



A REVIEW.....

Low density lipoprotein (LDL) as cryoprotectant in semen extender : A new approach

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ABSTRACT..... Semen cryopreservation a technique for long-term storage of sperm cell supplements Artificial Insemination (AI) to enhances its efficiency for widespread dissipation of superior germplasm. These two techniques together open up new opportunities for breed improvement in country. Semen cryopreservation needs extender essential for sperm survival and storage at extreme low temperature (-196°C). Being an important component of cryopreservative process, semen extenders have been continuously studied and revised from time to time for improved post thaw semen quality. Egg yolk is a very well known cryoprotectant that protects plasma membrane during cryopreservation. Various components of EY have been investigated to identify the most active component(s) responsible for its protective effect and role of low-density lipoproteins (LDL) in egg yolk has been widely accepted as membrane stabilizers. Simultaneously, there have been increasing demands to replace whole egg yolk in semen extenders because of the presence of substances in yolk that inhibit respiration of spermatozoa or diminish their motility, acrosomal integrity and fertilizing ability. Based on the knowledge that the cryoprotectant effect of egg yolk is derived from the low-density lipoprotein (LDL) fraction, this component is now being extracted studied and added to the extender as an replacement of egg yolk and has shown promising results. So, taking into account the fact that LDL could be a better alternative for egg yolk as cryoprotectant in semen extender for better post thaw semen quality and improved conception rate in farm animals.

KEY WORDS..... Goats, Cryopreservation, Egg yolk, Low density lipoproteins (LDL), Semen

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