



Food and Agriculture
Organization of the
United Nations

KAP Study on Drivers for Antimicrobial Use Among Poultry Producers in Gatundu North, Kiambu County

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FAO-Kenya



“It is not difficult to make microbes resistant to penicillin in the laboratory by exposing them to concentrations not sufficient to kill them, and the same thing has occasionally happened in the body...there is the danger that the ignorant man may easily under-dose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant.”

-Alexander Fleming, Nobel prize lecture, 1945



Can you play with him for a while?
His battery died



You can't park
in the Handicap Zone just because
you've lost your phone.

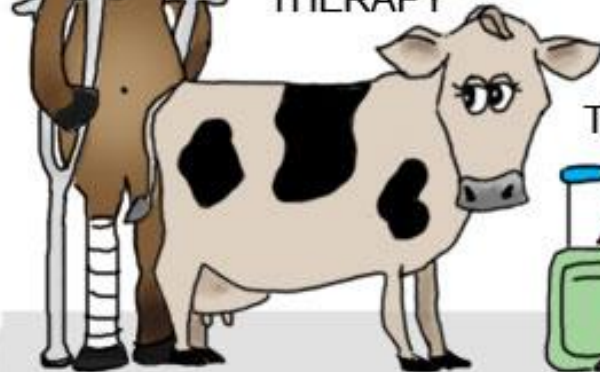


AFTER
SURGERY

**SOME EXAMPLES OF
PROPHYLACTIC AND METAPHYLACTIC
USES OF ANTIBIOTICS IN ANIMALS**



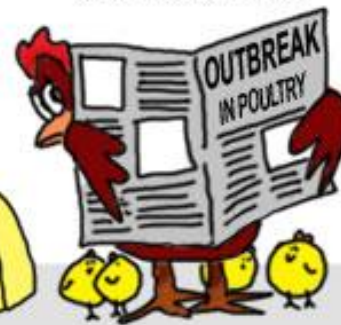
DRY-COW
THERAPY



BEFORE
TRANSPORTATION



POTENTIAL
OUTBREAKS



STRESSFUL
CONDITIONS



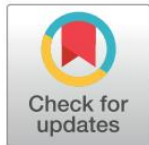
The KAP study


RESEARCH ARTICLE

Towards a bottom-up understanding of antimicrobial use and resistance on the farm: A knowledge, attitudes, and practices survey across livestock systems in five African countries

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 OPEN ACCESS



Objectives

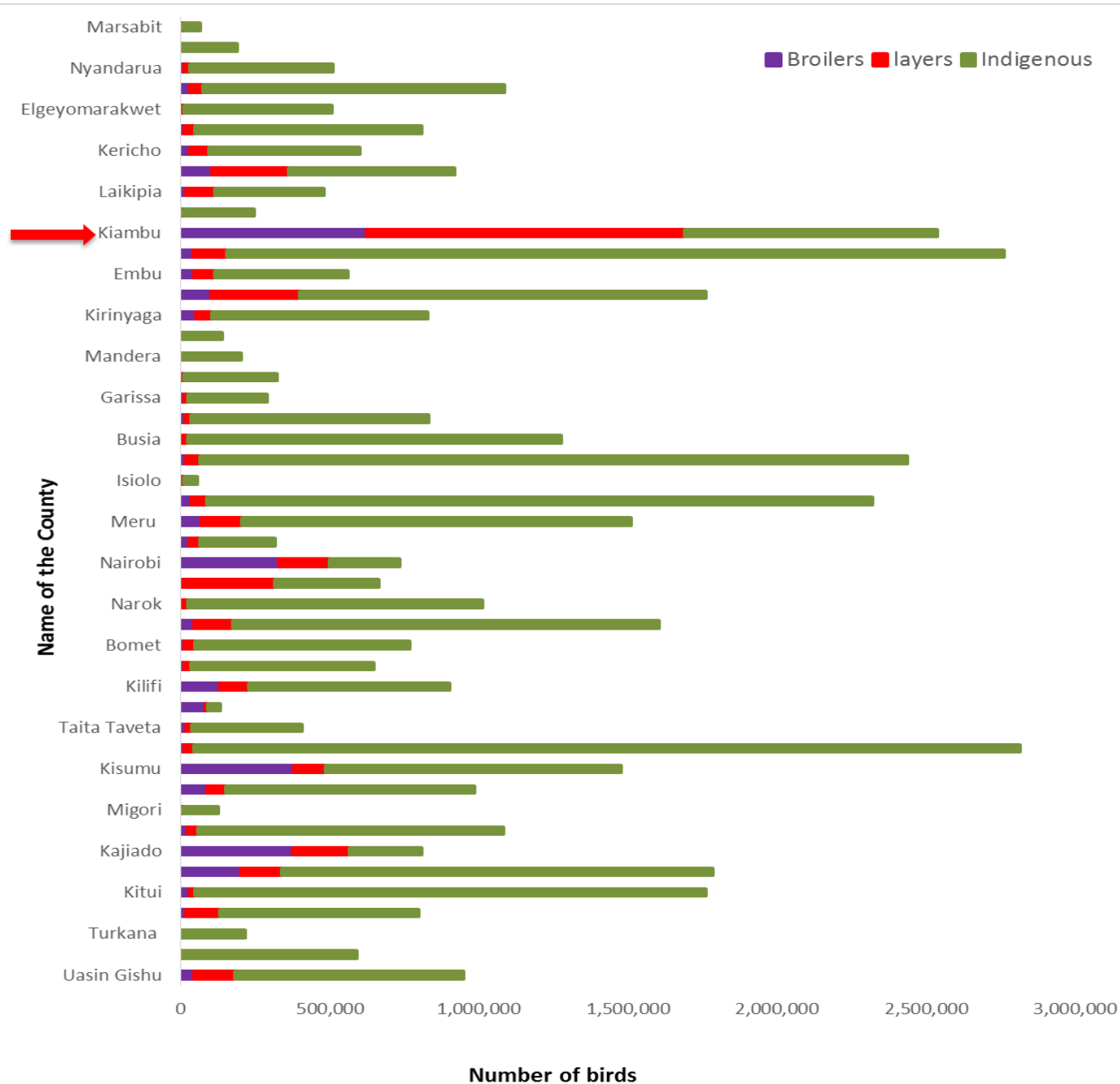
- The main objective of this study was to understand the knowledge, attitudes, and practices related to AMU in layer production systems with the goal of designing behavioral change interventions that promotes prudent AMU and AMU-related practices



Study area: Kiambu

Kiambu County:

- Largest population of poultry in Kenya:
 - Layers- 25.7%
 - Broilers - 20.4%
- Antibiotics widely used by farmers (*Mbugua, 2014*)
- High prevalence of AMR from poultry samples (*Adelaide, Bii, & Okemo, 2008*)



Why Gatundu North?



Kenya

Gatundu North Sub-county – highest number of layers in Kiambu (241,500)



Kiambu Country

The Approach

- Focus Group Discussions with farmers
- Key Informant Interviews
 - Agrovets
 - Sub County veterinary officers
 - Animal Health assistants
- KAP Survey (76 Farmers)



Qualitative Results - Key themes emerging from FGDs with layers farmers

- agrovets as source of health information, day-old chicks and other poultry inputs
- farmers having personalized methods of “manufacturing” poultry feeds
- farmers having a broad knowledge of poultry diseases and available treatment options
- farmers being aware of necessary biosecurity measures but showcasing reluctance to invest in them
- veterinarians perceived doctors for cows and other large stock but not for poultry
- farmers having limited knowledge on AMR specifically and;



Qualitative Results - KIIs with animal health professionals



“When a farmer come complaining of treatment failure, we usually prescribe a stronger alternative”



Biosecurity as the major issue promoting disease and drug use

- Agrovets viewed as veterinarians
- Seeking of professional veterinary services as a “last resort”
- Highly variable understanding of antimicrobial resistance



KAP Results





DESCRIPTION:

Neo-Oxy Egg Formula wsp is a highly effective combination of broad-spectrum antibiotics and vitamins. Oxytetracycline belongs to the group of tetracyclines and acts bacteriostatic against many Gram-positive and Gram-negative bacteria like Bordetella, Campylobacter, Chlamydia, E. coli, Haemophilus, Mycoplasma, Pasteurella, Rickettsia, Salmonella, Staphylo-coccus and Streptococcus spp. The action of oxytetracycline is based on inhibition of bacterial synthesis. Oxytetracycline is mainly excreted in urine and for a small part in bile. Neomycin is an amino-glycoside with bactericidal action against mainly Gram-negative bacteria like E. coli, Klebsiella, Pasteurella, Salmonella and Staphylococcus spp. Vitamins are essential for the proper operation of several physiological functions.

INDICATIONS:

Neo-Oxy Egg Formula wsp is especially produced for layers and ensures:

- Higher peak egg production level
- Maintenance of high production level throughout the laying period
- Increased egg production when there is a drop in performance caused by stress situations
- Reduced mortality throughout the laying period
- Increased feed conversion efficiency



OXYSOL PLUS

Oxytetracycline HCl 6.2% w/w
and Vitamins combination

Water Soluble Powder



A broad spectrum combination of antibiotics and vitamins

OXYSOL PLUS

Water Soluble Powder

SITUATION:

Contents per 1000g

Oxytetracycline HCl	62,000mg
Vitamin A	5,100,000 iu
Vitamin D3	1,800,000 iu
Vitamin E	3,500 mg
Vitamin K	2,900 mg
Vitamin B1	500 mg
Vitamin B2	2,900 mg
Vitamin B6	285 mg
Vitamin B12	2,500 mcg
Vitamin C	11,500 mg
Nicotinic Acid	15,500 mg
Pantothenic Acid	3,000 mg
Folic Acid	100 mg
Choline	11,900 mg

DOSAGE & ADMINISTRATION:

Treatment:

2.0g per litre of drinking water for 7 c

Prevention:

1.0g per litre of drinking water for 7 c

The medicated feed or water should be used within 24 hours.

WITHDRAWAL PERIODS:

Meat: 5 days,

Eggs: 1 day

STORAGE CONDITIONS:

Store in a cool dry place below 30°C
Keep out of reach of children

INDICATIONS:

OXYSOL PLUS is indicated for the treatment and control of a wide range of bacterial infections including the treatment of Coliform Septicaemia, Fowl Cholera, Fowl Typhoid and the control of secondary infections due to chronic respiratory disease (CRD) and viral infections in poultry.

Batch No.: P071726
Mfg. Date: JUL 2017
Exp. Date: JUN 2019


ALFA-VEC

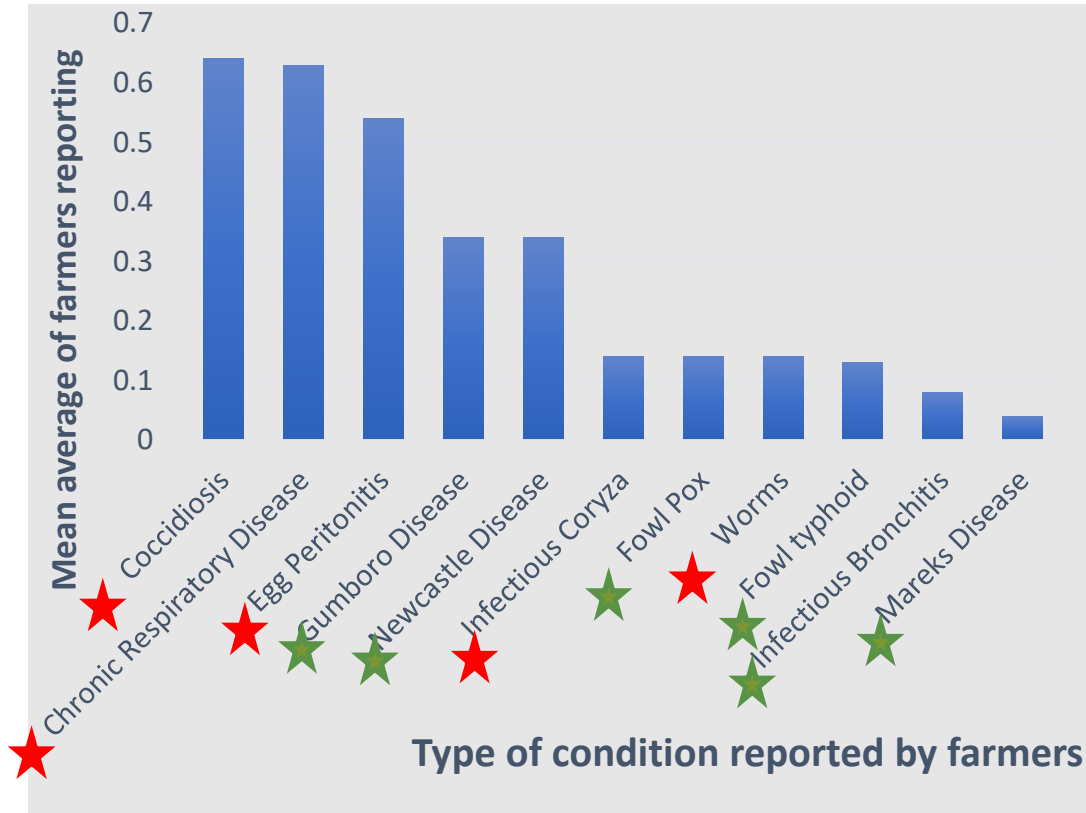
Developed by:
Alivet Animal Healthcare Ltd



VETCARE
AFRICA

Manufactured under license of
VETCARE AFRICA



Common infections driving antibiotic use in layer



Hygiene management 

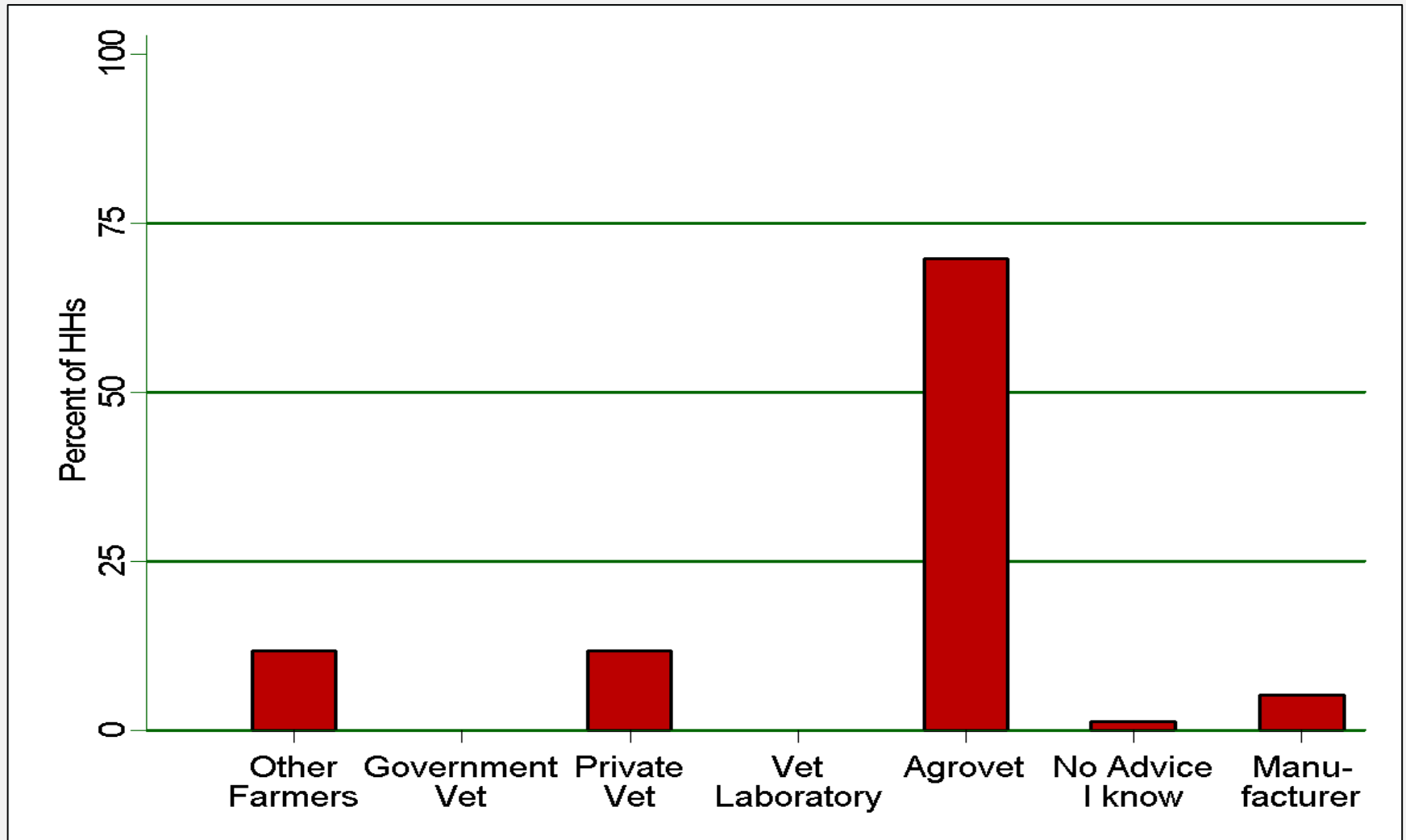
Vaccine preventable 

Vaccination rates high for most dses

- Gumboro (100%)
- Newcastle disease (100%)
- Newcastle combined with infectious bronchitis vaccine (95%)
- Fowl Pox and Fowl Typhoid (both 95%)
- Marek's Disease (4%)

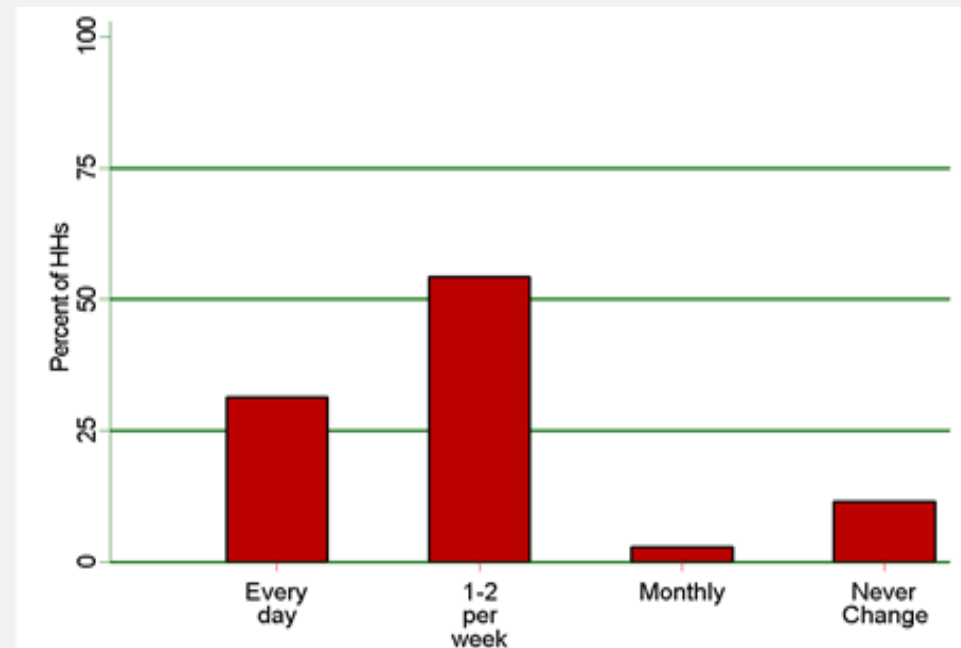
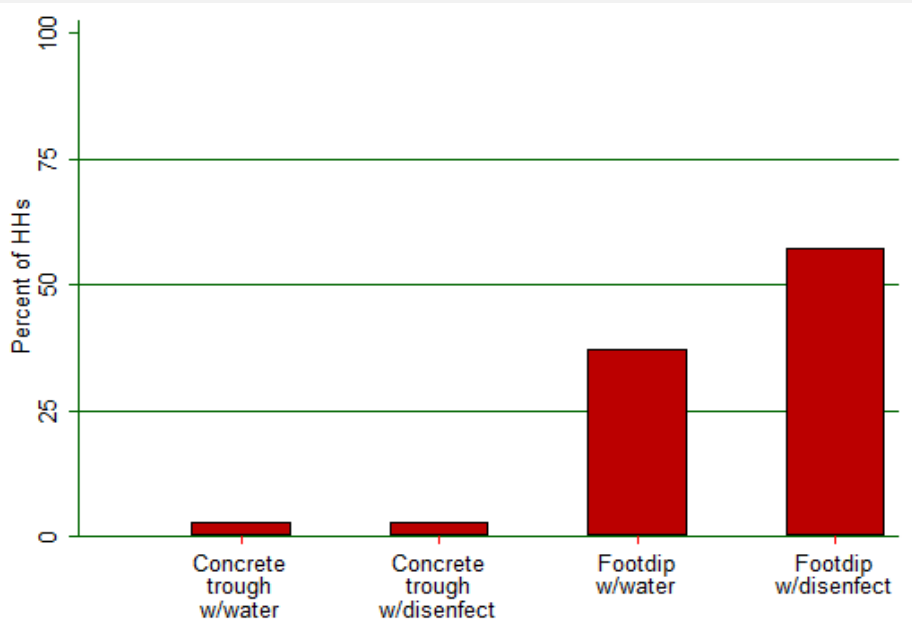


Who provides advice?



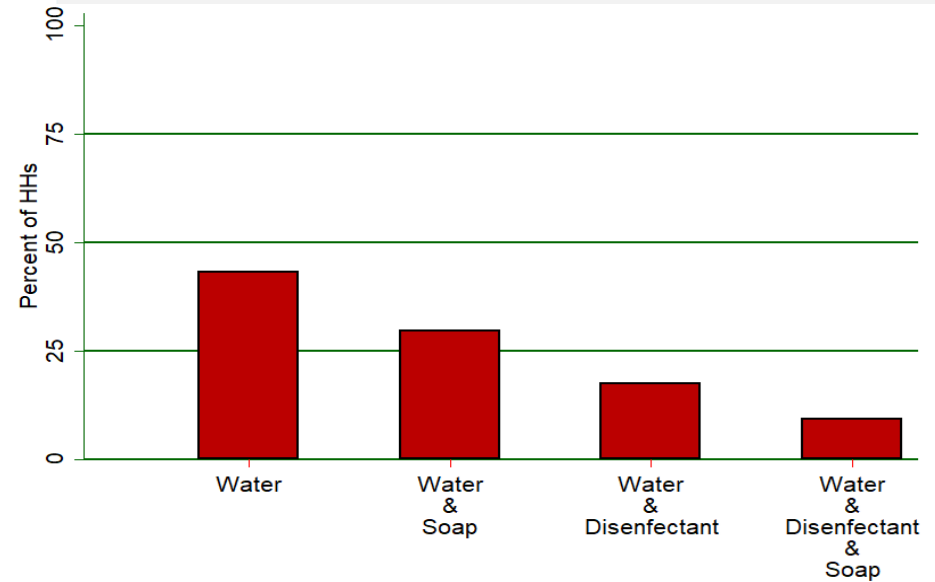
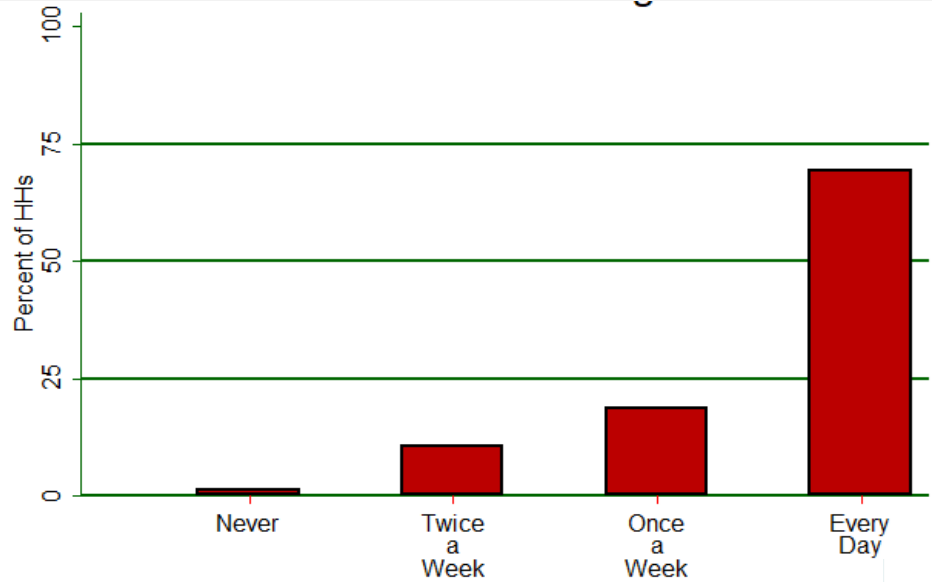
Biosecurity and hygiene practices

Footbath type and cleaning frequency



Biosecurity and hygiene practices

Cleaning frequency of drinkers and cleaning method



Biosecurity and hygiene practices

PPE	% HHs reporting
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Have Boots	0.75
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Boots for different houses	0.37
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Have Masks	0.58
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Masks for different house	0.39
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Have Overalls	0.50
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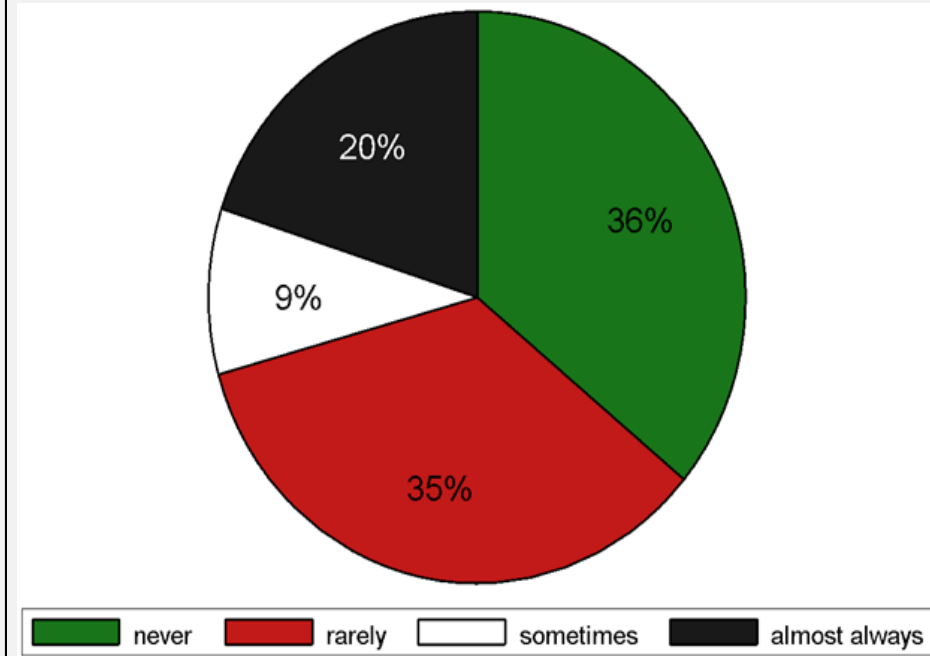
Overalls for different houses	0.40
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Have gloves	0.51
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Gloves for different houses	0.41
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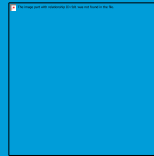
Observations	75
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Wearing boots when entering layer house



Next step

Develop interventions to limit use and misuse of AMs and limit emergence of AMR



Set up layer Farmer Field Schools



What is FFS?

- A ‘school without walls’, where:
 - You learn through observation and **experimentation** on the farm
 - Your farm management skills are improved
 - Led by a Facilitator(s)



Core Activities: Agro Ecosystem Analysis

- You use the **field as a classroom**
- You explore the environment around you (example, poultry house).
- AESA is built upon an **experiential model** of learning

1. Observing



2. Analysing and recording findings



3. Presenting for feedback

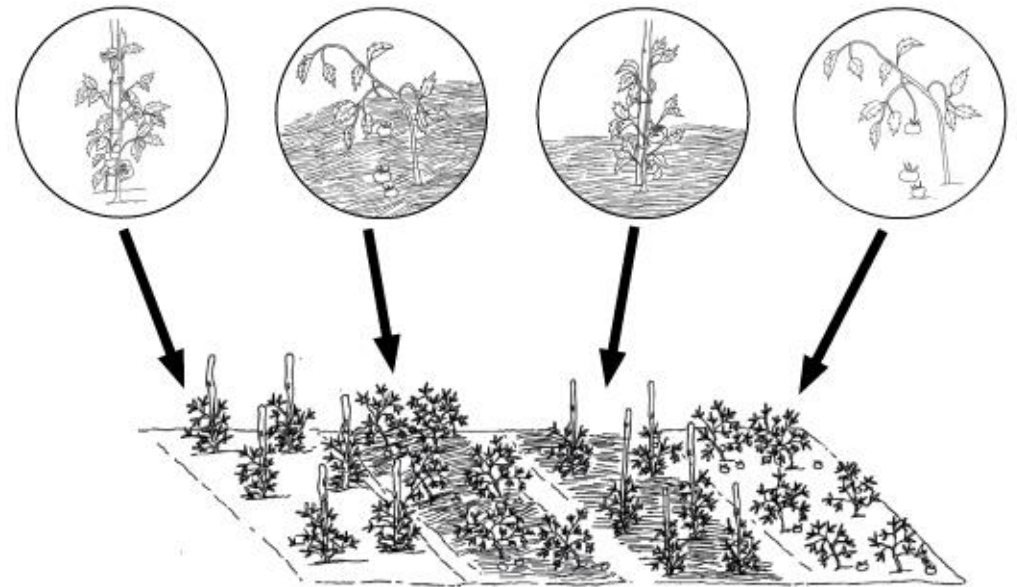


4. Deciding on actions to take



Core Activities: Experiments

- You carry out simple experiments on small test plots or livestock
- You develop observation, recording and analytical skills
- You use the results of experiments and blend them with your own knowledge to select the best solutions to their problem



Core Activities: Special Topics

- Used to introduce new information that is technical or requires specialized skill



Topic of the day: These sessions give farmers technical information such as the example shown above.



**We have the
responsibility
to save lives in
our hands!!!**



Thank You!



fao.org/antimicrobial-resistance
Antimicrobial-Resistance@fao.org

