

Detection of *Peste des Petits Ruminants* (PPR) virus antibodies in sheep and goat populations of the North West Frontier Province (NWFP) of Pakistan by competitive ELISA (cELISA)

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Abstract

The present study was planned to carry out a seroprevalence study of PPR antibodies in North West Frontier Province (NWFP) including Federally Administered Tribal Areas (FATA), using competitive-ELISA (c-ELISA) kit. A total of 4548 serum samples collected from 26 locations of the NWFP including. Eight hundred twenty eight samples were found positive for PPR antibodies yielding an overall seroprevalence of 18.20 percent in the small ruminant population included in the study. 337 (24.90%) serum samples from sheep and 491 (15.36%) from goats were found positive in PPR c-ELISA yielding a marginal difference in seroprevalence of PPR. The current situation of PPR in Pakistan could be regarded as of low magnitude but constant threat. Incidence may increase to the alarming level due to uncontrolled/ free movement within and from across borders to the stocks of non-immunized susceptible population of sheep and goats in the country but production systems and economic realities constraint the effective animal movement control within and across the borders. Based on the limited reports of outbreaks and uneven distribution of occurrence over the years of past decade, the best available options are high level of prevention and objective surveillance. Keeping in view the high risk of PPR, control strategy should be adopted and further study needs to be undertaken to ascertain the extent of PPR virus circulating in the population of goats and sheep in the country. Under existing production and marketing system, sanitation and preventive vaccination are two practicable options for control of PPR in Pakistan. Homologous PPR vaccine is now available which is a freeze dried live vaccine derived from tissue culture from attenuated PPR virus. The vaccine is intended for sheep and goats and is required to be injected to all animals above the age of 3 month. The vaccine may be repeated after one year of the primary vaccination in high risk areas.

Keywords: *Peste des petits ruminants*, Competitive-ELISA, Virus, Seroprevalence, Sheep, Goat.