

Farmers' Perception of Etawah Grade Goat Productivity Based on the Hair Color Differences

I Gede Suparta Budisatria, Panjono, Dyah Maharani

Faculty of Animal Science, Universitas Gadjah Mada-Yogyakarta
Corresponding email: budisatria@ugm.ac.id

ABSTRACT: In recent year, there is a tendency that farmers prefer to keep Etawah grade goat with black head color instead of brown or mixed colors, therefore the study was conducted to identify the farmers' perception in regard with the effect of hair color differences on the productivity of Etawah grade goats. Sixty farmers were interviewed deeply on their perception using a semi structured questionnaire; farmers were selected randomly from two districts, Sleman and Kulonprogo, which have been known as the centre of Etawah grade goats in Yogyakarta Province. The interviews were conducted for three months using "door to door" method, including farmers characteristics, the reason to select different hair color, mating systems, the kid produced, the price of goats based on different hair color, and the effect of different hair color on feed intake and productivity. Data was tabulated and analyzed descriptively. The result indicated that the majority reason of farmers kept the specific hair color of goats due to the expensive prices (40.00%), excellence exterior characteristics (38.33%), and a few farmers stated that they select different hair color because the goats had high performance, i.e. high milk production (13.33%) and rapid growth rate (8.33%). Farmers mostly (85.00%) mated their Etawah grade doe using a buck which has the same color with the doe, while the rest (15.0%) mated their doe sometimes with different hair color of buck. In addition, farmers also believed that the kids will have the same colors with their parents (76.67%), however, some of 23.33% farmers had experience that mating between doe and buck which has the same color will not automatically produce kid with the same hair color. The difference hair color between the kids and their parents was found relatively small, less than 25%. There was a significant differences of price between black head color hair and brown or mixed color according to more than 86% farmers, the different price approximately IDR 399,000,00, The different price of goats seem to be based on their excellent exterior characteristic (66.67%) and high demand (21.67%) rather than high milk production (6.67%) and rapid growth rate (5.00%). Majority of farmers did not agree (68.33%) and only a few farmers (21.67%) stated that productivity was related to different hair color, while 10% of the farmers did not know whether it will affect the productivity or not. It can be concluded that expensive prices and exterior characteristics was the main reason for the farmer to select and keep Etawah grade goats. Kids produced will not automatically have similar color with their parent. Farmers believed that color differences will not have impact on the productivity of goats, however goats with black head color remain have the most expensive price for excellent exterior performance reason.

Keywords: Etawah grade goat, Productivity, Hair color differences, Farmers' perception

INTRODUCTION

Indonesia has an abundance and potential asset of animal genetic resources and germ plasm that can be used to develop new animal breeds. Amongst the local breeds, goats are the most popular animal kept by farmers. Goats are an important asset for small farmers, but the existence is often ignored. Farmers prefer to raise goats, but the numbers of goats kept are generally small and under

traditional management. One of the goats breed kept by farmer is Etawah grade goat. Originally, Etawah grade goats produced from the crossing of male Etawah goats with female Kacang goats, the native goats in Indonesia. Etawah-grade goats are distinctly different from Kacang goats with a larger body frame, long hanging ears, convex face and larger horns (Budisatria, 2009). Etawah grade goats can be found in all agro-ecological zones, although preferences of farmers and policy makers for goats differ between zones, Etawah-grade goats are said to be more suitable for farming systems in the middle zone and uplands, because of the abundant availability of tree leaves (Budisatria, 2006; Budisatria *et al.*, 2012).

In recent years, there is a tendency that farmers prefer to keep Etawah grade goat with black head color instead of brown or mixed colors. Farmers perceived that keeping black head color will gain more benefitted, because they have relatively higher prices than the others. Those perceptions supposed to be the kind of local wisdom that need to be justified, the farmers rely on their past experience of keeping goats and concluded that black head goats had better performances than the others. Based on the scientific reason, those perception could be caused by the variation of their ancestor, the blood composition of Etawah grade was dominated by pure Etawah, while the contribution of Kacang goat was relatively low, therefore the productivity of Etawah grade almost similar with the productivity of pure Etawah goat. However, there was little information available in regard with farmers, perception and also quantitative data on the productivity of Etawah grade based on their differences hair colors. That information is necessary required, so the stakeholders have the right information in order to select or keep the Etawah grade goat. Based on the background, the research was conducted to identify farmer's perception and the reason for selecting specific hair color of Etawah grade goats.

MATERIALS AND METHODS

The study was conducted in Sleman and Kulonprogo district, Yogyakarta province. Those two districts have been known as the centre of Etawah grade goats in Yogyakarta Province. Farmers in Kulonprogo district mostly keep black head goats, while farmers in Sleman district keep black, brown or mixed color of Etawah grade goats. The main objects of the research were 60 Etawah grade goats' farmers. The farmers were selected randomly. The semi structured questionnaire was used to assist in collecting data required.

The participatory approaches consisted of interviewing 60 small ruminant farmers according to different color of goat they kept to identify perceptions of farmers. Farmers were asked a specific question regarding their perception on the differences between goats which has black, brown or mixed color. The interviews were conducted for three months using "door to door" method, to avoid the intervention of the answer from one to other farmers. Discussion was also conducted with a group of farmers. Some of questions were related to farmers' background (age, education, farmers experiences, numbers of goats), the reason to select different hair color, mating systems, the kid produced, the price of goats based on different hair color, and the effect of different hair color on feed intake and productivity. Data was tabulated and analyzed descriptively.

RESULTS AND DISCUSSION

The result of this study showed that the majority of farmers kept the specific hair color of goats due to the expensive prices (40.00%), while other perception argued that they had select specific color because the excellence exterior characteristics (38.33%), and a few farmers stated that they select different hair color because the goats had high performance, for example rapid growth rate (8.33%) and high milk production (13.33%), as presented in Table 1.

Table 1. Farmers reason to select different hair of goats

Perception	Percentage
The reason to select different hair color (%)	
Expensive price	40.00
Excellent exterior characteristic	38.33
High milk production	13.33
Rapid growth rate	8.33

Those perception might be caused by the fact that in recent years, general opinion stated that the best Etawah grade goats was the goats which has black color in their head and white color in the whole body. However, it is in contrast with the origin of Etawah (or usually called as Jamunapari) goat, which the characteristic of Etawah is hair color predominantly by white with brown patches on neck and face (Thiruvankadan, 2014).

Table 2. Farmers' perception on reproduction aspect of goats

No.	Perception	Percentage
1.	The doe was mated with the buck which has the same hair color (%)	
	Always mated with the same hair colors	85.00
	Sometimes	15.00
	Never	0
2.	The kid born had the same hair color with their parents	
	The color was always the similar with their parent	76.67
	Sometimes differ	23.33
	Different hair color	0
3.	The percentage of different hair color between the kids and their parents	
	<25%	73.33
	25-50%	26.67
	>50%	0

There was a significant differences price between black head color hair and brown or mixed color acoding to more than 86% farmers, the different price was approximately IDR 399,000.00 (Table 3). The different price of goats seem to be based on their excellent exterior characteristic (66.67%) and high demand (21.67%) rather than they consider on the performance of goats, such as high milk production (6.67%) and rapid growth rate (5.00%).

Table 3. Farmers perception on different prices of goats

No.	Perception	Percentage
1.	The price of goats based on the different hair color	
	Different prices	86.67
	No different prices	13.33

2. The highest price of goats based on the hair color	1. Black head 2. Brown head 3. Mixed color
3. Different price of black head color of Etawah grade goats compared to other hair color (IDR)	399,000.00
4. Factors affecting different prices (%)	
Excellent exterior characteristic	66.67
High demand	21.67
High milk production	6.67
Rapid growth rate	5.00

When the farmers were asked their perception on the effect of different hair color on the productivity of Etawah grade doe, majority farmers did not agree (68.33%), only a few farmers (21.67%) stated that productivity was related to different hair color, while 10% of the farmers did not know whether different of hair color will affect the productivity or not. Farmers were also confirmed that high feed and nutrient intakes did not affected by the different hair color (91.67%), however, 8.13% of farmers were agreed that high intakes caused by the different hair color, primarily on the black head color of Etawah grade goats.

Table 4. Farmers perception on the effect of different hair color on productivity of goats

No.	Perception	Percentage
1.	The different hair color will affect the productivity of Etawah grade goats (produce milk, etc.)	
	Completely agree	21.67
	Disagree	68.33
	Did not know whether it was different or not	10.00
2.	The different hair color will affect feed intakes of Etawah grade goats	
	Agree	8.13
	Disagree	91.67

Baskoro (2014) found that farmers perception on the black head color of Etawah grade goats was significantly high, some of 68% of farmers interested in keeping black color of Etawah grade goats instead of brown or mixed head colors. High perception of farmers in regard with the black head color of Etawah grade goats might be accelerated by a routine contest and show event held by government or association, which in the contest, the winner was dominated Etawah grade goat which has black head color. Especially in Java island, local government is continuously conduct Etawah grade contest with the specific criteria (Bondan, 2009), including the color condition. This statement supporting the fact that in Indonesia, the preferences of black head color of Etawah grade goats is merely based on its expensive price and their exterior characteristics rather than production aspects. In India, according to Uttar Pradesh State Biodiversity Board (2014), the predominant coat color of Etawah or Jamunapari goat is white with occasional brown patches on the ears, neck and head.

CONCLUSIONS

Based on the study, it can be concluded that expensive prices and exterior characteristics was the main reason for the farmer to select and keep Etawah grade goats. Kids produced will not automatically have similar color with their parent. Although the farmers believed that color differences will not have impact on the productivity of goats, goats with black head color remain have the most expensive price for excellent exterior performance reason.

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