

1ST EASTERN AFRICA AGROECOLOGY CONFERENCE
TRANSFORMING FOOD SYSTEMS FOR RESPONSIBLE PRODUCTION,
CONSUMPTION AND SOCIAL WELLBEING

March



2023

*Strengthening Resilience and Sustainability in
Food Systems for Environmental and Socioeconomic Development*

Investigating Foot and Mouth
Disease in Wami village,
Tanzania: A study of
pastoralists awareness,
practices and vaccination
applicability
Dr Rajab Awami (SAT)

“

*The most powerful tool
for changing the world is
the active participation
of people in the
situations they wanted
to change” Paulo Freire.*





INTRODUCTION

- ❑ Pastoralists of Wami faces the problem of Foot and Mouth Disease (FMD)
- ❑ The problem which was presented during 7th WPRD organized by SAT
- ❑ FMD is a highly contagious viral disease of cloven-hoofed livestock that has a significant economic impact

PRINCIPLES OF LIVESTOCK DISEASE MANAGEMENT

1. BIOSECURITY

- 1st line defence
- The most recommended measure
- Aim at preventing entrance and exit of diseases
- **FMD** is a **complicated** disease to be prevented by Biosecurity only

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2. VACCINATION

- 2nd line of defense
- **Vaccine**: substance that contains a disease-causing pathogen, that has been weakened, killed, or **modified??**
- **Killed vs modified?**
- Vaccination is the process of administering a vaccine

3. TREATMENT

- 3rd line of defence
- Applied only when necessary
- Should abide with principles of organic farming.



INTRODUCTION

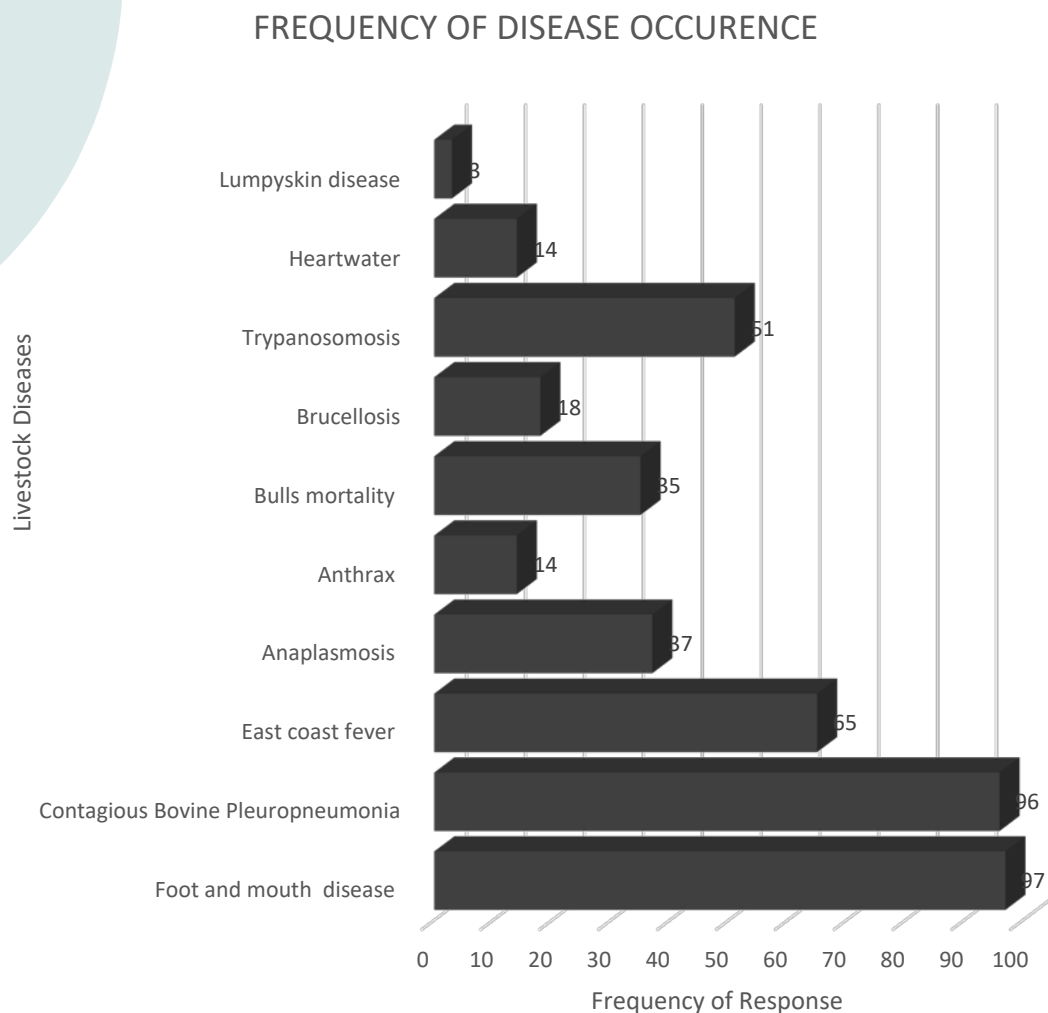
- ❑ Currently there is no cure for FMD
- ❑ So the control of this disease is by strict Biosecurity measures and **Vaccination if applicable (?)**



METHODOLOGY

- It is **Participatory applied research design**
- The awareness on vaccination, local methods available, the time period of occurrence, and effects of FMD were determined by using 100 structured questionnaires
- 200 random cattle were from 5 different farms were used
- Sample of 100 cattle were vaccinated
- Tools: **Kobo collect** and **EPIINFO (SA)**

RESULTS AND DISCUSSION



➤ FMD, CBPP, ECF, and Trypanosomiasis are the most prevalent diseases

➤ 69% don't know how FMD is transmitted

➤ 100% have witnessed the occurrence of FMD in their cattle

RESULTS AND DISCUSSION

❑ Commonly used medications used by pastoralists to treat FMD are:

1. Mixture of table salt and wood ash
2. Kiloriti plant and Mtangalala plant
3. Wild sunflower
4. Cattle urine
5. Diesel
6. Olukulu practice (cattle jump over traditional herb)
7. Wild onion
8. PENSTREPT
9. Diminazine Diaceturate

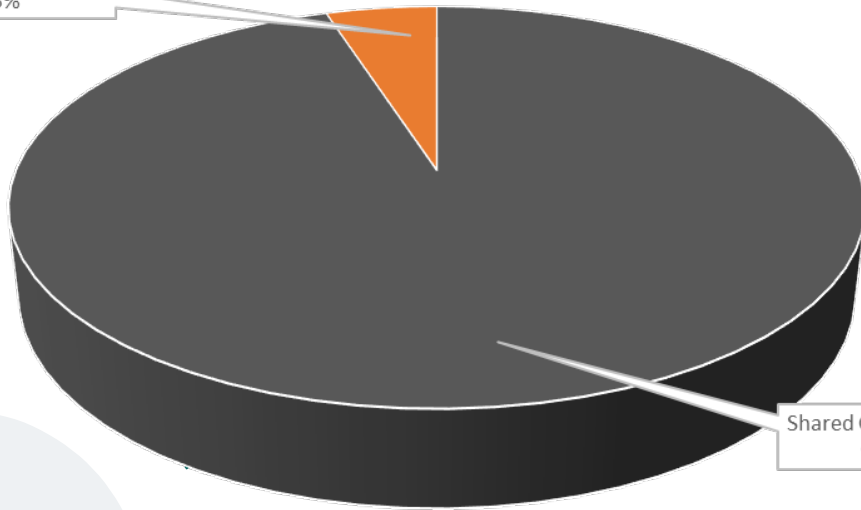
❑ Some medications (Diminazine) are not scientifically proved to treat FMD but has been used for years by pastoralists (risk of AMR)

RESULTS AND DISCUSSION

- ❑ The highest prevalence of FMD disease can be explained by the mode of traditional livestock keeping practiced by pastoralists
- ❑ The knowledge, importance and role of vaccines in disease prevention is not well emphasized among Maasai communities

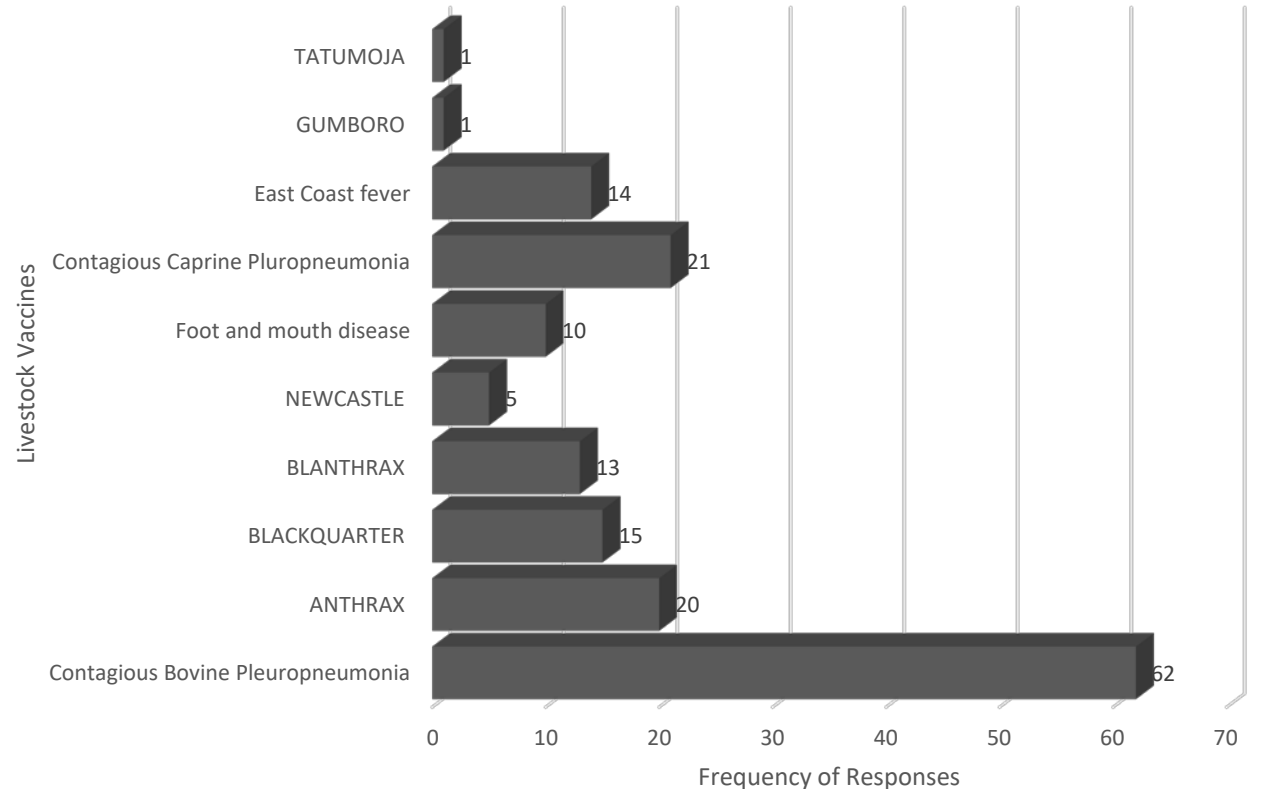
TYPE OF PASTURELAND

personal grazing land
5%

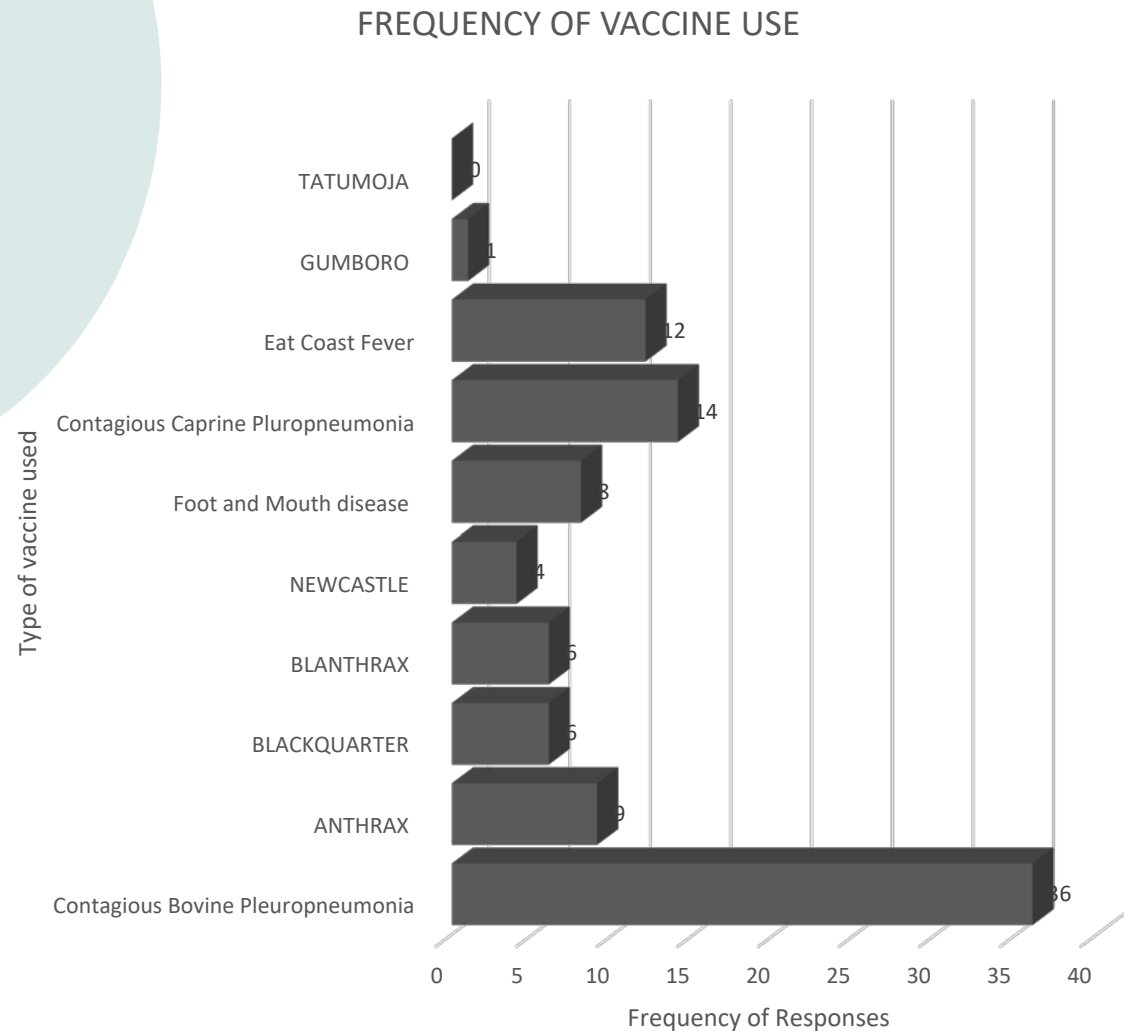


■ Shared Grazing land ■ personal grazing land

KNOWLEDGE ABOUT VACCINES



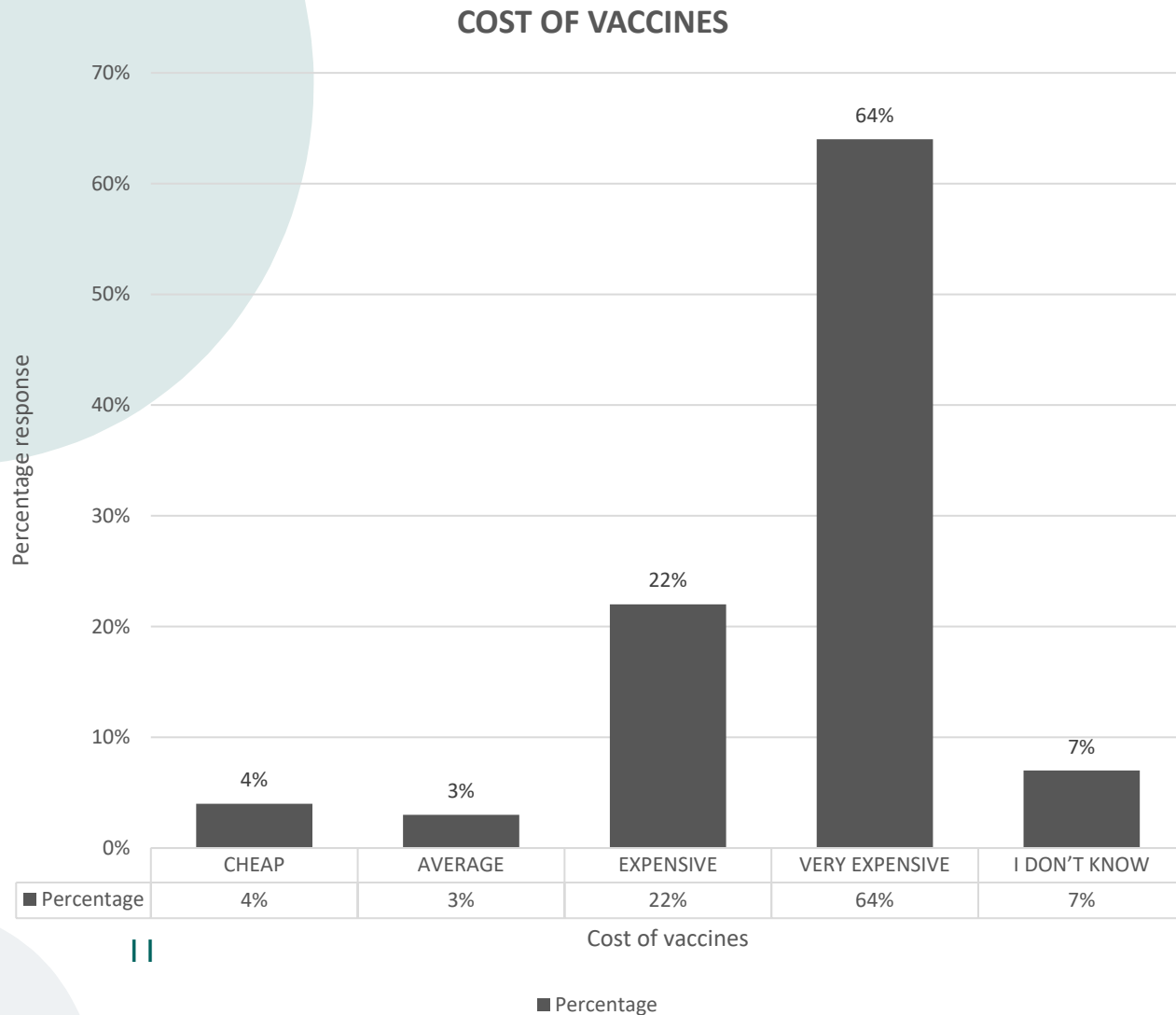
RESULTS AND DISCUSSION



❑ 62% of pastoralists do not have tendency to vaccinate their animals against commonly occurring diseases

❑ Despite FMD being diseases of highest prevalence pastoralists are stagnant in using commercially available FMD vaccines (only 8x)

RESULTS AND DISCUSSION

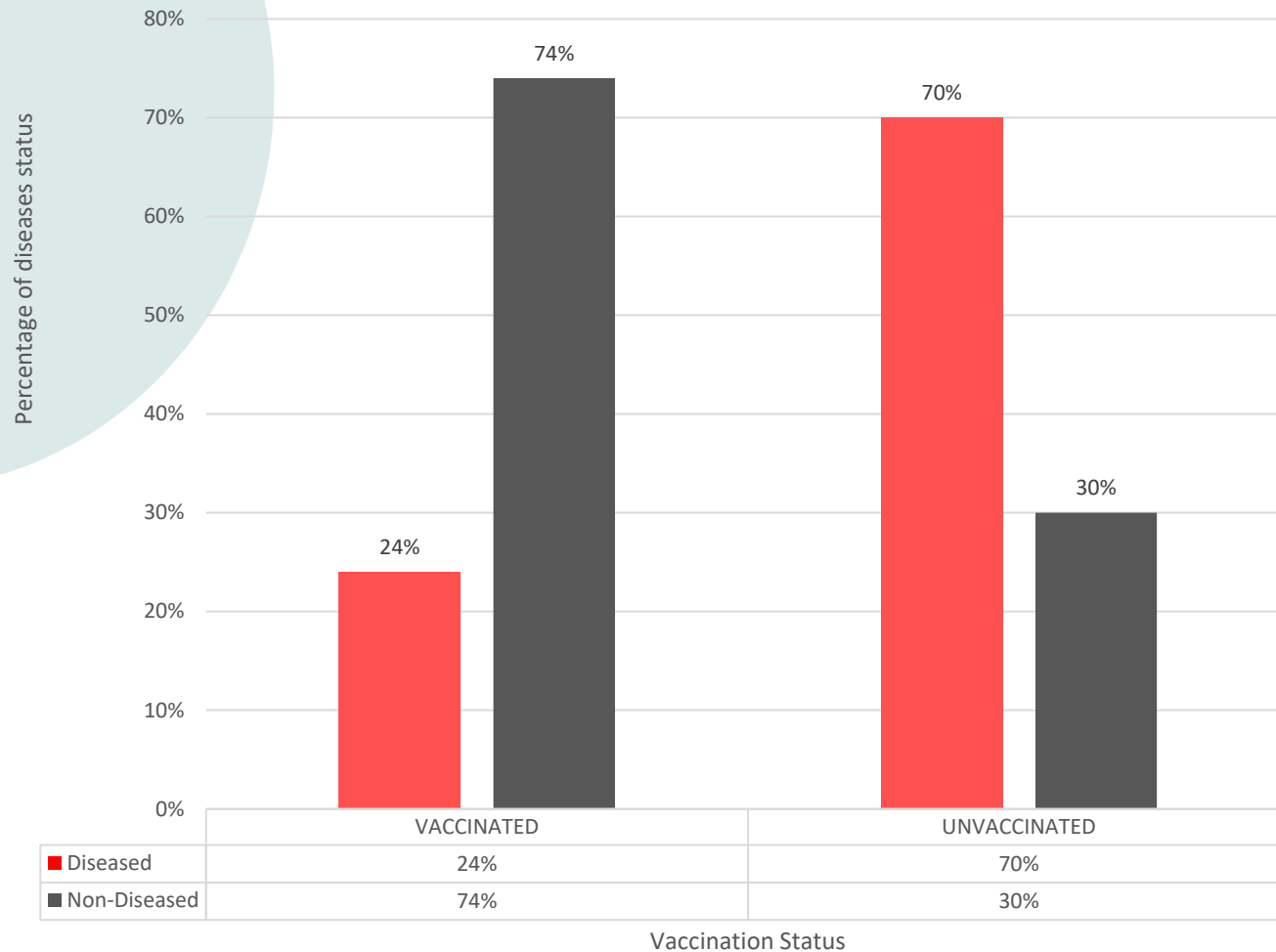


❑ Pastoralists fails to use FMD vaccines due to reasons of:

1. High cost (??????)
2. Unavailability of vaccines
3. Lack of vaccination skills
4. Failure to define the timing of vaccination
5. Poor veterinary extension services
6. Presence of fake vaccines

RESULTS AND DISCUSSION

VACCINATION OUTCOME



Statistically ($\chi^2 = 38.782$, p-value < 0.05) vaccination is effective as evidenced by reduced number of disease cases in vaccinated compared to non-vaccinated

The results were used by researcher to educate and influence pastoralists on importance of using vaccine

CONCLUSION AND RECCOMENDATIONS

- ❑ The results from research reveal that, the pastoralists (Wami) are less aware in mode of transmission, prevention and control of FMD in cattle
- ❑ vaccination is effective means in prevention of Foot and Mouth Disease in cattle
- ❑ Authorities should impose strong vaccination programs to fight FMD disease
- ❑ Strict biosecurity measures should be undertaken to control the diseases

Thanks!

ANY QUESTIONS?

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