USE OF MELENGESTROL FOR ESTRUS SYNCHRONIZATION IN AN ARTIFICIAL INSEMINATION PROGRAM IN EWE

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The objective of this study was to evaluate the potential of melengestrol acetate (MGA), an orally active progestagen, for estrus synchronization in an artificial insemination (AI) program. Two experiments were conducted in anoestrous season (May) to 1) determine the time of the LH peak in ewes synchronized with MGA and 2) evaluate the fertility rate of the ewes inseminated following estrus synchronization with MGA. In the first experiment, a total of 24 Canadian Arcott ewes received a daily oral dose of 0.25 mg/hd or 0.40 mg/hd of MGA for 12 d. Blood samples were collected every 4 h from 36 h to 96 h after the last feeding of MGA. Serum samples were analyzed for LH by radioimmunoassay. Three ewes did not show a LH peak during the sampling period. The mean interval between the last dose of MGA and LH peak was not different for the ewes treated with 0.25 (60.0±13.6 h) or 0.40 mg/hd/d (64.0±12.6 h) of MGA. The time of onset of the LH peaks varied from 44 h to 84 h. This information was used to determine the insemination time for experiment 2. In the second experiment, 81 Dorset ewes were assigned to one of the three synchronization treatments : T1) vaginal progestagen sponge for 14 d + 500 I.U. PMSG at sponge withdrawal (control group, n=21) ; T2) 0.25 mg/hd/d MGA for 12 d + 500 I.U. PMSG 12 h after the last feeding of MGA (n=20) ; 0.25 mg/hd/d MGA for 12 d + 500 I.U. PMSG 12 h after cessation of MGA feeding followed by 50 ug GnRH 60 h after the last dose of MGA (n=40). Ewes were inseminated with fresh semen 55 h after removal of the vaginal sponge (T1) or 76 h after the last feeding of MGA for T2 and T3. Lambing rate to timed AI were not different between the three treatment groups (42.9, 45.0 and 45.0% for T1, T2 and T3, respectively). In conclusion, MGA could replace the traditional vaginal sponge treatment for estrus synchronization in AI program in sheep.