

**Complex scenario of Bovine herpesvirus 1 (BHV-1) vaccines**

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Among the viral diseases, IBR caused by Bovine herpesvirus 1 (BHV-1) occupies a key position as a disease causing major economic losses in the cattle industry globally. BHV-1 is a member of the genus Varicellovirus in the sub family Alphaherpesvirinae, belonging to the family Herpesviridae. BHV-1 is an enveloped virus with icosahedral nucleocapsid consisting of 162 capsomers encompassing double stranded DNA and surface glycoprotein as D & E can be used as vaccine candidate. BHV-1 is capable of establishing a latent state in ganglionic neurons after infection. Latency allows the virus to persist and the introduction of a latently infected carrier into a non-infected herd is the best way to spread the disease. Prevention & control programs are ongoing in several countries (OIE 2010). Different types of modern, recombinant and conventional vaccines are available for immunoprophylaxis. Inactivated vaccines are not as efficacious as modified live virus (MLV) vaccines, though both are available. Attenuated vaccines are administered intranasally or intramuscularly. Inactivated vaccines contain high levels of inactivated virus or glycoproteins supplemented with an adjuvant to stimulate an adequate immune response. Inactivated vaccines are given intramuscularly or subcutaneously. Marker vaccines allow the distinction between vaccinated and naturally infected animals. BoHV-1 glycoprotein E deleted mutant marker vaccines are now generally available (live or inactivated). Some of the vaccine virus strains have a temperature-sensitive phenotype which cannot replicate at 39 °C or higher temperatures. Vaccination against BoHV-1 is used to protect animals from the clinical disease and markedly reduce the subsequent shedding of field virus in cattle. Although vaccination may not prevent field virus infection of individual animals, spreading of wild-type virus in infected herds is efficiently reduced. Several European countries successfully implemented the IBR eradication program. Countries like Austria, Denmark, Finland, Sweden and Switzerland are now officially free of IBR. In this paper the vaccination scenario of BHV-1 will be addressed to plan and discuss the prevention of IBR and as an aid in control and eradication programs.

**Biography**

Sharad Kumar Yadav has 26 years of teaching and research experience and has served at various senior positions of the university including Registrar of the DUVASU University. He is currently a Professor, Head of Department of Veterinary Microbiology at DUVASU, Mathura, India. He has published number of papers in reputed international & national journals and has a vast experience in the arena of BHV-1 virus.

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