

Immune response and antibody persistence in goats following vaccination with contagious caprine pleuro-pneumonia F38 Biotype vaccine

Alexander Kipronoh

Kenya Agricultural and Livestock Research Organization Perkerra Research Center, Kenya

A post vaccination assessment of contagious caprine pleuro-pneumonia serum antibody persistence following vaccination with Caprivax® F38 Biotype vaccine was conducted at the Kenya Agricultural and Livestock Research Organization - Perkerra Research Center between the months of April, 2014 and March, 2015 to determine the effectiveness of the vaccination program in place. A total of 42 goats of different ages were recruited and put in a longitudinal study with two groups; the vaccine group and non-vaccine group considered as negative control. A baseline assessment of antibody titre was done prior to administration of treatments. Post vaccination serum sampling was conducted monthly and antibody titres assessed using monoclonal antibody based competitive Enzyme-linked immuno-sorbent assay. A significantly higher mean percentage inhibition titre of 71.8% was recorded in goats in the vaccine group compared to 58.6% in goats in the non-vaccine group ($p < 0.0001$). The magnitude of the difference in the mean percentage inhibition titre levels was large (eta squared = 0.847) indicating a large effect of vaccination in antibody titre levels and hence the effectiveness of using the Caprivax® vaccine. Mortalities were recorded in goats in young age category that received the vaccine for the first time in life, suggesting the need for a repeat vaccination to improve protection using this vaccine.