A recent nationwide survey determined the spatial distribution of brucellosis through laboratory determination of Brucella antibodies, records of abortions within farmers’ herds and farmers’ hygienic practices during and after parturition in the different AEZs to inform strategic control approaches.

Methods: This survey utilized sera from a total of 925 indigenous cattle (410 Ankole, 50 Ngoro and 465 East African Shorthorn Zebu (EASZ) obtained randomly from 209 herds. The sera were sequentially analysed for Brucella antibodies using the indirect (I) and competitive (C) enzyme linked immuno-sorbent assays (ELISA). Age, AEZs, breed, recent incidences of abortion (within the previous 12 months) and routine hygienic practices (lack of protective gear, unhygienic disposal of retained placenta and feeding retained placenta, dead foetuses to dogs) were interrogated in a logistic regression model (95% confidence interval) for influences of disease occurrence.

Results: The results indicated that Brucella antibodies occur in approximately 8.64% (90/925) and 28.70% (85/300) of the sampled individual cattle and herds, respectively. Cattle from the different agro-ecological zones (AEZs) exhibited varying levels of seroprevalence ranging from 1.78% (95% CI) to 19.67% (95% CI) in the Lake Victoria Crescent (LVC) and North Eastern Drylands (NED), respectively. Significantly higher likelihoods for Brucella antibodies occurred in the NED (OR: 3.40, 95% CI, p = 0.01) inhabited by EASZ cattle compared to the Kyunga Plains (reference category). AEZ. Recent incidences of abortions within the previous 12 months, older cows more than 72 months and poor hygienic practices by cattle farmers/attendants were more significantly (p < 0.001) associated with Brucella antibody-positive herds.

Conclusion: Brucellosis occurs widely in Uganda and strategic control measures could be deployed through:-
1. Continuous creation of awareness on brucellosis dangers and occurrence to cattle keeping communities.
2. Sensitization and subsequent enforcement of good hygiene practices such as use of protective gear during assisted births and sanitary disposal of retained afterbirth and dead foetuses and consumption of cooked milk.
3. Testing for brucellosis among human patients showing signs of prolonged fever and come from cattle keeping households.
4. Testing for brucellosis in district laboratories and issuance of health certificate by local veterinarians before cattle are sold and transferred to new areas.
5. Culling of older cows more than 72 months, since study results showed that pastoralists keep favourite cows for a long time which their chances to exposure to the disease.
6. Culling of cows which have had an abortion especially during advanced pregnancy.
7. Carrying out mass vaccination especially in northeastern and semi-arid AEZs where brucellosis prevalence was found to be high.

References for further reading
Kabi, F. et al 2015: Spatial distribution of Brucella antibodies with reference to indigenous cattle populations among contrasting agro-ecological zones of Uganda. Preventive Veterinary Medicine 121: 56-63. doi 10.1016/j.prevetmed.2015.06.007

II. TOGETHER, WE CAN COMBAT THE MENACE OF THE PORK TAPEWORM IN UGANDA
Author: Joseph M Kunga (PhD)
Researcher, National Livestock Resources Research Institute (NaLIRRI), Tororo

Pork tapeworm (Taenia solium) is a public health concern, which also poses a market barrier to pig producers. It affects pigs and humans in different forms thus lowering economic productivity significantly in pigs and serious health defects in humans. The possible key players in the maintenance of the life cycle of the pork tapeworm include: limited awareness by public, free roaming of pigs, poor hygiene and sanitation, un-hygienic disposal of faeces and eating raw pork. The condition is among diseases declared by WHO/OIE/FAO as potentially eradicable. However, no stringent efforts have been set targeting control and possibly eradication the condition. Briefly about the pork tapeworm:

What is pork tapeworm?
- A serious parasitic condition that affects humans and pigs.
- Lowering economic productivity significantly in pigs and serious health defects in humans.
- It has two stages; the intermediate (cysticercus) and adult stage (taeniapora).
- What is the current situation?
- Up to 15% of pigs kept are affected.
- Suspected to cause 30% human epilepsy cases in the country.
- Incidence of human cysticercosis and tapeworm carriers not known.
- Most pork sold in the country is slaughtered in backyards and not inspected posing a big risk.

Why is it important?
- Both stages of its development can occur in humans resulting in human cysticercosis (cysticercus infection) and taeniosis (tapeworm infestation).
- The cysticercus can migrate to the brain to cause neurocysticercosis; or other active organs of the body causing various defects.
- The adult worm infestation causes upset in the gastro-intestinal system.
- Well roasted pork with salads
- In pigs:
- Only intermediate stage occurs causing porcine cysticercosis
- No disease condition manifests but puts the human consumers at risk, hence poses a market barrier

What should we do to combat it?
- Always use toothbrushes
- Wash hands with clean water and soap after visiting toilet and before eating
- Boil drinking water
- Collect water from protected sources for pigs
- Deworm routinely as recommended by physician
- Pigs must be confined at all times
- Eat well cooked pork
- Buy pork checked and certified by a meat inspector
- Thoroughly clean the salads accompanying the pork (tomatoes, carrots, cabbage)

In pigs:
- Only intermediate stage occurs causing porcine cysticercosis
- No disease condition manifests but puts the human consumers at risk, hence poses a market barrier

Cystic pork

Oxystriated Human cysticercosis