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| University of Baghdad  |
| Veterinary Medicine  | College Name |
| Surgery and Obstetrics | Department |
| Fayyadh Elia Buni Redaa  | Full Name as written in Passport |
|  | e-mail |
|  **Professor**  |  **Assistant Professor** |  **Lecturer** |  **Assistant Lecturer**  | Career  |
|  PhD  |  Master  |  |
| **Study the effect of Glycyrrhiza glabra on reproductive** **of local Iraqi goat.**  | Thesis Title  |
| 14/1/2008 | Year |
| This study was carried out in the animal production field of the college of Veterinary medicine/Baghdad University , between 3-12-2007to 9-5-2008. The effect of licorice extract , on reproductive performance of 40 mature local Iraqi does were studied , ages and weights were between 2.5-7 years, 25- 45 Kg respectively , there were three mature and fertile bucks to notice does sexual behaviour. The study was included two stages :**The 1st stage** was aimed to evaluate the semen of bucks group , and fertility of does through detection the mean length of Oestrous cycle , Luteal phase and Oestrous phase of two respective oestrous cycle from 3–12–2007 to 31– 01–2008 , as well as for detection successful natural inseminated period of does . **The 2nd stage ( Experimental stage )** included four experiments for evaluation the effec of licorice extract on reproductive performance : **The 1st Experiment** was conducted on 25does divided in to 4 groups which were treated weekly for four successive weeks with 300 , 400 mg water solution of licorice / Kg B.W weekly, 57 mg powder licorice with food/ Kg B.W respectively with control group . Does were kept free for 4 hours daily (2hrs at Am and 2hrs at Pm) with apronized bucks to notice their sexual behaviour. Their weight and health were recorded, from 1 – 02 – 2008 to 28 – 02 – 2008.**The 2nd Experiment** was aimed to evaluate the affect of licorice extract on reproductive performance of pregnant does ( at late gestation ) . Five pregnant does were treated with 400mg water solution of licorice / Kg B.W. weekly for 2 weeks , and 10 pregnant does for control group from 25 – 1 – -+9202008 to 28 – 2 – 2008 . **The 3rd and 4th Experiment** was performed on 28 and 30 does in intervals from 1 to 27 March /2008 and from 7 April to 9 May / 2008 respectively. The does were divided into 10 groups , all groups except 2 controls were treated for synchronization using vaginal sponges impregnated with 40 mg MAP for 14days .The animals of the 3rd exp. were treated as follow . 300 mg, 400 mg water solution of licorice /Kg BW and 500 IU PMSG I/M before 48 hrs of sponges removal, while animals in the 4th group was treated with sponges only. The 4th exp. Groups were treated with 300 mg water solution of licorice before 48 hrs of sponges removal. And 300 mg / Kg licorice solution ,500 IU PMSG and 300 mg licorice / kg + 500 IU PMSG on day 14 , and were left with apronized bucks to notice their sexual behaviour for 3rd exp. does , and with free bucks to notice their sexual behaviour and ensure mating for 4th exp. does . **Exploratory laparotomies** were done for one doe of each group for 3rd exp. And two does of each group for 4th exp. As well to record the gross changes on ovaries and genitalia.  **Results showed:** Those mean lengths of oestrous cycle, luteal phase & Oestrous phase were 20.41 ± 1.00, 18.83 ± 0.97 days & 38.41 ± 1.29 hrs respectively in interval from **3rd** Des. /2007 to the **31st** January / 2008. The successful natural inseminated period for local Iraqi does started in the **1st** half of August and continued on till the **2nd** half of September and the climax was in the **1st** half of September / 2007 associated with the means of photoperiod and temperature degree 12.35 hrs and 32.2 c respectively .  The relationship effect of licorice extract on does reproduction performance , include the results were recorded 83.3% , 50% , 33.3% oestrous percentage for does treated with 400 mg , 300 mg water solution of licorice/ kg B.W. weekly and 57mg powder of licorice / kg B.W daily, compared to 28.5% for controls in the end of reproductive season in **1st** experiment . And the mean length periods of parturition stage ( 1st stage , 2nd stage, 3rd stage) of the late gestation does treated with 400mg licorice / kg B.W/ week ( two weeks ), was reduced to be 0.68 ± 0.09 hrs, 0.87 ± 0.16 hrs and 25± 3.60min respectively , compared to 2.18± 0.16 hrs , 1.47 ± 0.22 hrs and 40± 6.53min for controls in 2nd experiment . The results of 3rd experiment were recorded on Estrus induction , 50% for groups which had treated with 300 and 400mg licorice / kg B.W and 60% for 500 IU PMSG , before 48 hrs of sponges removal , compared to 0 % control , with 4 , 1 , 1 prolificacy of 1st three groups , outside of reproduction season . while no effect of 300mg licorice / kg B.W at the time on day of sponges removal , and estrus percentage was 66.6 % with high active ovaries had been shown grossly and high ovulation rate in group treated with licorice + PMSG outside reproductive season. |  Abstract  |