Development strategy to improve beef cattle business in Pati Regency

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Abstract. Most of beef cattle farmers in Pati Regency are dominated by smallholder farming system. The research was conducted to determine the alternative strategies for the development of beef cattle business in Pati Regency. Focus Group Discussion (FGDs) was used in this research for data collection. Based on the results, FGDs had benefit to formulate strategies in order to increase beef cattle sector in Pati Regency based on stakeholder’ perspective. Beef cattle sector in Pati Regency had opportunity to develop to improve productivity and able to compete with import product from other country. It had availability of feed resources by mix farming system practices between crop and livestock production. In order to support smallholder farmers, government need to plan long term strategies such as open access to capital, build partnership to improve marketing system as well as regulate production system and processing of beef product.

1. Introduction

Agribusiness as an activity related to the handling of agricultural commodities in a broad sense, which includes production, processing (agro-industry), agricultural marketing and institutional support activities [1]. Mardikanto [2] stated that agribusiness is a concept of an integrated system consisting of several sub-systems, namely: upstream subsystem, cultivation subsystem, processing subsystem, marketing, and supporting system, which consists of research, extension, financing, financial system, transportation and other services.

One of the potential agribusiness sectors to be developed is beef cattle sector. Based on the survey, total population of beef cattle in Central Java was 1,751,799 heads/cattle, meanwhile, the beef cattle population in Pati Regency had a contribution of 6.12 percent or equal to 107,329 heads/cattle [3]. There needs to enhance growth and improve the profitability of beef cattle, especially in the provision of quality livestock breeds in order to stay competitive in the marketplace. Government policy in beef cattle development program in Pati Regency was to prioritize the availability of breeds by optimizing local resources. Government policy in beef cattle sector should consider four components, as follows: increasing skills and welfare for farmers, increasing population and productivity, conserving land and environmental protection, developing science and technology [4].

Government policy related with beef cattle sector was aim to increase availability of protein sources from large ruminants, especially beef cattle as well reduce meat import [5]. Rukinantia et al. [6] explained that meat consumption has been increased over the
years and it is related with increasing household income and knowledge about nutrition value. However, most of the beef cattle farming system in Pati regency based on smallholder farming system, lack of capital access, and low level of farming knowledge [7]. In the other hand, Pati Regency had potency to boost beef cattle sector, such as: availability of alternative feed resources, trade routes which connected Java Island as well as marketing opportunity. It was necessary to develop more systematic strategy to improve beef cattle sector based on perception of all stakeholders who are involved in beef cattle market. Hence, the aim of this research was to explore alternative strategies to increase beef cattle population based on focus group discussion of relevant stakeholders in beef cattle sector in Pati Regency.

2. Materials and Methods
This research was a qualitative research, which aimed to explore the state of the development of beef cattle farms in Pati Regency. Qualitative research was a method to understand social problems based on holistic picture and perception of the informants and it is formed with words, reports, observation in a natural setting [8]. Qualitative research had been used if the research factors cannot be quantified or cannot be calculated and the variables cannot be expressed in numbers instead of perceptions, opinions, and assumptions.

Primary data were collected using FGD (Focus Group Discussion) and observation methods. Secondary data were obtained from Agriculture and Livestock Office Pati Regency and other relevant documents related with beef cattle sector. The FGD was held by conducting discussions with selected key persons as many as 12 people consisting of academicians (1 participant), farmers and represents of the farmer’ group (6 participants), traders (1 participant), government institutions such as the head of Agriculture and Livestock Office, Pati Regency, veterinarian and extension officers (4 participants). The selection of key persons was based on their background, knowledge and experience related with beef cattle sector in Pati Regency. Selection of key persons was based on discussions with the Head of Agriculture and Livestock Office, Pati Regency.

The benefits of FGDs were a group discussion method to formulate basic situation and need assessment of the participants as well as finding their problems based on their own experiences related with beef cattle sector in order to determine alternative solutions its problems. In addition, through this FGDs method, several matters were discussed related to the focus of the research hence the researcher immediately obtained data effectively.

2.1. Data analysis
Qualitative data analysis was carried out in the form of a collection of words during the FGDs and not a series of numbers. Qualitative data analysis was consisting of three steps, namely data reduction, finding theme of the discussion, and making conclusion. The method was used to gain insights into people's feelings and thoughts, which may provide the basis to develop strategies in beef cattle sector. The analysis in FGDs involved providing explanation and interpretation of patterns and themes for a qualitative researcher to verifying conclusion correctly [9].

3. Results and Discussion
Based on FGDs, it revealed that Pati Regency had four main programs for livestock sector, namely: breeding program, prevention and control of livestock diseases, improve management of livestock production, and extension program to increase application technology. One of the problem come up during the FGDs, it was lack of veterinarian which greatly affects the improvement of livestock health. Lack of farmer’ capability in
managing livestock health was raised during the FGDs. It needs a systematic program for controlling disease at the farm and village level.

During the FGDs, the participants informed that the Agriculture and Livestock Office, Pati Regency implemented technological application in livestock through training and extension services including making fermented animal feed, organic fertilizers as well as subsidies for artificial insemination programs. However, problems in beef cattle farming system in Pati Regency were also identified during FGDs. According to participant 10, some of the farmers did not applied technological application due to lack of socialization and the extension services did not reach farmers as many as expected since lack of interest to joining farmer’ group.

3.1. Alternative Strategies with FGD (Focus Group Discussion)

FGDs was carried out to generate alternative strategies in order to help decision makers in Pati Regency to set of decision that define future direction of beef cattle development. Stakeholders were gathered in the form of FGDs. FGDs in this research facilitated group discussion and develop strategies around problems and solutions. FGDs generated a structural priority and action to boost beef cattle productivity in Pati Regency. The output of FGDs adapted the perspectives of stakeholders. It was a better understanding of the different interest, expectations and target hence participants would gain trust and respect for their opinions even though it had different perspectives from others. The result of FGDs may develop ownership for the future beef cattle development strategy in Pati Regency. The results of the FGDs in this research are presented Figure 1.

The FGDs resulted four themes to explain main aspects to be developed in Beef cattle sectors in Pati Regency. These four themes could be called as aspects. Here four aspects that were collected as result from FGDs: 1) reproductive aspects 2) market strengthening, 3) product development, 4) support system. Moreover, each themes resulted alternative strategies that can be taken into account to improve productivity of beef cattle sector.

| Reproductive Aspects | Market strengthening | Product development | Agriculture Support system |
|-----------------------|----------------------|---------------------|---------------------------|
| a. Protection for female productive cows | a. Government intervention to stabilize price of live cattle | a. Product diversification based on local resources | a. Training and assistance for technological application in livestock and business management |
| b. Breeding program | b. Build networks/partnerships with other stakeholders | b. Standardization of product quality (breeds, feed types and communal cage) | b. Training on feeding practices |
|                       |                      |                     | c. Access to capital |
|                       |                      |                     | d. Improve the role of farmer’ group |

Figure 1. Result of FGDs

Based on FGDs, two key words were come up from theme of reproductive aspects were namely: protection of female productive cows and breeding program. Reproductive
performance of the beef cattle in Pati Regency was poor because most of the farmers failed to detect the cow got estrus. However, according to the participant, if the farmers could properly have managed nutrition and heat detection, in the future it will resulted better reproductive performance of beef cattle in Pati Regency. One of participant of FGDs added it needs to improve awareness among farmers to do better improvement of breeding management practices. It needs a lot of efforts to do network and collaboration among many stakeholders in order to increase reproductive performance of beef cattle in Pati Regency. Several efforts to improve reproductive aspects of beef cattle sector in Pati Regency including were resulted during FGDs, including protection of female productive cows and breeding program. Information gathered during FGDs added that protection of female productive cows related with national program had been implemented by national government. It can be said that improvement of reproductive aspect in beef cattle needs to be done through protection of female productive cows. Breeding program can be maintained by selection of reproductive female cows that have to be slaughtered. It has to be intensively selected as well as better input production systems. In addition, it is important to integrate proper breeding management program and disseminate knowledge about breeding management for farmer by proper extension program. FGDs concluded that a successful breeding program could have a positive impact on sustaining reproductive aspect in the future.

Moreover, second theme was market strengthening. It was resulted based on two keywords, namely: government intervention to stabilize price of live cattle and building networks/partnerships with other stakeholders. All participants agreed that it need comprehensive strategies targeting farmers to ensure stability of their farming system including linking the farmers to get access to improve their capital through two activities, such as government intervention to stabilize price of live cattle and building networks/partnerships with other stakeholders. Beef cattle farmer’s dependency on middleman (blantik) resulted on lack of bargaining position to decide the price of live cattle. These conditions expose uncertain prices, which makes lower income for farmers. Support from government to intervene in live cattle prices in the market is urgently needed. Hence, it is important to create price stabilization schemes. In addition, participant 2 added that local government of Pati Regency need to develop farmer’ capacity and connect the farmer to markets through make partnership with other stakeholders such as: retailers, slaughterhouse, and financial institution in order to improve competitiveness and farmer’ bargaining position.

The result of FGDs produced third theme called Product development. Third theme was developed based on two keywords, namely: product diversification based on local resources and standardization of product quality. In order to increase food demand from beef cattle product is seeking food diversification. Participant 1 suggested this strategy in order to improve the nutrition improvement and being capable to compete in the market. It would improve the value added of beef cattle product. Introducing farmer into others food producer in Pati, such as meatball seller, grilled meat seller and other types of business related to meat product. It is important to develop partnership and it would enhance the symbol of Pati Regency as friendly tourism destination. Moreover, participant 6 explained about the important to improve beef cattle productivity by improving farmer’ capability in managing their farm, such as: feeding management and organize the farmers into one communal barn hence the farmer would get benefit from sharing resources and knowledge.

Four keywords were developed to shaped fourth theme in this research, namely agriculture support system. Participant 8 explained that farmers need to receive agricultural support systems in order to improve beef cattle productivity, such as: access for technological application through training and assistance, access to capital, and improve
capacity of farmer’ group. Increasing productivity cannot be achieved without access to agriculture support system.

3.2. Discussion
From the result above mention, four themes were developed as a result of FGDs. FGDs were carried out as to find alternative strategies to improve beef cattle sector in Pati Regency based on discussion among several stakeholders. It was crucial steps started from analyze the environment, identify and evaluate strategic options, followed by setting future alternative strategies. Several important keywords were revealed such as importance to make collaboration and partnership. Purnomo et al. [7] mentioned that developing partnership between farmers and others sectors or other business owners resulted in mutual benefit by sharing the costs and reducing risks. FGDs also revealed that alternative strategies can be done through improving feeding and breeding management, controlling animal disease, as well improve support system for farmers.

Moreover, modernization of livestock sectors by following technological developments also requires assistance and monitoring by the government [4]. Farmers must also be need to be adaptive to existing changes such as new technology in breeding and feeding management [10]. It was added by Wahyuni et al. [11], several approaches can be improved include: applying artificial insemination technology, utilizing waste from crop production to make silage, application of mix farming system.

In addition, it is important also to emphasize on support system in beef cattle sector in Pati Regency. In order to improve productivity, farmers need a better access to financial capital such as getting easy to get credit from government institution or private sector [12]. Farmers need to be sustain to run their farm by providing better animal breed, managing animal disease and other agricultural inputs. These often require short-term loans, which they will repaid whenever the cows were converted into cash by selling the cows or other income from other agriculture production. Installing major improvements in support system as mention above will help the farmers to be sustain in beef cattle farming system. Lastly, improve farmer’ capability is also important such as increase their participation in farmer’ group. Being a member of farmers’ organizations is one of solution to gain access to resources, opportunities for sharing knowledge and improve farmers’ leadership in decision-making and solve their own problem [13].

4. Conclusions
Beef cattle agribusiness has opportunity to be developed in Pati Regency. There are opportunity related with natural resources as well as improve feeding practices for the cows by utilizing waste from crop production. Even though, most of the farmers were faced difficulty to improve productivity. Several alternatives strategies had been developed as result from FGDs in this research. These strategies include improve four elements in beef cattle farming system, namely: reproductive aspects, market strengthening, product development and support system.

References
[1] Downey W D and Erickson S P 1992 Manajemen in agribisnis (Jakarta: Erlangga)
[2] Mardikanto T 2007 Introduction in Agriculture (Surakarta: PUSPA)
[3] Statistical Office Pati Regency 2019 Pati Regency in Number 2019 (Pati Regency: Statistical Office)
[4] Sugiarto M, Mastuti S, Khaerudin and Gayatri S 2020 IOP Conference Series: Earth and Environmental Science 518 012027
[5] Priyono and Priyanti A 2018 Wartazoa Journal 28 23-32
[6] Rukinantia A, Oktaviani R and Bunasor S 2017 *Jurnal Aplikasi Bisnis dan Manajemen* 3 353-360
[7] Purnomo, Sutrisno H, Endang T R and Sidiq B A 2017 *Buletin Peternakan* 41 484-494
[8] Silalahi U 2009 *Metode Penelitian Sosial* (Bandung: PT. Refika Aditama)
[9] Halkier B 2010 *Qualitative Research* 10 71-89
[10] Suryana 2019 *Jurnal Litbang Pertanian* 28 29-37
[11] Wahyuni R and Dewi R 2018 *Jurnal Litbang Pertanian* 37 49-58
[12] Gayatri S and Vaarst M 2016 *International Journal of Agricultural Extension* 4 19-31
[13] Hanani N, Asmara R, Fahriyah F and Suvarjo S 2017 *Agricultural Socio-Economics Journal* 16 126-135