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Monitoring of Humoral Immune Response of Monovalent and Combined PPR and FMD Serotype 'O' Virus Vaccines in Goats

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Abstract : Comparative efficacy of three formulations (non-adjuvant, gel, and oil adjuvant) of monovalent and combined PPR and FMD virus vaccines was evaluated in goats. All kinds of monovalent PPRV vaccines elicited protective antibody titers at one-month post vaccination (PV) that remained so till six months PV. Monovalent non-adjuvant (NA) FMDV vaccine provoked non-protective antibody titers that declined to undetectable levels after three months. In case of combined vaccines, all of the formulations elicited protective antibody titers against PPRV in vaccinated animals which remained above that limit for six months. However, an exceptional immune response against FMDV was observed in combined NA vaccine group where antibody titers were extremely high and remained above protective level till 4 months PV in animals who received a single vaccine shot and till six months PV in booster group. Although, adjuvant or NA combined vaccines can induce protective antibody titers against both of the viruses within one month PV, but a booster vaccine shot is needed to retain protective antibody level for 6 months duration. Immune response elicited by combined vaccines is comparable or superior to the monovalent vaccines. Hence combined vaccine can be effectively used for the control and prevention of both of the diseases.

Keywords : antibody titer, protective, combined vaccine, non adjuvant
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