Research Paper

Prevalence and Risk Factors Associated with Cryptosporidium Infection in Raw Vegetables in Yazd District, Iran.


ABSTRACT

Consumption of raw vegetables is an important route of parasites transmission. It is an important source for foodborne outbreaks in both developed and developing countries, and outbreaks of parasitic diseases in humans. The objective of the present study was to detect the presence of Cryptosporidium oocysts in raw fresh vegetables in Yazd city, Iran, from 2017 to 2018. A total of 275 fresh vegetable samples were collected and tested using a sucrose flotation medium of 1.21 specific gravity and a Modified Ziehl-Nielsen staining procedure. Of the 275 vegetables examined, 85 (31.5%) samples were positive for Cryptosporidium oocysts. Lettuce had the highest rate (n= 16, 47.1%) of contamination with Cryptosporidium oocysts while basil and parsley showed the lowest rates of contamination (n= 6, 20%). There was a significant association between the occurrence of Cryptosporidium oocysts and the investigated vegetable types. According to the locations of the vegetable field, Amir Abad and Bahaman Hospital area had the highest (n: 16, 59.3%) and lowest (n= 5, 18.5%) rates of Cryptosporidium oocysts contamination, respectively. The plant part showed that the root vegetables had the highest contamination rates (n= 41, 45.6%), followed by leafy vegetables (n= 44, 24.4%). The analysis further indicated a significant association between the occurrence of Cryptosporidium oocysts and the route of vegetable consumption. Based on these results, the edible vegetables in Yazd city are one of the potential sources of Cryptosporidium infections in humans. Moreover, the vegetable fields within the city of Yazd are contaminated with Cryptosporidium oocysts which can pose public health problems.

Keywords: Cryptosporidium, Oocysts, Raw vegetables, Yazd city, Iran.

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Antibacterial Efficacy of Zinc Oxide and Titanium Dioxide Nanoparticles against 
*Escherichia coli* in Minced Meat

**Graphical Abstract**

**ABSTRACT**

This work aimed to investigate the antibacterial effect of zinc oxide (ZnO) and titanium dioxide (TiO2) nanoparticles, alone or together, against *Escherichia coli*. The disc diffusion method showed that ZnO (12 mM) was the most effective concentration used for reducing bacterial cell viability. ZnO nanoparticles had a more destructive effect on bacterial cell than the mixture of ZnO + TiO2, and 12Mm TiO2 alone. The antibacterial activity of these nanomaterials was evaluated and treated with different concentrations of two nanomaterials (approximately 20 nm), including 6 mM, 12 mM ZnO, 6 mM, 12 mM TiO2, and a combination of 6 mM ZnO and 6 mM TiO2. E. coli reduction effect on 

**Keywords:** Minced meat, Nanoparticles, TEM, Titanium dioxide, Zinc oxide.

**Incidence and Prevalence of Hard Ticks in Ruminants of Al-Abwa Oasis Region, Kingdom of Saudi Arabia.**

**Graphical Abstract**

**ABSTRACT**

From 4 different fish farms at different locations in Kafr El-sheikh Governorate for bacteriological and chemical analysis. The results of water quality parameters examination revealed that the mean values of pH, dissolved oxygen, unionized ammonia, and nitrite were 8.2 ± 0.73, 7.44 ± 0.54 parts per million, respectively. The bacterial isolation results revealed 38 species isolated from water samples. Of those 38 positive fish samples, 25 (65.78%) were

**Keywords:** Biochemical parameters, Minerals and Trace Elements, Minerals and Trace Elements, Minerals and Trace Elements.

**Detection of Streptococci in Cultured Tilapia Fish Using PCR and 
Chemical Examination.**

**Graphical Abstract**

**ABSTRACT**

5 species directly from organs from fish and water samples revealed that 5 species were isolated from the organs of tilapia fish. The biochemical results indicated that the infected fish with the infection had reduced total protein, albumin, and globulin in the blood serum while total cholesterol, urea, creatinine levels, and AST, ALT, GPX, CAT, SOD activities significantly increased, compared to non-infected fish.

**Keywords:** Oreochromis niloticus streptococci, Tilapia fish, Water examination.
Modern pig farming worldwide has been facing substantial economic loss due to perinatal mortality which is mainly associated with the farrowing process. Therefore, the present study aimed to identify factors affecting the farrowing duration in natural farrowing sows in the intensive indoor conditions. In total, 210 farrowing sows in 4 commercial farms were included in the study. The association between potential risk factors and farrowing duration was analyzed. The study found that average birth weight was significantly associated with farrowing duration. Among the four factors, average birth weight had a negative association with farrowing duration, whereas the other three factors had positive associations with farrowing duration. These findings have implications for improving pig farming practices and reducing economic losses.

Keywords: farrowing duration, intensive indoor conditions, pig farming, average birth weight.

The Medulla Oblongata and The Fourth Ventricle


Research Paper

ABSTRACT

Amniotic fluid is a dynamic complex mixture that carries components contributing to the regulation of fetal development. The present study aimed to measure the levels of trace elements in amniotic fluid (AF), maternal serum (MS), and venous umbilical cord serum (VUCS) in order to assess the possibility of monitoring abnormal fetal growth. Blood samples were collected at the time of delivery. The Fe, Zn, Cu, Mg, Se, and Mn levels were analyzed on the atomic absorption spectrophotometer. The findings of this study indicated an active transport for Fe, Zn, Cu, Mg, Se, and Mn between the amniotic fluid and maternal serum. The transport of these elements is thought to be necessary for fetal development.

Keywords: amniotic fluid, trace elements, maternal serum, venous umbilical cord serum, fetal growth.


The current study aimed to carry out a post-mortem analysis of the dairy calves with clinical suspicion of listeriosis and determine a condition contributed to death using histopathological evaluation. The tissue samples were obtained from 16 dairy calves with the histopathological alterations observed in calves clinically suspected of listeriosis. The tissue samples were stained with hematoxylin, and eosin along with Levaditi's method, and the microscopic examination. The histopathological findings were consistent with infection by Listeria monocytogenes, addressing histopathological alterations observed in calves clinically suspected of listeriosis.

Keywords: dairy calves, listeriosis, post-mortem analysis, histopathology.

Research Paper

ABSTRACT

Veterinary Service was enlisted as important service by the Government of Nepal on June 22, 2020, only after continuous effort of Nepal Veterinary Association (NVA).

Research Paper

Veterinary laboratories also started COVID19 tests.

• Vertical Arran Disease Investigation Laboratory, Chitwan,
• Regional Animal Disease Investigation Laboratory in Biratnagar, Sankhu, Dhulung, and Sundrap.</p>
Risk Factor Analysis of Typhimurium. The study provided various risk factors that had a clear and effective role in Plate Count and Somatic Cell Count in Bulk Tank Milk in Cattle Dairies. The geometric mean value of and molecular identification to be Salmonella Typhimurium isolates (100%). Phylogenetic and partial gene sequence analysis of Salmonella determining the level of Bulk tank milk analysis was referred to as a useful and appropriate diagnostic tool to evaluate count (cfu/ml) revealed that the geometric mean of 150 dairy farms was 3.2×10² Importantly, this study highlighted the importance of more efficacious preventive programs for controlling the mastitis and Staphylococcus aureus (ABSTRACT Standard plate count, and Somatic cell count in bulk tank milk. The PCR amplification with (Salmonella were detected and confirmed phenotypically by culturing, gram staining, biochemical and of Egyptian isolated strain showed a great identity with the different Salmonella) gene-specific primers revealed a product with an approximate size of 937 bp. (Staphylococcus aureus gene found in all milk quality and mastitis pathogens in cattle dairy herds. Out of the total number of 150 pooled Typhimurium revealed a product with an approximate size of 517 bp. SigD sopB sopB, Keywords: Mastitis, PCR, phylogenetic analysis, risk factors, Essential oil, Fennel, Growth performance, Oregano, Rabbit, Thyme. Parameters of Growing Rabbit. Effect of Dietary Dried Fennel and Oregano and Thyme Supplementation on Zootechnical (30-day-old), white New Zealand, were divided into 4 groups and submitted to the following dietary treatments: Control diet, F diet (Control diet + 5% Foeniculum vulgare), O diet (Control diet + 5% Origanum compactum), and T diet (Control diet + 5% Thymus capitatus). The components of Foeniculum vulgare, Origanum compactum, and Thymus capitatus essential oils of the above mentioned aromatic plants were extracted and were analyzed using a gas chromatograph coupled to a mass spectrometer. The treatment of fennel, oregano, and thyme had no beneficial effects on the growth performance of the rabbits but reduced the mortality rate. The phenylpropanoid and the phenolic monoterpenes were the major components of the essential oils. The study aimed to determine the prevalence of Vibrio parahaemolyticus, V. vulnificus, and V. mimicus strains in seafood (Dicentrarchus labrax) and seabream (Sparus aurata), with a focus on antibiotic resistance and the virulence gene toxR. The results indicated that the total prevalence of antibiotic-resistant strains was high, with 30% of isolates resistant to ampicillin, erythromycin, streptomycin, and gentamycin. The present study also aimed to determine the prevalence of Vibrio parahaemolyticus and Vibrio harveyi in seabass and seabream, with the focus on the virulence genes tdh and trh. The results indicated that good hygienic measures should be taken to avoid infection with these pathogens, which have great public health importance. A total of 30 seabass (Dicentrarchus Labrax spp.) and 30 seabream (Diplodus vulgaris) were purchased from fish markets at Kafr El Sheikh Governorate and subjected to bacteriological examination. The PCR assay was used for the detection of virulence genes (V. parahaemolyticus gene). The results indicated that the total prevalence of Vibrio parahaemolyticus isolates showed sensitivity to ciprofloxacin, norfloxacin, cefotaxime, and chloramphenicol. The prevalence of Vibrio parahaemolyticus in seafood had great public health importance.
Salmonella Typhimurium and different Salmonella Typhimurium in Egyptian duck farms. Out of 75 fecal swab samples, 15 (20%) local field Salmonella epidemiology, disease pattern of bcfC PRK15193 outer membrane usher protein (56-424bp), and Salmonella gene using NCBI tool and ORF analysis of the sequencing Salmonella strains uploaded from GenBank. Nucleotide alignment report of the sequenced Salmonella BcfC México. Typhimurium. A PapC N-terminal conserved domain can be used as a vaccine target for Salmonella and serologically to be World Vet. J. strains uploaded from GenBank. In conclusion, the Egyptian bcfC reading frames of a specified minimum size in a sequence of (453 bp). The 3 conserved domains region in the nucleotide sequence FimD Outer membrane usher protein FimD/PapC (cell motility, extracellular structures, Typhimurium strain and the different Salmonella S. Typhimurium. The PCR amplification with Salmonella bcfC gene was found in 7 (46.6%) isolates of Salmonella bcfc gene showed great homology between the Egyptian Salmonella strains. The main objective of this study was applying Salmonella bcfC Salmonella strains, and Oxytetracycline for the Treatment of Early-Stage Interdigital Necrobacillosis in Dairy Cows. World Vet. J. 10 (3): 362-374, DOI: http://dx.doi.org/10.3638/0/scil.2020.wvj46


Feeding Trail

Dairy cows with early-stage interdigital necrobacillosis


Feeding Trail

Dairy cows with early-stage interdigital necrobacillosis

Figure 1: Polymerase chain reaction amplification of bcfC gene from different Salmonella Typhimurium isolates from Egyptian duck farms. The isolated Salmonella Typhimurium isolate (PRK15193) was used as positive control. bcfC gene sequencing from different Salmonella Typhimurium isolates revealed 3 conserved domains region and 100% homology with the reference sequenced bcfC gene from the eagle Hawk (Eaglet owl L. euops) isolate (GenBank Accession Number: KC640614) (Figure 1).
The current study was designed to evaluate the protective effects of Tribulus terrestris fruit (200 mg/kg) against cadmium in the lung tissue. These results demonstrated that the effects of Tribulus terrestris fruit indicated normal tissue appearance, while others showed large aggregations of inflammation, necrosis, hyperplasia, and large urinary space in Bowman's capsule in the mice exposed to cadmium. The lungs of some mice exposed to cadmium and treated with the alcoholic extract of the fruit showed normal tissue appearance, while others showed large aggregations of inflammation, necrosis, hyperplasia, and large urinary space in Bowman's capsule in comparison to the normal appearance of tissues in the mice in the other two groups. The large mortality of infected chicken (80-100%) was observed. The best dose of the IgY to protect them from infection was 24 hours before infection, at the time of infection, and 24 hours after infection. The effectivity of IgY anti-Hemagglutinin Protein (anti-HA) of High Pathogenic Avian Influenza (HPAI) clade 2.1 (A/Chicken/Blitar/2003) was tested against HPAI clade 2.3.2. According to the cross-protectivity of IgY as preventive method against HPAI outbreak, the IgY anti-Haemaglutinin Protein (anti-HA) of HPAI clade 2.1 could protecting infection of HPAI clade 2.3.2. According to the results revealed that the incorporation of dietary supplementing with Pentadiplandra brazzeana powder in water recorded the highest live weight and weight gain, compared to the inclusion via feed and with the control diet. The feeding method did not affect the haemato-biochemical parameters, compared to the control diet. Chickens fed with a powder in chickens' diet and drinking water could decrease feed intake, compared to the powder. In conclusion, dietary supplementing with Pentadiplandra brazzeana powder in water, compared to the inclusion via feed and with the control diet. The feeding method did not affect the haemato-biochemical parameters, compared to the control diet. Chickens fed with a powder in chickens' diet and drinking water could decrease feed intake, compared to the powder. The carcass yield was significantly higher with the inclusion of the powder via drinking water, compared to the inclusion via feed and with the control diet. The feeding method did not affect the haemato-biochemical parameters, compared to the control diet. Chickens fed with a powder in chickens' diet and drinking water could decrease feed intake, compared to the powder.
Samples from owned dogs were collected and examined for the presence of H. pylori. The prevalence of this bacterium was high in both human and dog isolates. Gene sequencing and phylogenetic analysis were performed to determine the relationship between human and dog isolates. In conclusion, this study indicated a high potential for H. pylori transmission between dogs and humans, which represents a public health concern.

Keywords: H. pylori, Helicobacter genus, 16s rRNA sequencing, Phylogenetic analysis.

References:


ABSTRACT

Polycystic ovary syndrome, a common cause of infertility among women in the reproductive age, is associated with high levels of androgens. Recognizing the anti-androgenic effects of spearmint, the present study aimed to evaluate the effects of its hydroalcoholic extract on the levels of luteinizing hormone, follicle-stimulating hormone, and testosterone and ovarian folliculogenesis in normal and letrozole-induced polycystic ovary syndrome rats. Female mature rats were divided into six groups (n=8 per group), as follows: Normal rats (I or Control), normal rats which received 250 mg/kg spearmint extract (II) or 500 mg/kg spearmint extract (III), and PCOS-induced rats (IV), PCOS-induced rats which received 250 mg/kg spearmint extract (V), or 500 mg/kg spearmint extract (VI). At the end of the experiment the animals were euthanized, and then mentioned parameters were evaluated. Administration of spearmint extract to PCOS rats resulted in a decrease of body weight and testosterone level, higher corpus luteum, and lower ovarian cysts and atretic follicles, compared to PCOS rats which received no spearmint. Accordingly, the spearmint can attenuate polycystic ovarian syndrome-related problems, such as a high testosterone level and ovarian cysts.

Keywords: Folliculogenesis, Mentha spicata, Ovary, PCOS, Rat

ABSTRACT

Despite the paucity of data, brucellosis is considered as a major problem in Algeria. The aim of present study was to assess the presence of bovine and ovine brucellosis in the areas close to the capital city (Algiers) where its vaccination is not implemented. A total of 402 cattle and 203 ovine sera were collected from two slaughterhouses, and examined by the Rose Bengal Test (RBT). Positive samples were then tested by Complement Fixation Test (CFT) and Hypertonic Double Gel Diffusion (DDG) with a smooth lipopolysaccharide, and the extract of native hapten was also tested by Indirect Enzyme Linked Immuno Sorbent Assay (iELISAs) with smooth lipopolysaccharide and polyclonal or protein G conjugates. Twenty-four bovine sera (5.97%) were RBT positive. Of these, 23 were positive in CFT, DDG, and 16 samples were also positive in iELISA when the assay was adjusted to 100% specificity. Only two ovine sera were RBT positive; one was CFT and DDG positive, and the other one had a CFT-titer of 1/4, and was DDG negative. This preliminary study confirmed that bovine brucellosis is a major problem in Algeria, and indicated that some field studies are needed to determine the prevalence of Brucellosis in Algeria urgently. Similarly, other studies are necessary in areas with dominance of ovine breeding system. Further studies in the areas with a dominance of ovine breeding system are necessary. The results of this work showed that simple tests like RBT and DDG are not outperformed by CFT or iELISA for assessing the apparent prevalence of brucellosis in the absence of vaccination. Finally, isolation and typing of the involved Brucella species are also necessary in order to have a complete epidemiological picture of brucellosis in Algeria.

Keywords: Abattoirs, Algeria, Brucellosis, Cattle, Serology, Sheep, Prevalence