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CALLIPYGE-AWASSI GROWTH AND MEAT CHARACTERISTICS IN COMPARISON TO THE PURE AWASSI

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In order to improve meat quality and quantity, the Callipyge gene was introduced to the local Awassi sheep by importation of frozen semen (from Utah University (USA)) of the Rambouillet sheep that carry the Callipyge gene (homozygous). After obtaining the first generation, nine ram lambs (4 from CA-AW (50% Awassi and 50% Callipyge) and 5 from AW (pure Awassi) were subjected to fattening trial for 90 days (post weaning) in an individual pins using standard ration, then the ram lambs were slaughtered for meat characteristics measurements. No difference was observed in initial body weight, while final weight ($P<0.009$), total gain ($P<0.009$), average daily gain ($P<0.009$) and feed efficiency ($P<0.01$) were significantly higher for CA-AW than for AW. Weights of hot carcass ($P=0.02$), cold carcass ($P=0.02$), shoulder ($P=0.01$), leg ($P=0.006$), rack ($P=0.007$) and loin ($P=0.002$) were significantly higher in CA-AW than in AW while fat tail weight ($P<0.0001$) was greater in AW than in CA-AW, whereas there was no significant difference ($P=0.18$) in dressing percentage between genetic groups. Non carcass components show that CA-AW was significantly higher in Mesenteric fat, Lungs and trachea, Heart, Liver , and Kidney fat weights than in AW, while there was no significant difference in spleen and kidney weights. Meat pH ($P < 0.02$) , color coordinates (L^* and a^*), and tenderness ($P < 0.0001$) were higher in AW than CA-AW, while there were no significant differences in the meat Cooking loss and water holding capacity (WHC). Longissimus weight ($P<0.0002$), eye muscle area ($P<0.0001$) and muscle weight ($P<0.0006$) were greater in CA-AW than AW. In conclusion a substantial effect of Callipyge gene on growth and meat characteristics was observed and can be used for improving the productivity of Awassi shee.

Keywords: Callipyge-awassi, characteristics, pure awassi

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