

## Using hormonal and non-hormonal treatments for improving reproductive efficiency of ewes.

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The objective of the present experiment was to evaluate the influence of using hormonal and non-hormonal treatments during flushing on reproductive efficiency of Ossimi ewes. The experiment was performed on thirty-three Ossimi ewes of  $41.59 \pm 1.05$  kg average live body weight. Animals were randomly divided into four groups, G1-flushing with normal diet, G2 received salt free- diet (SFD) for 7-days followed by a salt-containing diet for another 7 days (10 g salt per ewe per day), G3 received Multi Vitamins (twofold injection of multi vitamins every 7 days ( 5 cm<sup>3</sup> for ewes and 10 cm<sup>3</sup> for rams), and G4 received one injection of GnRH (1 ml Receptal). All ewes and rams were fed 500g/ head/day concentrate pelleted mixture (14% crude protein) increased gradually to one kg during the flushing period (two weeks before start of breeding season and continued for two more weeks during the early stage of breeding season). Rice straw was provided. The experiment designed according to the complete randomized design (CRD). The results showed that the best effect for flushing was for G1 (control), where litter size , number of lambs weaned per ewe (at 8 wks.) and total daily gain (from birth to weaning) obtained were 1.66, 1.55 and 0.134 kg followed by G4 (hormone treated), 1.25, 1.25 and 0.130 kg, respectively ( $P < 0.05$ ) While, the lowest values were obtained with G2 (1.0, 1.0 and 0.120 kg) and G3 (1.0, 1.0 and 0.117 kg), respectively.. On the other hand, there were no significant differences in lambing rate, birth and weaning weights, kilograms of lambs born and weaned. It could conclude that use of normal diet for flushing succeed to improve fertility, without need to the tested treatments. Especially when considering the cost added of those treatments.

**Keywords: GnRH; Litter size; total daily gain; Non-hormonal method.**