Study of Socio Economic Profile of Small Holder Goat Farming in Gumelar Sub-District Banyumas Regency

(Studi Profil Sosial Ekonomi Usaha Ternak Kambing Rakyat di Kecamatan Gumelar Kabupaten Banyumas)

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Abstrak

Penelitian ini bertujuan untuk mengetahui profil sosial ekonomi usaha ternak kambing rakyat di daerah pedesaan Kecamatan Gumelar Kabupaten Banyumas. Pengumpulan data menggunakan metode survey pada tiga desa terpilih, kemudian 188 responden dipilih secara acak sebagai sampel. Data yang terkumpul dianalisis menggunakan analisis deskriptif. Hasil penelitian menunjukkan bahwa tingkat pendapatan usaha ternak kambing sebesar Rp.349.184,71 per tahun, dengan tingkat efisiensi ekonomi sebesar 2,21. Jumlah pemilikan ternak kambing rata-rata sebesar 2,67 ST, dengan jumlah biaya pakan ternak per tahun rata-rata sebesar Rp.147.672,34. Umur peternak rata-rata 46,5 tahun, tingkat pendidikan peternak sebagian besar berpendidikan Sekolah Dasar dengan lama pendidikan formal rata-rata 5,78 tahun, dan tingkat pengalaman beternak kambing rata-rata 4,04 tahun. Sistem pemeliharaan ternak kambing yang digunakan yaitu sebagian besar menggunakan sistem pemeliharaan tradisional, sedangkan status pekerjaan peternak yaitu sebagian besar berstatus sebagai petani penggarap.

Kata Kunci: Ternak Kambing Rakyat, Profil Sosial Ekonomi, Banyumas

Introduction

In many regions of Indonesia, livestock are kept as an important component of farming activities, particularly by small holders. Livestock farming plays an important role in agricultural development (Birner, 1999). Livestock production plays an important role as income generating activities, particularly for the small holders, while being a source of animal protein to support the national program.

One of the livestock which gives a contribution to the increasing of farmer's income at once gives the role in economic growth is goats (Devendra, 1993). Goats in Indonesia play a complex function in Indonesia's farming system. Their biological and economic functions have been recognized. Besides producing animal products as a protein source, a goat also provide manure to maintain soil fertility (Suradisastra, 1993), important source of income (Djoharjani, 1996), and a form of insurance against risk (Knipscheer *et al.*, 1987). In fact, in the villages, goat farming usually was done traditionally, so an introduction attempt of animal husbandry technology innovation with the purpose is to increase the small holder goat farmer's income. The small holder goat farming had taken farmer's interest because it can be raised traditionally with a simple technology and its products have attracted the consumers interest.

Chaniago (1993) said that almost all small ruminants in Indonesia are raised by small holders in villages and are managed in traditional ways. A village, as well as being the home, is also the center of socio, cultural and economic life of people living in rural areas. The village and the villager's economy are based on crop production, primarily to provide food for the family in subsistence agriculture, but also to provide some surplus for sale for their cash needs. Devendra (1986) stated that small ruminants production systems have persisted together with the overall patterns of crop production and farming systems. They are especially dependent on the agro-ecological environment and because of the ruminant digestive system, must always depend on high

fiber vegetation or crop residues for their feed base.

Gumelar Sub-district located in Banyumas Regency is one of small holder goat farming center. Usually goats are raised by the farmers in a small number with a traditional farming system and simple application of animal husbandry technology. Usually farmers do not orientate to enterprise economic aspects yet, so they have not count the income and economic efficiency level of their farming. The income and economic efficiency of small holder goat farming is affected by some socio economic factors, such as the number of goat owned, feed cost, farmer's age, farmer's education level, breeding experience, also farming system and farmer's main job. So it needs a research to analyze the socio economic profile of small holder goat farming in Gumelar Sub-district Banyumas Regency in order to increase the farmer's income.

Based on background, the aims of this research are to know the number of income and economic efficiency level of small holder goat farming, and to know the socio economic profile of small holder goat farming in Gumelar Sub-district Banyumas Regency. These data can be important for the local government and extension agent, because different condition of socio economic profile between goat farmers type also requires different approach. Also the local government and extension agent can encourage small goat farmers to learn from larger goat farmers, so the small farmers can increase their herd scale in order to increase the farmer's income.

Research Methods

The target of this research is Jawarandu goat farmers who live in Gumelar Sub-district Banyumas Regency. The socio economic profile of small holder goat farming which analyzed in this research are income and economic efficiency level, the number of goat owned, feed cost, farmer's age, farmer's education level, breeding experience, farming system, and farmer's main job. The research was done using survey method. Samples were taken by purposive sampling. Criteria for the selected village is goat farmer populations those dense, medium, and rare. From nine villages located in Gumelar Sub-district, three villages were selected as a sample, which are; Karang Kemojing, Cihonje, and Gancang. From those three villages; ten percent of total goat farmers of each selected village are taken at random. Total respondents are 188 farmers.

The data of farmer's income level is obtained from subtraction between total revenue and total cost by cash out flow, and economic efficiency level is accounted by using revenue per cost ratio (R/C).

Income = Total Revenue – Total Cost

$$R/C = \frac{\text{Total Revenue}}{\text{Total Cost}}$$

Whereas socio economic profile of goat farming is known from the number of goat owned, feed cost, farmer's age, farmer's education level, breeding experience, farming system, and farmer's main job. The data are analyzed using descriptive analysis and cross tabulation. The data were taken primary data, which is obtained from depth interview with a standardized questionnaire, and secondary data, which are obtained from documentation, statistic data, internet, and monographic data.

Results and Discussion

Goat population in Gumelar Sub-district Banyumas Regency was 1,982.22 which are owned by 452.4 farmers. Commonly, goat farming management is managed in traditional ways and as a side job. Usually, goats are raised in the slatted floors (*lemprakan*) with a simple construction, elevated to about 0.5 m above the ground. Martawidjaja (1992) stated that this type of housing as the goat's pens can easily be cleaned.

The feeding system was quite similar among the farmers. It consisted mainly from mixture of shrubs and leaves from banana, cassava, jackfruit, and other trees including the leguminous as *Calliandra callothyrsus* Meissn. (*kaliandra*), *Leucaena glauca* (*lamtoro*), and *Gliricidia maculata* (*gliricidia*). Djoharjani (1996) stated that the development of goat production depends also on the quantity and quality of available animal feed.

Goat is obtained by buying or by result of goat farming from other farmer (*menggaduh*), and from kid of previous goat farming. Most of kids are sold and used as the breeds, and seldom it used for self consumption. Whereas manure is used as fertilizer, either for farmer self sufficient or sold to other farmers.

Revenue and Cost of Production

Goat farming revenue comprise goats selling, inventory change, and manure selling is accounted in the certain time. Base on the result of the research, total revenue of goat farming in Gumelar Sub-district Banyumas Regency is Rp.653,829.79 per year per farmer or Rp.54,489.82 per month per farmer. Hernanto (1989) stated that factors affecting the livestock farming income are farming scale, land, capital, managing skill, the value of livestock's products, livestock productivity, input cost, and price of products.

Production cost is all expenditures spent by farmer, to get the production factors and supporting material. Production costs comprises depreciation of goat's pens, depreciation of equipments, buying cost for goat, labor cost (worker outside family member), and goat's feed cost.

Based on the result of this research, total cost of small holder goat farming in Gumelar Sub-district Banyumas Regency is Rp.304,650.43 per year per farmer or Rp.25,387.54 per month per farmer. For small scale of livestock farming, if all production cost are added, the farmer just get very little profit or did not get at all. There are some costs which never been accounted such as labors which are the farmer themselves, capital cost, labor which come from their own family, cost of renting land farming, and feed cost which is not obtained by buying.

Income Level

Income is the subtraction of total revenue by total cost during goat farming period. The analysis was done using cash out flow approach, which means that the interest on capital and the labor coming from own family is not accounted.

Based on the research, the average income level farmers is Rp.349,184.71 per year per farmer or Rp.29,098.73 per month per farmer.

Economic Efficiency Level

Economic efficiency is the comparison of total revenue with total cost. According to Hernanto (1989), economic efficiency is accounted using revenue per cost ratio (R/C), which is comparing total revenue with total cost used in the process of farming production.

The R/C value of small holder goat farming in Gumelar Sub-district Banyumas Regency is 2.21. It means that in every one unit of cost spent in goat farming in a year will produce revenue of Rp.2.21. Soekartawi (1988) stated that a farming enterprise is said as an efficient if the revenue per cost ratio (R/C) is higher than one. The higher value of revenue per cost ratio is the more efficient farming.

Socio Economic Profile of Small Holder Goat Farming

Socio economic profile of animal husbandry farming is the factors which affect the smoothness of a farming which will determine the success of that animal husbandry farming. Furthermore, the socio economic profile of small holder goat farming in Gumelar Sub-district Banyumas Regency can be explained as follows.

Number of Goat Owned

The result of the research shows that 85.11 percent of number of goat owned is between 1.10-4.00 ST (Livestock Unit), with the average

number of owned is 2.5 ST. This number is higher than what have been reported by Sochech and Warsiti (2000) that was 2.33 ST. According to Soedjana (1993), the number of goat owned has a positive effect to the increasing of farmer's income. Astuti *et al.* (2000) stated that number of livestock owned determine the income level so much, because the higher number of livestock owned will be more efficient because it increases the revenue number and depress total cost of production. So the farmer could increase of their herd scale with to improve the number of goat and capital. The number of goat owned showed in the Table 1.

Feed Cost

In a goat husbandry, feed cost is the highest cost, and one of the factors determining feed cost is amount of the feed given. According to Tillman *et al.* (1984), that the cost of livestock's feed is the highest cost in animal husbandry farming, that is about 60-80 percent of total production cost. The result of the research shows that 66.49 percent using feed cost is about Rp.54,000.00-Rp.162,000.00. The average number of feed cost as much Rp.147,672.34 per year per farmer or Rp.12,306.03 per month per farmer. The number of feed cost shows in the Table 2.

Astuti *et al.* (2000) reported that goat's feed cost also affected the farmer's income. If feed cost is increasing, the production cost also increase, so the farmer's income will be decrease. Musofie and Wardhani (1999) stated that cost efficiency of livestock's feed could increase revenue, so that the farmer's income and

Table 1. The classification of goat owned

The Number of Goat Owned (ST)	Frequencies	Percent	Cumulative Percent
Less than 1.10	0	0.00	0.00
1.11 – 1.00	160	85.11	85.11
4.11 – 7.00	25	13.30	98.41
7.11 – 10.00	2	1.06	99.47
More than 10.01	1	0.53	100.00

Table 2. The classification of feed cost

The Number of Feed Cost (Rp)	Frequencies	Percent	Cumulative Percent
Less than 162,000.00	125	66.49	66.49
162,000.01 – 270,000.00	38	20.21	86.70
270,000.01 – 378,000.00	21	11.17	97.87
378,000.01 – 486,000.00	3	1.60	99.47
More than 486,000.01	1	0.53	100.00

Table 3. The classification of farmer's age

The Farmer's Age (years)	Frequencies	Percent	Cumulative Percent
Less than 15.00	0	0.00	0.00
15.01 – 55.00	137	72.87	72.87
More than 55.01	51	27.13	100.00

economic efficiency of goat farming could also increase.

Farmer's Age

Farmer's age is one of the factors affecting income and economic efficiency. Soekartawi (1988) stated that farmer's age as the labor of farming enterprise in some villages can determine the number of income. Based on farmer's age classification, it is known that farmer's age is about 14-55 years (72.87 percent), whereas the non productive age is just 27.13 percent. The research result shows that the average of farmer's age is 46.5 year, which is belonging to productive age, and so it will determine the continuity of goat farming activity. The farmer's age shows in the Table 3.

Farmer's Education Level

Education level is one of the important factors in developing human resources. Education will add skill and knowledge, so it will increase labor productivity and will determine their goat farming performance. The result of the research shows that most of goat farmer's education level (75.53 percent) is elementary school level, whereas the number of the farmers who never attended school is about 17.55 percent. It shows that education level of most goat farmers is low; with the average period of formal education is about 5.78 years. The goat farmer's education level was shown in the Table 4.

Low education level caused the innovation in technology adopted by the farmers is not maximum, so that the output produced do not fulfill the standard of production. Simamora *et al.* (1984) stated that the major of villages populations are belong to low economic population with low level of education, so their attempt in adopting the innovation of technology is not sufficient.

Breeding Experience

The research data shows that 81.38 percent of the breeding experience in farming goat is less than five years. The average number of goat farming experience is about 4.04 years. Most of the farmers said that the get the goat farming experience from their parents which is delivered from a generation to next generation. The goat farmer's breeding experience is shown in the Table 4. According to Wahyono and Soepeno (1995) that the experience, knowledge, attitude, farmer's skill in breeding and reproduction aspects, feed giving, farming management, and a good marketing management shows that the farmer have a good capability, so that it can cause the increasing of their income.

Farming System

The research result shows that 70.21 percent the farming system done by the farmer commonly was done traditionally, whereas the non-traditional or semi intensive farming system is just 29.79 percent. Criteria for the selected of traditional or non-traditional farming system are based on aspects of herd scale, feed, goat pen, farming sustainability, technology, and farming management. Devendra and Burns (1983) stated that commonly the goat farming system in villages uses traditional farming system with a small number of goat owned and do not exploit new technology yet. Shodiq and Tawfik (2003) stated that the major systems in goat production found in Indonesia are the cut and carry and grazing systems, so they need to adopt the new technology of animal husbandry. The goat farming system shows in the Table 6.

Farmer's Main Job

The result of this research shows that most farmers (54.79 percent) have the main job as the crop farmer (*petani penggarap*), whereas the none crop farmer number is 45.21 percent. The reason of this fact is that most of populations in Gumelar Sub-district Banyumas Regency are crop farmers or farm laborers (*buruh tani*), so that the livestock farming is considered just as a side job.Soedjana (1993) stated that commonly the villages populations focus their intention on

Table 4. The classification of farmer's education level

The Farmer's Education Level	Frequencies	Percent	Cumulative Percent
Never Attended School	33	17.55	17.55
Attended Elementary School	142	75.53	93.08
Attended Junior High School	5	2.66	95.74
Attended Senior High School	8	4.26	100.00
Attended Diploma/University	0	0.00	100.00

Table 5. The classification of breeding experience

Breeding Experience (years)	Frequencies	Percent	Cumulative Percent
Less than 5.00	153	81.38	81.38
5.01 – 10.00	19	10.11	91.49
10.01 – 15.00	12	6.38	97.87
15.01 – 20.00	3	1.60	99.47
More than 20.01	1	0.53	100.00

Table 6. The classification of goat farming system

Goat Farming System	Frequencies	Percent	Cumulative Percent
Non Traditional System	56	29.79	29.79
Traditional System	132	70.21	100.00

Table 7. The classification of farmer's main job

Farmer's Main Job	Frequencies	Percent	Cumulative Percent
Non Crop Farmer	85	45.21	45.21
Crop Farmer	103	54.79	100.00

their main job that is a crop farmer, so they do not pay many attentions on their livestock farming. It is because most of small holder goat farming is considered just a side job, so their attention on their livestock farming is not sufficient. The farmer's main jobs are shown in the Table 7.

Conclusions

The income level of small holder goat farmers in Gumelar Sub-district Banyumas Regency are various with the average income level of Rp.349,184.71 per year per farmer or Rp.29,098.73 per month per farmer. The small holder goat farming in this area have already efficient with the average of revenue per cost ratio (R/C) level is 2.21, which means that every Rp.1.00 of production cost will produce Rp.2.21.

The average of farmer's goat owned is 2.5 ST, and the average of feed cost is Rp.147,672.34 per year per farmer or Rp.12,306.03 per month per farmer. The average of farmer's age is 46.5 years, the farmer's education level are commonly attended elementary school with the average period of formal education is about 5.78 years, and the farmer's breeding experience level are about 4.04 years. In farming goats, most of farmers use

traditional farming system. Whereas in the matter of main job, most of farmers are crop farmer.

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