Infectious Bovine Rhinotracheitis (IBR)

Prelims: *Current events of national and international importance*

Why in news?

India's first indigenously developed vaccine against infectious bovine rhinotracheitis (IBR) was launched recently.

- IBR is a highly *contagious and infectious viral disease* that affects cattle of all ages.
- **Caused by** – Bovine Herpes Virus (BHV-1)
- It is *endemic in India*.
- **Characterized by –** Inflammation of the upper respiratory tract and disease of the reproductive tract.
- Clinical signs are influenced by the age of the animal, the dose of virus, route of infection and whether other agents are also present.
- **Transmission –** It spreads through direct contact between infected and susceptible animals, through air (aerosols), and via humans and contaminated equipment, water, or semen.
- **Symptoms –** Respiratory ones, conjunctivitis, occasional coughing, poor milk yield, lose their appetite, high fever (41-42°C) with purulent ocular and nasal discharges.
- **Mortality rate –** During an outbreak of IBR, the morbidity rate may be 100% but the mortality rate is generally less than 2%.
- **Diagnosis of IBR –** Serology (blood samples) or the real-time PCR method.
- **Treatment –** There is no specific treatment for the virus itself, but antibiotics can be used to manage secondary bacterial infections that often accompany IBR.
- **Control of IBR –** By Selective culling, Systematic vaccination against the target species, Biosecurity, and Monitoring.
- **Vaccination –** Modified-live and inactivated vaccines are available and are a key part of IBR control programs.

  So far, In India there is no specific vaccine and treatment available against this disease.

- **Impacts –** Infertility, abortions and lower milk productivity which leads to economic loss in the cattle industry.

Quick Fact

Raksha-IBR Vaccine

• **Developed by –** Indian Immunologicals Limited (IIL)
• **Launched -** In collaboration with National Dairy Development Board
• **Treats –** Infectious bovine rhinotracheitis (IBR) in cattle
• *1st indigenously developed* glycoprotein E (gE) deleted DIVA (Differentiating Infected from Vaccinated Animals) marker vaccine.

References

1. The Hindu | India's first gE deleted DIVA marker vaccine
2. MSD Animal Health | Infectious bovine rhinotracheitis (IBR)

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