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Effect of Season on Semen Production of Nubian and Saanen Bucks in Sudan

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Abstract : The influence of the season (autumn, winter, and summer) on semen production in Nubian and Saanen bucks was studied. Seven mature bucks (4 Nubian and 3 Saanen) were used in this study to prepare semen samples which were collected with an artificial vagina. The samples were extended in Tris-egg yolk-glycerol-glucose extender, frozen, and stored in liquid nitrogen at –196 0C for 48 hours. Straws were thawed in water at –37 0C for 15 seconds before sperm evaluation (post-thaw sperm motility). There was a significant seasonal variation in both semen quantity (volume, concentration, and the total number of spermatozoa per ejaculate) and quality (percentage of sperm motility, percentage of post-thaw sperm motility, and dead spermatozoa). Greater ejaculate volumes were observed during summer and autumn in comparison to winter. Higher values of sperms concentration were observed during autumn, while the lowest sperm concentration values were observed during summer. Higher values of sperm motility were observed during autumn in comparison to summer. Lower values of dead spermatozoa were recorded during autumn, while the highest percentages of dead spermatozoa were observed during summer for the two breeds of bucks. The influence of season on post-thaw sperm motility was significant. Semen frozen during autumn and winter had the highest values, while during summer, lower mean values were observed. The best semen was produced during autumn and winter, while during summer, poor semen quality was recorded.

Keywords : season, Nubian, Saanen, semen production, Sudan
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