ECTOPARASITISM IN INDIGENOUS CHICKENS AND AVAILABLE INTEGRATED CONTROL ALTERNATIVES. A CASE STUDY IN KENYA

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Ectoparasite control in indigenous chicken is a major impediment to rural farmers since their scavenging habits and constant contact with contaminated environment expose them to parasitic infestations. Studies in Kenya have revealed that indigenous chickens are often infested with lice, fleas, soft ticks and mites among other ectoparasites. A number of techniques have been used in control of these ectoparasites. These include: management changes such as modification of poultry housing by eliminating cracks and crevices required by these pests for shelter; cultural methods like paraffin use in control of fleas (Echidnophaga gallinae) and petroleum jelly applied on scaly legs (Cnemidocoptes mutans); and traditional herbs like neem (Mwarubaini) leaves and bark in control of ectoparasites. In the treatment of scaly mites, neem (Mwarubaini) mixed with residue from soaked and filtered ash and a little water is made into paste and smeared on the scaly legs. The commonly used insecticides include Ectomin 100EC® (synthetic pyrethroid) and Sevin poultry dust® (cabaryl compound) applied as a spray (or bird dipping) and dust treatments. Therefore, an integrated control strategy is imperative for effectual riddance of these ectoparasites. E-mail address: alexe_911@hotmail.com.

AN INVITRO STUDY OF SOME FACTORS THAT MAY INFLUENCE CHANGES OF VIRULENCE FOR NEWCASTLE DISEASE VIRUS


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A Komarov strain of Newcastle disease virus, vaccine strain was passaged ten times invitro in leucocytes cultures from six-Month-old indigenous chicken and ducks. The chicken and ducks had been immunosuppressed with Dexamethasone for four consecutive days prior to sampling of spleens. Leucocytes were separated from the sampled spleens for culture and subsequent infection with the new virus. Spleens were also sampled from non-immunosuppressed chicken and ducks. The infected leucocytes cultures were incubated under CO2 atmosphere. Virus in culture harvests was tested by direct haemagglutination and culturing in 9-11day old specific pathogen free chicken embryos. Virulence of the virus recovered from subsequent passages was monitored by mean death time (MDT) in 9-11 day old chicken embryos, and intracerebral pathogenicity index (ICPI) in one- day old chicks and also by ability to form plaques on chicken embryo monolayers with agar overlays. Reduction in mean death times and an increase in intracerebral Pathogenicity index were observed for immunosuppressed ducks more than non-immunosuppressed and also for some of the passage level in chicken. No plaque formation was observed up to passage four. The (MDT) of the virus decreased slightly which might indicate direction towards elevated virulence. Further investigation may be required to find out whether indeed any changes occurred especially at molecular level.

LOCALIZATION OF NEWCASTLE DISEASE VIRAL NUCLEOPROTEIN IN THE TISSUES OF CARRIER DUCKS


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Localization of Newcastle disease viral nucleoprotein in the tissues of carrier ducks was evaluated in 45 experimentally infected and 10 sentinel ducks. Ten chickens were used as positive control birds. The ducks were sacrificed serially on day 1, 4, 8 and 14 - post inoculation. Six tissues (liver, spleen, lung, cecal tonsils, kidneys and brain) were collected from each bird, preserved in 10% neutral formalin for 24 hours, and then transferred.
to 70% ethanol. Indirect alkaline phosphatase – antialkaline phosphatase immunoperoxidase staining was performed to detect viral nucleoprotein. The ducks (28.9%) had Newcastle disease viral nucleoproteins in their tissues. The viral nucleoproteins were found in large mononuclear cells of cecal tonsils and tubular epithelial cells in kidneys of infected ducks. The viral antigens were located in the cytoplasm and nucleolus of the respective cells. Liver, lungs, spleen and brain of all the infected ducks did not have detectable viral antigens. The number of ducks with viral antigen increased with duration of infection from 22.2%, 16.7%, 33.3% and 41.7% on days 1, 4, 8 and 14 post inoculation, respectively (P<0.05). Viral antigen intensity in cecal tonsil tissue sections was 4, 5, and > 5 cells in 15.4%, 53.8% and 30.8%, respectively of the infected ducks. In the kidneys, more than 5 positive cells were recorded. Thus, in Newcastle disease virus carrier ducks, the kidneys and cecal tonsils need to be sampled for virus isolation besides other tissues.

VARIOUS MANIFESTATIONS OF OVARIAN CARCINOMA AND MAREK’S DISEASE/LEUKOSIS COMPLEX IN CHICKENS: CASE REPORTS

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Like any other diseases of poultry, tumours are important to poultry keepers. This is because farmers keep poultry mainly for commercial purposes and are affected by any condition that would cause death of the chickens or reduce their productivity. There are various tumours that affect chickens, mostly the older ones. This is a report of two manifestations of ovarian carcinoma and two extraordinary manifestations of Marek’s disease/Leukosis complex. Possible impacts on poultry production are discussed.

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INVESTIGATION OF CAUSES OF EGG LOSSES IN OSTRICH PRODUCTION IN KENYA

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Commercial ostrich farming is rapidly becoming a desirable alternative source of profitable meat production among small holder farmers in Kenya. However ostrich farming is severely constrained by high egg losses (up to 60% in Kenya). The overall aim of the study was to establish the possible causes of egg losses in ostrich production in Kenya. The study was carried out in Maasai Ostrich Farm (MOF) in Kitengela. It involved examining the incubation parameters and egg weight losses during incubation. Optimum hygienic conditions were maintained within the incubation and hatchery facility at MOF. The average percentage egg weight loss calculated was 8.2%. An automated incubator was always set at 36°C and 30% temperature and relative humidity, respectively. The low egg weight loss recorded in this study was probably due to high chick mortality resulting from hypoxia. Trained personnel and routine recordings of egg weights during incubation were recommended in keeping track of progressive egg weight loss at the farm. Optimal levels of interaction between factors that will increase egg weight loss and hence improve hatchability rates need to be investigated.

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SESSION 10

CAN OBEYING PROFESSIONAL ETHICS GUARANTEE EMPLOYMENT TO VETERINARIANS?

Christopher Wanga

Veterinary professionals and para-professionals trained to degree, diploma and certificate levels have increasingly found it difficult to obtain gainful employment in the public and private sectors for the past two decades due to a variety of factors. The Government adopted Structural Adjustment Programmes fronted by our development partners which led to the freezing of direct employment of veterinary technical staff, a challenge that led to the
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