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I Ternak and Innovation in the Making of Animal Farmers Data Group Applications for North Sumatra Province

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Adi Suhendra

Research and Development Agency, Ministry of Home Affairs Republic Indonesia | Kramat Raya Street No. 132 Central Jakarta

✉ adisuhendra.pm@gmail.com

Abstract: Lack of animal food availability to meet the needs of food security in Indonesia causes the government to import to various countries so that food stock needs are safe, this indicates that our country still depends on other countries to meet the needs of animal food, the lack of adequate empowerment of cattle farmers, especially in West Sumatra made the writer to be the background for this research. To solve the problem of the lack of empowerment of cattle farmers, the government has made innovations, by making the I application of cattle and the application of data grouping . The method used in this research is descriptive by conducting interviews with several sources with qualitative analysis, the results obtained that the application provides benefits to cattle farmers, this can be seen by increasing investors and increasing coordination between cattle farmers.

Keywords: innovation, I Ternak, Data Group Application, System, Cattle

1. Preliminiry

As the human population increases, the level of demand for meat consumption and the like is also increasing, but in fact, to meet the needs of meat and its like, the government must import from other countries. This is because local breeders are not able to meet the needs of the community, so the government has to import cattle from other countries.

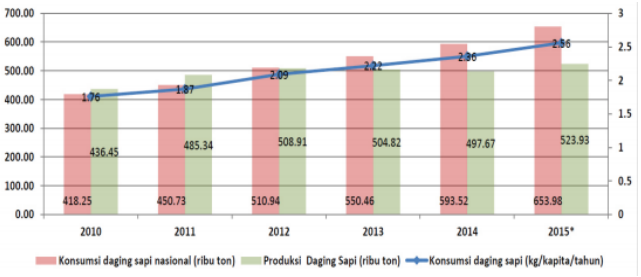

Figure 1 . Comparison of Consumption and Production of Beef 2011-2015
(Source: Central Bureau of Statistics)

Based on Figure 1. It is clear that from 2011 to 2015 the need for national beef consumption has always increased, this indicates that the national demand for meat is always increasing, but the national beef production does not appear to have increased, it can be said that it still means that there is a difference that must be fulfilled to address the national meat shortage. This condition can be caused by a lack of education to cattle farming and a lack of coordination between cattle farmers to develop their cattle businesses, in order to meet national food needs (S.W. Walsh et al. 2011).

The maturity in managing livestock is also influenced by the level of education of the livestock farmer itself, the level of education will greatly affect the adoption of technology, where at a higher level of education it will be easier for someone to adopt innovations and understand the nature and function of these innovations (Rogers, 1983). However, most of the livestock farmers in the province of West Sumatra have graduated from elementary schools, this means that maturity in technology still needs to be improved.

Government programs to meet the level of animal protein are still mainly focused on increasing the productivity and population of beef cattle (Pambudi, 1999). The increase in beef cattle production in Indonesia is still not good enough, namely meat production in 2016 as much as 3.4 million tons with donations from beef and buffalo 0.6 million tons (16.40%). Meanwhile, broilers still contributed the highest to 1.9 million tons (56.77%). The population of beef cattle in 2016 was 16 million heads and buffalo 1.4 million heads (Directorate General of PKH 2017). Until now, the existing cowcalf operation (CCO) is still carried out by small breeders intensively, which is generally a side business, while commercial beef cattle business in Indonesia is generally for fattening.

The government tries to encourage breeders to revolutionize their cattle system. The direction of the development of the cattle sector is to make reliable breeders. This will closely relate to support for government programs in achieving the target of selfsufficiency in beef and rbau, which are one of the commodities included in the special efforts that the Indonesian government is promoting this year. It is necessary to build an even farm so that all components and elements can work optimally.

The development of cattle as an industry controlled by humans includes four components, namely breeders as subjects, cattle as objects, land as the ecological basis for cultivation and environment and technology as tools (Saleh, 2014). Animal husbandry itself has an understanding, which is a production process in which efficient use of production factors can increase farmer acceptance and income (Widharyadi, 2010). So, breeders must strive to use the smallest possible factor of production to get a large output. According to (Daniel, 2002), technical efficiency is the efficiency that links actual production and maximum production. A use of production factors is said to be technically efficient (technical efficiency) if the production factors used produce maximum production.

The government's direction in the development of the cattle sector is to make reliable breeders. It will be very closely dal am support for the program estabering in achieving the target of selfsufficiency in beef and buffalo, which is one of the commodities included in the special effort that is being promoted by the Indonesian government this year.

To achieve this, the first focus of local government will do pe RLU held guidance to farmers by extension as well as other relevant agencies. Coaching these breeders is carried out using a group approach . This is partly due to the limited number of officers. At sa at this extension have formed a group of farmer groups of farmers subsector cattle in the field. In order to facilitate guidance from the provincial level, it is felt that it is important to collect data on the cattle subsector farmer groups that have been formed as a first step.

The second is that the government collaborates between the cattle service and the health service to facilitate breeders in keeping their animals healthy and having good quality as a protein source. The government wants to collaborate between investors, breeders and insurers. However, cattle farmers do not have enough funds to meet their maintenance needs and guarantee insurance.

Based on the background above, the aim of the author is to know the characteristics of farmers needed to develop their business and make their cattle healthy and have good quality meat for consumption.

2. Research Methods

The method used in this research is descriptive method using qualitative analysis. The descriptive method is a way of describing how innovation is used by conducting interviews with various parties, the interviews are conducted with the regional government of West Sumatra province, West Sumatra cattle farmers, potential investors, and insurance parties. The data of this research are primary data, namely by conducting interviews with sources.

3. Results and Discussion

3.1. Compilation of Animal Grouping Data Applications

Based on the results of interviews with a number of cattle farmers and local governments, it is found that to fulfill the wishes of the central government in realizing the development of the cattle sector is to make reliable breeders. This is very closely related to support for government programs in achieving the target of food self sufficiency .

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To achieve this, it is necessary to provide guidance to breeders by extension agents and other related agencies. Coaching these breeders is carried out using a group approach. This is partly due to the limited number of officers. At this time, extension workers have formed farmer groups in the cattle sector in the field. In order to facilitate guidance from the provincial level, it is felt that it is important to collect data on the cattle subsector farmer groups that have been formed as a first step.

In order to facilitate the development of cattle farmer groups in the province, the Department of Food Security and Animal Husbandry of North Sumatra Province has created a "Data Application for Animal Farmers Groups". To facilitate the revitalization of Tern ak 2018 (inputting data into partic ASI) for this job description should be drawn gradually began from Provincial level, and the level of the Regency / City as follows

Table 1. Preparation of Guidelines for the 2018 Cattle Farmers Group Revitalization Activities

Province	Regency / City
Coordinating with district / city parties	Coordinating with the sub-district / extension center at the sub-district level
Conduct monitoring and evaluation of the implementation of activities	Provide assistance in collecting data on cattle sub-sector farmer groups at the sub-district level
Carry out formal collection / data collection of cattle farmer groups from the district / city level	To provide guidance for monitoring and evaluation of the implementation of activities
To collect the format / data collection group farmer ter , son of the district / city	Collecting / collecting farm farmer group data formats from the BPK level
Conducting a data recap of the cattle sub-sector farmer groups at the North Sumatra Province level	Carry out a data recap of the cattle sub-sector farmer groups at the Regency / City level
Facilitating the making of data software for farmer groups in the cattle subsector	
Compile and submit a report on the implementation of activities to the Head of the Food and Animal Husbandry Service Office of North Sumatra Province.	

From the table above, it is explained how the process of implementing the revitalization activities of cattle farmer groups in 2018. This process describes the concrete steps of the government to immediately form a farmer group application, in this case Coordination is carried out directly to the Agency which handles counseling at the district / city level. In this coordination, several things were conveyed:

a. Explanation of the activities of the Farmers Group Revitalization of the Animal Husbandry Subsector;
b. Delivery of data collection Subsector Livestock farmer groups to be deployed in the field of Agricultural Extension to facilitate data collection;
c. Submit a recap form at the district / city level and at the BPK level.
d. Coordination meetings with regencies / cities, covering data collection of cattle subsector farmers from districts / cities and inputting (entering) data into the data software for farm subsector farmer groups.

It can be seen that the coordination has been carried out directly to the cattle farmer groups to immediately record the cattle farmers so that they are input into the application where the application is connected to the West Sumatra cattle service server, so that the data can be followed up so that it can be processed as much as possible what will be conducted by local governments to increase farmer production.

3.2. Innovation I Ternak

iTernak itself is an online breeding application that makes it easy for users to raise cattle online through a mobile application and website, without having to have the land, skills and time to care for cattle. iTernak connects the cattle Market, smallholder breeders / cattle cooperatives, and cattle investors.

iTernak creates opportunities for cooperation between smallholder breeders / cattle cooperatives as cattle carers with urban communities as investors who want to raise cattle. With the concept of online cattle farming, smallholder breeders / cattle cooperatives will become more productive, so that the welfare of smallholder breeders / cattle cooperatives will also increase.

I-Ternak cattle is development of several strategies agribusiness from the Department of Animal Husbandry and Animal Health of the Province of West Sumatra. In the early stages of 2017, one of the strategies implemented was to facilitate the development of the Beef Cattle Fattening Cluster known as the Tri Arga Cluster which covers the areas of Timor-Timor , Bukittinggi, Lima Puluh Kota, Padang Panjang, Payakumbuh and Tanah Datar. The obstacle faced is the fact that the breeders are not able to meet

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the requirements needed to access the existing credit scheme with banking (not bankable).

Furthermore, in 2018 the Triarga Model scheme was initiated, which is a collaboration of three potential investors, farmers and insurers, which tested the cob will at some breeders and showed him the results were quite positive.

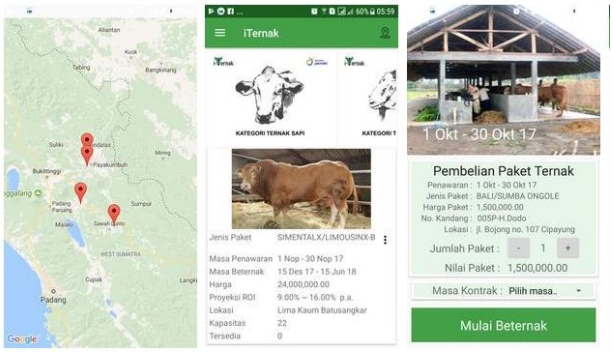

Figure 2. I-Ternak Application (source: https://apkpure.com/id/i-ternak/id.iternak.iternakinvestor)

Figure 2 is a display of the I-Ternak application , with some information, such as where the farmer is located, because this system is connected to Google Maps, investors and insurance and health doctors can automatically find out where the farmer is, for an image next to the map image This is information from cattle that is being sold, the display in this second picture contains information on the offering period with a time span that has been determined by the farm animal cattle farmer, the time range for doing the meditation by the cattle farmer, the price of the cattle to be purchased by the cattle farmer with the investment system, the location of the cattle farm that will raise cattle, the capacity of the cattle pen owned by the farmer, and finally how many cattle are already in the cattle barn. And the most recent image contains information on the purchase of cattle packages with information on the offering period determined by the cattle farmer, the type of package, the price of the package itself, the number of the cattle pen when the contract is completed, the location of the cattle pen when the contract is made, the number of packages to be purchased, the total value of the package to be purchased, and the contract period the investor wants to buy the package.

From the overall information, it is clear that this application already contains detailed information so that potential investors will not be confused when investing in cattle from the I-Ternak application.

3.3. Perceptions of Cattle Farmers on Applications I-Ternak and Applications of Animal Farmer Groups

The results of interviews with cattle farmers about the application I of cattle, from representatives of 20 interviewed respondents from cattle farmers, it appears that 95% of cattle farmers feel helped by this application, this is because they feel they get funds to develop their business from investors, with a system of sharing mechanisms. As a result, the application also collaborates with the animal health office so that the quality of these animals can be monitored for their development so that they become cattle with good quality for consumption, cattle farmers also get cattle health insurance when something unexpected happens.

Interviews were also conducted with cattle farmers about the innovative application of cattle farmer data grouping, according to them the application also helps them to be able to coordinate with each other, can share among cattle farmers, so that they can help solve problems around cattle because there is a container for this application. . And also the application of this data group is also connected to the official, so that farmers get attention when there are problems with their cattle.

3.4. Local Government Strategies to Introduce ITernak Applications and Grouping Data Applications

Introduce to cattle farmers if application I-Ternak using a production sharing system. This system has been developed in West Sumatra since 2017. The Tri Arga Concept This model is an innovation that brings together pen owners, feed suppliers, cattle keepers, and insurers manually. Where later, investors believe that the cattle they buy will be managed to be fattened by the pen owners, animal feed suppliers and cattle keepers by implementing a profit sharing system. If the cow is lost or dead, the insurance company will replace it. With this mechanism, cattle farmers are interested in taking part in using this application, to introduce investors to the West Sumatra provincial government to carry out advertising on banners, posters, social media, the internet, in order to attract the attention of investors to invest their money and also help prosperity. cattle farming economy.

And for the innovation of the cattle farmer data group application, the provincial government of West Sumatra district conducts outreach to areas by inviting cattle farmers to provide education about the benefits and benefits of raising cattle by using the cattle farmer data group application.

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3.5. Advantages of Using Animal Husbandry Applications and Group Data Applications

With the application I Ternak and the application of the cattle farmer data group there are several advantages

First, by using the community data group application, information about cattle farmer groups in all districts / cities in North Sumatra Province can be obtained. So that cattle farmers can always be up to date on the development of cattle in West Sumatra province

Second, the data group application will be stored in a database about who is a cattle farmer that has been registered with the West Sumatra provincial government, this is useful when cattle farmers have problems with their cattle, the government can provide assistance.

Third, for the innovation of animal husbandry applications I see it from an investor's point of view, the application provides a transparent profit sharing system and the security of the application has been guaranteed by the insurance company, this can make investors not hesitate to invest their funds.

Fourth, the innovation of application I of cattle from the side of cattle farming, cattle farmers are guaranteed to raise cattle with a supply system, this is not a concern for farmers when there is a lack of capital, they can use the application I mechanism, this cattle also provides marketing guarantees so that their cattle can be easily sold

The five advantages of cattle application I from the government perspective, the government can guarantee the availability of safe limit food stocks, this is because it can be coordinated with all cattle farmers, and supports food selfsufficiency sovereignty.

4. Conclusion and Suggestions

Based on the results of the study, it can be concluded that the application of cattle and the application of the data group have functioned well, this can be seen from some cattle farmers agree that this application is applied. There are also many benefits that will be obtained from all stakeholders, from cattle farmers, government and investors

Suggestions for the West Sumatra provincial government in the future so that the application can be sure to run well, this is so that there are not many technical problems when it is used, thus minimizing existing errors. For cattle farming, always update the information so that it can be known by the government and investors.

5. Acknowledgments

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