Legal aspects in development of beef cattle in South Sulawesi, Indonesia

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Abstract. Development of livestock, especially beef cattle is intended to achieve a high rate of production in order to accomplish the need of food that comes from animal. On the side of technology, livestock production has long been developed to increase the production, quality and the other reasons, however non-technical reasons are also affecting the livestock production. Therefore, the objective of this study was to explain the legal aspect of non-technical reason of cattle development, especially Bali cattle in South Sulawesi. In development of these livestock, mostly are raised by small holder farms system, whereas those cattle are raising in extensive system including housing and feeding system with very small livestock technology applied. The most two non-technical problems that limits the development of cattle even reduced the population are stealing the cattle and slaughtering of pregnant cows. These two problems are significantly inhibits the development of cattle population as well as sustainability. Efforts to cope the problems have been conducted by the government as well as in cooperation with national security. Regulation that related to the problems have also been made by the government, however it seems that several obstacles in application of this regulation. Therefore, it can be concluded that legal aspect that affecting the development of beef cattle in South Sulawesi is still need special attention for its application and supervision.

1. Introduction

The growth of economic in Indonesia day by day is increase that might be affecting by many factors resulting in high demand of meat that origin from cattle. This demand are needed by the people of Indonesia as they have economically income improved. However, this demand is difficult to fulfil to the Indonesian people due to availability of this cattle is still lack in number. Basically, the population of beef cattle in Indonesia in the year of 2014 was 14,727,000, and it increases to 17,050,000 in 2018. Although the population of beef cattle in Indonesia is always increase annually; at about 3 to 4% from 2014 to 2018, slaughtered cattle are almost flat at similar period; at about 2 million per year [1]. However, the most fundamental issue is how to strive for the production of animal food in proportion to existing needs. During this time, the demand of national meat is always higher than the production (supply) available, so that import dependence is increasing [2]. Therefore, in order to fulfil the demand of the meat of the need of the meat, especially beef, the government of Indonesia imported both beef cattle and meat every year.

A lot of efforts to suppress the import both beef cattle and meat to Indonesia have been conducted by the government. However, so far, these efforts seem to be continued due to that the production of beef cattle are still far from the demand of Indonesian people and needs more efforts and strategies to increase the number of beef population as well as the number of cattle to be slaughtered. On the other hand, the farmers who are raising the
beef cattle must be more efforts to increase their cattle and subsequently increase their income that origin from cattle. Basically several farmers have technical strategies to increase their own cattle under surveillance of government. However, a new problem sometimes occurs in the farmers’ level. The problem is non-technical; that after raising the cattle, and growth enough of the cattle that it showed by high body weight, those cattle sometime are stealing by a group of thieves. This problem makes frustration to the farmers, due to long term raising the cattle without getting anything. Therefore, efforts to maintain this problem are needed.

The other non-technical problem that usually occur in the farmers’ level is that some beef cows that are in pregnancy slaughtered with/without knowing the condition. This problem is really limits the growth of beef cattle population and even reduces the population due to loss replacement of cattle that are needed for future generation. One of beef cattle producers in Indonesia is South Sulawesi Province. This province has about 1.5 million cattle and dominated by Bali cattle. Therefore, the objective of this study was to explain the legal aspect of non-technical reason of cattle development, especially Bali cattle in South Sulawesi.

2. Materials and methods

2.1. Beef cattle farms, management and interview

The study was conducted in several small holder farms in South Sulawesi Province, Indonesia. All small holder farms as the object of this study were managed by the farmers and their family. The cattle were housed in the area near by the farmers’ house or even just under the farmers’ house. Generally, the cattle are loss in the morning time to feed them in the field and return back to the house in the afternoon or evening times. Sometimes, farmers collecting some feedstuff such as natural grass or elephant grass to feed the cattle in the house. Rice bran was also used as feeding concentrate if available. Likewise, minerals supplement or vitamins occasionally administered to the cattle following local or regional livestock services programs. For the primary data, interview was performed to the owner of small farms that related to the objective of this study with the help of questionnaire [3]. The questions were related to the management applied by the farmers including housing management, raising management, health management, reproductive management, and some other statement by the farmers that related to the local wisdom management. The other questions were related to the legal aspect of raising the cattle including regulations that the farmers should obeyed. Problems faced by the farmers that also related to the law or legal aspects were asked to the farmers.

The secondary data that related to this study was obtained from related institutions and literatures. Data such as farmers to be visited were obtained from the Livestock Institution Office. Population and the growth of beef cattle year by year were obtained from the statistic book issued by the government.

2.2. Data of the study

The main data in the present study were qualitative data that origin from the answers and the statement of the farmers in small farms during interviewed. The following data were also collected in this study:

- The population of beef cattle in Indonesia
- The population of beef cattle in South Sulawesi Province, Indonesia
- Slaughtered beef cattle in Indonesia and South Sulawesi Province

2.3. Data analyses

This study was designed to know the legal aspects and limitations in development of beef cattle that raised by the farmers in small scale. The data that obtained through interview with the farmers were analyzed descriptively. Microsoft Excel program was used to tabulated and analyzed the population and growth of beef cattle population. The growth of beef cattle population and the lineer formulation as well as its correlation were also drafted and calculated in Microsoft Excel program. The average growth of beef cattle population are presented in percentage followed by plus-minus standard deviation (±SD). Differences in the population and growth of beef cattle population at different years were noted and explained descriptively.

3. Results and discussion

3.1. Trend of beef cattle population in Indonesia and South Sulawesi Province

The trend of beef cattle population in Indonesia from 2014 to 2018 are shown in Figure 1. The figure shows that there is a linear increase of beef population in Indonesia following the formulation of $Y = 565500 + 1x10^{-7}$ with
R²=0.9947 during a period of five years; from 2014 to 2018. This means that every year, the average growth of beef cattle population Indonesia is approximately about 565,500 heads. However, number of beef cattle slaughtered during the same period did not sufficient for consumption in Indonesia. Therefore, this is the reason to the government to import both live cattle and meat in order to meet the need of meat to the people of Indonesia.

Figure 1. The population of beef cattle in Indonesia at different year

Figure 2 shows the trend of beef cattle population in South Sulawesi Province during a period of five years (2014 – 2018). There was an increase the population of beef cattle in this region year by year following the linear formulation of Y = 74610x + 1x10⁶ with R²=0.9947. This indicated that about 74,610 heads of cattle production per year during five years in this region. According to the Figure 2 that the average (±SD; standard deviation) growth of beef cattle population in South Sulawesi Province is about 5.89% ± 1.51, higher than the average growth of beef cattle population in Indonesia; about 3.73% ± 0.82. This suggests that the growth of beef cattle population in this region much better in comparison to national growth. The reason of this growth is not clearly understood. The possible reason is that this region is one the provinces that has large population of beef cattle; number three at province level, suggesting livestock improvement programs might be well conducted in this province.

Basically, meat consumption in Indonesia in comparison to several developed and developing countries are still relatively low [4] and the people in South Sulawesi is no exception. This indicated that there is a great opportunity to increase the beef cattle population to provide meat in Indonesia. For this purpose, the government of Indonesia has built manuscripts as law documents and regulations in order to manage all stakeholders that are working in the field of livestock development. These regulations are intended to have best practices in running the livestock business to achieve as high income origin from beef cattle as possible and to provide meat from cattle and subsequently to provide protein to the people that origin from beef. To achieve this, the role of government is absolutely needed by the stakeholders either for guidance, regulation and supervision in this livestock business.

3.2. Legal aspects in development of beef cattle

Manuscripts that governing the development of cattle in Indonesia have been written in Law of Republic Indonesia No. 18 of 2009 [5] which was amended to Law of Republic Indonesia No. 41 of 2014 [6]. For instance, in the article 32 paragraph (1) of the manuscripts mentioned that the government and regional governments in accordance with their authorities are obliged to encourage as many citizens as possible to carry out livestock breeding in accordance with best practice livestock farming guidelines. Furthermore, in paragraph (2) mentioned that the government and regional governments in accordance with their authorities facilitate and support development for raising livestock that carried out by the farmers and certain parties who have special interests. Likewise, in paragraph (3) government and regional governments in accordance with their authorities to support and provide facilities for the growth and development of cooperatives and business entity in the livestock field. Several other manuscripts
have also been made both government of Indonesia and regional governments that are principally support the development of beef cattle in Indonesia.

**Figure 2.** The population of beef cattle in South Sulawesi Province, Indonesia at different year

Based on the two manuscripts mentioned above, farmers have flexibility to develop their farms, even from small scale to large scale. Livestock services both local and regional are highly support the farmers to develop and improve their livestock business through implementation of related programs. This due to that the most fundamental issue is how to strive for the production of animal food in proportion to existing needs [2]. However, some limitations are also meet that those regulations.

#### 3.3. Limitations in development of beef cattle

Although livestock improvement programs have many been conducted by the government, several obstacles are found in the farms level, especially small scale farms. Likewise, the regulations that are related to the livestock programs have also been applied in the field. However, there are some limitations that those regulations did not properly obeyed by the farmers or other parties as stakeholders. This limitations are significantly inhibiting the growth of beef cattle population in South Sulawesi Province. The most two problems in development of beef cattle in South Sulawesi are cattle theft and slaughtering pregnant cows.

The case of cattle theft has been a matter of frustration for the farmers, especially small holder farm. One of the reasons why the farmers keep their cattle just under their wooden house is to prevent their loss of cattle from the theft. Basically, raising cattle just under the farmer’s house is relatively not good for the people health. During interviewing, most farmers realized and agreed that it is not good to raise cattle near by the house because it would be a risk in health. However, many of them stated that “we have no choice to secure our cattle”; it is much better to keep them nearly. Generally, situation in rural area allows and makes it easy for thieves to steal. In case this problem faced by the farmers, first stage they have been done, it was informed to the security office. However, mostly their cattle were not return back to them. It means that they keep losing. Even though the thief has been captured and imprisoned but this problem had much affecting the farmers to keep raising the cattle. Consequently, reduced the development of beef cattle in the region.

The second problem faces the development of beef cattle production in the region is slaughtering pregnant cows. The farmers sell their cows even in pregnant to the other party and slaughtering the pregnant cows to obtain meat. Basically, efforts of the government to control slaughtering pregnant cows has long been done. This regulation is documented in Staatsblad No. 614 article 2 of 1936 (Harmadji dkk, 1979) [7]. Furthermore, for veterinary special police, instructions regarding slaughtering, slaughtering of large horned females are listed in a 1936 government regulation concerning large horned female animals (Wijziging van de bepalingen inzake het slachten op doen slachten van vrouwelijk groothoornvee ("Slacht Ordonantie Vrouwelijke Groothoornvee 1936"), Staatsblad of 1936 Number 614). In the Law of Republic Indonesia No. 41 of 2014 article 18 paragraph 2 mentioned that productive female ruminants are prohibited from being slaughtered because they are good livestock.
producers, except for research, breeding, and controlling animal diseases. Furthermore, in article 18 paragraph 3 that the government and district/city regional government provide funds to capture productive female ruminants which are issued by the community and store them in technical implementing units in the region for the purpose of breeding and supplying ruminant livestock breeds in the area.

These regulations in the field level, basically did not applied well. This problem is mainly occur when the farmers need cash for certain reason. Actually, raising cattle by the farmers are savings-like. Therefore, when there is something to be paid for, especially with high price, usually the cattle are sold even the cattle are being pregnant. The fate later of the pregnant cows are difficult to know, and mostly those cows are slaughtering for getting meat. The other parties who buy the cows had preference of buying female cattle than male cattle. This due to that female cattle much cheaper in price in comparison to those male cattle. Therefore, socialization of this rules are needed to all stakeholders. This intended to achieve high development of beef cattle in the region.

4. Conclusion
In conclusion, legal aspect that affecting the development of beef cattle in South Sulawesi is still need special attention for its application and supervision.

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