

# **Production performance and Some Non-Genetic Factors Affecting Litter Size Traits and Milk Yield in Awassi Ewes**

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## **SUMMARY**

This study is a part of ACSAD project of genetic improvement of Awassi sheep by selection. The main aims of this study is to explain some non-genetic factors affecting litter size at lambing and weaning age with milk production of Awassi ewes. Production records 2971 of Awassi ewes collecting during 2000-2005 from Al-slemia Awassi sheep station/ General Center of Sciences and Agricultural Research ( GCSAR ), to evaluate the performance of the ewes productivity and some non-genetic factors, production year, ewe production line ( milk or meat ), ewe age and type of birth, as well as, repeatability estimates of study traits. All non-genetic factors had significant effects (  $P < 0.01$  ) on litter size traits, number of lambs and weights at birth and weaning age, in addition to average daily gain and adjusted 90 days weight and milk yield, average daily milk yield and adjusted 105 days milk yield.

The obtain results indicated that most factors affected significantly (  $P < 0.01$  ) on most studied traits except type of birth on milk production traits. The mean of number of lambs born and weaned, with their weight increased with advanced years production, 6.860 to 7.393, 20.953 to 27.777kg., while adjusted lamb weight at 90 days was 27.972 to 38.077kg and average daily gain 0.234 to 0.343 kg/day. Repeatability of these traits were 0.63, 0.52, 0.66 and 0.48, respectively.

Ewe ages were significantly affected (  $P < 0.01$  ) on all traits and the mean of the most traits increased gradually to 4<sup>th</sup> year of age and decline after this age. Lamb weight at birth ranged 6.592-7.148, at weaning 21.521-22.710 kg., while the adjusted 90 days weight 28.92-30.89 kg. However, the average of the meat line production was higher 1.324, 7.120, 23.217, 0.267 and 31.233 kg. than milk line 1.169, 7.024, 22.897, 0.246 and 30.804 kg., respectively. Ewes of the twin birth gave higher value than singles.

The same trained was found with milk yield that increased with advanced years, 164.874 to 205.787, 1.160-1.751, 121.779 to 183.828 kg., and 139.041 to 154.867 days, for total milk yield, average daily milk, adjusted 105 days milk yield and lactation period, respectively. While, all mean value of the traits will increased to their maximum at 4<sup>th</sup> years of ages.