Kitchen waste as pig feed sustains transmission of Taenia solium cysticercosis in Mbeya, Tanzania

Braae, Uffe Christian; Harrison, Wendy; Lekule, Faustin; Magnussen, Pascal; Johansen, Maria Vang

Publication date:
2015

Document version
Early version, also known as pre-print

Citation for published version (APA):
Kitchen waste as pig feed sustains transmission of *Taenia solium* cysticercosis in Mbeya, Tanzania

Uffe Christian Braae 1, Wendy Harrison 2, Faustin Lekule 3, Pascal Magnussen 1, 4, and Maria Vang Johansen 1

1 Section for Parasitology and Aquatic Diseases, Department of Veterinary Disease Biology, Faculty of Health and Medical Sciences, University of Copenhagen, DK-1870 Frederiksberg, Denmark.
2 Faculty of Medicine, School of Public Health, Imperial College London, United Kingdom.
3 Faculty of Agriculture, Sokoine University of Agriculture, Morogoro, Tanzania.
4 Centre for Medical Parasitology, Faculty of Health of Medical Sciences University of Copenhagen, DK-1553 Copenhagen, Denmark.

### Background
- Recent data have shown that confinement of pigs can be insufficient in preventing transmission of porcine cysticercosis, indicating that pigs might become infected while being confined [1].

### Hypothesis
- Pigs are infected with porcine cysticercosis through environmental contamination while being confined.

### Aim
- To identify risk factors associated with porcine cysticercosis using a case-control study design.

### Methods
- Case-control study design consisting of questionnaire interviews and observational surveys, utilising known information on persistent or multiple infections of porcine cysticercosis in an endemic area of Tanzania [1].

- Households were allocated to either the case or control group based on at least two visits during a 14-month period.

- Cases had one or more cysticercosis positive pigs on at least two occasions whereas controls had none.

- Risk factors were identified by logistic regression analyses.

### Results
- From 20 villages a total of 93 households participated - 43 cases and 50 controls.

- Potato peels were said to be given to pigs either raw or boiled by 46% of the farmers.

- Porcine cysticercosis could be associated with absence or a completely open latrine (p=0.035, OR 5.98, CI: 1.33-43.02) compared to an enclosed latrine and feeding potato peels to pigs (P=0.007, OR 3.45, CI: 1.43-8.79).

### Take home messages
- Whether potato peels are contaminated with *Taenia* eggs before they reach the household or whether the contamination is from water or dirty hands during peeling, remains to be confirmed.

- This study suggests that detailed assessment of a number of areas of pig management is essential for designing effective control programmes.

### References