ABSTRACT: The objective of the two year study at the New Mexico State University Corona Range and Livestock Research Center was to determine the efficacy of breeding Suffolk rams to Western whiteface ewes while under range conditions. Approximately 120 ewes in 2003 and 2004, respectively, were divided among four similar pastures. Pastures were randomly assigned to receive either Suffolk rams or Rambouillet rams. Three rams were assigned to each pasture for a 34 d breeding season. One week before expected lambing approximately half of the ewes from each pasture were randomly selected to be shed lambed in order to estimate lambs born per ewe and birth weight of lambs. Birth weights (d 0 is the onset of lambing) were collected from only the shed lambs and within 24 h of parturition ewes and lambs were returned to their respective pastures. Body weights at marking (ear tagging and docking; approx. d 55) and weaning (approx. d 150) were recorded and analyzed from the entire lamb crop. Birth weights were similar (P<0.05) between sire groups (measured only on the shed lambed lambs) for both years. Suffolk sired lambs were heavier at d 55 in 2003 and 2004 (P<0.10 and P<0.05, respectively). The crossbred lambs were also heavier at weaning (P<0.05) in 2004 but no difference was detected between breeds in 2003 (P>0.10). In both years, the increased weight gain of crossbreds compared to straightbreds occurred between birth and marking, and the weight advantage was maintained through weaning. No differences were detected in lamb survivability between sire groups in either year. In conclusion, sheep producers that decide to use Suffolk rams on western white face ewes can expect crossbred lambs to be 8.5 % heavier at weaning than straight bred lambs.

Keywords: sheep, Suffolk, western white face, crossbreeding