

Early pregnancy diagnosis in alpaca (*Lama pacos*) and llama (*Lama glama*) by ultrasound

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An ultrasonography study of early pregnancy diagnosis was carried out in 19 alpacas and 12 llamas, after controlled matings. The aim was to determine the earliest gestational age at which pregnancy diagnosis by transrectal ultrasonography could be achieved, and to generate an empirical formula for gestational sac diameter (GSD) growth as a function of gestational age (GA), allowing an estimate of GA during the first month of pregnancy. We found that pregnancy diagnosis may be carried out as early as 9 days after mating in alpacas and 7 days in llamas. This diagnosis was found to be accurate at 23 days in alpacas and 34 days in llamas. The empirical relations that best describe the relationship between GSD and GA were $GA = \log GSD + 1.2339/0.0585$ $r = 0.85$, $P < 0.001$ in alpacas, and $GA = \log GSD + 1.2649/0.0546$ $r = 0.77$, $P < 0.001$ in llamas, where GA is measured in days and GSD in centimeters. Our results also indicate that ultrasonography is a reliable technique for early pregnancy diag