This project is financed by the European Union

Rift Valley Fever Virus is a Phlebovirus

**CYCLE OF RIFT VALLEY FEVER VIRUS**

**LEAST FREQUENT MODE OF TRANSMISSION**

- Mosquito bite
- Mosquito-animal-mosquito amplification cycle

**VERTICAL TRANSMISSION**
- Egg hatching during heavy precipitation

**RESERVOIR HYPOTHESIS:**
- Wild herbivores

**MOST FREQUENT MODE OF TRANSMISSION**
- Contact with blood and other bodily fluids of infected animals
  - An elevated risk during:
    - Slaughter
    - Animal birth
    - Veterinary interventions
    - Foetus and/or carcass removal

**NO INTER-HUMAN TRANSMISSION**

- Mosquito bite
- Mosquito-animal-mosquito amplification cycle

**CONTACT**
- Infected mosquito bites

**Amplifying host**
- Livestock

**Amplifying host**
- Infected Mosquito Eggs

**MOSQUITOS (Multiple species)**
- Amplifying vector

**INFECTED MOSQUITO EGGS**

**RESERVOIR:**
- Wild herbivores

**Egg hatching during heavy precipitation**

**MOSQUITO BITES**
- Mosquito-animal-mosquito amplification cycle

**CONTACT**
- Infected mosquito bites

**Amplifying host**
- Livestock
RIFT VALLEY FEVER (RVF) DISEASE is a zoonosis caused by a phlebovirus that primarily affects animals but can also cause human infections. SYMPTOMS IN BOTH ANIMALS AND HUMANS can be severe. In areas at risk, livestock vaccination is an effective means of combating this illness.

UNDERSTANDING THE VIRUS CYCLE OF RIFT VALLEY FEVER

**CONCERNED SPECIES**

<table>
<thead>
<tr>
<th>High susceptibility</th>
<th>Moderate susceptibility</th>
<th>Low susceptibility (inapparent infection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lambs, young goats, puppies, kittens, mice</td>
<td>Calves, sheep</td>
<td>Camels, horses, pigs, dogs, cats, rabbits</td>
</tr>
</tbody>
</table>

**RESERVOIR**

Hypothesis of wild herbivores.

**VECTORS**

Multiple species of mosquito, particularly the Aedes, Culex and Anopheles types can carry the virus.

**MODES OF TRANSMISSION**

- Animal to animal transmission occurs through:
  - Bites from infected mosquitoes.
  - Direct animal-animal contact with bodily fluids, particularly contaminated blood (during abortions, licking, or simple contact).
- Human transmission occurs through:
  - Direct contact with the blood or organs of infected animals.
  - Consumption of raw or undercooked meat and/or unpasteurized dairy products.
  - There is no evidence of human to human transmission.

**ENVIRONMENTAL FACTORS**

Close correlation between RVF and periods favouring mosquito population growth like heavy rainfall and unseasonably warm temperatures related to the El Niño phenomenon.

CLINICAL SIGNS

~100% abortion rate in pregnant sheep.

~100% mortality rate of lambs and young goats less than 8 days old.

**WARNING SIGNS in animals**

- **High mortality** without other clear symptoms among very young animals.
- **Large-scale abortion**, which can reach up to 100%.
- **High fever** (> 42° C) accompanied by other signs: anorexia, jaundice, foul and watery diarrhoea, bloody and mucus-filled nasal discharge in animals over two weeks old.

**PEOPLE AT RISK**

People involved in raising animals, including agricultural workers, slaughterhouse staff, and veterinarians are often among the most at risk.

**PRINCIPAL SYMPTOMS in humans**

- **Incubation period**: 2 to 6 days.
- **Flu-like symptoms** with sudden on-set fever, headaches, muscle pain, and joint pain.
- **In certain severe forms of the disease** (< 5% of cases), symptoms can also include bloody vomiting, a decrease in or loss of vision, and neurological complications.
- **Duration of symptoms**: 4 to 7 days.

WHAT SHOULD YOU DO WHEN YOU SUSPECT A CASE IN LIVESTOCK?

1. **ENSURE** GOOD COORDINATION between Wildlife Services, Veterinary Services and Public Health Services.
2. **ADHERE TO GOOD PRACTICES** for personal protection (gloves, protective clothing), especially when visiting slaughterhouses and delivering veterinary services.
3. **COLLECT** samples, if possible, and send them to the national veterinary laboratory or a reference laboratory.
4. **BURY THE CARCASS** sufficiently deep between two layers of quicklime or burn it as described in Article 4.12.6 of the OIE Terrestrial Code.
5. **NOTIFY** THE OIE BY E-MAIL OR FAX OR THROUGH WAHIS of every confirmed case of an OIE-listed disease (like RVF) as per Article 1.1.3 of the OIE Terrestrial Code.

WHAT MESSAGES SHOULD YOUR SHARE WITH AT-RISK COMMUNITIES?

1. **WEAR** light coloured, long clothing.
2. **APPLY INSECT REPELLENT**, if available, on all exposed skin, as well as on livestock.
3. **USE MOSQUITO NETS** treated with insecticide.
4. **PROTECT YOUR HANDS AND ANY EXPOSED SKIN** when handling sick or dead livestock.
5. **QUICKLY ALERT VETERINARY SERVICES** about unexplained animal abortions and/or deaths.
6. **AVOID** stagnant puddles of water in and around homes.

**RIFT VALLEY FEVER ABORTION RATE IN PREGNANT SHEEP.**

~100%

**MORTALITY RATE OF LAMBS AND YOUNG GOATS LESS THAN 8 DAYS OLD.**

~100%