

Effect of Feed Additive on Cryopreservation of Barki Ram Semen

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Abstract : Preservation of semen had a major impact on sheep genetic breeding. The aim of this study was to evaluate the effect of protected fat, probiotic and zinc-enriched diets on semen freezability. Twenty two Barki rams were randomly assigned into four groups; Group I (n=5) was fed the basal diet enriched with 3.7% of dry fat/kg concentration/day, Group II (n=5) was fed a basal diet-enriched with 10gm of probiotic /head/day, Group III (n=6) was fed on the basal diet enriched with 100 ppm of 10% zinc chelated with methionine/kg dry matter/day and Group IV (n=6) was served as control. A pool of three to four ejaculates were pooled from rams within a period of ten weeks. Semen was diluted in egg yolk-Tris diluent and processed in 0.25 ml straw. Motility was evaluated after dilution, before freezing and post-thawing at 0, 1, 2 and 3 hour incubation. Viability index, acrosome integrity and leakage of intracellular enzymes (Aspartat aminotransferase and Alkline phosphatase) were also evaluated. Spermatozoa exhibited highly significant ($P<0.01$) percentages of motility at 0, 1, 2, and 3 hours incubation after thawing, viability index and acrosome integrity in rams fed a diet enriched with protected fat and zinc groups as compared with probiotic and control groups. Also, the mean value of extracellular leakage of AST was significantly lower in fat and zinc group as compared with probiotic and control groups. In conclusion, semen freezability was improved in animals fed a diet fortified with fat and zinc with no significant improvement in animals fed the probiotic-enriched diet.

Keywords : Barki ram semen, freezing, straw, feed additives

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