

DESIGN OF LIVESTOCK MORTALITY INSURENCE SYSTEM AS A TOOL OF ROSK GUARANTEE FOR SUSTAINABILITY THE SMALLHOLDER BEEF CATTLE IN WEST JAVA (RISK IDENTIFICATION IN THE SMALLHOLDER BEEF CATTLE)

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ABSTRACT

Under conditions where a very small scale of farming, death of cattle can be no sustained business continuity factors that can disrupt the economy of the family. Further efforts to beef self-sufficiency will be threatened. Consider this, the necessary existence of an insurance system that can provide a guarantee for the sustainability of beef cattle livestock people. The purpose of this study were: 1) generate information about the risks involved in beef cattle farming in the context of changes in the current economic environment, 2) generate a description of the strategies and practices of governance risks run by actors livestock beef cattle at the moment, and 3) generate valuation and risk indicators for the feasibility of applying the insurance system in livestock beef cattle. The study was conducted in three (3) areas: District of Bandung, District of Subang, and District of Ciamis for eight months (since April to November 2012). The research method used was a survey method, which used technique of sampling is multistage random sampling. The number of samples used in this study as the primary data source as many as 150 people breeder. The data were analyzed descriptively by tabulation triangulation. The results showed that the dominant risk is a problem faced by farmers feed (forage) and diseases (diarrhea, flu, and bloating). To that end, death insurance deemed necessary because it was an case, very rare (incidence average once in 5 years). Nevertheless, the demand for insurance cattle ranchers (not specific: livestock mortality insurance) is very high, 90% of total survey respondents farmer wants a livestock insurance. Mainstay in the management of risk is to diversify its business, farming or fishing; reduce inputs, both the number and kind, and formed a partnership system. How risk management is closely linked to socio-economic conditions that farmers (individual attributes). Breeders realized that farming of beef cattle an economic sector heavily laden with risk conditions. Therefore, the farmers consider that the risk (losses) not yet at the level of troubling.

Keywords: Livestock insurance, risk management, beef cattle

Introduction

Risk and uncertainty commonly faced by actors in smallholder beef cattle. Natural disasters, such as prolonged drought, attack/disease outbreaks, loss of livestock due to theft, and other destabilizing substantive and sustainable production of livestock commodities. Moreover, as a consequence, the risk and uncertainty often arises from the character of the economy, such as frequent fluctuations in commodity prices, the level of demand is very inelastic commodity, commodity import farm level and nature of farm commodity markets indicated not perfect (imperfect market). Based on this phenomenon, Hardaker et.al (1997) may indicate that the risk and uncertainty management be done by farmer is one determinant

of the sustainability of its business. Quite a significant impact on the performance of risk and uncertainty and sustainability usahaternak, either micro or macro, encouraging the growth of a variety of practices and risk management mechanisms. In developed countries, the perpetrators usahaternak manage risk and uncertainty for businesses through a variety of instruments provided by various forms of institutions, both public (government) or private. Protection process is carried out with the insurance act, which is a willingness to establish small losses (a bit) that it is definitely in place (substitution) large losses uncertain (Salim, 1995).

Livestock insurance is a risk management tool most widely used by farmers these countries. It is characterized by the development of the livestock industry and the insurance market at the moment. However, unlike in developed countries, livestock insurance systems in developing countries still do not wake up and available (underdeveloped). In Indonesia, development of infrastructure and insurance systems for farming is still a discourse that has just rolled out by the Ministry of Agriculture of Indonesia (Tempo, February 25, 2011), while there is no information on livestock insurance system. Insured losses in the system due to the death of livestock, local knowledge was implemented in the finite case is a "fund joint responsibility" to overcome losses due to livestock deaths in a particular community. But the model of "joint liability fund" is not had time to develop a system that is able to cover the loss of coverage in a large population of farmers. As is well known, most of the beef usahaternak done by the farm household, there are about 4.5 million beef cattle in Indonesia, with an average of 3 chickens per household ownership. Livestock is one of the assets that are unique; wherein these assets can serve as a factor of production, sources of capital, savings, or any guarantee of value in the future. On this context, livestock insurance can be one of the instruments of risk management of the asset. Phenomena that have been described previously can be a justification for the implementation of research plans regarding opportunities usahaternak insurance system in beef cattle in Indonesia. This research aims to generate information about the risks in beef cattle usahaternak in the context of the current economic environment changes; produce a description of the strategies and practices of governance risks run by actors usahaternak beef cattle at this time, and generate valuation and risk indicators of the feasibility of applying livestock insurance system in beef cattle.

Research Methology

Materials and equipment

Materials used in this study is not as in the experimental or laboratory research in the form of chemicals, plants, or animals. Which is the subject of this study is that information about the breeder usahaternak collected through instruments or tools like questionnaire.

Research design and research stages

To achieve the goal in the first year of research, this study was designed as follows:

A. Research Methods

The research method used was a survey research method (sampling). Survey method is a method of study that collects information from a sample obtained from a population, in order to generalize as far as the population from which the sample was drawn (Paturochman, 2012).

B. Technique of Sampling

Technique of sampling done by multistage random sampling. The steps of this research penyamplingan technique is as follows:

- a. The first step → West Java is divided into three clusters, namely: northern region is represented by the Subang district; central region is represented by the Bandung

- regency, and southern region is represented by the Ciamis District.
- b. The second step → the three clusters areas: areas centers of beef cattle breeding farm for Subang district is sub-district of West Pagaden and Cikaum; Bandung district is sub-district Cikancung, and Ciamis district is sub-district Parigi, Cijulang, and Cimerak. Each district in each selected cluster group that runs smallholder beef cattle.
 - c. The third step → all members of a group of farmers who were sampled census in consideration of the characteristics of farmers are relatively homogeneous, although the scale of livestock ownership varies. However, for smallholder beef cattle (breeding farm) course leads to is dominated by small-scale (1-3 tails) in general. On the basis of this, the stratification in smallholder beef cattle is not taken into account. As for the number of samples that are respondents in this study is 150 respondents. Here is a more detailed data are presented breeder group which is the research respondents:

Table 3.1: The Mapping of Research Sampling

Province	District	Sub-district	Group of farmer	Amount (person)
Jawa Barat:				
a. northern region	Subang	Pagaden Barat and Cikaum	Mandiri Jaya dan Mitra Karya	40
b. central region	Bandung	Cikancung		55
c. southern region	Ciamis	Parigi, Cijulang, and Cimerak	Mekar Laksana 1 dan 2 Mitra Usahatani, Lumba-lumba Karya Jaya, Witu Nunggal, dan Rahayu Jaya Mandiri	55
Total of Sample (Respondent)				150

C. Types and Data Collection Techniques

The type of data in this study consists of primary and secondary data. Primary data were obtained with three ways: interviews with local extension, direct field observation, and questionnaires were directed to 150 samples (respondent). Collection of three different sources is a collection technique of triangulation.

For secondary data collection technique is done by searching the literature and the data supporting this research to related agencies, including: the Department of Animal Husbandry and Fisheries Bandung District.

Data Analysis

Associated with the problems and objectives of this study, the analysis of the data used is descriptive qualitative analysis through the tabulation technique of triangulation. The detailed analysis of the data used for each research study are as follows:

Table 3.2: Data Analysis Method

Activities	Technique of Analysis	Instrument of Analysis
Performance of risk at smallholder beef cattle	Description	Tabulation technique of triangulasi
Perseption and preferention upon risk.		
Management Strategic of risk.		

Results and Discussion

Performance of Risk

The result showed that for the Subang district, which is the most common risk is feed and illness (lack of appetite), but the risk of feed availability relative can be overcome by farmer. This is reasonable because the area is farming so as to utilize agricultural wastes generated from owned farm. In addition, farmers have learned so that they can feed processing technologies of all three regions showed that the risk of the most dominant or frequent faced by farmers and the same. Similarly with the Subang district, the Bandung district also run the risk of the most common is the problem of green feed and sick (diarrhea and bloating). When the dry season comes, the farmers began to face difficulties/limited supply of green feed. In this condition, procurement grass becomes more expensive and difficult because earlier they can easily get for free grass. The farmer brings the grass from the area Kadongora Rp2.000/sack delivered to the destination. Seeing this condition can certainly be predicted to an increase in production costs. In addition to feeding problems, diarrhea and bloating disease are also common. This is presumably due to climatological conditions are relatively cool areas to allow growth of fungi, bacteria, and other microorganisms nation more quickly.

Unlike the previous two regions, the risk of common problem in the Ciamis district is Artificial Insemination failure (hereinafter referred to as IB) and ill worms. Feeding problems also occur, but it is not a thing mengkwatirkan because the farmers in this region has had its own orchard grass and utilization of waste rice. IB is a risk that the failure most often experienced by farmers in the district of Ciamis justified by local extension. The results of interviews with local extension workers stated that IB injection in the region of Parigi, Cijulang, and the average was around 2-3 times injection to pregnant. IB package payment price is Rp 100,000 for 2 times injection. If cattle have not been pregnant, then the third injection of sufficient paid half of the initial payment, and if the animal has not been pregnant also injected back payment on the initial payment, which is 100,000. With the repeated injection of IB activities this course will add to the cost of production of the farmers. Worming issues can not be separated from cultivation management applied by farmers in the region. Farming systems in the region are run by semi-intensive to extensive. We can see the animals just released on the day of looking grass field itself so it allows cattle infected with worms. Based on information from local extension that deworming is a disease that most often affects the cattle in the sub-district of Parigi, Cijulang, Cimerak, "approximately 70% of the cattle in this region infected with intestinal worms."

Both of these risks have implications for motivation in running usahaternaknya breeder. Relatively long capital turnover in usahaternak nursery, especially with the complexity of the existing risks that resulted in some farmers left the business. This is an event experienced by peternaka Group Partners farming, in which the number of members at the beginning of the establishment of farmer groups until the year 2010 as many as 25 people. Since the year 2011

until the study is done, the number of members of farmer groups with 11 people. Local extension states that farmers are acting rationally. This means that when the revenue that the old and relatively small compared to expenditures / expenses that must be sacrificed to make farmers out of farming activity, therefore, we as PPL face difficulties in motivating and revived ghirah for breeding. The rise of the incidence of the condition is triggered by the collapse of the selling prices of beef cattle in the year 2011, so this year a decline in the number of farmers. Things like these are to be understood and addressed by the government, let alone to achieve self-sufficiency in meat by 2014.

To marketing problems, three areas of the study showed that the output marketing (including sales calf) from the breeder usahaternak relatively not difficult, although sometimes there is a "game" that is done by the dealers associated with the selling price. Nevertheless, problems remain attached to the marketing of this business. Since the issuance of PO-ization Program, marketing conditions usahaternak having a little problem. Peranakan Ongole cattle selling price (hereinafter referred to as PO) is relatively low because of the relatively poor performance (assessment Bandar). The farmers said that the price of beef types of PO at the age of 8 months -1 year valued at around Rp 4-5 million, while Simental or Brahman type cattle (outside type PO) at the age of 4 months valued at around Rp3-4 million. Inequality in the selling price is certainly an impact on decision making farmers. With frequently recurring events, such as the problem of availability of green fodder in the dry season, the farmers hope for a government program or policy that can be applied to solve this problem. Therefore, when ditawarin a risk transfer product to the other party in the form of livestock insurance, they are motivated to attend the program. Approximately 90% expressed enthusiasm for livestock insurance program. Statements, whether due to ignorance of the farmers on livestock insurance itself. Regardless of this, the results of the study also showed that the risk of death is a risk kasustik cattle and rare. Of the statement that the death of livestock breeders only occurs once in a minimum of 5 years. Therefore, they feel no need to livestock mortality insurance. The most important thing is the health insurance and assurance/guarantee the availability of food, especially green feed.

Farmers Perception of The Risk in Smallholder Beef Cattle

Preferences of farmers in the form of aversion to risk has implications for the perception of the farmers against livestock insurance. They believe that the presence of livestock insurance will add to the long list of production costs, which are costs of production that exist only been reduced by various strategies. They realize that their enterprises are businesses that are very close to the risk that will have an impact on earnings. One of the business transfer of risk that can be realized is through diversification, whether with food crops, gardens, and with fish. The farmer looked at, if there is livestock insurance then the insurance is highly expected health insurance and guarantees the availability of feed. This is reasonable because the risk is the risk most commonly experienced by farmers. The problems on the course, is inseparable from the condition of beef cattle farms in the country. Domestic beef cattle on farm level is driven by two (2) farming systems that have different characteristics, namely:

1. In smallholder beef cattle, livestock as a "rojo koyo" (asset life), in which it is used as the identity of "social class"
2. Corporate beef cattle (livestock industry), which has the SOP and profit-oriented business

Risk Management Strategies in Beef Cattle Usahaternak Sustainability Supporting People

For problems forage, ranchers in Subang district perform an action in tackling the

availability of forage (grass), especially in the dry season, by making its own feed formulation and feed technology implemented in a way to make hay. The feed is given in lieu of forage (grass), which is fine bran, dried hay, and salt mixed together, in which the feed materials derived from the surrounding farms. In addition, the farmers sometimes use the cassava plant, lamtoro leaves and banana stems. It is not independent of the existing integrated farming in usahaternak farmers. Generally seen that every farmer has planted agricultural land is with food crops, vegetable crops, or crop plantations, although with a relatively small land area so that the relative availability of food there. This action is taken in order to minimize the risk of obtaining. If in very extreme conditions (existing farm resources around can no longer meet the needs of the grass instead usahaternak) then breeders sometimes take way to look for grass to places outside their territory, which of course it is consequential to the cost of production, the transportation costs. The same was done by farmers in the Bandung district in the availability of grass. The farmers in this region to area of Kadongora looking lawn with the costs incurred by Rp2000/bunch (1 bunch = 50 kg, the farmer mowing his own, living rent Rp2000/bunch that cost up freight at the destination). Farmers in the region do not make their own food formulations as the farmers in the district of Subang, although resources available to it. As we know that beef cattle breeding areas in Bandung Regency is located in the area of vegetable farming, which waste vegetable plants can be used as a feed substitute. However, unfortunately this is not done by the breeder. This is supposedly related to the characteristics of farming be done. The farming run by farmers mostly farming partnership. Many private investors do "gaduhan" system in the region by sharing system 40:60 and 50:50 are applied to both the cost of production and selling of farming product. This condition has implications for creativity farmers, especially in the utilization of vegetable waste. In addition, the level of knowledge on the use of vegetable waste as a feed substitute relatively less. Consequently, breeders sometimes take way to reduce the availability of fodder when grass is relatively difficult and thinning in the region Kadongora. For the district of Ciamis, the feed is not a big problem. It is argued that some breeders group has had its own orchard grass, although the land is used for orchard grass is leased land, as was done by the farmer group Karya Jaya dolphins. The group cooperates with the air base to be able to cultivate their land to be used as garden lawns. The price of the land lease for Rp7.500.000/tahun are repaid as much as 4 times.

In all three areas of this study, the risk of death is technically considered low. The farmers claimed that the incident is extremely rare, at least 5 years has no events. The most frequently encountered are related to the health of livestock. For in the Bandung district, the disease is a disease that is often experienced diarrhea, flu, and bloating (bloat), while for the Subang district: poor appetite pain and flu, and the Ciamis district: deworming. Action is a mainstay for farmers is done by utilizing herbs, such as ginger is used to overcome the problem of appetite. In addition to cost savings, the use of herbs do not have side effects on livestock. However, it is undeniable that the farmers can not only rely on the use of herbal plants. Therefore, with limited capital breeder cattle treatment costs. As such, they are very enthusiastic about livestock health insurance. Based on the above description, the outline can be concluded that the strategy is a mainstay in the management of risk, namely:

1. Diversification of business: farming or fishing, and other types of businesses (motorcycles and construction workers)
2. Reduce the quantity of feed and the use of appropriate replacement of existing feed in the surrounding environment
3. Using herbal remedies to control some subclinical illness. However, if it looks worse then medical treatment is needed, the summoning spells or veterinarian.

Conclusions and Recommendations

Conclusion

1. The third area of research suggests that the dominant risk faced by farmers is a problem feed (forage) and illnesses (diarrhea, flu, and bloating). So, death insurance deemed necessary because the incident is “kasustik”, (on average it happened once in 5 years). Nonetheless, demand for livestock insurance breeders (not specific: livestock mortality insurance) is very high, 90% farmers of the study respondents wanted a livestock insurance
2. Mainstay in the management of risk is to diversify the business, reduce input, and formed a partnership/”gaduhan” system. The management strategic of risk is closely related to socio-economic conditions farmers (individual attributes)
3. Farmers realize that the farming an economic sector which is heavily laden with risk conditions, which farmers assume that the risk is not a big problem.

Recommendations

Given the major risks facing is the problem of feed and health (disease in cattle), then to the development and sustainability of smallholder beef cattle of itself required a policy of providing year-round forage and livestock health insurance. Problems associated with livestock health insurance, we need a further study of the concept and forms of animal health insurance in accordance with the conditions of the farmers in smallholder beef cattle in West Java.

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