


## Equine Influenza Vaccine

<b>Title of technology</b>	<b>Updated Equine Influenza Vaccine.</b>
<p><b>Preamble</b></p> <p>Equine influenza - commonly known as 'Horse Flu' is a viral disease of horses caused by Equine Influenza virus (EIV) subtype H3N8. The disease resulted in heavy morbidity and led to huge economic loss. To control the disease, an inactivated aluminium hydroxide adjuvant vaccine was developed by NRCE consequent to 1987 outbreak using Ludhiana/87 isolate which belonged to pre-divergent lineage of the EIV isolates. After a gap of twenty years, huge outbreak of the disease was occurred during 2008-09 affecting 14 states of the country. The EIV isolates were belonged to the Clade 2 of Florida sub lineage of American lineage on the basis of sequence analysis of haemagglutinin (HA) gene. Subsequently, the old vaccine was updated by incorporating the EIV isolate - A/eq/Katra (Jammu)/06/08 (H3N8). The vaccine was made from the seed stock of EIV grown in bulk in 9-11 days old embryonated chicken eggs and the allantoic fluid was harvested, purified by ultracentrifugation and inactivated by formalin. The vaccine was tested as per the standard procedures laid down by OIE, European Pharmacopoeia and European Medicines Agency (EMA) and showed protective immune response against EIV.</p>	
<p><b>Salient features</b></p> <ul style="list-style-type: none"> <li>• Inactivated aluminium hydroxide adjuvanted vaccine for equine influenza (horse flu).</li> <li>• Indigenous equine influenza virus {A/eq/Katra-Jammu/06/08 (H3N8)} belonging to Clade 2 of Florida sublineage, a recommended OIE strain was used in the vaccine.</li> <li>• Vaccine is intended for immunization of horses, mules and donkeys.</li> <li>• Dosage: 1ml Intramuscular</li> <li>• Vaccination Schedule: First vaccination in animals above 6 months of age followed by a booster vaccine after 4-5 weeks and repeated annually or after monitoring the titres by Haemagglutination inhibition assay (HI titres below 64- repeat vaccine).</li> </ul>	
<p><b>Stakeholders</b></p> <ul style="list-style-type: none"> <li>• Vaccines manufacturers</li> <li>• State Animal Husbandry Departments</li> <li>• State Govt Veterinary Biologicals Production Units</li> <li>• Small Entrepreneurs</li> <li>• Equine farmers</li> <li>• Indigenous Horse Societies / Army/ Police Departments etc.,</li> </ul>	
<p><b>Economic benefits</b></p> <ul style="list-style-type: none"> <li>• This vaccine will help in controlling influenza in equines during exigency.</li> <li>• Increase in equine production and work efficiency.</li> <li>• Improvement in economy of the equine owners.</li> </ul>	
	<div style="background-color: #ffff00; padding: 10px; border: 1px solid black;"> <p style="text-align: center;"><b>EQUINE INFLUENZA VACCINE</b></p> <p style="text-align: center; font-size: small;">Virus strain used: A/eq/Katra-Jammu/06/08 (H3N8) Killed Virus</p> <p>Batch : Experimental <span style="float: right;">Dose: 1ml Intramuscularly</span></p> <p>Date of Manufacture: <span style="float: right;">Caution: Store at 4°C</span></p> <p>Date of Expiry:</p> </div> <div style="background-color: #003366; color: white; padding: 10px; border: 1px solid black;"> <p style="text-align: center; font-size: small;">Mfd. by :</p> <p style="text-align: center;"><b>National Research Centre On Equines</b></p> <p style="text-align: center; font-size: small;">Sirsa Road, Hisar-125 001, Haryana (India)</p> </div>