Systematic Review


While some *Ehrlichia* species, such as *E. ruminantium* and *E. minasensis*, are not popular even among veterinarians, they can infect cattle. The current study aimed to review studies on *Ehrlichia* spp. to evaluate its worldwide molecular prevalence, given the lack of information about bovine ehrlichiosis and the lack of previous systematic reviews and meta-analyses on this subject. In order to determine the molecular prevalence of *Ehrlichia* spp. in cattle, a systematic review of the literature was conducted in three databases. A meta-analysis with a random-effects model was performed to calculate the pooled prevalence with 95% confidence intervals (95% CI) and measures of heterogeneity were reported. Subgroup analyses were performed in terms of *Ehrlichia* species, country, and regions. The literature search yielded 1051 papers until August 1, 2019, with 71 studies entirely eligible for review. The pooled molecular prevalence for *Ehrlichia* at the individual level (N = 6232) was 2.3% (95% CI: 1.7-2.9%) with the highest value of 82.4%. Studies identified the highest pooled molecular prevalence of 6.6% (95% CI: 0.6-12.7%) for *E. canis*, followed by *E. ruminantium* (n = 4695, 75.33%) 52 studies, with 1.7% (95% CI: 1.1-2.3%) and *E. chaffeensis* with 1.5% (95% CI: 0.0-0.3%). Moreover, the obtained result was indicative of only one study addressing *E. minasensis*. As the findings suggested, heartwater (*E. ruminantium* infection) is a notifiable disease of domestic and wild ruminants, recorded by the World Organization for Animal Health. There is a possible risk of endemic heartwater in the Americas due to the climatic features. Furthermore, *E. minasensis*, *E. chaffeensis*, and *E. canis* were observed in cattle although the two last species could be a molecular misidentification with regard to their phylogenetic relationships with *E. minasensis*. 
Keywords: Bacteria, Bovine, *Ehrlichia*, Systematic review, Tick-borne

Review

Uses of Immunoglobulins as an Antimicrobials Alternative in Veterinary Medicine.

Abd El-Ghany WA


ABSTRACT
As a result of increasing the resistance to antimicrobials in the field of veterinary medicine that reflects on human health, there is a great demand to use some drug alternatives. The application of avian immunoglobulins (IgY) is regarded as an important alternative strategy. The IgYs have been produced by several techniques and applied for animals using different methods. In addition, egg yolk IgYs have many advantages over blood type ones. There are many uses of IgYs in veterinary medicine. They have been used for the prophylaxis and treatment of different infections especially the enteric ones in cattle, pigs, rabbits, dogs, rats, mice, and fish species. Moreover, several studies showed the importance of IgY for competing for the *in vivo* enteric pathogens in poultry and the *in vitro* foodborne pathogen. Therefore, it is important to put a spotlight on applications of egg yolk immunoglobulins IgY in veterinary medicine to overcome the problems of antimicrobials’ resistance as well as the tissue residues that adversely affect human health.

**Keywords:** Advantages, Animals, Poultry, Production, Yolk antibodies

[Full text- PDF ] [XML] [Google Scholar] [Crossref Metadata]

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Changes of Body Condition Scores, Serum Biochemistry and Liver Triacylglycerol in Periparturient Holstein Friesian Dairy Cows Raised in a Small-Holder Farm.

Triwutanon S and Rukkwamsuk Th

Research Paper
ABSTRACT

This Negative energy balance (NEB) inevitably occurs in periparturient dairy cows. Its consequences are related to reduced cows' performances. Most studies concerning the NEB are performed in dairy cows of large-scale farms, particularly raised under non-tropical climate. The current study aimed to investigate the changes in body condition score, serum biochemical parameters, and liver triacylglycerol (TAG) accumulation in periparturient Holstein Friesian dairy cows raised by a small-holder farm. In this regard, 10 healthy pregnant dairy cows in a small-holder farm were recruited for the study. At 4 weeks before and 1, 2, 4, and 8 weeks after calving, blood samples were collected for determination of glucose, non-esterified fatty acid (NEFA), β-hydroxybutyrate (BHBA), and insulin-like growth factor-I (IGF-I) concentrations. BCS was evaluated at 4 weeks before and 2 weeks after calving. Liver samples were collected 4 weeks before and 2 weeks after calving to determine TAG concentration. Results revealed that serum NEFA and liver TAG concentration were elevated postpartum. Serum BHBA concentrations increased postpartum and the concentration indicated that dairy cows entered NEB condition as type I ketosis with a longer period. Serum IGF-I concentrations and BCS did not differ between before and after calving. In conclusion, dairy cows raised under small-holder tropical conditions suffered from serious NEB, though the cows had low milk production, as compared with the commercial non-tropical condition.

Keywords: Blood biochemistry, Dairy cow, Liver triacylglycerol, Negative energy balance, Small-holder farm
Anaimed at determining the effect of both the gender of the immunoglobulin G (IgG) were calculated in the maternal blood serum at the assigned periods. Measuring the chemical composition of the colostrum, as well as levels of IgG and IGF-1.

Dams pregnant with a female fetus, in the pregnancy period, at the giving-birth period and after hours after the birth except that for the percentage of fat and lactose which showed gradual.

ScourGuard-4k chemical composition and some biological parameters of the colostrum. Blood serum was (vaccinated buffalo dams pregnant with a male fetus, vaccinated buffalo dams pregnant with a).

Colostrum samples were collected at the birth time and 6, 12, 24, 48, and 72 hours after birth for components except for IGF-1, which was not positively influenced by the vaccination. Generally, richer content of IgG and IGF-1 levels and a higher percentage of total solids, solids-not-fat, ABSTRACT new-born calf and the pre-partum vaccination status of the dam (ScourGuard-4K) on the impact of offspring sex and dam’s pre-partum vaccination on colostrum composition and blood hormones in Egyptian Buffaloes.

World Vet. J. Reprints, Mikhail WZA, Salama MAM and Hafez YM. Impact of Offspring Sex and Dam’s Pre-partum Vaccination on Colostrum Composition and Blood Hormones in Egyptian Buffaloes. ABSTRACT Vaccination of Algerian Local Rabbits with Precocious Strains of Eimeria magna and Eimeria media. ABSTRACT The use of Kaolin as an inert ingredient in feed has been very common in the poultry industry.


ABSTRACT 0.5 or 1.0% in broiler chickens’ diet insignificantly increased final body weight by 4.5% and experimental period (6 weeks). The obtained data revealed that kaolin addition at the dose of randomly allotted into 3 equal groups (80 chickens per each group) and each group was kaolin added feeds on growth, immune response, some and immune response.

Experimental diets (0.0, 0.5, and 1.0% kaolin for groups 1, 2, and 3, respectively) during the growth performance, immune response, some and blood serum changes, and bone development. A total of 240 unsexed one-day-old Avian 48 Egyptian kaolinite in broiler chickens’ diet on growth performance, immune response, some and bone development.

World Vet. J. Okoko IM, Kagira J, X, and M. 2021; pii:S232245682100007-11. Milk of Goats with Sub-Clinical Mastitis in Thika Sub-County, Kenya. ABSTRACT SHV, CTX, TEM, CTX, KPC, OXA, and SHV ESBL-producing Staphylococci spp had a combination of beta-lactam resistance, beta-lactamases, and failure and potential transfer of the infectious bacteria to humans and other animals. The current study to interrogate the occurrence of beta-lactamases genes in bacterial isolates (American Type Culture Collection 35218 and non-standard Klebsiella pneumonia beta-lactam antibiotics for the treatment of sub-clinical mastitis may result in the treatment with two samples of the 44 bacterial isolates, also possessing the beta-lactamases gene. Only one isolate of bla associated with the bacteria carrying beta-lactamases genes, suggesting that the use of Escherichia coli human and veterinary medicine. In this regard, bacterial isolates from milk samples collected from dairy goats with sub-clinical mastitis from Thika Sub-county, Kenya, were used in the study.
ABSTRACT

The present study aimed to investigate the contamination of bacteria in blood cockle satay (Anadara granosa) sold at Surabaya traditional market (Indonesia) using a descriptive observational research design with a quantitative approach. A total of 11 samples were employed using Chromolaena odorata infusion and 10% Povidone-Iodine on Incision Wound Healing Process of Mice (Mus musculus). Considering the improper handling and processing can cause pathogenic bacteria contamination. The present study concluded that the blood cockle satay samples sold at Surabaya traditional market (Indonesia) were contaminated with determinative bacteriology and Indonesian national standard. Based on the obtained results, however, it potentially accumulates pollutant substances, both heavy metal or microbial so that further studies are needed to control the contamination of these samples.

Keywords: Blood Cockle, Povidone-Iodine, Chromolaena odorata, Histopathology, Povidone-iodine, Skin, Wound healing

RESEARCH PAPER


Antimicrobial agents, indiscriminate and extensive use of antibiotics. In conclusion, resistance monitoring data and associated with MDR development in the equine health sector of Egypt. The predisposing factors may be attributed to insufficient veterinary healthcare, monitoring, and regulatory knowledge about drugs. The misuse and overuse of antibiotics have led to the evolution of antibiotic-resistant bacteria in equine in Egypt.

**Keywords:**
- Staphylococcus aureus
- Proteus mirabilis
- Stenotrophomonas maltophilia
- K. pneumoniae
- P. aeruginosa
- Rhodococcus equi

**Keywords:**
- Western blot
- T. vitulorum
- M. digitatus

In the present study, the whole worms extracted of T. vitulorum and M. digitatus have been used for the production of proteins. The proteins have been identified using SDS-PAGE and western blot. The results indicated that the proteins have molecular weights ranging from 68 to 12 kDa. The proteins have been identified as T. vitulorum and M. digitatus, respectively. The results have been validated using ELISA and western blot.

**Keywords:**
- Gastrointestinal Parasites
- Merino Sheep
- Prevalence
- Faecal Egg Counts

The present study aimed to evaluate the effect of the agroecological zone, host age, and gender on the prevalence and faecal egg load of gastrointestinal parasites (GIPs) for Merino Sheep. The study was conducted in the Maseru and Quthing districts, Lesotho. A total of 1919 faecal samples were examined using the McMaster technique. The data were analyzed through generalized estimating equations (GEE) under the binary logistic regression model to determine the effect of the agroecological zone, host age, and gender on the prevalence and faecal egg load of gastrointestinal parasites. The results indicated that the agroecological zone and host age significantly affected the prevalence and faecal egg load of gastrointestinal parasites.
ABSTRACT

In vitro sporulation inhibition of garlic extract showed significant efficacy on oocysts in comparison with black seed extract and high significant efficacy of sporulation inhibition, compared to sulfadimidine. While black seed extract showed high significant efficacy, ability of garlic pretreatment had a better effect on prophylaxis and treatment for coccidiosis than garlic treatment and both had more beneficial effects, compared to black seed extract. Therefore, it is recommended to use garlic pretreatment, compared to the control positive, sulfadimidine treatment, and black seed treatment groups, in comparison with the negative, garlic pretreatment, and garlic treatment groups in comparison with other groups.

The results showed that there were no significant differences in erythrocytes counts in all pretreatment groups, compared to the control positive, sulfadimidine treatment, and black seed treatment groups. At the end of the experiment, the oocyst disappeared in garlic pretreatment, more beneficial effects, compared to black seed extract. Therefore, it is recommended to use garlic pretreatment, compared to the control positive, sulfadimidine treatment, and black seed treatment groups, in comparison with the negative, garlic pretreatment, and garlic treatment groups in comparison with other groups.

Overall oocysts number per gram was significantly lower in the garlic treatment and positive, garlic pretreatment, and garlic treatment groups in comparison with other groups. The results showed that there were no significant differences in erythrocytes counts in all pretreatment groups, compared to the control positive, sulfadimidine treatment, and black seed treatment groups.

Keywords: E. magna

ABSTRACT

Evaluation of Sensory Quality and Nutritional Value of Fish Cakes (Perkedel) Made by E. magna using Histopathological Examinations

ABSTRACT

Recommended Dietary Allowance (RDA) protein of 28.77%, RDA fat of 0.68%, and RDA carbohydrate of 7.41%. Moreover, it also produced energy of 162 kcal/100g.

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Recommended Dietary Allowance (RDA) protein of 28.77%, RDA fat of 0.68%, and RDA carbohydrate of 7.41%. Moreover, it also produced energy of 162 kcal/100g.
Identification of Somatic Antigens of Adult Fasciola gigantica Isolated from Bali Cattle.

Sriasih M and Munjizun A.


ABSTRACT
In most tropical countries, such as Indonesia, fasciolosis is generally caused by Fasciola gigantica known as tropical liver fluke. However, most fasciolosis serodiagnostic tests have been developed solely for diagnosing fasciolosis caused by Fasciola hepatica (non-tropical liver fluke), and very few have been specifically designed for F. gigantica. The aim of this study was to determine the profile of antigenic proteins from the somatic extract of F. gigantica isolated from Bali cattle (Bos javanicus). The liver flukes were collected from a slaughtering house in Mataram, Indonesia. The somatic extracts were prepared by homogenizing in buffers containing 0.05 M NaCl, 0.02 M PMSF, and 0.05% Triton X-100. The characterization of the somatic extract proteins was performed using one-dimension gel electrophoresis and followed by Western blotting to determine the profile of its antigenic proteins. There were 14 bands of the somatic extracts with an estimated molecular weight ranging from 8 to 105 kDa shown on the gel electrophoresis. The results of the Western blot show that there were five prominent protein bands. Three out of five prominent antigenic proteins with molecular weights of 8, 27, and 33 kDa are promising to enrich the existence of antigens that have immunodiagnostic value for fasciolosis. Therefore, further studies are required to examine more deeply the potency of those three antigenic somatic proteins of F. gigantica.

Keywords: Bali cattle, F. gigantica, Immunodiagnostic, Somatic extract, Western Blot