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Research Article

Determination of artificial insemination timing in Banteng based on follicle size and uterine enlargement

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ABSTRACT

The Banteng (*Bos javanicus* d'Alton 1823) is an endemic species in Indonesia that is threatened with extinction and whose population continues to decline in the wild. The aim of this study is to determine the timing of artificial insemination (AI) in the Banteng based on follicle size and uterine enlargement. For this study, two female Banteng were used in Taman Safari Indonesia, Cisarua, Bogor. Habituation was performed to facilitate data collection. Optimal timing for AI is determined by examining the reproductive organs using Ultrasonography (USG) to detect changes in the uterus and ovaries and monitor clinical signs of estrus. Follicle size and uterine examination was performed on days -1, 0, and +1 for 3 estrus cycles. Insemination was performed 2-3 times during estrus until ovulation occurred. The results showed that the average follicle size of both Banteng was 1.09 ± 0.02 cm on day -1, 1.31 ± 0.02 cm on day 0, and 1.33 ± 0.03 cm on day +1. Artificial insemination was performed with a double dose of frozen semen when the Banteng were still rideable, and the follicle size ranged from 1.23-1.38 cm. Pregnancy was examined by ultrasound on day 21 after mating; both Banteng females were pregnant after AI. It can be concluded that AI technique can be used in captive Banteng breeding program by studying the development of follicles and uterine enlargement.

Key words: Banteng, timing of artificial insemination, frozen semen, follicular size and uterine enlargement