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## Early Pregnancy Detection of Iraqi Female Dromedary Camels (*Camelus dromedarius*) Using Different Methods

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### ABSTRACT

This study was undertaken to identify the most sensitive, early and accurate method for detecting pregnancy in Iraqi female dromedary camels (*Camelus dromedarius*) using three different methods (plasma progesterone concentrations, ultrasonography and rectal palpation). The experiment included 12 multiparous, non-lactating Iraqi one-humped female camels (*Camelus dromedarius*) of 7- 8 years old and average body weight of 450-500 kg. The sensitivity percentage (accuracy) of progesterone assay for detecting pregnant female camel increased ( $P \leq 0.01$ ) from 80 to 100% during the experimental period, being moderately accurate ( $P \leq 0.01$ , 80%) at day 20 PM and highly accurate ( $P \leq 0.01$ , 100%) throughout the remaining periods (days 30-60 PM).. The specificity percentage (accuracy) for detecting non- pregnant female camels increased obviously ( $P \leq 0.01$ ) from 71.4% at day 20 post-mating (PM) to 85.7 at day 30 PM, and 100% at 40, 50 and 60 days PM. The sensitivity for detecting pregnant female camels using ultrasonography was moderately accurate ( $P \leq 0.01$ , 80%) at day 20 PM and highly accurate ( $P \leq 0.01$ , 80%) at remaining experimental periods (days 30-60 PM). The specificity (%) for detecting non- pregnant Iraqi female camel increased obviously ( $P \leq 0.01$ ) from 71.4% at day 20 PM to 85.7 at day 30 PM, and 100% during 40, 50 and 60 PM. The rectal palpation sensitivity and specificity were 100 % at 60 and 90 days PM. In conclusion, these results described, the early and accurate pregnancy detection using progesterone assay and ultrasonography at day 20 PM onwards. These findings will enhance the reproductive and productive efficiency of female camel by adapting valuable management tools in Iraq and in the world.

**Keywords:** *progesterone, ultrasonography, rectal palpation, pregnancy detection, camels*