THE DEVELOPMENT OF SUSTAINABLE CATTLE FARMS IN EAST ACEH TO SUPPORT THE DOMESTIC RESOURCE-BASED SELF-SUFFICIENCY OF NATIONAL BEEF PRODUCTION

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ABSTRACT

Beef self-sufficiency is a government program to provide for the needs of the national beef originating from local cows Indonesia. Data show that the cattle population in East Aceh District accounts for approximately ten percent of the total number of beef cattle in the province of Aceh, which makes the region has a significant role in supplying the availability of beef in Aceh. However, based on findings in the field, there are some major issues that require an immediate response. Some of these issues such as the low productivity of beef cattle farms in East Aceh since most are individual or people farm, the low human resources quality of breeders, unqualified policy makers to map resources in the region in a comprehensive manner, the limited number and quality of the farm instructors, as well as the shrinking of grazing land in the region. This article discusses these issues, then offered several alternative solutions for the sake of sustainable development of cattle farms in East Aceh District to support national domestic resources-based self-sufficiency in beef.

Keywords: National self-sufficiency, beef, cattle farm, East Aceh

INTRODUCTION

The self-sufficiency program of national beef production launched by the government in 2014 is considered still has not reached the target. The increase in beef production amounted to 5.28% in 2015 (CBS, 2015) is still inadequate national demand continues to increase. Increased national demand for beef occurs triggered by the increase of economic growth and population growth rates, and the increased quality of public education and awareness of the importance of good nutrition in animal products. This program is a continuation of the previous program in 2005 and the Acceleration Program of Beef Self-Sufficiency (P2SDS) in 2010. According to Act no. 7 of 1996 on food, self-sufficiency is the state's ability to ensure the realization of the ability of food produced from domestic production. Based on such understanding, the self-sufficiency in beef has a meaning as an attempt to realize the supply of domestic resources-based beef that capable to fulfill the domestic demand of 90-95% of the total national demand of beef.

Based on the Road Map of Cattle Industry Development in Indonesia (2014), it is projected in 2015 the Indonesian population will reach 255.1 million and the beef consumption as much as 2.56 kg/capita/year. Thus, the estimated total demand of national beef is 640 thousand tons which is filled from 1.23 million cattles. On the other hand, the supply of beef production is only reached 446 thousand tons, thus the differences or lack of supply of beef amounted to 194 tons. This means the fulfillment of domestic beef can only meet about 69.7% of the total national demand. The situation of market demand and the lack availability of beef nationally led the government adopted the import policies of cattles and beef by 30.3%. That policy caused a very large deficit on the

trade balance of livestock commodities (Ministry of Agriculture, 2015).

In the long term, the government making policies that object to achieve the domestic resources-based self-sufficiency of beef to reduce the dependency on cattle and beef imported (Atmakusuma, Harmini & Winandi, 2014) as well as to provide the growth probabilities of cattle population in Indonesia and to keep the beef prices remain affordable by community (Ariningsih, 2014). Based on supply-demand balance data of cattle and buffalo in 2015-2019, Ditjennakeswan stated that the national demand of beef in 2019 is expected to reach 610,421 tonnes. The amount is expected to be obtained from a local beef amounted to 90.03% and the remaining 9.66% of imports, so that the government's expected target is the beef self-sufficiency program has been reached in 2019. The program is expected to take place on an ongoing basis, which means the self-sufficiency in beef production that achieved will be able to continue to run and be maintained in subsequent years. If the objective is achieved, the beef consumption at the household level is expected to be safe and the opening of job and employment opportunities in the beef cattle farms; so that the income and welfare of breeders has also increased, optimizing the potential of local cattle, and savings of national income can be materialized.

East Aceh district is one beef-producing region in the province of Aceh. According to statistics of 2015 (Ditjenak, 2015), Aceh province is a center of cattle farms in Indonesia with a population of as many as 536.930 cattles and population growth rate of 4.76 percent. The data also states that the centers of beef cattle development in Aceh are North Aceh with the population as much as 92 365 cattles, 89.421 cattles in Aceh Besar, 62.836 cattles in Aceh Tamiang, 61.408

cattles in Pidie, 56.422 cattles in Bireuen, and 56.422 cattles in East Aceh. Cattle population in East Aceh district is estimated to contribute about 10 percent of the total number of cattle in Aceh, which it has a significant role in supplying the availability of local beef in Aceh.

Therefore, to create a sustainable cattle farms in East Aceh district will require the appropriate strategies so as to increase the production and productivity of cattle farm to support domestic resources-based national self-sufficiency of beef.

RESULTS AND DISCUSSION

Based on the results of field observation and interview with supervisors of Department of Agriculture, most cattle farms in East Aceh district cultivated by local communities or individuals. This situations also found by Januar *et al.* (2014), that most (90%), national beef production comes from people farm and the rest of the company- and state-owned farms. Thus, the people farm is the biggest part of the farm system in Indonesia which its role must be optimized. Author found the characteristics of farm people is a small-scale holdings, and its commercial properties have not been well. Yunizar (2015) reported that the main issues in connection with the development of cattle farm in East Aceh district, among others, is the farm have a simple technology semi-intensive system of cultivation, feeding not meet the nutritional needs of cattle, less land grazing that caused many breeders to switch to the cultivation of plantation crops, and the less economical scale of livestock ownership (3-4 cows/breeder).

Another problem found that most breeders have a low level of formal education or do not complete primary education. This led to the ability to absorb information and adopting technology is relatively limited, causing a lack of the ability of breeders to manage the business to be well developed and to achieve an income that meet expectations. The low quality breeders is a serious obstacle in the development of cattle breeding. Without a capable human resources, cattle breeding development objectives can not be achieved. Human resources is vital in the development of the subject. The future human resources in farming are expected to be capable of mastering science and technology, has the entrepreneurial spirit, and ready to face the competition of business as well as to be able to achieve a higher development phase of sustainable cattle farms in East Aceh.

An improvement of human resource in farming can be achieved through the learning process. By the process, the breeders are willing and able to help and to organize themselves in accessing the market information, technology, capital, and other resources, in an effort to improve productivity, business efficiency, revenue, and welfare, as well as raise the awareness in environmental functions. The need of competent human resources in cattle farming has become very

important in the domestic resources-based self-sufficiency program of beef, due to the direction of the local participatory development approaches, as well as the decentralization policy in accordance with the specific conditions of each region related to regional autonomy.

At the level of policy makers, the results of observations indicated that many local agencies have not been able to map the resources in the region in a comprehensive manner and to have precision in making the concept of utilization. Given that most of rural areas in Indonesia is based on the resource potential of agriculture, farming, fisheries and forestry, so should government agencies in an area populated by a qualified resource that has an understanding of agriculture in the broad sense.

With the current development of information technology is growing rapidly create regional boundaries become blurred so that communication can run fast without having to hit a distance. By utilizing this, the government is actually able to use it into a new innovation in the supervision and guidance of peasant communities. The government could provide education and counseling through online and not having to meet directly with breeders. As well as through social media, the local government agencies can provide important and actual informations about agricultural world in a faster way to the breeders. On the other hand, the obstacles that arise is the access, where most breeder communities still can not keep up with the development of information technology, especially those living in rural areas. So that the counseling process still needs to be done, and as a form of the government's closeness to the people.

Government institutions as supporting institutions, in addition, have a very important role in improving the human resource quality of breeders, among others through counseling. Referring to Presidential Decree No. 154/2014 on Counseling Institutional, noted that the Counseling is a learning process for the main actors and businesses so that they are willing and able to help and organize themselves in accessing market information, technology, capital, and other resources, in an effort to improve their productivities, business efficiencies, incomes, and welfares, as well as raise awareness in environment conservations.

Based on the observations and interviews' results, it is indicated that the instructors which available are very limited in number and quality. The average age of instructors are also more than 45 years. The systems and institutions of agricultural, fishery, and forestry instructors have not been good, so not able to guarantee the profession welfare for the instructors. In fact, the outline of Article 18 and the Presidential Decree No. 154/2014, the institutional taks of instructors at district level are as the main agent of changes in the farm are to: (a) arrange the counseling programs at district level that in line with the counseling programs of municipality/regency districts; (b) conduct the

counseling process based on the counseling programs arranged; (c) provide and disseminate information technologies, production facilities, financing, and markets; (d) facilitate the development of institutional and partnerships among major actors and entrepreneurs; (e) facilitate the capacity building of Civil Servants, reliance, and private instructors through an ongoing-based learning process; and, (f) conduct the learning process through a pilot and development of a farm model for the main actors and businessmen.

Last but not least, the breeders found to be facing reduced grazing land or pasture shrinking in East Aceh district and generally in the area of the farm or agricultural centers. This condition is encouraging the government to issued Law No. 41/2009 pertaining to the protection of productive agricultural land in an effort to minimize the reduction of pasture due to land conversion. The aim is to: (a) protect the sustainability of agricultural land area; (b) ensure the availability of sustainable agricultural land; (c) realize the self-reliance, resilience, and sovereignty of food; (d) protect the agricultural land holdings owned by breeders; (e) increase the prosperity and welfare of breeders and the community; (f) improve the protection and empowerment of breeders; (g) increase the employment of a decent life; (h) maintain the ecological balance; and, (i) realize the revitalization of agriculture.

In order to respond the problems of forage or animal grass feed availability, in the East Aceh region, the government should established the Agricultural Innovation Field Laboratory (AIFL) as a vehicle for the implementation and development of specific area technological innovations based on local resources. The objective of establishing AIFL is to increase the population and productivity of cattles through the introduction of forage provision technology, especially the introduction of fermented rice straw for animal feed and cultivation of superior grass with training methods, pilot demonstrations (so-called, demplot), and assistance and counseling to breeders. The expectation is that after obtaining the training, the breeders gain increased knowledge about innovation and technological of forage. In turn, breeders can apply that knowledge to improve the efficiency of cattle business and to increase their revenues.

Efforts to increase the added value of people farm-based cattle business can be conducted through the application of installation technology of biogas, organic fertilizers, and bio urine. These efforts executed by means of make a list of breeder group in East Aceh district by a group class, the introduction of raw materials and industrial waste plant oil palm-based cattle feed technology, as well as the establishment of the Community Agricultural Centers (CAC).

Mayulu *et al.* (2010) suggest the development strategy of cattle farms need to be made through a sustained effort, supported by the feed industry that optimizes the utilization of specific area-based local feed ingredients through an integrated pattern. The policy direction of the development of animal

husbandry and animal health on an ongoing basis issued by the General Director of Animal Husbandry in 2015, states that in order to achieve national food sovereignty including the self-sufficiency of cattle, it is necessary to the development of animal husbandry areas. The approaches that can be implemented are: (a) agro-ecosystem approach, that is tailored to the type of livestock and natural resources; (b) agribusiness system approach, that food needs based on market demand; (c) an integrated approach, which requires the support of relevant stakeholders; and, (d) participatory approach.

Although the development of cattle breeding areas in the province of Aceh in the Master Plan of Agricultural Ministerial Decree no. 43/2015 specifies only Aceh Besar, Aceh Tamiang, Aceh Jaya and Bener Meriah districts, but it would be nice if the government continues to accommodate the non-regions because a significant role as a supplier of local beef such as East Aceh district. Refer to the actions taken by Animal Husbandry Department of West Java (2015), then it should be the district government of East Aceh also have to accommodate and to allocate the preparation of the Master Plan for development of the cattle farm areas, comprehensively. The plan will describe the potential in the province of Aceh, which is directed to the analysis of resource potential, current conditions and, target to be achieved. The targets are based on the assumption of population, population of livestock, forage productivity, pasture or feed resources, the potential of the area, infrastructures, socio-economic conditions, breeders' human resource quality, the farm instructors, and the need for investment. Local government can also develop the idea of the CAC as a achievement roadmap of beef self-sufficiency in the future. CAC's philosophy is to increase the cattle population by incorporating the business community concept among the people-scale cattle breeders, and simultaneously to select and gradually improve the genetic quality of livestock (Kabarbisnis.com, 2015).

In the strategic plan of the Ministry of Agriculture 2015-2019 noted that the increase in beef production can be done by increasing livestock population and distribution of dense regions to abundant biomass but empty of livestock regions, improve livestock productivity through the provision of water and cheap feed, superior male services, a better artificial insemination services and application of good farming practices, fattening and snooze pieces according to the genetic potential and the livestock economic potential, slaughter prevention of productive female cows, prevention and control of disease for reducing mortality of calves and cows, and increase the genetic quality of livestock through selection and crossbreeding. To meet the strategic plan, several operational steps or actions can be recommended to carried out in the field. The suggested actions are:

- a. Increase the productivity of local cattle, i.e.:
 - (1) optimization of artificial insemination and synchronization of estrus;
 - (2) procurement of

superior male cattle and buffalo; (3)provision of water for livestock; (4)reduction of reproductive disorders and improvement of animal health services; dan, (5)control of productive (female) cows.

- b. Development of animal feed, i.e.: (1)development of forage technology and innovation; and, (2)development of materials/processed feed technology.
- c. Provision of cows/cattle, i.e.: (1)provision of superior seeds; (2)provision of superior livestock breeds; and, (3)certification of livestock breeding area and institutional.
- d. Maintaining the health of animals, i.e.: (1)handling of strategic and zoonotic contagious animal diseases; (2)investigation and testing of animal diseases and certification of veterinary medicines; (3)strengthening the veterinary authorities institutions; (4)production of vaccines, veterinary medicines and biological materials; and, (5)strengthening the national animal health systems.
- e. Implementation of the veterinary public health, post-harvest and marketing, i.e.: (1)strengthening and improvement of Slaughter House management; (2)implementation of safe, healthy and halal guarantees on animal products; (3)facilitate the meat stalls, cattle markets, and marketing arrangements of cattle/buffalo and beef; (4)application of animal welfare systems.
- f. Application of government regulation, i.e.: (1)local regulations on the slaughter of productive cows; (2)local bylaw permits the development of cattle in oil palm plantations; (3)imports regulation of livestock and beef; (4)provision of credit schemes facilities; and, (5)inventory arrangements of cows/cattles.

CONCLUSION

The strategy of sustainability cattle farm development is can be executed by performing an inter-relationship of all the factors surrounding the potential for cattle farm in East Aceh, such as the ability of cattle breeders, the number and quality of farm instructors that meet expectations, the competence of policy makers in related to the sustainability of local people's cattle business, as well as the limitations of cattle grazing land. To overcome these problems, the government of East Aceh district needs to prepare a

Master Plan for the development of cattle breeding region in a comprehensive manner. Through a sustainable and integrated business approaches, it is expected to achieve the development of sustainability cattle farms in East Aceh district which were able to support the creation of domestic resources-based self-sufficiency of beef.

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