

**REPRODUCTIVE PERFORMANCE OF OSSIMI SHEEP AS AFFECTED BY OXYTOCIN
INJECTION DURING MATING SEASON.**

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ABSTRACT

Twenty adult Ossimi ewes were used to study the effect of pre-mating oxytocin Intra-muscular injection (IM) on some reproductive traits. They divided randomly into equal two groups. Ewes in both groups were IM injected by 1ml GnRH (1st inj.) at day 0 (GnRH analogue contained 0.004 mg Bussrelin (Receptal. Intrvet, International BV Boxmeer-Holland). Then at day 7, they injected (IM) by 0.7ml PGF2 α analogue (Estrumate, Coopers Animal Health LTD, Berkhamsted-England). Each ml of Estrumate contained 250 μ g Cloprostenol Acetate. Then, ewes injected the second GnRH dose (1 ml analogue) at day 9, two days post PGF2 α injection. Oxytocin (20 I.U/IM , Adwia Company) was only IM injected to each ewe in the first group immediately pre-mating, one day after the second injection with GnRH. Another oxytocin injection was given 12 hr. post the first injection, after pre-second mating by the same rams. Ewes of the second group (control) were not injected oxytocin pre-mating by the same rams, one day after GnRH second injection.

Results showed improvement in most reproductive traits of oxytocin injected ewes. The percentages of improvement were 33.33% for estrus rate, non-return rate and lambing, 25% for twinning rate, 8.67% for litter size and 44.44% for fecundity, compared to the control group. P4 concentration was high ($P < 0.05$) in treated group affected by oxytocin injection. Thereafter, P4 decreased in all treated groups after PGF2 α injection. Post-2nd GnRH injection, P4 levels showed a pronounced increase in all treated groups. At day 20 post-mating, P4 levels showed the highest values in both groups. It could conclude that pre-mating oxytocin Intra-muscular injection could use to improve reproductive performance of Ossimi ewes.

Keywords: Oxytocin, GnRH, progesterone, reproductive, ewe.