

## **Edible birds' nest (EBN) hydrolysate for bovine sperm cryopreservation**

### **ABSTRACT**

The aim of this study was to evaluate the effects of supplementing different concentrations of EBN into Tris (Tr) and Bioxcell (Bx) extenders on bull sperm cryopreservation. A total of 12 semen samples were collected from mature bulls by electro ejaculation. The semen samples were evaluated both freshly and after cryopreservation for quality based on % sperm general and progressive motility (under a microscope), viability and abnormal morphology (using eosin-nigrosin stain). The fresh samples were then diluted and extended using the two extenders containing 0% (control), 0.03%, 0.06%, and 0.12% of EBN. Chilled at 4°C for 3 hours before packaged into 0.25 mL straws and frozen into liquid nitrogen (-196°C) for 48 hours. Results for both extenders revealed insignificant differences ( $P > 0.05$ ) in all parameters between the different EBN treatment groups and control. Although not significant, 0.12% EBN in both extenders showed the lowest % abnormality, close to the fresh sample reading. In conclusion, EBN concentrations used in this study do not significantly improve sperm quality after freezing. However, the improvement in sperm morphology observed at 0.12% EBN (highest concentration) might imply importance of further increase in dosage for significant effect in future studies.

**Keyword:** Semen cryopreservation; Edible-bird nest; Bulls; Tris and Bioxcell extender