Stakeholders' knowledge, attitude and perceptions on the control of *Taenia solium* in Kamuli and Hoima districts, Uganda

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ISESSAH International Society for Economics and Social Sciences of Animal Health

Presentation outline

Introduction

Problem statement and objectives

Methodologies

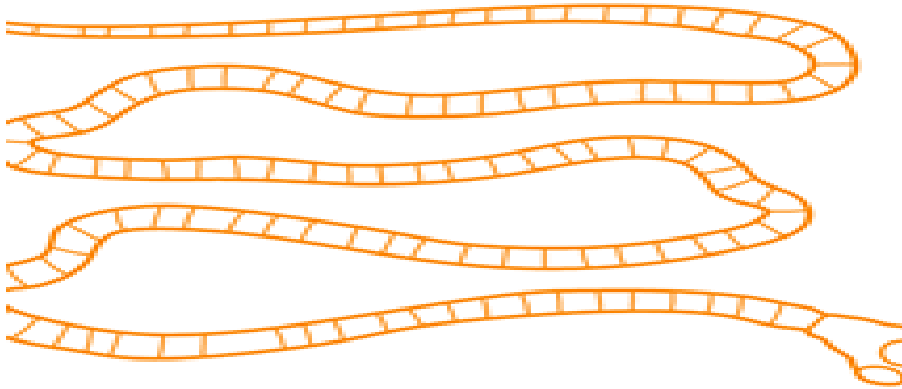
Results

Conclusions

Introduction: *Taenia solium*

Taenia solium : One parasite, 3 diseases

- Taeniasis – Adult worms in small intestines of humans
- Porcine cysticercosis (PCC) – cysts in active muscles in pig hosts
- Neurocysticercosis (NCC) – cysts in brain and eyes of human hosts



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The health and economic burden

T. solium infections in humans (both taeniasis and NCC) affects over 50 million people with 80% of this in low- and middle-income countries (WHO 2021); economic burden due to condemnation of carcasses

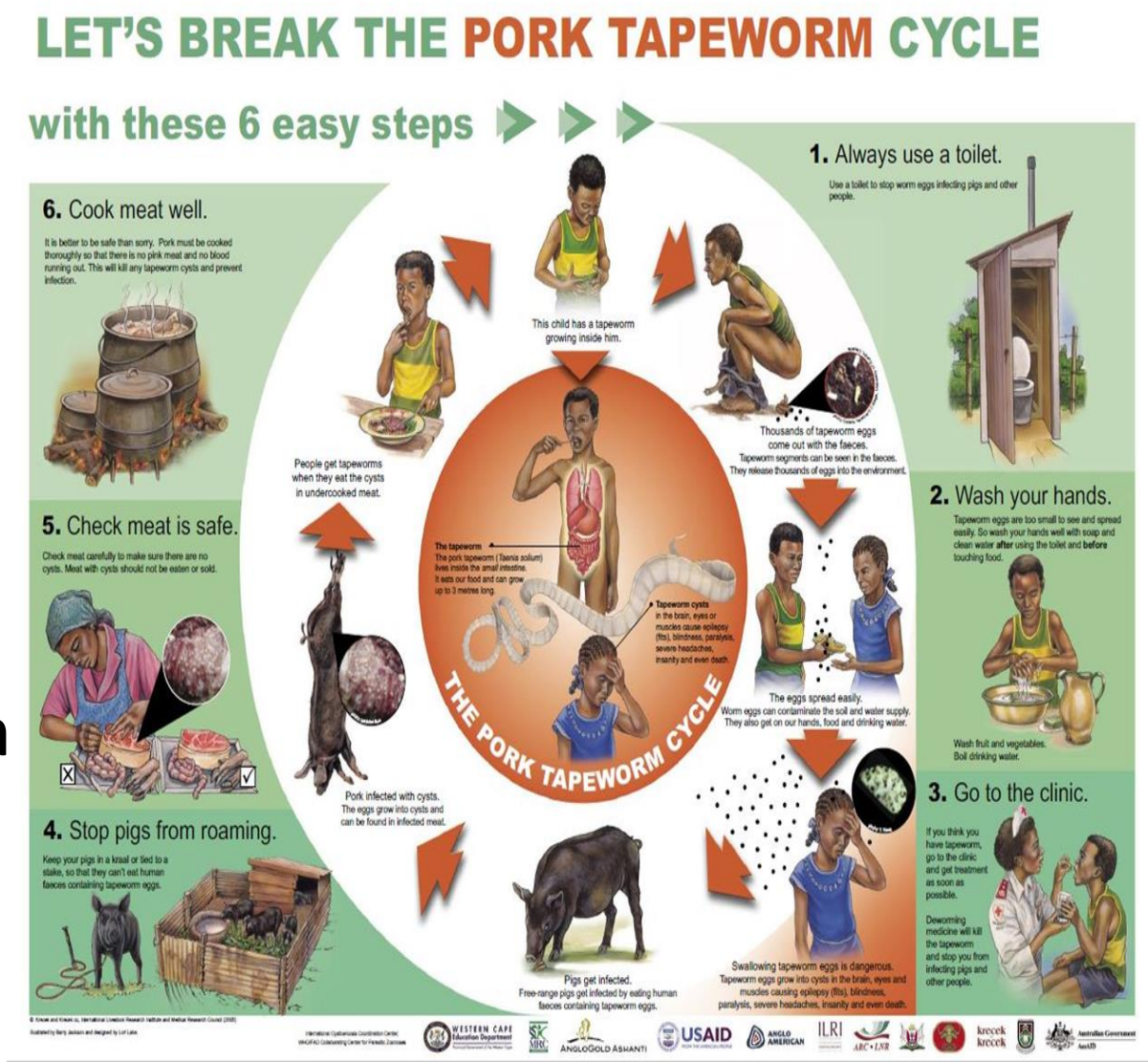
The parasite is endemic in much of Latin America, Southeast Asia and sub-Saharan Africa including Uganda

Introduction: Pig sector in Uganda

- Local demand has significantly driven growth in pig production
- 70% of pork produced in Uganda is consumed domestically - Per capita consumption of 3.4 kg/capita per year
- Consumption mainly in pork joints (roadside eateries selling ready to eat pork (fried or roasted)
- Pig rearing is semi-intensive and extensive – free roaming pigs fed on crop residues
- Creates opportunity for infections with *Taenia solium*

The problem

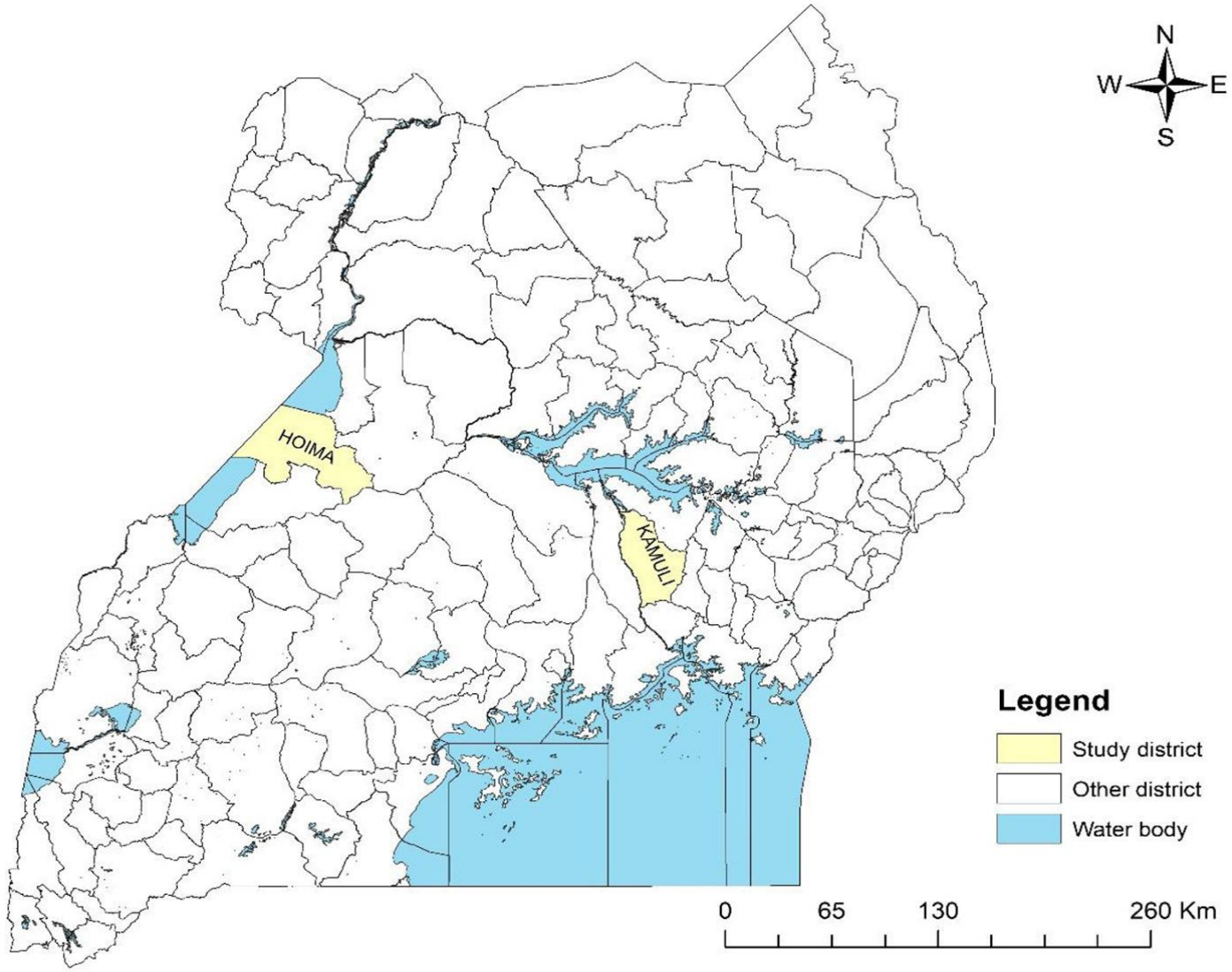
- Transmission may be broken at 6 key control points
- Adoption of control may be limited by contextual factors
- The socioeconomic and cultural factors that may influence adoption have not been studied in Uganda



Objective

- To determine the knowledge, attitude and perceptions of different stakeholders on the control of *T. solium* in Kamuli and Hoima districts

Study site : Uganda (Hoima and Kamuli districts)



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Methodology

- Data collected through 20 FGDs and 9 KIIs
- 6 with pig farmers, 2 each with community leaders, pig traders, animal health assistants and human health assistants and KIIs with officials
- Checklist was developed and pretested along the 6 CCPs.
- Data was analysed using the deductive content analysis in NVIVO
- Ethical clearance from ILRI IREC, CoVAB REC & UNCST

Results: Knowledge on *Taenia solium*

General knowledge and awareness
Differential levels of knowledge on *T. solium* and its control
Fragmented knowledge
Poor knowledge on source of infection

Pig farmers
Poor knowledge and pork tapeworm
Confounded by knowledge on intestinal infections

Government officials
Animal and human health officials had good knowledge
Some could not explain the link to NCC

Pig traders
Poor knowledge on how the disease manifests in pigs
Majority agreed pigs get it when free roaming
Often confused with ASF.

Community leaders
Poor knowledge on how the disease manifests in pigs
Majority agreed pigs get it when free roaming

Key informants
Some did not have comprehensive knowledge on the parasite
But identified it as a zoonotic parasite
One had good knowledge on the parasite and its control
Government veterinary and human health leaders had good knowledge

Results: Use of toilets

Coverage
Over half of HHDs have toilets but many in bad condition. No complete walls and roof, no door
Low coverage in flood prone area

Construction
Most toilets were semi-permanent constructed with local materials.
Design was influenced by availability of materials
Lack of resources affected toilet construction

Also affected by lack of equipment, lack of space, weak and rocky soils
Traditional norms and customs
Ignorance on importance of having a toilet

Roles
Men constructed the semi-permanent toilets
Women provided materials – thatching grass and water
Women cleaned toilets using brooms and ashes

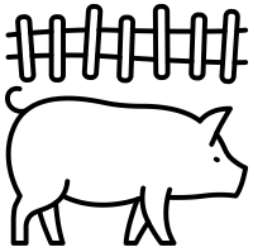
Enforcement
Women enforced toilet use at HHD level
At community level enforcement done by community leaders and village health teams

Barriers
Age, poorly constructed toilets, no lighting, poor hygiene, smelly esp. in public toilets, wrong intention of constructing, drunkards, cost minimization, beliefs e.g on women esp. pregnant women, on children

Results: Hand washing, deworming, pig confinement, meat inspection, pork preparation

Pork preparation
Women prepare pork at home. In most cases meat is well cooked by frying or boiling
In pork joints pork not always well cooked
Lack of time, fuel, skills, many orders and cooking utensils

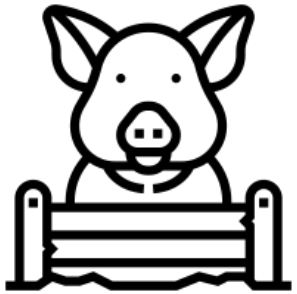
Meat inspection
Only conducted during holidays
Consumers do not check for cysts (no knowledge and butchers do not allow)
Consumers only check for freshness, cleanliness
Some traders inspect under the tongue
Butchers rely on govt meat inspectors
No centralized slaughter place
Political interference



Barriers to pig confinement
Lack of resources to construct pig pens, poor structures, lack of labour and feeds for confined pigs

Hand washing
Hand washing facilities available (tippy tap), sometimes with soap
Few people was hands after toilet
VHTs promote HHD hygiene

Deworming
Different perceptions on deworming (frequency and importance)
Albendazole mostly used
Expectant women dewormed
School deworming programmes
School health days x2/year



Pig confinement
Farmers appreciated the need for housing pigs to avoid infections e.g ASF
No price incentives for fat well reared pig- middlemen buy small pigs normally raised on free range

Conclusions

- Pig farmers, community leaders and pig/pork traders had almost no knowledge of *T. solium* infections
- Pig confinement, pit latrine construction, coverage, maintenance and sustained use were influenced by cultural, socio-economic, and physical/ environmental factors of the study population and area.
- There is need for stakeholder specific sensitization programs
- Reminders and nudges may lead to change in practice

Publication

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