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Soybean lecithin is suitable cryoprotectant for cryopreservation of ram semen

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The purpose of the present study was to evaluate ram semen *in vitro* fertility after the freezing–thawing process with extenders containing soybean lecithin. Soybean lecithin levels of 0.5, 1 and 2% (w/v) were assessed in combination with 7% glycerol in a basic Tris medium. Bioexcell was used as control treatment. Semen samples were diluted with extenders and then frozen. The sperm parameters were assessed after thawing for motility, viability and capacitation status. Fertility was recorded as cleavage rate at 3day and blastocyst rate at 8day after *in vitro* fertilization (IVF). Significant effects of various concentration of soybean lecithin were noted for the parameters investigated ($P \leq 0.05$). The percentage of motility was recorded to be 41.8%, 51.9% and 39.7% for 0.5, 1 and 2% lecithin respectively. Also the percentage of viable spermatozoa was estimated to be 36.08, 48.06 and 35.7 for 0.5, 1 and 2% lecithin respectively. Lecithin at 1% had more positive effect than other concentrations. Bioexcell produced 49.18% percentage of motile spermatozoa and 46.8% viable spermatozoa. No significant differences in the staining patterns of capacitation status were observed. In IVF experiment, the cleavage rate being significantly higher in oocytes fertilized with semen cryopreserved in 1% Lecithin. Different concentration of lecithin had no effect on embryo development. Results indicated that soybean lecithin is suitable cryoprotectant for cryopreservation of ram semen. Animal origin free extender based on soybean lecithin we have investigated here is a viable alternative to traditional egg yolk-based extenders.