

THE EFFECTS OF CROSSBREEDING ROMANOV EWES WITH WILTSHIRE HORN RAMS ON EWE FERTILITY AND PROGENY PERFORMANCE

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Abstract. According to the current demands of domestic and international markets, meat-producing sheep breeding is considered as having the best future. Therefore, sheep breeders are apt to choose more meaty and less woolly breeds. Earlier very popular Romanov sheep do not satisfy the today's requirements of either breeders or customers. Although the ewes of this breed produce litters of 3 to 5 lambs at a time, but these lambs show low growth intensity and the dressing percentage accounts for only 40% after slaughter. Moreover, the sheep require from 2 to 3 shearings per year. Thus, it was not without a purpose that Romanov sheep were improved using woolless mutton Wiltshire Horn rams after their import to Lithuania in 2005.

The aim of our study was to determine the influence of Wiltshire Horn rams on the fertility of Romanov sheep, their progeny weight, meat percentage and wool length. Twelve Romanov ewes and two rams of Romanov and Wiltshire Horn breeds and their progeny (18 purebred and 14 crossbred) were used in the study. All the animals were allotted into two groups of six ewes and one ram each.

In April 2009, the ewes were mated and lambed in October. Ewe fertility was evaluated by the number of lambs born per litter. The lambs were weighed at day 1 and 7 months of age. Wool quality of lambs was assessed at one and seven months of age by measuring wool length to within 0.5 cm on the side. Lamb muscularity was determined visually on a 1 to 9 point scale by touching the back, shoulder blades and thighs of lambs at 7 months of age.

The mating of fur bearing Romanov sheep with a woolless mutton Wiltshire Horn ram had a positive effect on the weight, growth rate and meat percentage of crossbred lambs. Although the number of crossbred lambs born was by 26.50% lower, but they were by 1.04-1.25 kg heavier ($P<0.001$) and gained daily by 36.55-50.85 g more ($P<0.001$), and thus exceeded the purebreds by weight from 8.74 to 11.69 kg ($P<0.001$) and had 1.30-1.87 points higher muscularity than the purebred lambs. Crossbred lambs also inherited white wool colour of the Wiltshire Horn ram and low wool production. Until 7 months of age, the wool length of purebreds increased while the wool of crossbreds naturally moulted and did not require shearing.

Keywords: Romanov ewes, Wiltshire Horn, crossbreeding, fertility, growth rate, meat percentage, wool length.