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**Effect of short-term supplementary nutrition effect during the initial and final stages of oestrous cycle on reproductive performance of Kurdi ewes**

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**Abstract**

This study was conducted to evaluate the effect of short-term supplementary nutrition on reproductive performance of Kurdi ewes. Hundred ewes were assigned randomly to four treatments through a completely randomized design. Oestrus cycles were synchronized with two (2PG) or three (3PG) prostaglandin injection. Half of two first groups (2PGN and 3PGN), fed by short-term supplementary nutrition over days 8 to 14 or 0 to 6 of the oestrous cycle. Short-term supplementary nutrition increased insulin and decreased estradiol plasma concentrations in 2PGN and 3PGN experimental groups ( $P < 0.05$ ). Progesterone plasma concentration decreased only in 2PGN group. FSH and IGF1 concentrations did not affected by experimental groups. Short-term supplementary nutrition increased total numbers of follicles by 2PGN and 3PGN treatments and fertility rate by 3PGN increased ( $P < 0.05$ ). On the whole results showed, short-term supplementary nutrition of Kurdy ewes in second half of oestrous cycle, had better effect on metabolic and reproductive hormones and follicle development than first half of oestrous cycle..

**Key words:** Kurdy ewe, Short-term supplementary nutrition, Reproductive performance.