

# The ultrasonographic pregnancy diagnosis and reproductive evaluation in under 4 month pregnancy in river buffalo in-vitro

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## Abstract

This study aimed to evaluate the sizes and dimensions of fetuses and uteruses in under-four-month pregnant river buffalos through ultrasonography by determining their standard values. For the ultrasonographic evaluation of uteruses in under-four-month gravid cows, 24 uteruses of eight age groups were collected from a slaughterhouse and then transported to a laboratory. Each uterus was placed inside a 40-liter water bowl (water bath) and then examined with probes of 6.5 and 8 MHz. The fetal eyeball diameter, skull diameter, lateral and dorsal cotyledon diameters were reported  $0.55\pm 0.30$  cm,  $1.25\pm 0.50$  cm,  $1.50\pm 1.33$  cm, and  $1.00\pm 1.10$  cm, respectively, in a  $47.79\pm 3.41$ -day-old fetus. The fetal eyeball diameter, skull diameter, lateral and dorsal cotyledon diameters were reported  $0.65\pm 0.12$  cm,  $2.35\pm 1.20$  cm,  $2.30\pm 1.21$  cm, and  $2.50\pm 0.65$  cm, respectively, in a  $76.34\pm 3.4$ -day-old fetus. The fetal eyeball diameter, skull diameter, lateral and dorsal cotyledon diameters were reported  $1.60\pm 0.12$  cm,  $4.50\pm 1.80$  cm,  $3.08\pm 0.50$  cm, and  $3.03\pm 0.75$  cm, respectively, in a  $105.7\pm 3.2$ -day-old fetus. In general, the research results indicated the critical role of ultrasonography as an early diagnostic method for determining the sizes and dimensions of fetuses and uteruses in under-four-month pregnant river buffalos and obtaining their standard values.

**Key words:** Ultrasound, Fetal, Uterus, River buffalo

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