Abstract

The objectives of this study is to evaluate the effect of the hormonal treatments on estrus synchronization and induction.

This practice was conducted to reduce the time, effort, cost, and organizing the work in the farms, and for increasing, elevating the out puts.

This study was conducted in Al Nahla farm at soba`s agricultural area. Two experiments were conducted, a total of 44 kabbashi ewes randomly selected were used. In the first experiment 24 open dry ewes were used, aged between 1.5-2 years, with average body weight 49 kg.

In the second experiment 20 postpartum ewes (14 days post-Partum) were used, aged between 3-4 years, with average body weight 57 kg. Four healthy rams aged 2 years, with average body weight between 75-100 kg were used.

In the first experiment, ewes were divided into three equal Groups as follow:-

1\ Group one (T_1): Treated with impregnated intravaginal progesterone (60 mg) sponges (MAP), for 14 days. At the time of

sponge removal, the ewes were injected (I.M) with 500 I.U(PMSG)

2 \ Group two (T_2): Treated with intravaginal sponges for 14 days. At the time of sponge removal the ewes were injected (I.M) with 100 mic (GnRH)

3 \ Group three (C): was considered as a control group, with no hormonal treatment.

Heat symptoms was detected 24hrs after sponges removal by introducing aproned rams.

All ewes in group one and two were artificially inseminated. Ewes were firstly inseminated, 72hrs after sponge removal. The Second insemination was done at 96hrs after sponge removal.

Results showed that the percent of estrus synchronization was (100%) in group one and two. Estrus signs were displayed during 72hrs after the end of the hormonal treatment. Differences were Significant ($p<0.001$) compared to the control group.

Lambing rate was 100%, 87.5%, 50% in group T_1, T_2, C, respectively. With a significant differences ($p<0.05$) between the three groups.

Twinning rate was higher in group T_2 (75%), then group T_1 (29%)

compared to group C (25%). With significant differences ($p<0.05$) between group (T_2) compared to group (T_1), (C). But there was no significance between group (T_1) compared to group (C). Litter size were 1.3, 1.8, 1.2 in group T_1, T_2, C respectively.

In the second experiment, ewes were divided into two equal groups. Group (T) was treated with impregnated intravaginal progesterone sponges for 14 days. At the day of sponges removal, ewes were injected (I.M) with 500 I.U (PMSG).Group (C) was considered as a control group.

Results showed that all ewes in the treated group (T) were respond by Showing estrus signs, and the percent of estrus induction was 100% .The estrus signs were displayed during 72hrs after sponges Removal.There were significant differences ($p<0.001$) between group (T) and group (C).

Concerning the lambing rate there was a significant increase In the treated group T (100%) compared to the control group C (20%).

Twinning rate was (60%) and (0%) in treated group T, control group C respectively.

Litter size was significantly ($p<0.001$) higher (1.6) in T group Compared to group C (1.0).

In conclusion, hormonal treatments reflected their effectiveness in Synchronization and induction of estrus and increased twinnig rates.

Control of breeding is a good Practical method for regulation of production systems and upgrading programs.