

Effect of Scrotal Circumference on Freezability of Bangladeshi Crossbred Bulls

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Abstract : The study was conducted to evaluate the freezability of crossbred bulls' semen at early age. Semen of three consecutive collections at 7 days interval from 12 crossbred bulls 17 was evaluated. The age at first collection was 15 to 20 months. Evaluation of semen was done soon after collection. Triladyl, Minitub, Germany was used as extender and was frozen using standard semen freezing protocol. Post-thaw sperm motility was evaluated. Morphology of paraformaldehyde fixed spermatozoa was evaluated under differential interference phase contrast microscopy and the viability of spermatozoa was evaluated by using stain SYBR-14 (1 mM/ml) and propidium iodide (2.41 mM/ml) under an epifluorescent microscopy. Scrotal circumference was correlated with all possible measures in all groups of crossbred bulls. Volume of semen, sperm concentration, total number of spermatozoa, initial sperm motility, post-thaw sperm motility, proportion of normal spermatozoa and proportion of live spermatozoa were compared among individual bull within and between two groups of crossbred bulls. A significant positive correlation was observed between scrotal circumference and volume of semen and between scrotal circumference and the total number of sperm production per ejaculate ($r = 0.72$, $p < 0.04$). Significant variation was observed in different semen parameters among individual bulls within the same group ($p < 0.05$) but no significant variation was found between two groups of crossbred bulls. Out of 12 bulls, semen freezability of 10 bulls was found satisfactory while semen of 2 bulls (Local \times Friesian) was unsatisfactory. In conclusion, crossbred bulls aged 18 months having scrotal circumference > 30 cm produce freezable quality semen.

Keywords : Bangladesh, crossbred bull, scrotal circumference, semen freezability

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