

Evaluation of the ejaculate quality of the red jungle fowl, domestic chicken, and bantam chicken in Malaysia

ABSTRACT

The objective of this study was to investigate the semen quality of 3 chicken breeds: the red jungle fowl, domestic chicken, and bantam chicken (*Gallus gallus domesticus*). A total of 27 cocks, including 9 cocks each of red jungle fowl, domestic chicken, and bantam chicken, were used in this study. Semen was collected once a week by dorso-abdominal massage method. The semen was evaluated for volume, concentration, motility, live/dead ratio, and percentage abnormalities. There were no significant differences in the semen volume and general motility among the 3 breeds. However, the semen concentration was significantly different between the red jungle fowl (4.44×10^9 sperm/mL) and bantam chicken breeds (1.83×10^9). The percentage of forward motility in the red jungle fowl was significantly higher than that of the domestic chicken and bantam chicken, while the percentage of spermatozoa with rotating motility was significantly higher in the bantam chicken and domestic chicken. It was concluded that the semen concentration, individual motility, and total abnormalities were significantly different among bantam chicken, domestic chicken, and red jungle fowl and the semen volume and concentration was highest in the red jungle fowl.

Keyword: Domestic chicken; Malaysian bantam chicken; Red jungle fowl; Semen collection; Semen evaluation; Semen quality