EFFECT OF SEASONALITY ON ESTRUS AND OVULATION IN LONG SYNCHRONIZATION PROTOCOLS WITH OR WITHOUT CIDR REPLACEMENT IN SANTA INÊS SHEEP

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This study was designed to investigate the effect of seasonality on estrus and ovulation response in long synchronization protocols, with or without a P4 replacement, in Santa Inês sheep. Seventy adult ewes were treated with one of two synchronization protocols during three seasons (2 x 3 factorial; Anoestrus: G-1CIDR, n=12 and G-2CIDR, n=11; Transition: G-1CIDR, n=12 and G-2CIDR, n=12; Breeding: G-1CIDR, n=11 and G-2CIDR, n=12). Estrus was synchronized with a P4 device (CIDR) for 14 days. However, in G-2CIDR, the CIDR was replaced by a new one on D7 (D0 = P4 administration). Doses of 2.5mg of dinoprost prostaglandin F2α, i.m. were administered on D0 and 14. All ewes received 300 IU of eCG on D14. Estrus observations were performed every 12 hours for 4 days and ultrasonographic examinations of ovaries were accomplished every 8 hours for 5 days after the withdrawal of CIDR.

Data were analyzed by GLIMMIX by using SAS. There was no group by season interaction; therefore, the main effects of the variables are presented. Over 90% of ewes showed estrus and all ewes ovulated at the end of the synchronization protocols (P>0.9). There was effect of treatment on time of estrus onset (G-1CIDR 45.87±2.43, vs. G-2CIDR 51.33±2.17 hours after the end of the protocols; P=0.04). However, this effect no was observed on time of ovulation (G-1CIDR 76.0±2.06, vs. G-2CIDR 78.17±2.01 hours after the end of the protocols; P=0.42), number of ovulations (G-1CIDR 1.31±0.09 vs. G-2CIDR 1.25±0.1; P=0.66) or diameter of the first ovulatory follicle (G-1CIDR 7.32±0.16 vs. G-2CIDR 7.4±0.17 mm; P=0.68). Moreover, there was an effect of season on time of estrus onset (anoestrus: 43.42±2.14 vs. transition: 57.56±3.13 vs. breeding: 44.18±2.14 hours after the end of the protocols; abP< 0.0002), time of ovulation (anoestrus: 72.0±1.37 versus transition: 75.3±3.34 hours after the end of the protocols; abP= 0.01), number of ovulations (anoestrus: 1.34±0.11 versus transition: 1.04±0.04 vs. breeding: 1.47±0.16; abP< 0.01), and diameter of the first ovulatory follicle (anoestrus: 7.77±0.23 vs. transition: 7.15±0.11 vs. breeding: 7.16±0.22; abP< 0.03). These results showed that there was effect of treatment only for time of estrus onset. However, season influenced the onset estrus, ovulation time, number of ovulations per animal and the diameter of the first ovulatory follicle. Finally, both protocols were effective during each season.

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