extract twice a week for five weeks while the last group served as controls and were fed on normal saline via intragastric tube. Blood samples were collected at 15 min interval for up to 3 h after khat administration and plasma assayed for LH, testosterone and cortisol levels using radioimmunoassay technique. The data was evaluated using SPSS statistical package and differences in means among groups and over time period was analyzed by two-way ANOVA followed by Tukey's multiple comparison test. The results showed that khat extract causes a significant decrease in pulse frequency; 2.2 ± 0.2, 2.0 ± 0.32, 1.8 ± 0.2 and 1.4 ± 0.25, area under LH curve; 213.9 ± 16.9IU, 167.4 ± 40.5IU, 187.9 ± 13.1 and 168.8 ± 14.4IU and mean plasma LH; 19.43 ± 0.32 IU/L, 18.68 ± 0.43IU/L, 16.57 ± 0.49 and 15.45 ± 0.64 as well as mean plasma testosterone levels; 1.89 ± 0.06nmol/L, 1.79 ± 0.05nmol/L, 1.68 ± 0.06nmol/L and 1.58 ± 0.06nmol/L at doses 1.5g/kg, 4.5g/kg, 13.5g/kg and 40.5g/kg body weight of khat extract respectively. Plasma cortisol levels were significantly increased; 31.39 ± 0.85nmol/L, 33.55 ± 0.78nmol/L, 39.68 ± 0.62nmol/L and 41.33 ± 0.54nmol/L at the same doses. This study demonstrates that khat impairs reproductive function in male rabbits by interfering with hormonal profiles.

Preliminary Study Of Tetrameres Species Infestations in Different Age Groups of Village Free-Range Chickens in Embu and Mbeere Districts, Kenya. P.G. Mbuthia E-mail: pgnmbuthia@wonihi.ac.ke L.W. Njagi 1, P. N. Nyaga 1, J. N. Michieka 1, L. C. Bebora 1, U. M. Mbinga 2, J. E. Olsen 3. 1Department of Veterinary Pathology, Microbiology and Parasitology, University of Nairobi, P.O. Box 29053, Nairobi, Kenya. 2Department of Microbiology and Parasitology, Sokoine University of Agriculture, P.O. Box 3021, Morogoro, Tanzania. 3Department of Veterinary Pathobiology, The Royal Veterinary and Agricultural University, Stigbaljen 4, DK – 1870 Frederiksberg C., Copenhagen, Denmark.

One hundred and five free-ranging indigenous chickens were brought from different smallholder farms and villages in Embu and Mbeere districts. Of these 77 were adult chickens, 21 grower birds and 7 chicks. On examination 26/105 (24.76%) birds had female Tetrameres species of worms in their proventriculi. A total of 7/77 (9.1%) adult chickens, 14/21 (66.7%) grower birds and 5/7 (71.43%) chicks were infected by the parasites. The number of parasites per proventriculus ranged from 2 -15 in adult chickens, 1- 47 in grower birds and 5-71 in chicks. Both male and female parasites were recorded. Most proventriculi had one to thirty parasites but grower birds and chicks had heavy infestation as compared to adult chickens. Grossly, black spots representing the red globular female worms were observed spread out over the thickened walls of the proventriculi while male worms were identified using a microscope. There was excess mucous exudation in the affected proventriculus and some had blood stained exudates. Proventricular glands had variable degree of destruction depending on the infestation. The results show heavy Tetrameres species infestation in young birds than adults that may contribute to the high mortality rates observed in these ages due to thickened walls and blockage of proventriculi, emaciation and anaemia. These parasites require to be controlled in these birds.

The Factors Associated With Newcastle Disease Occurrence in Indigenous Free-Range Chickens in Embu and Mbeere Districts, Kenya. L.W. Njagi 1 E-mail: njagi.luc@wonihi.ac.ke P. N. Nyaga 1, P.G. Mbuthia 1, J. N. Michieka 1, L. C. Bebora 1, U. M. Mbinga 2, J. E. Olsen 3. 1Department of Veterinary Pathology, Microbiology and Parasitology, University of Nairobi, P.O. Box 29053, Nairobi, Kenya. 2Department of Microbiology and Parasitology, Sokoine University of Agriculture, P.O. Box 3021, Morogoro, Tanzania. 3Department of Veterinary Pathobiology, The Royal Veterinary and Agricultural University, Stigbaljen 4, DK – 1870 Frederiksberg C., Copenhagen, Denmark.

A study of factors associated with outbreaks of Newcastle disease (ND) in indigenous free-range chickens was carried out in five agro-ecological zones in two districts of Eastern province of Kenya. Seventy five households keeping chickens were randomly selected. Data on management practices, incidence of diseases and factors associated with ND outbreaks were collected using interviewer – administered questionnaire. The prevalence rate of Newcastle disease was highest (93.8%) in the dry zone (Low midland 5) and lowest (50%) in cool wet zone (Lower highland 1). The ND outbreaks were significantly associated with stress inducing factors; namely, confinement of birds, lack of supplementation of feed and...
seasons. It was found to be more prevalent in wet seasons than dry seasons in all agro-
ecological zones except the Lower midland where it occurred during the hot season. Other
important factors for the outbreaks were mode of disposal of infected birds, carcasses and fecal
matter, windy conditions and the restocking of farms with chickens from the markets. Mixing of
chickens with other poultry, green vegetation on the farm, dust storms, gift birds to farms, short
intermittent temperature changes and flowering of the crops had minimal association with these
outbreaks. The study also revealed that only 17.3% of the farmers were controlling ND
through vaccination. It was concluded that besides using vaccination as a control measure for ND in rural free-
range poultry, the flock owners should be educated on the modes of transmission of ND virus in addition to being
discouraged from purchasing restocking chickens from the market.

Report On Three Rare Cases Handled at the Poultry Clinic, Kabete. L.C. Bebora* and P.G.
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Poultry-keeping is a commercial enterprise for the farmer. The poultry farmer obtains his/her income from the sale of eggs, poultry meat and manure. Thus, any factor which directly or indirectly affects the above will adversely affect respective profit margins. Diseases are known to have a direct effect; some of which may not cause obvious losses like death, but will cause morbidity losses such as: reduction in egg production, fertility and/or hatchability, pullets taking too long to start laying, and broilers taking too long to reach market weight. Since those in the latter category consist of birds that are living, feeding costs get inflated, thus increasing expenses for the farmer. This paper reports on three rare diseases/conditions that were handled at the poultry clinic, Kabete: histomoniasis in a duck, articular and visceral gout in chickens, and crop, rectal and oviduct impaction in chickens.

Chronic, non-healing corneal erosion may be caused by trauma or may occur spontaneously. The clinical management of the condition can be frustrating to the clinician due to its persistence. The condition is characterized by superficial corneal erosion, underrunning of the epithelium allowing for penetration of fluorescein, painful eye, epithelial blebs, or a loose epithelial margin. The condition occurs in any species including man and is more common in dogs than in cats and horses. Studies on this condition have been extensively conducted in man and in the dog. Trauma and basement membrane dystrophy have been identified as inciting factors in man. In the canine, basement membrane dystrophy has been associated with this condition. A female kitten was managed for persistent keratitis, corneal opacity, developing to panophthalmitis in seven months. Medical treatment was done with systemic antibiotics and steroids. Topical treatment was done by a combination of steroids, anti fungal, and antibiotic treatment done on intermittent terms of three weeks each done by the owner at home. The clinical course of the condition has varied necessitating surgical intervention by combined punctate and linear keratotomy. The surgical procedure is outlined including pre-surgical preparation, post-surgical care and medication. The outcome and complications are also discussed.

Haemorrhagic Sore is the Most Definitive Diagnostic and Distinguishing Sign of Subclinical and Chronic Laminitis in Cattle. J. Nguku-Mwangi; P. M.F. Mbili; J.K. Wabacha; P.G. Mbuthia.* Department of Clinical Studies. *Department of Veterinary Pathology, University of Nairobi. P.O. Box 29033-00625 Kangemi, Nairobi, Kenya. e-mail: ngukuju@ymail.com

Laminitis is a foot disease of great importance in dairy cattle due to its long-term economic implications. The insidious nature of laminitis makes it difficult to diagnose early enough. In most cases diagnosis is made after irreversible claw changes have occurred. There is need for early diagnosis in order to succeed in managing the condition. A cross-sectional study to determine prevalence and risk factors of laminitis was conducted on 300 dairy cows in 29 zero-grazed and 3 pasture-
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PROCEEDINGS
OF THE
FACULTY OF VETERINARY MEDICINE
5TH BIENNIAL SCIENTIFIC
CONFERENCE AND EXHIBITION, 2006

DATE: September 6th TO 8th 2006

THEME: Emerging/Re-emerging Diseases and Environmental Challenges: The Way Forward

VENUE: DEPARTMENT OF PUBLIC HEALTH, PHARMACOLOGY AND TOXICOLOGY AUDITORIUM

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