Canine attacks on newborn lambs are a problem for sheep farmers, causing substantial economic losses to the sheep industry. Anecdotal evidence indicates that alpacas reduce the losses caused by such attacks when placed within sheep flocks. A study was conducted at two sheep farms in rural NSW where experimental – ewes grazing with alpacas - and control – ewes grazing without alpacas – groups, with replication within and across farms were organised with a total of 6,483 breeding ewes.

Overall weaning percentages for each flock of sheep were tabulated at 14 weeks and evaluation of performance between groups was conducted using descriptive statistics. An inferential statistical Z test for pairs was conducted to find out the level of significance of the difference in performance between the experimental and control groups.

Combined weaning percentage for the control groups was 69.8% while the experimental groups showed a combined weaning percentage of 82.6%. Assuming equal mortality rate because of natural causes among the groups, it may be concluded that the presence of alpacas within the lambing paddocks increased lambing weaning percentage by 13% with $\alpha = 0.025$ (i.e. CL = 97.5%). It was also noted that lamb carcasses on the alpaca paddocks were not even predated by the foxes.