

## Performance and Marketing of Garut Sheep, West Java

A.M. Fuah, Muladno and M. Yamin  
Faculty of Animal Science, Bogor Agricultural University

### ABSTRACT

Sheep is concentrated in West Java with the population of approximately 48% of the total sheep population in Indonesia (9.514.184 heads). Garut Regency contributed around 5% and 9% respectively to West Java and Indonesia population (DGLS. 2007). A steady increase with very little fluctuation of sheep population within 3 years (2004-2007) in West Java (10%/year) and Garut (17%/year) indicates its economical contribution and cultural values to the region. However, Garut sheep gained little attention and support for its development. A study was carried out in two representative villages in Garut, aiming at obtaining information on sheep production characteristics including, ownership, types of management, production capacity and marketing. The results showed that the numbers of animals owned was ranging from 1-5 heads/family. Ratio between males and females of 1 : 1.7, providing enough chances for mating activities. Simple housing, feeding and health management were applied by farmers. Fifty four percent of ewes were kept for breeding purpose, while lamb were raised for sale. The average body weight gain of 100gr/day. Reproductive characteristics was significantly high: 1) sexual maturity for males and females was achieved at 6 m and 10 m respectively; 2) age at first mating around 1 year of age; 3) lambing interval was 9 months and litter size was 2.8 lambs/year, with high percentage of single birth (41%) and twinning birth (46%). High mortality rate (75%), mostly occurred at young age. Sheep were sold as live animals to other farmers, consumers or middle-man. The marketing channels by middle men went through several steps before reaching the final consumers.

*Key words: Garut sheep, performance, marketing chain*

### INTRODUCTION

Sheep is mainly concentrated in West Java with the population of approximately 48% (4,605,417 heads), of the total sheep population in Indonesia (9.514.184 heads), of which Garut Regency contributed around 5% and 9% respectively to West Java and Indonesia population (Statistik Peternakan, 2007). Garut sheep plays significant roles in farmer daily activities, has good productivity, economical contribution and high cultural values to the region. Sheep has been part of the farmers activity since the Dutch colonialism era. From biological and economical point of view, sheep has high reproductive performance with litter size up to 150% per year, meat production, could achieve 50% of bodyweight, very adaptive to local environment. Based on approach and information from Indonesia Trade Promotion Center (ITPC), importer from Arab Saudi Association is ready for marketing collaboration. The animal has potency for domestic market and also export to Saudi Arabic country, especially

during Idhul Adha. Despite its popularity, in fact, the Garut sheep, gained little attention and support for its development toward a sustainable sheep farming. Therefore information on production characteristics is essential. This study was initiated, aiming at obtaining information on sheep production systems and characteristics including, ownership, types of management, production and reproduction capacity, including the marketing system applied by farmers in the region.

The objective of this study was to evaluate sheep production systems in Garut, West Java, to assess production and reproduction characteristics of Garut sheep, and to identify the marketing system applied by farmers.

### MATERIALS AND METHODS

A study was carried out in representative villages in two districts (Wanaraja and Tarogong) of Garut Regency. involving sheep owners, groups of farmers in both locations, livestock officers and village representatives

(kepala desa and local key persons). Pre-survey was conducted prior to data collection, to evaluate regional potency which was necessary for site selection and sampling purposes. Secondary data was obtained from regional statistics, previous reports on sheep and district data. Questionnaires were used for interview with 2 groups of sheep farmers for data collection on sheep production and performance, marketing system applied including organization and farmers characteristics. Four hundred and fifty eight (458 heads) of sheep were used as samples for assessment and direct observation was made on the sheep housing and management, productivity and biological performance. Based on data and information collected, depth discussion was done with related institutions including key personnel, and analyses was made on the economics and the marketing system applied during the last year of the study period.

**RESULTS AND DISCUSSION**

**Production and Management**

The results showed that most farmers in the region reared sheep on individual basis, the numbers of animals owned ranging from 3 - 13 heads with an average of 8 heads /family. Beside individual rearing, sheep were raised by groups of farmers in each district; 280 heads of sheep were kept by group 1 and 178 heads by group 2. Commonly, sheep were raised for specific reasons, i.e: in Wanaraja, for meat production, while in Tarogong most farmers kept so called "domba tangkas", for fighting purposes. Every year, the community held a big traditional event, in which sheep keepers brought their well trained animal for fighting. Therefore, the sheep keepers were mostly men, with low education level (71% finished elementary school) (figure 1). According to the opinion of respondents, education had little benefit on their daily activities as small farmers, which was resulted in such low motivation for sending their kids to a higher level of education. Realizing the great potency of sheep, informally-applied training would be needed to improve their knowledge and skill in sheep management, for improving their daily income.

Sheep population in Garut Regency during the study period (2002), was 69,274 Animal Units (AU), of which Wanaraja and Tarogong accounted for approximately 1.6% (1.112 AU) and 0.6% (446 AU) respectively. Based on regional potency, the caring capacity of Garut

Regency for ruminant animals was 606,779 AU, indicating a good opportunity for increasing the ruminant population including sheep. Figure 2 and 3 describe the proportion of sheep reared by each group of farmers, based on age and sex, by which, females were preferred to be kept in the flock for breeding purpose.

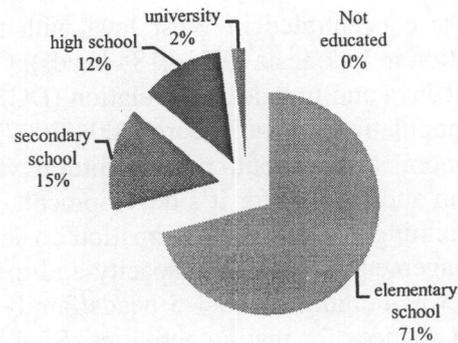
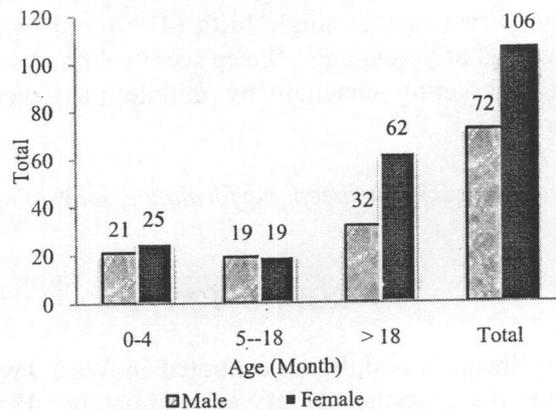
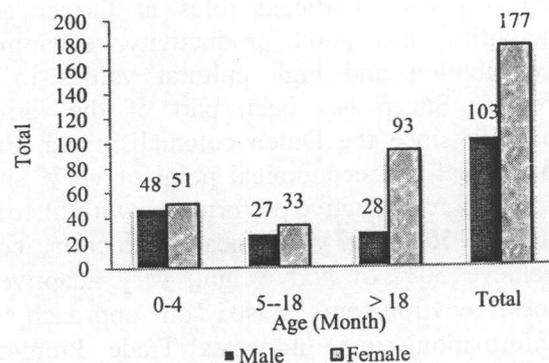


Figure 1. Level of Education of Respondent Farmers in Wanaraja



Source: Laporan Tahunan (2001)

Figure 2. The Number of Sheep Raised by Group 1 of Farmers Based on Age and Sex



Source: Laporan Tahunan (2001).

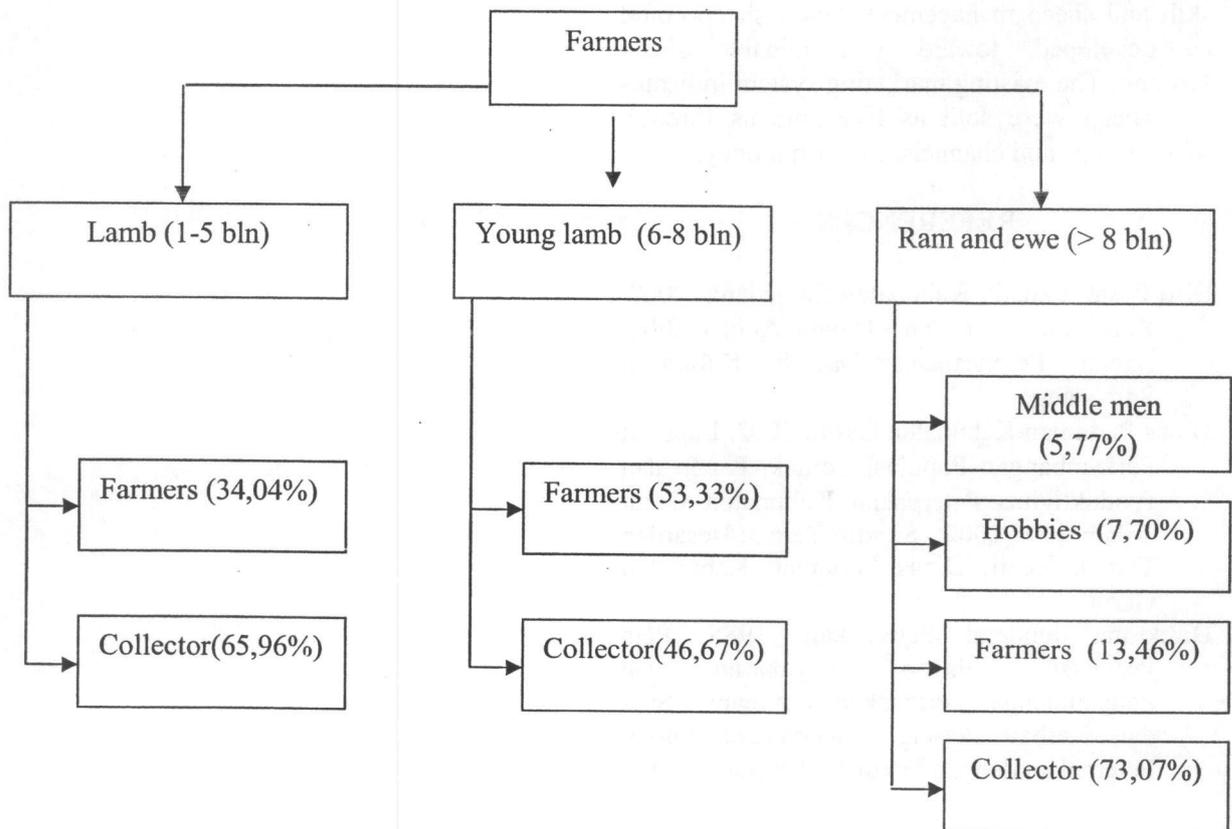
Figure 3. The Number of Sheep Raised by Group 2 of Farmers Based on Age and Sex

Table 1. The average number of lambs produced classified by group of farmers and types of birth

Type of birth	Group 1		Group 2	
	No of birth (times)	No of lamb (heads)	No of birth (times)	No of lamb (heads)
Single	33	33	15	15
Twin	37	74	26	52
Triplet	8	24	9	27
Quartered	2	8	2	8
<i>No of lambs per ewe per birth</i> )	1.76		1.96	

Table 2. Population dynamics of sheep in the 2 localities based on age

Time/Period	No of lamb (head)		No of young lamb (head)		No of mature animals (head)	
	male	female	male	female	male	female
No of animal at starting year	69	76	46	52	60	155
Year 1	215	215	67	74	104	203
Year 2	281	281	210	210	167	271
Year 3	376	376	275	275	369	471
Year 4	653	653	368	368	630	730
Year 5	1013	1013	640	640	977	1075
The condition when males were sold alternately within the years	1013	1013	45	640	68	1075



Source: Kantor Penyuluh Pertanian Kabupaten Garut, 2002 Kantor Kecamatan Wanaraja, 2002

Figure 4. Marketing channels based on sheep age, in Wanaraja

## Sheep

Sheep were sold as live animals to other farmers, consumers or middle-man, either in the village or nearby local market for cash money. For sheep trading between farmers and middle man or sheep collector, prices were determined by sheep owners based on age and the condition of animals, which was always lower than the timely market price and differed between age. The marketing channels by middle men went through several channels before reaching the final consumers. Table 3. and Figure 4. showed the number of animal bought and sold by respondent farmers during the period of 2002.

## CONCLUSIONS

Garut sheep were reared by farmers as secondary activities in agricultural production with the numbers of animal owner ranging between 3-13 heads/family. Simple housing, feeding and health management were applied which was resulted in low productivity. Realizing the existing sheep production and performance and regional potency, improvement of farmers skill and sheep management, Garut sheep could be developed, toward a sustainable sheep farming. The existing marketing system indicates that sheep were sold as live animals through several steps and channels, for cash money.

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