



## MINISTRY OF JAHAD-E-AGRICULTURE

Agricultural Research, Education and Extension Organization  
Chaharmahal and Bakhtiari Agricultural and Natural Resources  
Research and Education Center

### **Effect of weaning age on the productive and reproductive performance of Lori-Bakhtiari ewes and lambs growth traits**

**Research worker: Mohsen Bagheri**

#### **Abstract**

The effects of time of weaning on subsequent productive and reproductive performance of ewes and the growth of lambs were evaluated in Lori-Bakhtiari sheep. Lactating ewes (aged between 2 and 5 years; n=103) were weaned early (ET1: 60 days postpartum on average; n=34), weaned as in traditional sheep rearing (ET2: 90 Days postpartum on average; n=34) or weaned late (ET3: 120 days postpartum on average; n=35). Immediately after weaning, 10 male lambs of each weaned group (early, normal or late weaning) were randomly selected and transferred to fattening period as treatments LT1, LT2, and LT3. Other lambs (male and female) were kept continuously with their mothers until 6 months old, without accessing to their dam's udder. The fattening period lasted until 2 months following the separation of the late weaned lambs from their dams. Rams were introduced at 60 days postpartum and were remained with ewes for 3 months. Ewes that became pregnant remained in the trial. Again, rams introduced to ewes at the breeding season and remained with ewes for 6 months. The proportion of ewes that exhibit estrus, the interval from lambing to first estrus and to conception, lambing interval, conception rate and number of lambs' birth per ewes exposed to the rams were recorded. Sequential weighing was performed for all Lambs at birth and 2, 3, 4, 5 and 6 months of age. All ewes weighed at breeding, right after parturition and 2, 3, 4 and 5 months after parturition. Body weight and body condition score of ewes at breeding, parturition and 2, 3, 4 and 5 months after the first parturition were similar for all treatments. The gain rate of ewes was higher for ET1 and ET2 in the first month after weaning than other months ( $p<0.05$ ). Percentage of estrus and conception rate after first parturition were significantly higher ( $p<0.05$ ) for ET1 ewes (52.8 and 38.2%, respectively) than ET2 (36.2 and 26.4%, respectively) and ET3 (37 and 25.7%, respectively). After first parturition, ewes in ET1 group returned to estrus and conception earlier (81.2 and 99.5 days, respectively) compared to ET2 (90.1 and 110.1 days, respectively) and ET3 (92.1 and 114.4 days, respectively) group ( $p<0.01$ ). Average of 3 lambing interval was lower ( $p<0.01$ ) for ET1 ewes (229.4 days) than ET2 (238.4 days) and ET3 (241.7). In the second parturition, the number of lambs born per ewe exposed to the ram was higher ( $p<0.05$ ) for ET1 ewes (0.41) than ET2 (0.29) and ET3 (0.28) ewes. In the same age, weight of fattening male lambs in each treatment was higher than non fattening male lambs in same or other

treatments ( $p < 0.01$ ) and weight of non fattening lambs were similar in all treatments. Again, in the same age, fattening male lambs in LT1 group was significantly higher than fattening male lambs in LT2 and LT3 groups ( $p < 0.05$ ). Average daily gain (ADG) from 2 to 6 months of age was higher ( $p < 0.01$ ) for LT1 fattening male lambs (242 gr/d) than LT3 fattening male lambs (212 gr/d) but, there were not significant differences between LT1 and LT2 (226 gr/d) and between LT2 and LT3 fattening male lambs for this trait. It was concluded that Lori-Bakhtiari lambs can be weaned at 60 days of age for accelerated lambing program. Weaning male lambs at 2 months of age and fattening to 6 months old had a positive effect on growth rate and final weight.

**Keywords:** Ewe, Performance, Early weaning, Reproduction