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WOAH Reference Laboratory
for Contagious Bovine
Pleuropneumonia

Reference Centre



World Organisation
for Animal Health
Founded as OIE

REMOTE VETERINARY ASSISTANCE

CBPP WOAH Expert

Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise

«G. Caporale», Teramo, Italy

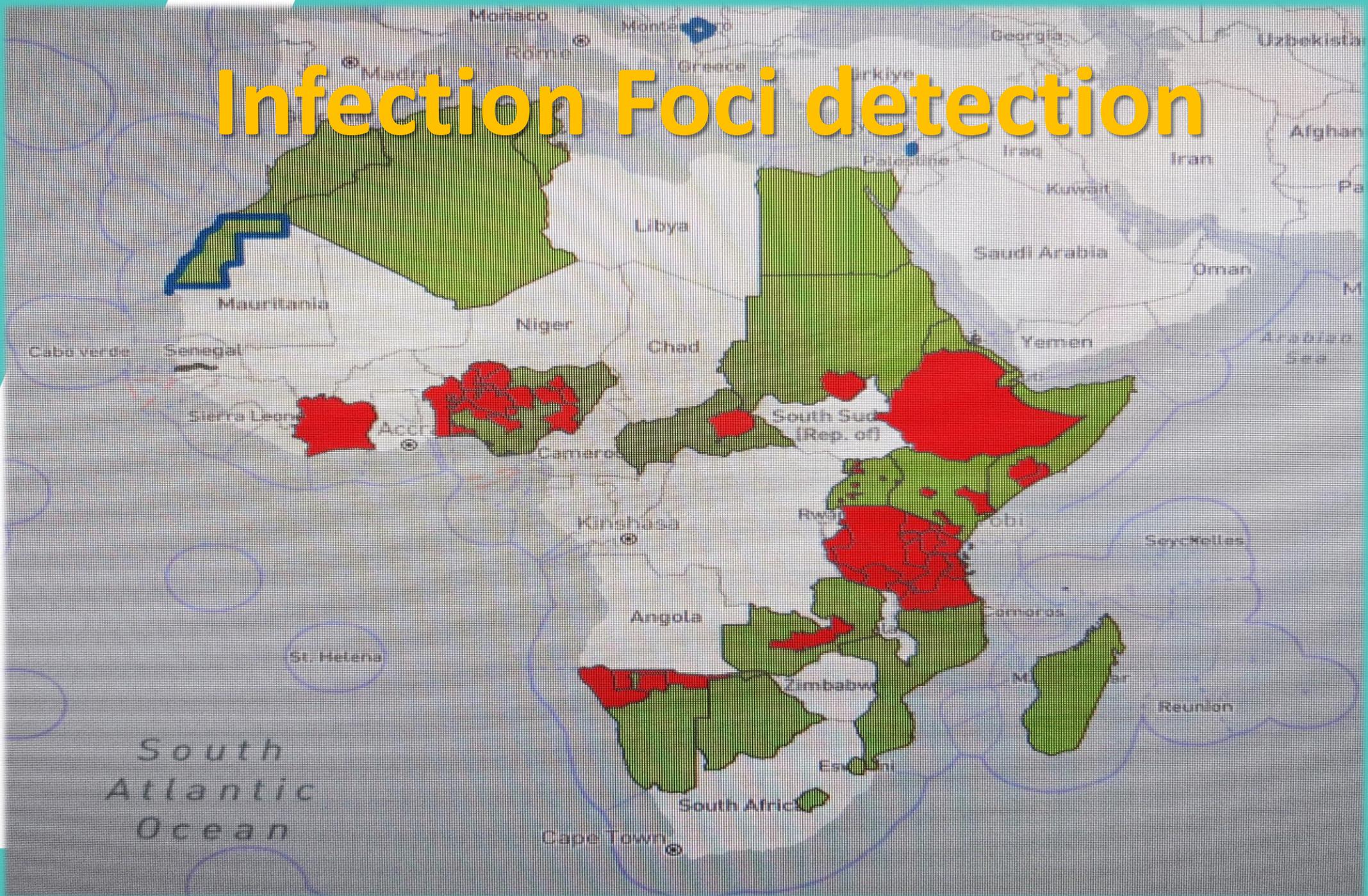
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Infection Foci detection



Context

AU-IBAR emphasises CBPP control policy
concerning active surveillance and
information gathering for the
early detection of CBPP foci of infection

Challenges

- Low resources
- Limited personnel
- Political/military instability

Pastoral Constraints

- Remote territories
- Transhumance, mobility and Vet assistance
- Cross-border settlements

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Events based surveillance of CBPP: Innovative Technologies



Event-Based Surveillance

- Pathological lesions -based suspicion:
 - Abattoir *post-mortem* inspection
 - Field necropsy observations

Stakeholders

- Official & private vets
- Technicians
- Meat inspectors
- Local leaders, farmers & NGOs

Why Remote Assistance

- Telediagnosis to support field workers
- International expert support

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WHAT IS VETERINARY TELEMEDICINE?

Definition

- Veterinary telemedicine-Remote technical assistance (VT/RTA): services via Information and Communication Technologies (ICT)
- When vet & animals are not co-located

Purpose

- Telemedicine services are assimilated to any veterinary diagnostic/therapeutic service.
- Telemedicine services complement the veterinary examination to improve its effectiveness, efficiency, appropriateness and standardisation

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Purpose

VT/RVA is to provide and improve veterinary services in areas where distance, social and political instability and the incidence of disastrous natural events do not allow constant physical contact with Farmers, Veterinarians/Technicians and Experts

Current Practice

Already happening:

- Mobile calls, email, messaging apps
- Needs standardisation

Uses

- Prevention & diagnosis
- Outbreak management and report to be sent to the central level
- Expert, veterinarians, technicians, farmers, leaders and local communities networking

Tools

- Mobile platforms
- Dedicated mobile Apps
- Standard *post mortem* examination and image capture

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Expert Network

- Clinicians
- Diagnosticians
- Nutritionists
- Pathologists

Through digital and telecommunication technologies to share and comment data/photos deriving from disease outbreaks

Data Types

What data are we talking about?

- Clinical forms
- Necropsy forms
- Sampling collection for the lab
- Standardised lesion images

Data Types

- **Standardised images:** concerning clinical and pathological findings in sick animals, collected by mobile

Additional Data

- Audio/video
- GPS/geolocation
- Herd environment

Data Quality

- Standardised information transmitted
- Reliable archiving (photos, documents, etc.)

Training

Continuous professional training of
veterinarians, technicians, local communities,
traditional leaders and breeders

Principle

- VT/RVA is a practical tool
- Not a separate veterinary discipline

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***VETERINARY
TELEMEDICINE/
REMOTE VETERINARY
ASSISTANCE:
ONE EXAMPLE OF
MOBILE APP***

Mobile App Example

- Real-time photo & data upload
- Rapid expert feedback

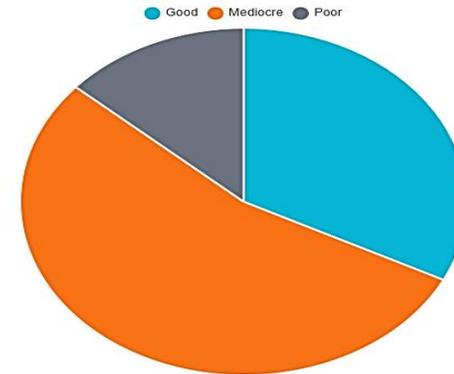
VETSYRIA

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- Pathologies
- Pathology Properties
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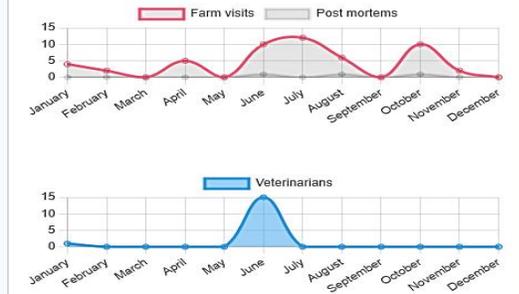
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Animal Body Score: Frequency of Ratings



Line Charts



Latest Cases

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- استشارة وتشخيص**
18/04/2025, 07:36

Cattle

بقرة اصيبت بالحمى القلاعية وتم تقديم العلاج وتحسنت ولكن بعد يومين انتكست بشده واستدعاني المري فكانت البقرة ضعيفه جدا وانتفاخ في الوداجي وذهاب العزم وتم...
- استشارة طبية**
14/04/2025, 21:00

Sheep

بثور جلدية تشكل طبقة بيضاء سميقة، التشخيص المناسب، والعلاج الأفضل من فضلكم.
- استشارة**
09/04/2025, 23:57

Cattle

بقرة مضى على ولادتها 7 اشهر ولم تدخل بدورة شبق بعد الولادة ابدأ تم فحصها وفحص المايض فتبين وجود جسم اصفر اعطيت بروتستانتين اسم فيتامين...
- استشارة**
09/04/2025, 15:08

Cattle

بقرة مضى على ولادتها 20 يومشهيه ضعيفه وحراره 40.5 بول مدمم يشبه القهوة او الشاي العامدم منحل يشبه القهوهتم تشخيصها على انها بيله هيموغلوبينه ونقص الفوسفورتم...
- استشارة**
08/04/2025, 20:21

Cattle

حراره 40.5عرجتسلخات بالفم والاضلافسيلان لعابي

Latest Articles

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- (Test Article) Marek's disease**
11/06/2024, 10:10

Chicken Marek's disease

Introduction Marek's disease is a highly contagious viral disease primarily affecting chickens, characterized by the formation of tumors and paralysis. The causative agent, Gallid alphaherpesvirus...
- (Test Article) Foot rot in sheep**
11/06/2024, 10:10

Sheep Foot rot

Introduction Foot rot is a highly contagious bacterial infection affecting the hooves of sheep, leading to lameness, significant discomfort, and economic losses in the sheep...

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Mobile App

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Cases

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|--|------------|-------------|---|---|---------|---------------|-------------------|-------------------|--|--|
| استشارة طبية | 00010FV/25 | Farm Visit | ⚠ Pending | 👁 Visible | | | 20/04/2025, 16:18 | 14/04/2025, 21:00 | | |
| استشارة | 00007FV/25 | Farm Visit | ⚠ Pending | 👁 Visible | | | 18/04/2025, 07:41 | 08/04/2025, 20:21 | | |
| استشارة وتشخيص | 00011FV/25 | Farm Visit | ⚠ Pending | 👁 Visible | | | 18/04/2025, 07:37 | 18/04/2025, 07:36 | | |
| استشارة | 00008FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 12/04/2025, 09:21 | 09/04/2025, 15:08 | | |
| استشارة | 00009FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 12/04/2025, 09:18 | 09/04/2025, 23:57 | | |
| استشارة | 00004FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 05/02/2025, 11:27 | 31/01/2025, 14:35 | | |
| استشارة حالة مرضية | 00006FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 05/02/2025, 11:25 | 02/02/2025, 21:36 | | |
| استشارة حالة مرضية | 00005FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 05/02/2025, 11:12 | 02/02/2025, 21:12 | | |
| طلب استشارة | 00002FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 30/01/2025, 11:52 | 10/01/2025, 19:29 | | |
| مشاركة الحالة مع الاطباء البيطرين | 00003FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 30/01/2025, 11:50 | 14/01/2025, 17:50 | | |
| Request a consultation from an experienced veterinarian | 00001FV/25 | Farm Visit | 🔄 In progress | 👁 Visible | | | 17/01/2025, 14:44 | 09/01/2025, 18:20 | | |
| استشارة | 00038FV/24 | Farm Visit | 🔄 In progress | 👁 Visible | | | 28/11/2024, 11:35 | 27/11/2024, 12:55 | | |
| تشخيص وعلاج | 00037FV/24 | Farm Visit | 🔄 In progress | 👁 Visible | | | 24/11/2024, 14:38 | 18/11/2024, 13:31 | | |
| استشارة | 00034FV/24 | Farm Visit | 🔄 In progress | 👁 Visible | | | 28/10/2024, 16:37 | 15/10/2024, 12:18 | | |
| الاستشارة والاستفادة من خبره الدكتور والاح الكبير ماسيمو | 00036FV/24 | Farm Visit | 🔄 In progress | 👁 Visible | | | 28/10/2024, 16:30 | 24/10/2024, 16:04 | | |
| مشاركة حالة عجول | 00031FV/24 | Farm Visit | 🔄 In progress | 👁 Visible | | | 28/10/2024, 16:20 | 09/10/2024, 12:44 | | |
| Request for medical consultation from scientific and field experience | 00033FV/24 | Farm Visit | 🔒 Closed | 👁 Visible | | | 27/10/2024, 07:42 | 10/10/2024, 08:46 | | |
| Request medical advice from those with scientific and field experience | 00035FV/24 | Farm Visit | 🔄 In progress | 👁 Visible | | | 21/10/2024, 16:00 | 18/10/2024, 19:32 | | |
| استشارة حول علاج التهاب قناة فالوب عند الأبقار | 00032FV/24 | Farm Visit | 🔄 In progress | 👁 Visible | | | 11/10/2024, 17:10 | 09/10/2024, 13:30 | | |
| Pulmonary fibrosis | 00001PM/24 | Post Mortem | ⚠ Pending | 🚫 Hidden | | | 10/10/2024, 08:34 | 01/08/2024, 17:14 | | |

<< < 1 2 3 > >> 20 ⌵

Mobile App

Latest Cases

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Request veterinary consultation

19/06/2024, 15:04

 Sheep

.Dear veterinary experts.A herd of sheep numbering 100 heads.The injured 25 heads.Skin symptoms that start small and expand, and the skin becomes hard and thick.I...

The milk curdles

19/06/2024, 12:31

 Goat

Dear Veterinary ExpertsGreetingsI would like to consult you on a medical caseA goat has a normal temperature and appetite, the color of the milk is...

My fellow doctors, male and female veterinarians, I would like to obtain your professional and field expertise in the case of persistent estrus in a...

Seeking advice about a case of an acute diarrhea in a young calf

18/06/2024, 10:46

 Cattle

Dear veterinary experts, I am asking about the possibility of controlling a case of severe diarrhea in a three-month-old calf. The diarrhea is yellow

Request veterinary advice about a complex case

17/06/2024, 17:04

 Sheep

Hello, my fellow doctors, male and female veterinarians. I am asking for your help in a case that affects young sheep between the ages of...

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Marek's disease

11/06/2024, 10:10

 Chicken  Marek's disease

Introduction Marek's disease is a highly contagious viral disease primarily affecting chickens, characterized by the formation of tumors and paralysis. The causative agent, Gallid alphaherpesvirus...

Foot rot in sheep

11/06/2024, 10:10

 Sheep  Foot rot

Introduction Foot rot is a highly contagious bacterial infection affecting the hooves of sheep, leading to lameness, significant discomfort, and economic losses in the sheep...

Mobile App

Request veterinary consultation



19/06/2024, 15:04



Original

English

Italian

Arabic

.Dear veterinary experts
 .A herd of sheep numbering 100 heads
 .The injured 25 heads
 .Skin symptoms that start small and expand, and the skin becomes hard and thick
 .I have injected her several times with ivermectin as well as infusions with external fluids
But it's no use

Type

Farm Visit

Farm Owner



Address



Visit date

2024-06-01

Visit number



[Redacted], 15:08

🔒

Original English Italian Arabic

Please Help



(1) أفات جلدية
80 KB



(3) أفات جلدية
73 KB

Status

Closed



Mobile App



Scacchia Massimo
m.scacchia@izs.it

+ Comment

SM

Scacchia Massimo [Redacted] 14:18

🔒

Original English Italian Arabic

Dear friend, I think it is Dermatophilosis caused by *Dermatophilus congolensis*.

Dermatophilosis is initially characterised by the presence of small corneous swellings on the epidermis, which, with the time, evolve into more or less confluent crusty formations consisting of epithelial cells and exudate that conglutinates the wool. Such crusts, often tenaciously

Training Modules

- Biosecurity
- Farm epidemiological data collection and notification
- Clinical visit and symptoms
- Necropsy - Pathological lesions and sampling

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Training Modules

- Therapy and AMR
- Sending material to the Veterinary Diagnostic Laboratory
- Organs photos and clinical symptoms videos, using mobile phone

Supporting Materials

- Necropsy technique photographic atlas
- Pathological lesions photographic atlas
- Standard forms
- Differential diagnosis database

Mobile App: Photos collection



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TECHNOLOGICAL NEEDS

TECHNOLOGICAL NEEDS

Field Vets and Technicians

- Mobile phones or tablets
- Telephone connection
- @mail, if possible
- Offices with electricity and Internet connection

Telemedicine/Tele-assistance Secretariat

- Internet connection

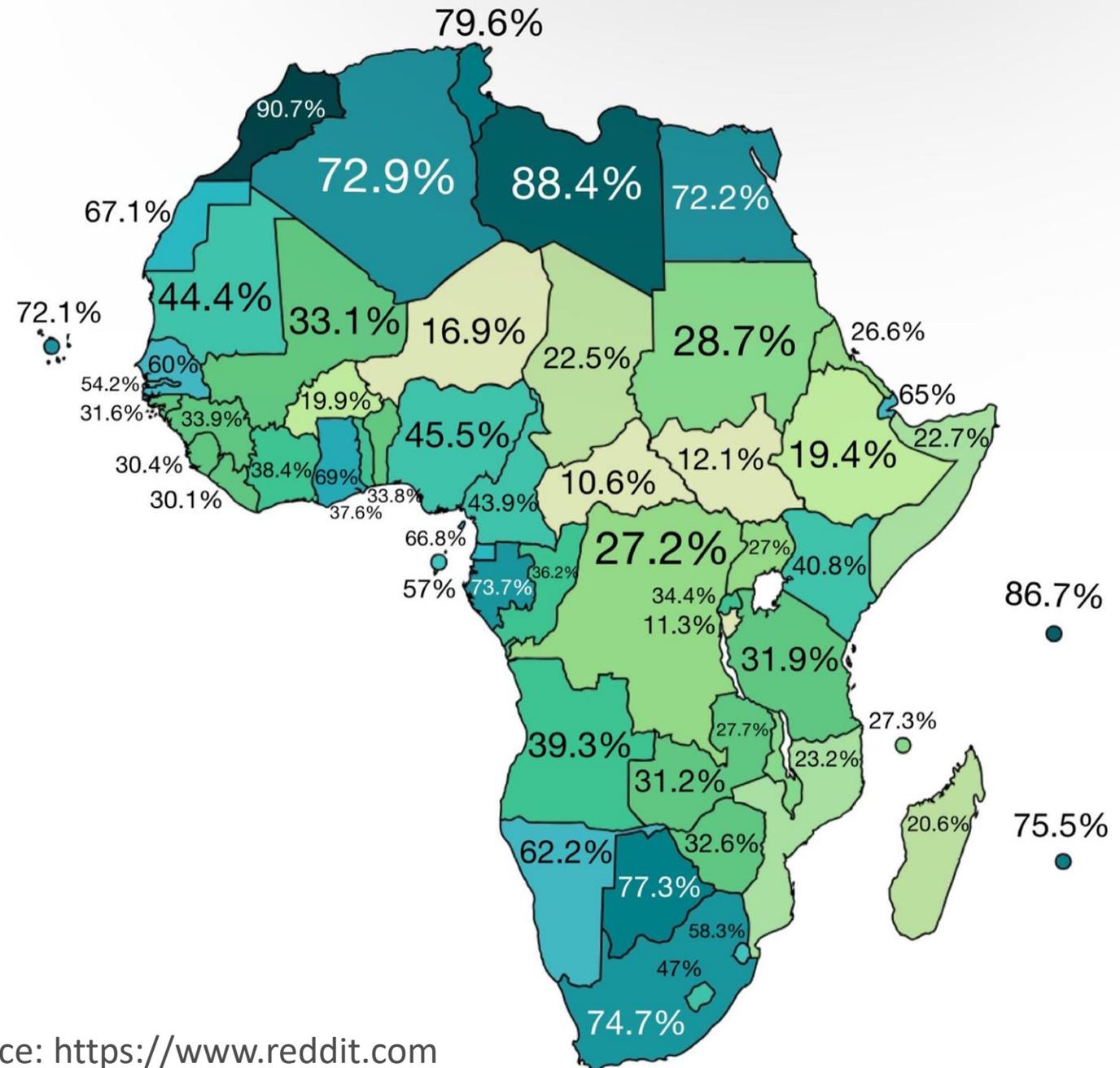
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Internet access in Africa March 2024



Source: <https://www.reddit.com>

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VETERINARY TELEMEDICINE: CBPP AND ANTIBIOTICS



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ANTIBIOTICS AND CBPP: TANZANIA STUDY

Antibiotics and CBPP: Tanzanian experience

- *Tylosin was the most commonly used antibiotic (84.87%), followed by Oxytetracycline (14.39%) and Enrofloxacin (0.89%).*
- *86.50% of respondents reported being aware of CBPP.*
- *10.25% did not seek professional veterinary advice.*
- *86.75% reported using antibiotics to treat CBPP.*

Antibiotics and CBPP: Tanzanian experience

- *34% of cattle keepers practiced self-treatment of their animals.*
- *20.98% did not complete the prescribed antibiotic dosage.*
- *28.06% did not comply with the withdrawal period.*
- *65.74% of respondents were not aware of antimicrobial resistance (AMR).*

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CGIAR

KENYA OUTBREAK INVESTIGATION: CBPP TREATMENT

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Kenya: Antibiotics and Other Treatments Used Across Farms

Antibiotics: PenStrep, Oxytetracycline (10%, 20%, 30%), Betamox, Tylosin Diaminazene diacetate

Other drugs: Dexamethasone, Metaphos (phosphorus + vitamin B12 supplement), Butaphos, Dewormers, Multivitamins,



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Kenya: Antibiotics and Other Treatments Used Across Farms

- The **overall herd mortality rate** due to CBPP was estimated at **30%**.
- CBPP results in **substantial economic losses** related to **drug expenses** and **animal deaths**.
- **Self-treatment practices** are common; in some cases, veterinarians administer only the **first injection** and **leave subsequent doses** to farmers.
- One ranch in **Laikipia** successfully used **Tulathromycin** to treat CBPP.



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***According WOAHA
PVS, use of
antibiotics is
OUT OF
VETERINARY
CONTROL
in a large number
of African
countries!!!!***



Source: Emile Singano, TVLA-Tanzania

Therapeutic Role

- **Antibiotic treatments must be administered under direct supervision of qualified Veterinarians or Animal Health Technicians to minimize residue risks and AMR development.**
- **When using VT/RVA systems, treatment can be conducted under the guidance of trained traditional or farmer leaders, formally instructed by Veterinary Services (VSs).**

Therapeutic Role

- **Therapy**
The VT/RVA system enables a veterinarian to **define the treatment plan** based on a **suspected diagnosis** and to **monitor the clinical response** following pharmacological therapy.

Therapeutic Role

- **Therapy**

The primary purpose of the service is to ensure that veterinarians **provide clear guidance** to farmers on **drug selection, dosage, treatment duration, drug storage,** and especially **withdrawal periods for milk and meat.**

Closing

- VT/RVA reinforces surveillance, diagnosis
- And responsible antimicrobial use

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Thank you!

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