

IDENTIFICATION OF SPERM MORPHOMETRY IN GEMBRONG GOAT AND GARUT SHEEP

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ABSTRACT

The purpose of this research to identify the sperm morphometry of Gembrong goat and Garut sheep. Semen were collected twice a week using artificial vagina from a mature Gembrong goat and a mature Garut sheep and then evaluated macro and microscopically. Sperm morphometry examination were performed using NaCl-formaldehyde fixed samples through phase contrast microscope micrometer addition with oil emersion (1000x). Sperm morphometry characteristics were measured by Nikon motorized microscope Ci-E with NiS software after applying Eosin-Negrosin staining technique. Each sperm were measured for four primary spermatozoa head dimensional parameters length (μm), width (μm), area (μm^2), perimeter (μm), two flagell parameters middle piece (μm), principal piece (μm), and total sperm length (μm) were measured on 100 cells for each Gembrong goat and Garut sheep with four replication. Gembrong goat, sperm morphometry length = $8,04 \pm 0,35 \mu\text{m}$, width = $4,11 \pm 0,20 \mu\text{m}$, area = $27,94 \pm 1,66 \mu\text{m}^2$, perimeter = $20,49 \pm 1,01 \mu\text{m}$, middle piece = $12,14 \pm 0,31 \mu\text{m}$, principal piece = $39,47 \pm 1,20 \mu\text{m}$, total sperm length = $59,65 \pm 1,43 \mu\text{m}$. Garut sheep, sperm morphometry length = $8,77 \pm 0,34 \mu\text{m}$, width = $4,95 \pm 0,28 \mu\text{m}$, area = $33,92 \pm 1,35 \mu\text{m}^2$, perimeter = $22,49 \pm 0,54 \mu\text{m}$, middle piece = $14,93 \pm 0,44 \mu\text{m}$, principal piece = $42,93 \pm 1,26 \mu\text{m}$, total sperm length = $66,63 \pm 1,46 \mu\text{m}$.

Key words: Gembrong goat, Garut sheep, sperm morphometry, spermatozoa