peanut, fine bran, corn flour, table salt, lime, and bone meal. The concentrate consists of high-quality feed ingredients, such as soybean meal and coconut meal, with readily available and cheap feed ingredients, such as rice bran, soybean grass, and coffee hulls. Concentrates can provide additional energy and protein to meet production needs that forage cannot meet. Apart from the above, breeders can also innovate to make fermented feed. Namely, the management of cow feed, such as straw or grass, processed with bacteria or microorganisms to increase its nutritional value. This process can improve digestion, increase nutrient availability, and reduce the risk of disease in cows. Fermentation methods can involve adding certain microorganisms to the feed or allowing the feed to ferment naturally under certain conditions, such as in hay that is left wet.
- 2) **Creating a Website for Awareness and Education.** The availability of internet technology can be an opportunity to provide education and training to livestock farmers to improve their skills in caring for livestock and managing business and marketing. Create a website that contains knowledge for breeders, starting from steps to care for livestock, solutions to problems faced by breeders in caring for livestock, how to market their business, and also what innovations can be made by breeders to increase sales and quality of beef products, both meat and beef—Milk, and also sheep. With a website

available, farmers can easily access it anytime, anywhere, without time limits. They can open it repeatedly as a medium or source of knowledge to improve their skills and keep up with changes in caring for livestock.

- 3) **Training or Counseling.** Display cattle business training on the website Sapibagus.com. There is a need to provide an understanding of the cattle and sheep farming business to the community and breeders; this is done by providing counseling or training to the community regarding livestock business management as well as how to care for livestock and carry out marketing that the community and breeders can carry out. The way to convey knowledge and information to the public effectively is through outreach, which is a systematic activity in which there is a process of conveying information to the outreach participants here, namely the public, with information provided by resource persons who have an understanding in the field to be conveyed. Counseling aims to change people's knowledge and behavior so that they understand and change positively or by what the resource person conveys. Start with the following steps: a. Planning Extension planning begins with a needs analysis, including what breeders don't know about livestock business management and how to care for livestock and carry out marketing. After that, the objectives and material that will be presented will be determined. This is done by providing material that must be delivered by an expert in animal husbandry and agribusiness to be conveyed factually and clearly to the public. Apart from that, paying attention to what media are appropriate for the community to convey information is necessary. Apart from delivering material, we can also design pamphlets and other things. Counseling must be consistent with the breeder's time so breeders can participate in the extension event. The implementation of training activities needs

to be carried out by the plans or designs that have been planned. Apart from that, after delivering the material, extension officers can distribute pamphlets regarding livestock business management and how to care for livestock and carry out marketing. Evaluation can be done by asking the breeder questions about whether or not the extension is ongoing so that it can help improve extension activities in the future.

## 5. CONCLUSION

Sapibagus, a livestock business in the center of Depok City, faces various internal and external challenges. In terms of land, problems arise due to dense housing in the area, making it difficult to find adequate land. The lack of land also impacts livestock feed availability, with infertile soil and a lack of quality grass. In addition, livestock

management still relies on traditional care due to labor shortages and limited skills. Getting water, especially during the dry season, is also an obstacle, while increasingly tight competition in the livestock market and cattle import policies complicate external conditions. Even though it faces several challenges, Sapibagus has excellent potential to develop cattle and sheep farming businesses. Increasing demand for beef and lamb and processed products from these livestock provides promising opportunities. Innovation in feed management, application of technology, workforce training, and product diversification are solutions to overcome internal challenges. Apart from that, education and awareness through websites, counseling, and training will help farmers face market dynamics and improve the quality of productivity of the Sapibagus livestock business sustainably.

## REFERENCES

- [1] Ditjen PKH, "Statistik Peternakan dan Kesehatan Hewan 2022/ Livestock and Animal Health Statistics 2022," *Issn 2964-1047*, vol. 1, pp. 1-276, 2022.
- [2] A. Amam and P. A. Harsita, "Tiga Pilar Usaha Ternak : Breeding, Feeding, and Management," *J. Sain Peternak. Indones.*, vol. 14, no. 4, pp. 431-439, 2019, doi: 10.31186/jspi.id.14.4.431-439.
- [3] S. Sandi, M. Desiarni, and A. -, "Manajemen Pakan Ternak Sapi Potong di Peternakan Rakyat di Desa Sejaro Sakti Kecamatan Indralaya Kabupaten Ogan Ilir," *J. Peternak. Sriwij.*, vol. 7, no. 1, pp. 21-29, 2019, doi: 10.33230/jps.7.1.2018.7080.
- [4] K. Rusdimansyah, *Manajemen Pemeliharaan Sapi Pedaging*, vol. 1. 2022.
- [5] E. Ekonomi, B. Universitas, F. Y. M. Produktivitas, U. Tani, D. A. N. Keberhasilan, and P. Simantri, "KABUPATEN KLUNGKUNG Ni Luh Putu Rossita Dewi 1 Fakultas Ekonomi dan Bisnis Universitas Udayana ( Unud ), Bali , Indonesia Email : rossita91@gmail.com ABSTRAK PENDAHULUAN Latar Belakang Pertanian merupakan salah satu sektor yang dominan dalam pendapatan ma," vol. 2, pp. 701-728, 2017.
- [6] K. Moller, R. Eeswaran, A. P. Nejadhashemi, and J. S. Hernandez-Suarez, "Livestock and aquaculture farming in Bangladesh: Current and future challenges and opportunities," *Cogent Food Agric.*, vol. 9, no. 1, 2023, doi: 10.1080/23311932.2023.2241274.
- [7] J. Friedrich, H. Faust, and J. Zscheischler, "Incumbents' in/ability to drive endogenous sustainability transitions in livestock farming: Lessons from Rotenburg (Germany)," *Environ. Innov. Soc. Transitions*, vol. 48, no. July, p. 100756, 2023, doi: 10.1016/j.eist.2023.100756.
- [8] R. Astarika *et al.*, "Optimization of Livestock Waste as an Alternative Energy Source and Community Organic Fertilizer in Puuwatu District, Kendari City," *JAKADIMAS (Jurnal Karya Pengabd. Masyarakat)*, vol. 1, no. 1, pp. 25-30, 2023, doi: 10.33061/jakadimas.v1i1.9478.
- [9] M. Abadi, L. O. Nafiu, T. Saili, and L. Yunus, "Sustainable Bali Cattle Breeding and the Future of Smallholder Farming in South Konawe District, Indonesia," *J. Law Sustain. Dev.*, vol. 11, no. 12, p. e844, 2023, doi: 10.55908/sdgs.v11i12.844.
- [10] I. Danasari, H. Harianto, and A. Falatehan, "Dampak Kebijakan Impor Ternak dan Daging Sapi terhadap Populasi Sapi Potong Lokal di Indonesia," *J. Ekon. Pertan. dan Agribisnis*, vol. 4, no. 2, pp. 310-322, 2020, doi: 10.21776/ub.jepa.2020.004.02.9.
- [11] E. K. Ulama, A. T. Priandika, and F. Ariany, "Sistem Pendukung Keputusan Pemilihan Sapi Siap Jual (Ternak Sapi Lembu Jaya Lestari Lampung Tengah) Menggunakan Metode Saw," *J. Inform. dan Rekayasa Perangkat Lunak*, vol. 3, no. 2, pp. 138-144, 2022, doi: 10.33365/jatika.v3i2.2022.
- [12] J. C. Mahyun, Z. Poli, A. Lomboan, and L. R. Ngangi, "Tingkat keberhasilan inseminasi buatan (IB) berdasarkan Program Sapi Induk Wajib Bunting (SIWAB) di Kecamatan Sangkub," *Zootec*, vol. 41, no. 1, p. 122, 2021, doi: 10.35792/zot.41.1.2021.32340.