quality reflected the interrelationship of the antler cycles with low quality "s during velvet antler growth stages and it was higher at the hard antler of viable spermatids, whereas the testes are present in ejaculates. The finding that the sperm production in tropical species show fluctuations in a and to the average, increased levels of production and urine hard antler stage. Antler casts annually when testes were regressed to their in agreement with previous report by Willard and Randall (2002) on the age growth period in tropical species (Axis). The best semen quality is produced and obtained at hard antler development stage of the antler cycle in which the stag is not hard antler (Hafez, et al. 2002). It was also reported that the stage with a high degree of semen quality corresponded with the hardening of urine (T. Ram, pers. comm.).

**Materials and Methods**

Semen was collected from three Garut rams using an artificial vagina once a week. Epididymal sperm was collected from cauda epididymis of slaughtered ram. Semen was diluted with modified Tris extender containing 5% glycerol and 20% egg yolk. The modified Tris extender is containing 3.32 g (hydroxyethyl) amonium, 76.8 g citric acid-monohydrate, 3.7 g D-glucosamine, 2.16 g lactose-monohydrate, 0.05 g glutathione, 100 cc/L penicillin, and 1000 µg/ml streptomycin in 100 ml distilled water. Semen was loaded in 0.25 ml mini straw with the final concentration of 200 million motile sperm. Semen was equilibrated at 5°C for three hours. The straws were placed for 15 minutes in liquid nitrogen vaper. 10 cm above the level of liquid nitrogen. The straws were then plunged into liquid nitrogen and stored at -196°C. Straws were thawed in a 37°C water bath for 30 seconds prior to analysis. Quality of processed semen modulations in terms of motile sperm and plasma membrane (PM) integrity were synchronized using intravaginal administration of C/D 45°C for 3-3 days. Cervical insemination was carried out 53 hours after withdrawal of C/D 45°C and repeated seven days later with the same dose, respectively. Pregnancy was determined using ultrasonography (USG) 83 days after insemination.

**Results and Discussion**

Results of these research showed that sperm quality of EJS is better than EPS. Mean percentage of motile sperm after diluting for EJS (76.67%) was significantly (P<0.05) higher than EPS (70.83%). There was no significant difference between EJS and EPS for mean percentages of live sperm and IP after diluting. After equilibrating, mean percentages of motile sperm, live sperm, and IP for EJS (70.00%, 70.00%, and 74.44%) were significantly (P<0.05) higher than EPS (58.33%, 70.50%, and 68.33%). Mean percentages of post thawing motile sperm, live sperm, and IP for EJS (52.78%, 58.78%, and 56.22%) were significantly (P<0.05) higher than EPS (45.00%, 54.50%, and 48.83%) (Table 1). Pregnancy and lambing rate for EJS (58.33% and 58.33%) was significantly (P<0.05) higher than EPS (44.44% and 33.33%) (Table 2).
It was found that seminal plasma is better for sperm motility than frozen-thawed epididymal sperm.

In conclusion, quality of frozen-thawed ejaculated sperm is similar to that of ejaculated stallions, frozen-thawed epididymal sperm, and frozen-thawed cauda epididymal sperm. The seminal plasma of ejaculated sperm is comparable to that of ejaculated stallions, frozen-thawed epididymal sperm, and frozen-thawed cauda epididymal sperm.

References

Pregnancy was induced in ewes and their lambs were later analyzed for semen characteristics. The results showed that the lambs had significantly higher sperm motility than the ewes. The study also found that the lambs had a higher percentage of spermatozoa with normal morphology compared to the ewes. These findings suggest that lambing rate in ewes is higher when lambs are produced from lambs that were artificially inseminated with epididymal sperm. The authors suggest that further research is needed to understand the underlying mechanisms behind these findings.