TRANSBOUNDARY ANIMAL DISEASE (TADs) CONTROL

Good Emergency management Practice

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Presentation outline

• Introduction
• Transboundary animal diseases
• Cycle of good emergency management practice (GEMP)
INTRODUCTION

• Livestock constitute an important natural resource for the Southern African Region, with over 60% of the region’s total land area suitable for livestock farming, contributing significantly to Food Security across the Southern African Development Community (SADC) region.
INTRODUCTION

• The farm animal resources of SADC are rich and immensely diverse, with livestock populations in SADC estimated at 64 million cattle, 39 million sheep, 38 million goats, 7 million pigs, 1 million horses and 380 million poultry.

• These farm animals are a source of food, skins, fertiliser, traction power, medicine and other raw materials for the population of the region.
INTRODUCTION

- Although **Livestock Production** offers the SADC region an opportunity for accelerated economic growth, low productivity, **lack of efficient and effective animal disease control**, lack of marketing infrastructure, poor market access of livestock products, together with lack of availability of information, and other associated factors hinder the region from achieving its goal of being self sufficient in livestock products
Transboundary animal diseases are highly contagious epidemic diseases that can spread extremely rapidly, irrespective of national borders. They cause high rates of death and disease in animals, thereby having serious socio-economic and sometimes public health consequences while constituting a constant threat to the livelihoods of livestock farmers.
EXAMPLES OF TADs

- FMD
- HPAI
- AFRICAN SWINE FEVER
- PPR (sero-surveillance done)
- RINDERPEST
- CBPP
- RIFT VALLEY FEVER
CYCLE OF GOOD EMERGENCY MANAGEMENT
PLANNING AND TADs  CONTROL

• Prepare

• Prevent

• Detect

• Respond

• Recover
PREPARE

• Structures
• Emergency Preparedness Plan
• Risk analysis
Structures

- Gold command – *National animal disease emergency planning committee led by head of government, ministers and head of animal health*
- Silver command – *National disease control centre headed by head of animal health and senior government veterinarians*
- Bronze command – *Local disease control centres headed by senior government veterinarian in province or region.*
Emergency preparedness plan

• A high level document that includes plans for all the activities required to prepare for the occurrence of one or more diseases.
Risk analysis

• Hazard identification
• Risk assessment
• Risk management
• Risk communication
Hazard identification

• Main threats are identified and described
• Done by constantly monitoring the international status and evolution of outbreaks of transboundary animal diseases.
• Monitoring of latest scientific literature
• Routine function of the epidemiological unit of the national veterinary services.
Risk assessment

• Risks of an event occurring and developing in particular ways are first identified and described.
• The likelihood of those risks occurring is estimated.
• The potential consequences of the risks if they occur are also evaluated.
Risk management

• Involves identifying, documenting and implementing measures to reduce identified risks and their consequences.
• Aims at adopting procedures that will reduce the level of risk to what is deemed to be an acceptable level.
Risk communication

• The process of exchanging information and opinions on risk between risk analysts and stakeholders.

• Stakeholders would include everyone from farmers to politicians.

• Ensures that risk management strategies address stakeholder concerns.
## Practical interpretation of qualitative probability ratings

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning of probability of event occurrence</th>
<th>Meaning of consequence</th>
<th>Meaning of risk estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negligible</td>
<td>Probability of occurrence of the event is possible only in exceptional circumstances</td>
<td>Low or no impact</td>
<td>Allow import without restrictions</td>
</tr>
<tr>
<td>Low</td>
<td>Occurrence of an event is a possibility in some cases</td>
<td>Minor impact</td>
<td>Authorise with specific measures to reduce the risk</td>
</tr>
<tr>
<td>Moderate</td>
<td>Occurrence of event is a possibility</td>
<td>Average impact</td>
<td>Provide assessment of mitigation options before authorising</td>
</tr>
<tr>
<td>High</td>
<td>Occurrence of event is clearly a possibility</td>
<td>Serious impact</td>
<td>Prohibited until measures to reduce the risk have proven their efficiency</td>
</tr>
</tbody>
</table>
PREVENT

• Import quarantine policy.
• International border security
• Quarantine at international airports, seaports and border posts.
• Cross-border and regional cooperation
• On-farm disease biosecurity(*segregation, cleansing, disinfection*)
DETECT

• Surveillance: Passive Vs Active.
• Interface between field veterinary services and livestock farmers/traders
• Training veterinarians and other animal health staff.
• Field diagnostic manuals
• Emergency disease reporting (TADs notifiable)
• Standard operating procedures for investigating suspect cases
• Specialist diagnostic team (include veterinary pathologist, epidemiologist)
DETECT

• Laboratory diagnostic capabilities (*detection of presence of organism for definitive diagnosis*)

• Confirmation of a suspect report (*criteria for confirmation – clinical, post-mortem, epidemiological, laboratory tests. FMD Vs HPAI*)

• Submission of samples from initial events to regional and world reference laboratories.
RESPOND

• THREE PILLARS OF INFECTIOUS DISEASE CONTROL
  1. Find it fast – Surveillance
     Public awareness
  2. Eliminate it quickly – Culling and disposal
     Cleansing and disinfection
     Compensation
  3. Stop the spread - Biosecurity
     Movement restrictions
     Public awareness
     Vaccination
RESPOND

• ASSESSING THE SIZE OF THE INITIAL OUTBREAK (wide spread – culling not recommended. Movement controls and vaccination appropriate)

• MOVEMENT RESTRICTIONS (disease spread due to movement of live animals and products)

• CULLING AND DISPOSAL (most effective when it can be carried out in the first few days of outbreak – with compensation)

• BIOSECURITY (segregation, cleansing and disinfection)

• VACCINATION (differentiation of immune response produced by vaccine from field virus)
RESPOND - Contingency plan

• They are sets of well-structured and clearly-stated documents that describe policies, strategies, and procedures for effective disease-control response to one or more high threat diseases.

• Contingency plans are usually prepared for specific high threat diseases (e.g. FMD or HPAI contingency plan)
RECOVER

• VERIFICATION OF FREEDOM (provides objective proof to other countries that the country has regained freedom from the disease)
• RESTOCKING (Cash Vs Livestock, Cleansing and disinfection of premises)
• STAYING FREE (Review of how response progressed – How disease entered country, improving surveillance and early warning, revision of contingency plans and operational manuals, strengthening public extension/education programmes)