Rabbit diseases as a production Constraint in Kenya

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WAMBUGU HOTEL, SEPT. 30TH – 1ST OCTOBER 2013.
KVA CENTRAL BRANCH CPD 2013
Introduction….

• Rabbit production is now one of the fastest growing livestock enterprises in the world.
• Highly prolific, early maturity, fast growth rate, high genetic selection potential, efficiency in feed conversion and economic utilization of space (Lukefahr & Cheek, 1990)
• Rabbit meat is white, fine grained, palatable, mild flavored, high in good quality protein content, low fat and caloric contents, contains a higher percent of minerals than other meats
Introduction....

- Diseases of rabbits in Nairobi have increased tremendously by the year 2010 Aleri et al., (2012)
- Reasons: Knowledge gap, inadequate connection between field diagnoses and confirmatory laboratory diagnoses (Borter et al., 2010).
Limitations (Serem et al, 2012)

- NOMKT = lack of market both for rabbits and rabbit meat.
- INADHUSBKN = insufficient knowledge on rabbit husbandry practices.
- POORBREED = poor breeding stocks.
- INADFUND = lack of funds to expand rabbit enterprises.
- INADFEED = inadequate commercial feeds in the market.
- UNKNAHOFF = Animal health officers are unknowledgeable of rabbit diseases and treatment.
- UNAWARPOP = the Kenyan population is unaware of the benefits of rabbit meat.
- NOVETDRUG = no veterinary drug specific for rabbits.
- NOHUTCHPL = lack of proper hutch plans.
Diseases

- Gastrointestinal
- Respiratory
- Skin
- Reproductive,
- Metabolic and nutritional diseases and disorders
MATERIAL AND METHODS

- Visits to sixty one rabbit farms in six counties
- Questionnaires, post mortem on dead rabbits, laboratory analysis of samples collected and isolation of causative agents.
RESULTS

- Gastrointestinal: 65.57
- Skin: 27.87
- Eye, ears and mouth: 27.87
- Miscellaneous conditions: 22.95
- Respiratory: 11.48
- Musculoskeletal: 8.2
Disease prevalence by age
Gastrointestinal conditions

- **Intestinal Coccidiosis**
  *Eimeria* spps.
  Clinically: Diarrhea, bloating, **nervous signs** just before death, found dead.
  young rabbits (from day 21-3 months)

- **Prophylaxis**
  - hygiene
  - Medical - decoquinate, diclazuril, toltrazuril.
  Treatment - sulphur drugs
  at 3 weeks for 4 days every 4 weeks till 3 months

Vaccination? Under trial
Intestinal Coccidiosis

Severe congestion

Enteritis
Hepatic coccidiosis

- **Clinically**: None to non-specific
  - Anorexia, debilitation, constipation or diarrhea

- **Pm**: Multi-focal whitish yellowish nodules on the liver surface

- Control similar to intestinal coccidiosis
Mucoid Enteropathy

- Multifactorial; bacteria, toxins, dietary irregularity, obstruction
- Common between 7-10 weeks also 5-20 weeks
- Clinically: bloat, mucoid fecal material, history of change in feed
- Treatment: withdraw feed, sulphonamide

Control: provide fiber, anti *E. coli.* in feed (Colimycin, tetracycline, furazolidone)
withdraw feed
*Sulphonamides in water*
Mucoid Enteropathy

Gastric ulcers due to toxins in the feed

- gelatinous mucoid content in ceacum
Bloat

- Abdominal distension, diarrhea
- Death
- Control:
  - wilt forages
Treatment:
Not very successful
Withdraw feed
Give only hay
Bacterial conditions

- *Escherichia coli*, *clostridiosis* and *Salmonella spp*
  
  Clinically: Peracute form: death, with little or no signs. Chronic: anorexia, wasting and intermittent diarrhea over several days.
  
  Watery green to tarry brown feces; straw colored peritoneal effusion; ecchymoses in the cecal serosa.
Bacterial conditions

- Collibacillosis

Control;
hygiene
Avoid stress.
Extreme cold, high temperatures
Treatment:
Sulphonamides
Multivitamins
Pinworms

- Not very pathogenic
- May cause obstruction and death when severe
- Clinically visible in ceacum
- Treatment:
  - Piperazine
  - fenbendazole
Skin conditions

Localized mange

- Clinically: alopecia, scratching, around the nose, paws
- Etiology: *Sarcoptes scabiei* mites
- Treatment: Avermectin group (Ivermectin, Doramectin, Selamectin)
- Control: dusting cages with acaricides
Generalised/fur mange

**Etiology:** *Cheyletiella parasitivorax* (Fur Mites)

- Generalized alopecia (dorsal trunk and scapular areas)
- Loss of condition
- Bald patches
- Rarely no scratching
- Treatment & control: similar sarcoptes
Sub-cutaneous abscesses
Sub-cutaneous abscesses...

- Etiology: bacterial (*Staphylococcus aureus, Pasteurella spp, Streptococcus spp, Pseudomonas aeruginosa*)
- Treatment: Draining and cleaning the abscesses
- Injectable Penicillin, *not very successful*
- Control: cleaning and disinfection of cages and materials after outbreaks (Omnicide)
- 800 mg tetracycline HCl (Hydrochloride) per kg feed over a 7-day period have been reported to reduce mortalities temporarily
Diseases affecting the eye, ears and mouth

- **Conjunctivitis**

- **Ear canker**
  - Scabs, crusts, discharges
  - Treatment: Avermectin group (Ivermectin, Doramectin, Selamectin)
  - Mineral oil ??? temporary
Ear canker
Encephalitozoonosis (Nosematosis)

Etiology: *Encephalitozoon cuniculi*
Clinically: Asymptomatic, nervous signs
gross: indented grey areas on the cortical surface
Treatment: antiparasitics (fenbendazole, albendazoles)
Control: regular disinfection
Diseases affecting the respiratory system

Pneumonia
clinically: chronic snuffles, purulent conjunctivitis, localized abscesses, respiratory difficulty, infertility and sudden death
Etiology: Pasteurella, Pseudomonas, Staphylococcus
Control:
Stress free (cold, weather changes)
Good ventilation
prophylactic antibiotic therapy & multivitamins

Antibiotics: (suphonamides) early stages.
Miscellaneous conditions

- Splay legs
- Emaciation
- Nephritis
- Trichophagy
- Cannibalism
- Fight wounds
Conclusions

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<th>Diseases/conditions which cause morbidity and mortalities in domestic rabbit are those affecting the gastrointestinal, skin and the ears</th>
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<td>Enteritis and emaciation are the prevalent conditions affecting domestic rabbits with a prevalence of 29.51% and 14.75% respectively</td>
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<td>Coccidia counts per gram of feces were unsatisfactory (&gt; 2000 OPG) in 68% of the farms</td>
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References