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**A survey of Antimicrobial Resistance profile of
Mycoplasma mycoides mycoides isolates from
Southern Africa: a case study of Tanzania**

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OUTLINE

- Background
- The Current situation of CBPP in Tanzania
- Aim and Objectives
- Rationale
- Research question
- Methodology
- Field work
- Results
- Discussion
- Acknowledgment



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Background

- Causative agent-*Mycoplasma mycoides mycoides* (*Mmm*)
- Hosts-Bovine & Water buffalo
- Clinical signs



Background cont.....

- Control –Stamping out-financial status of Tanzania
- Prevention-Vaccination, T1/44
- Treatment of CBPP by antibiotics is a standardised practice in Africa, though it is contraindicated.



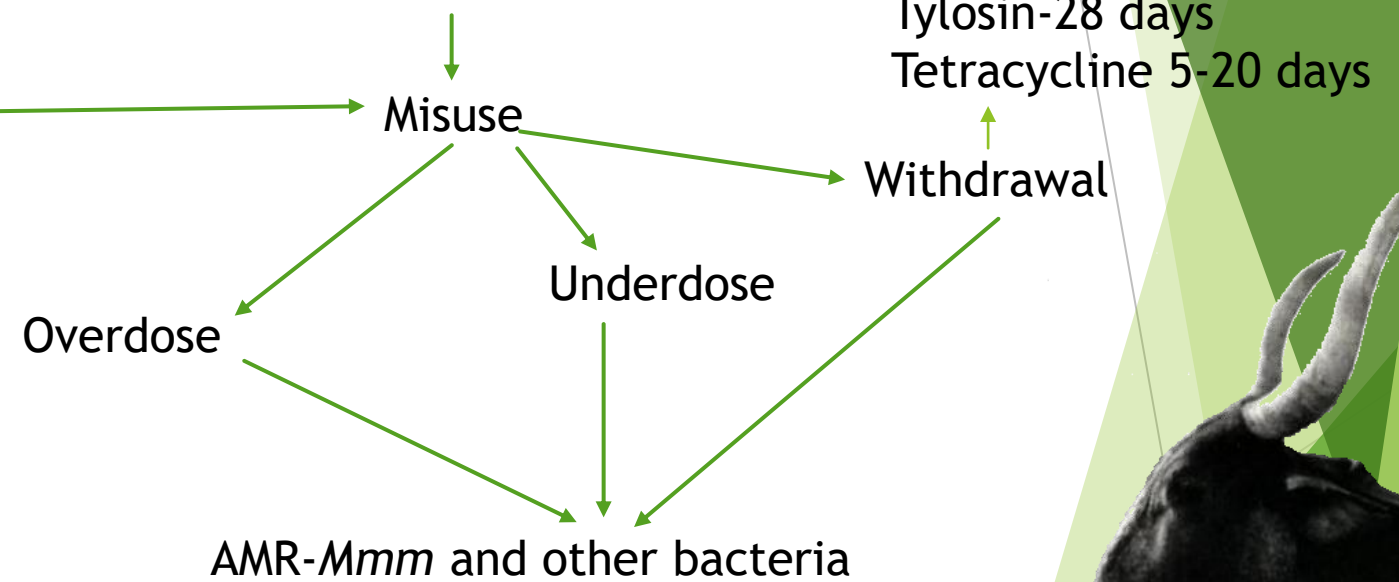
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Back ground cont.....



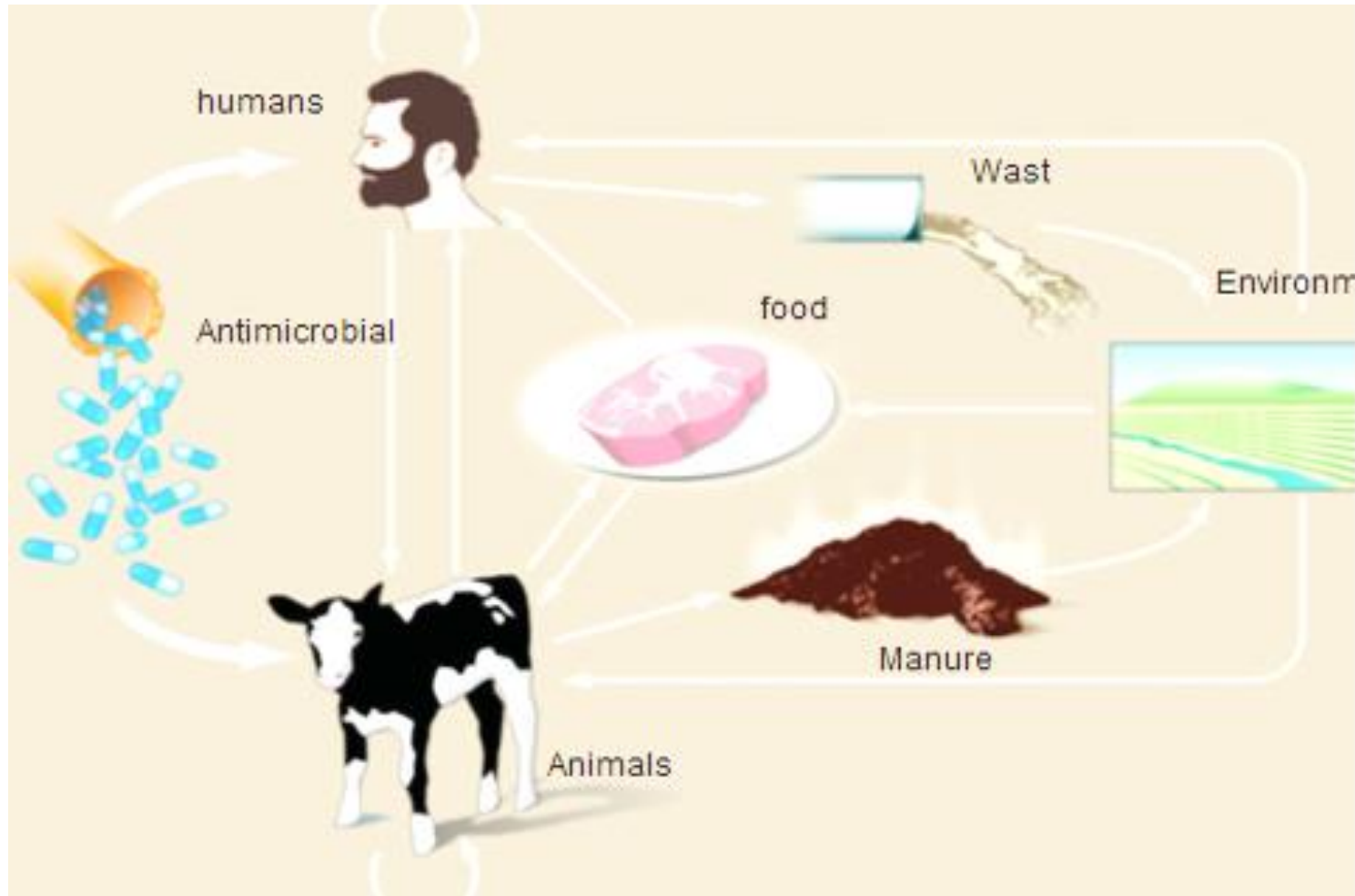
Accessibility of Antibiotics

Self-treatment- Discouraged by WOH



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Background cont.....



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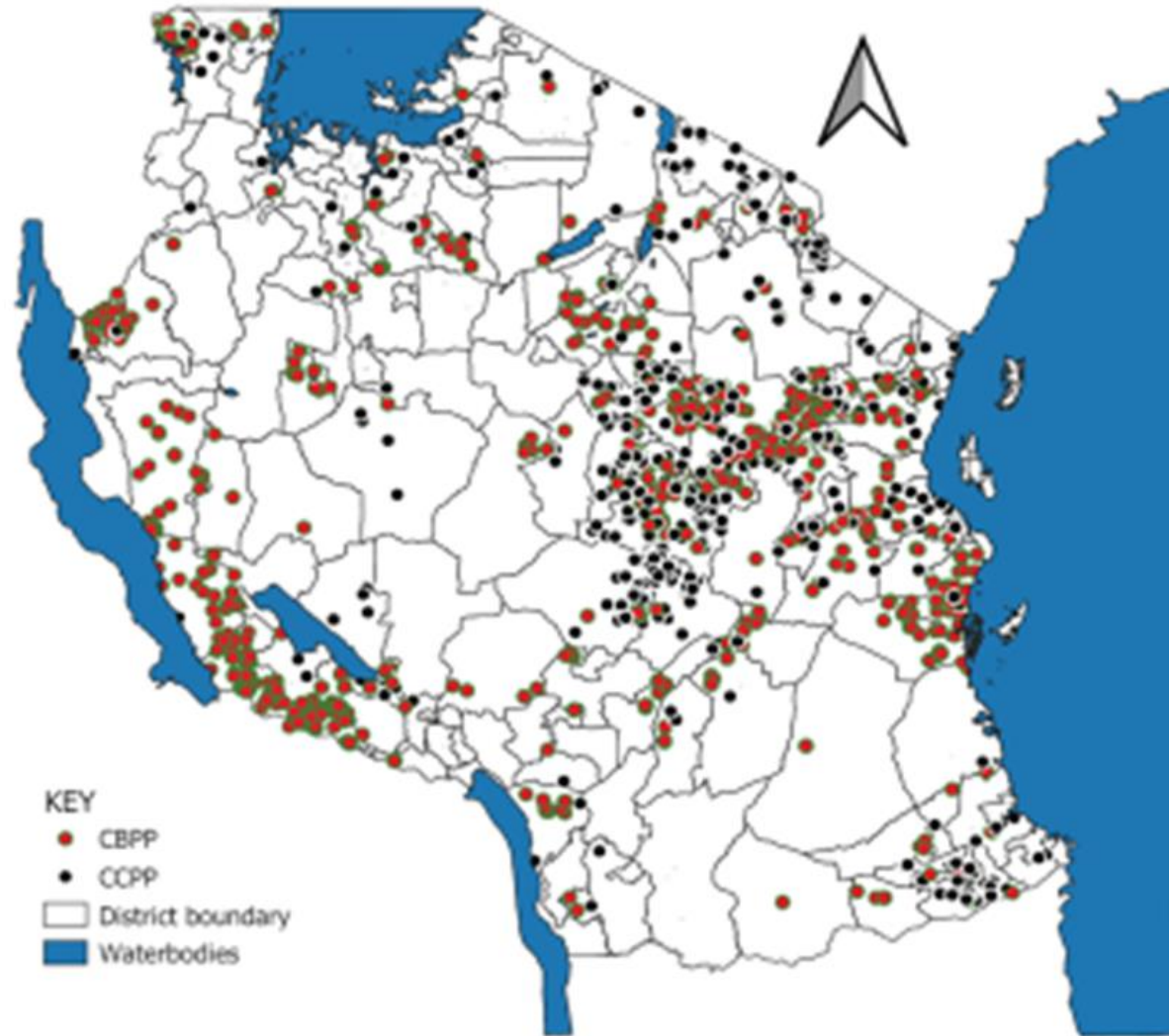
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Current situation of CBPP.....

January-May 2023, 720 samples
sent to CVL

cELISA-120+ve, 600 -ve

=16.6%



ERFAN, IZSTE, BNVL, TVLA



Aim and Objectives

- To determine the antibiotic susceptibility and resistance profiles of *Mycoplasma mycoides* subsp *mycoides* (***Mmm***).

Objectives

1. To ascertain the antibiotics commonly used to treat CBPP in the targeted areas.
2. To isolate ***Mmm*** from clinically affected and dead cattle samples collected from the selected areas in Tanzania.
3. To perform minimum inhibitory concentration (MIC) of ***Mmm*** isolates with specific antibiotics



The Rationale of the Study

- The study was anticipated to generate baseline data that can help to curb antibiotic resistance problems in Tanzania
- The research is part of the partial fulfilment of the requirement of the award for the Master of Veterinary Science in Tropical Diseases

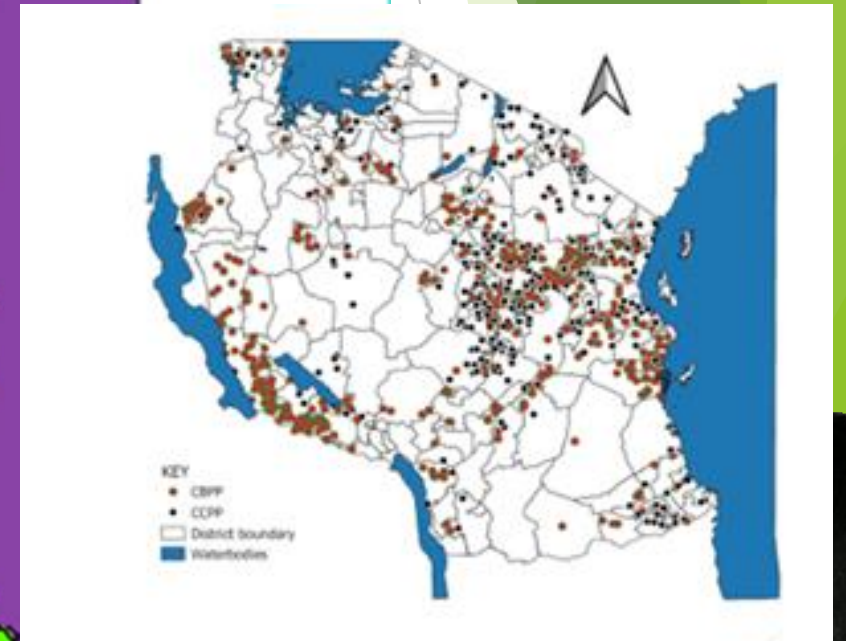
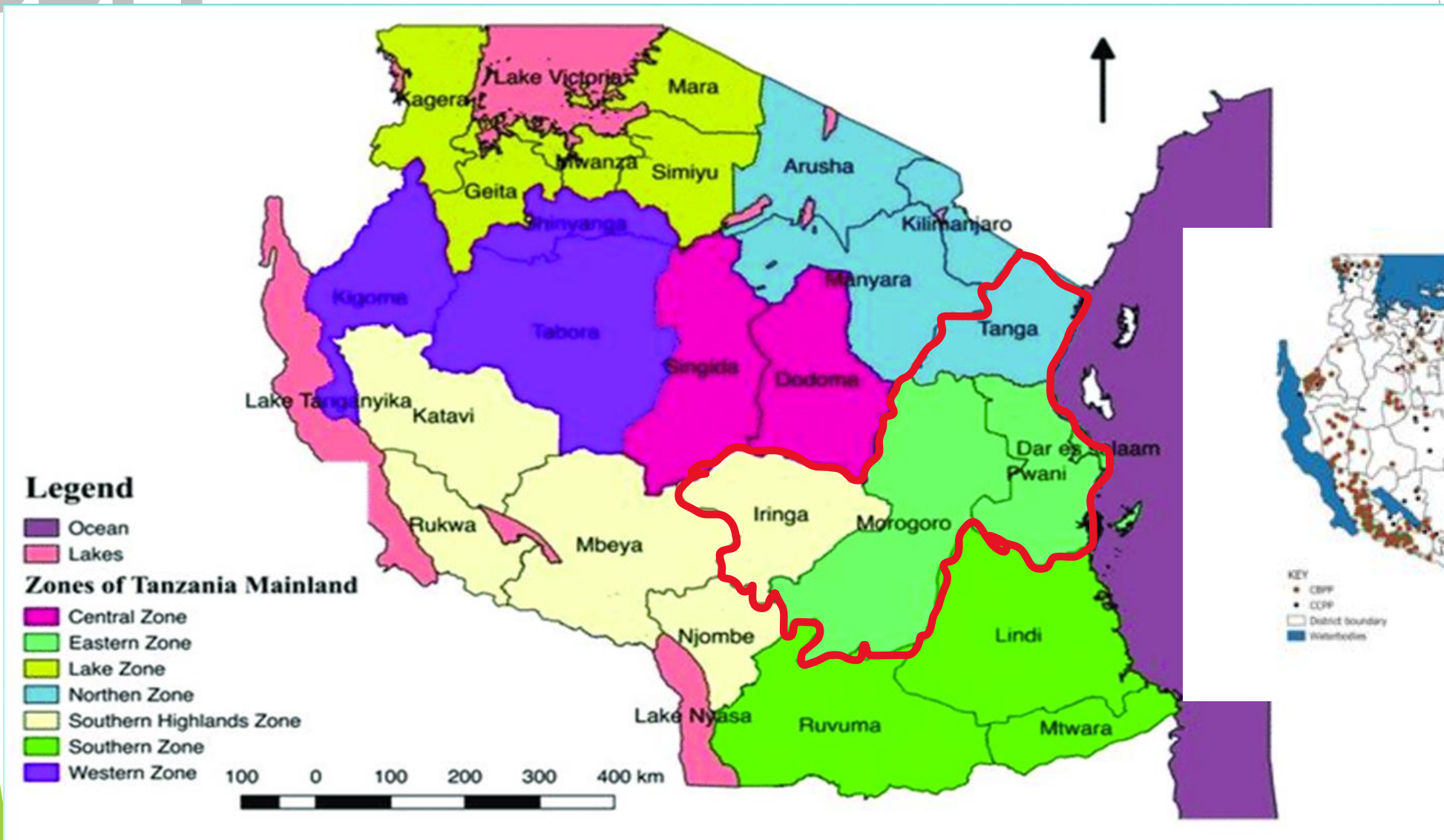


Research Question

1. What are the commonly used antibiotics to treat CBPP in the research areas?
2. What is the relationship between farmer's management practices, and the development of antibiotic resistance of *Mmm*?



Methodology-Study area



Methodology cont.....

- Study design-Mixed Methods-descriptive cross-sectional survey design and observation
- Data collection tool –Interviews guide
- Total of 400(100%) households, and, 400 samples, 348(87%)
- Samples-Lg, Pf, Ln, Nd, Ns,
- Lab-Culture & Isolation, RFLP-PCR-BNVL
- MIC-IZSTE-Teramo



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Field work



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Field work cont....



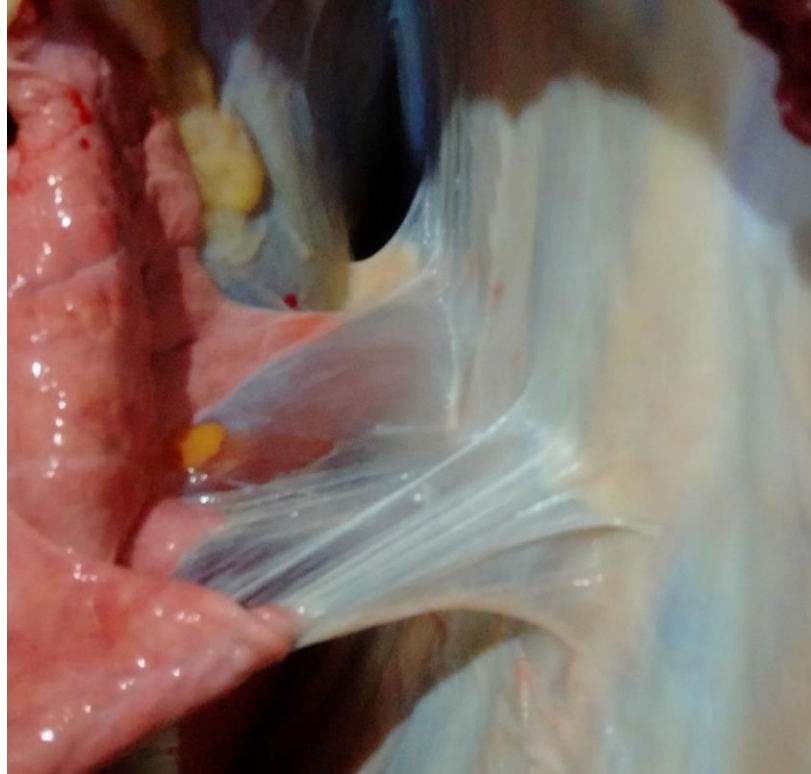
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Field work cont-Sharing water source



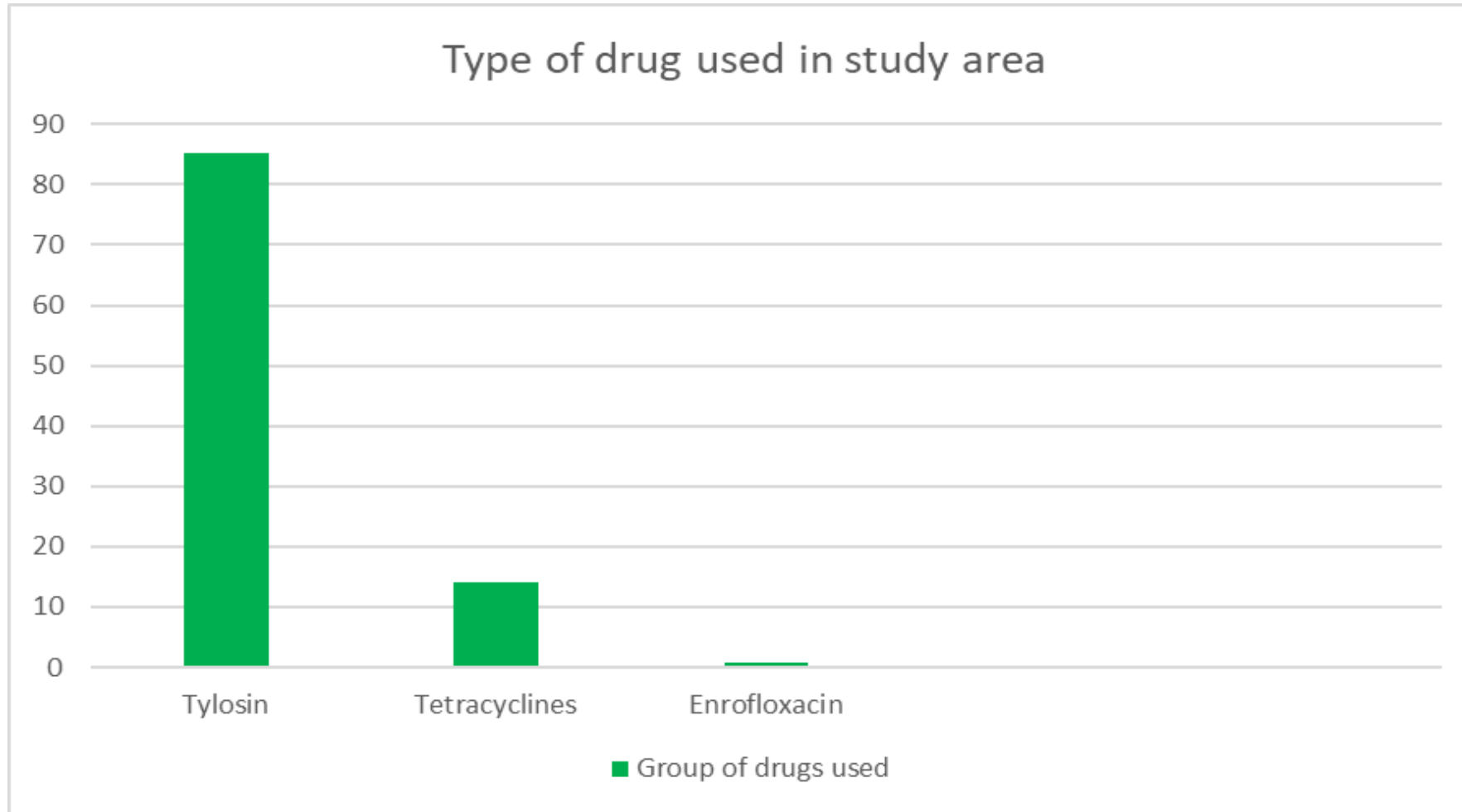
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Field work cont.....



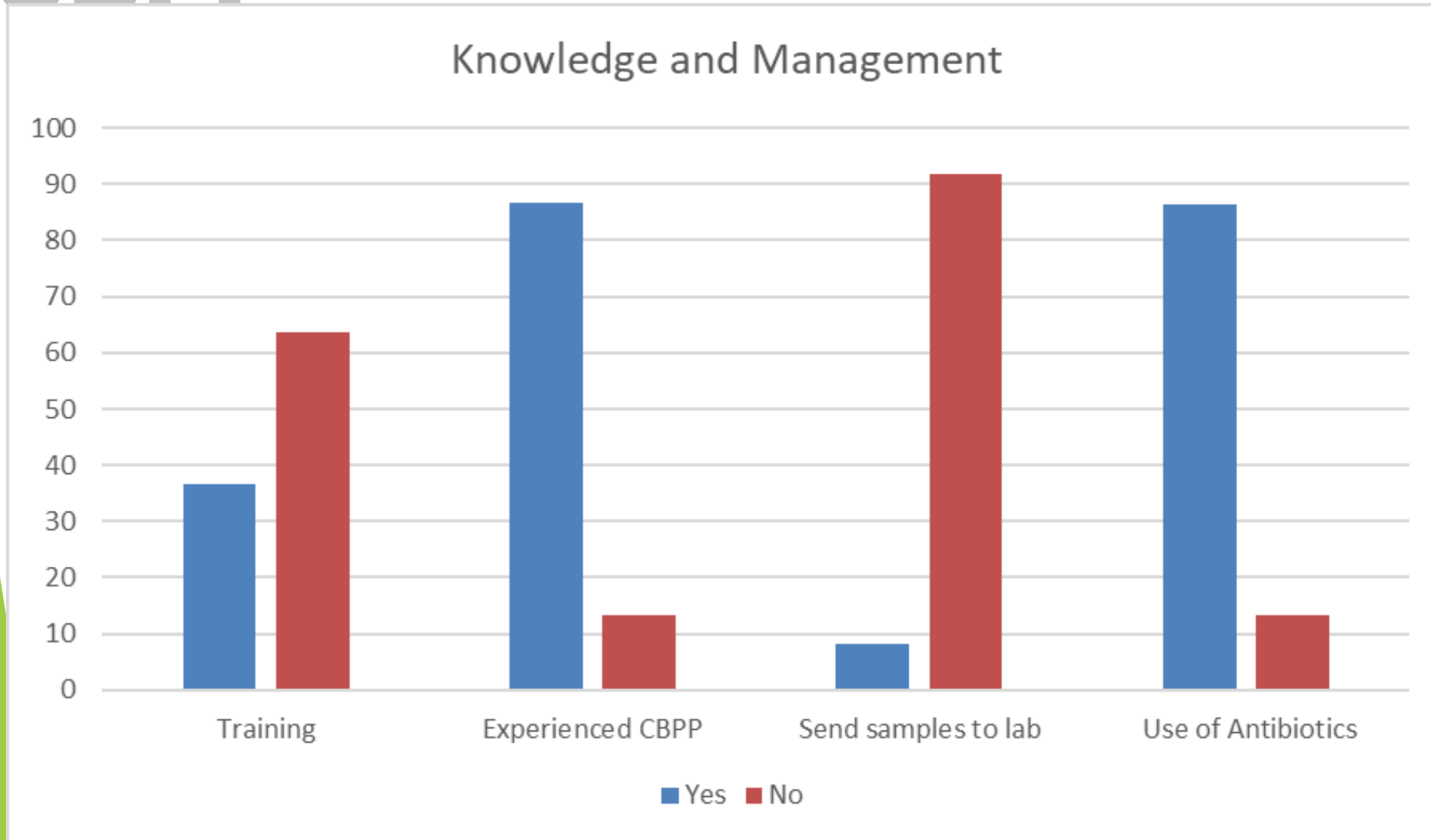
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Results



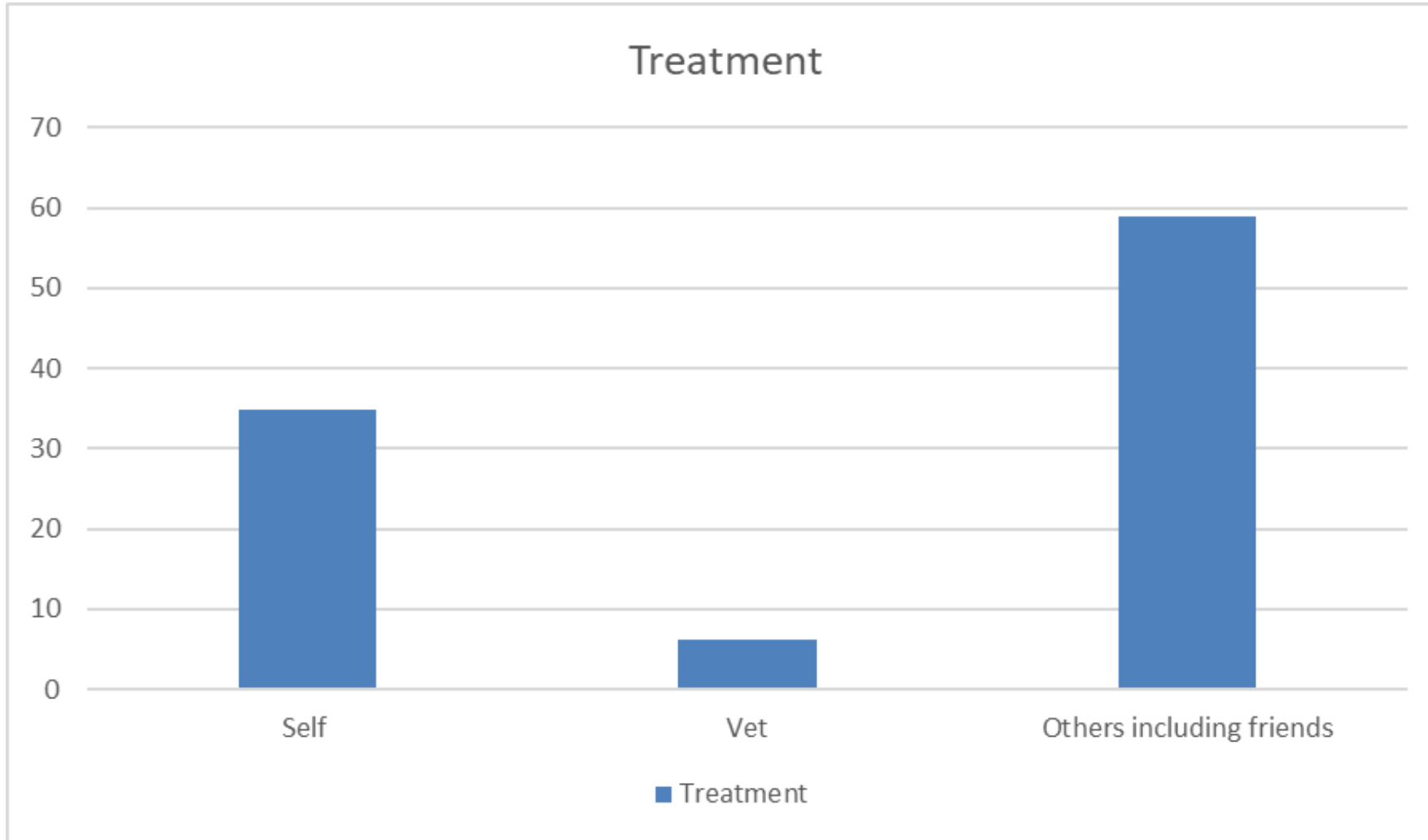
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Results



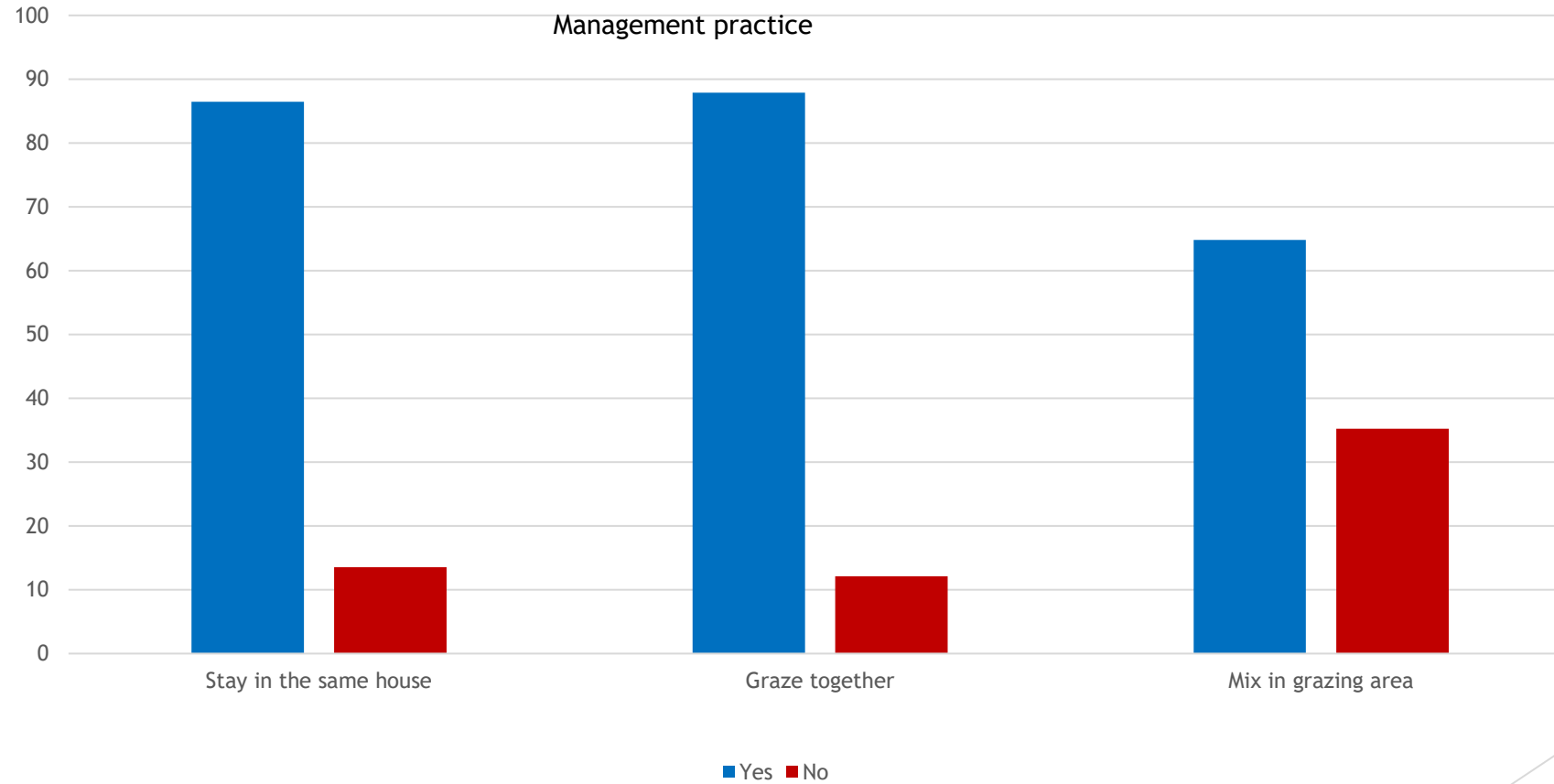
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Results



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Results



Discussion

- ▶ The results confirm the use of antimicrobials amongst cattle keepers, and Macrolide is the most group of antimicrobials used, followed by Tetracycline and Enrofloxacin.
- ▶ The study confirms that farmers have experienced CBPP. Most of them use antibiotics without sending samples to the laboratory.
- ▶ Also, the study confirms that some cattle keepers practice self-treatment to cattle or use other animal attendants without considering their professionals, only a few per cent are using veterinarians.
- ▶ The ongoing work will assess if the use of these antimicrobials leads to any antimicrobial resistance in the Mmm strain isolated.



AKNOWLEDGEMENT



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THANK YOU

