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A study of Variation in Semen Quality of Dromedary Camel Bulls

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ABSTRACT

The aim of the present study was to determine whether there were significant variations in sperm parameters of dromedary camels used for artificial insemination. A total of 200 ejaculates were collected using an artificial vagina from 6 males and throughout 4 years (2012/2013; 2013/2014; 2014/2015 and 2015/2016). Ejaculates were analyzed according to the following parameters: color (grey, white, white milky), viscosity (liquid, viscous, very viscous), volume (direct observation), mass motility (scale from 0 to 5), viability (eosin/nigrosin stain), and sperm concentration (Thoma cell). Data were statistically analyzed by the GLM procedure of SAS with three factors (season, month and bulls) and the difference was examined using Duncan test ($\alpha = 5\%$). χ^2 test was used for color and viscosity. Results showed that volume, percentage of sperm viable and total sperm were significantly higher in the three last years compared with the first one. There were also significant monthly changes in semen characteristics with maximum values registered in January and February. However, no significant variation in color and viscosity was found during months and years. Concentration, viability, mass motility, total sperm and total sperm viable were varied significantly between dromedary bulls. This study showed that sperm quality of dromedary camels varied from year to year and this could be explained by the effects of climatic parameters (hot temperature, lack of rain) and housing conditions (social isolation, limitation in movement...).

Keywords: *Year, month, sperm quality, dromedary camel*