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.
The species 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 for some fish and water isolates, 6 % positive samples for Enterococcus faecium, 3 (37.5%) were Enterococcus faecalis, 5 (13.15%) were Streptococcus pyogenes, 6 (15.78%) were Streptococcus iniae, and 40 % were positive for Streptococcus agalactiae. Using mPCR to identify Streptococcus agalactiae, Streptococcus iniae, Enterococcus faecalis, and Streptococcus pyogenes by PCR and chemical analysis in cultured tilapia fish. Streptococcus iniae isolated from water samples. Of those 38 positive fish samples, 25 (65.78%) were Enterococcus faecalis, 25 (65.78%) were Enterococcus faecium, and 2 (25%) were Streptococcus pyogenes. It is concluded that 12 mM ZnO nanoparticles have the best antibacterial effect against Escherichia coli in minced meat. The antibacterial activity of ZnO, TiO2, and combination of ZnO and TiO2 was also examined against E. coli. It is concluded that 12 mM ZnO nanoparticles have the best antibacterial effect against E. coli in minced meat.
The results also demonstrated that the number of total born piglets, stillborn, and mummified piglets, number of stillborn and mummified piglets, litter weight, and average birth weight of piglets, was significantly associated with farrowing duration. Among the four factors, average birth weight had a negative association whereas the other three factors had positive associations with farrowing duration. Two models explained about 19.1-19.5% variation of the farrowing duration.

Modern pig farming worldwide has been facing substantial economic loss due to perinatal losses. This 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 results showed that the number of total born piglets, stillborn, and mummified piglets, number of stillborn and mummified piglets, litter weight, and average birth weight of piglets were associated with farrowing duration. Two models explained about 19.1-19.5% variation of the farrowing duration.

Keywords: perinatal losses, farrowing duration, intensive indoor conditions, sows.
The geometric mean value of $h_{lg}$ Typhimurium. The study provided various risk factors that had a clear and effective role in $aureus$. The virulence gene Staphylococcus aureus gene found in 13 (54%) isolates were detected and confirmed phenotypically by culturing, gram staining, biochemical, $Salmonella$ gene. The results of the present study emphasize the Typhimurium gene sequence analysis of $Salmonella$ ABSTRACT Staphylococcus aureus isolates. The PCR identification of $Typhimurium$, $sopB$ Staphylococcus aureus Staphylococcus aureus $Salmonella$ gene molecular identification to be Standard plate count, and Somatic cell count in bulk tank milk. The PCR amplification with ($Typhimurium$ revealed a product with an approximate size of 517 bp. A local field strain indicated a great homology with the different $Salmonella$ isolates (100%). Phylogenetic and partial gene sequence analysis of $Salmonella$ Bulk tank milk analysis was referred to as a useful and appropriate diagnostic tool to evaluate Plate Count and Somatic Cell Count in Bulk Tank Milk in Cattle Dairies. The objective of this study was to analyze and compare the effects of fennel, oregano, and thyme dietary treatments: Control diet, F diet (Control diet + 5% $Foeniculum$), O diet (Control diet + 5% $Origanum$), and T diet (Control diet + 5% $Thymus$). The aromatic plants and their active compounds can be used as additives in rabbit nutrition. Parameters of Growing Rabbit. Keywords: Essential oil, Fennel, Growth performance, Oregano, Rabbit, Thyme. © 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/). The geometric mean of somatic cell count (SCC)/ml in Bulk tank milk samples of 150 $Salmonella$ count (cfu/ml) revealed that the geometric mean of 150 dairy farms was $3.2 \times 10^3$. The results of total bacterial plate counts uploaded from the gene banks. The results of the present study emphasize the $Typhimurium$ isolates (100%). Phylogenetic and partial gene sequence analysis of $Salmonella$. The results of the present study emphasized the importance of more efficacious preventive programs for controlling the mastitis and $Mastitis$, PCR, phylogenetic analysis, risk factors, https://dx.doi.org/10.36380/scil.2020.wvj44.


Keywords: bcfC gene, Salmonella Typhimurium, Sequencing, PCR amplification, GenBank, ORF, Phylogenetic tree, Conserved domain, Duck, Gene of Salmonella Typhimurium Isolated from Ducks in Egypt.


Suwarno, Srawati R and Widjaja NS (2020). Cross Protective of Yolk Immunoglobulin Antibodies Production of High Pathogenic Avian Influenza A subtypes H5N1 Administered on Chicken Infected by High Pathogenic Avian Influenza (HPAI) clade 2.1 (A/Chicken/Blitar/2003) was tested against HPAI clade 2.3.2 (A/Duck/Sidoarjo/2012). The inhibiting dose amounts (0 µg, 100 µg, 200 µg and 400 µg) were administered at three different times which were observed. The lungs of some mice exposed to cadmium and treated with Tribulus terrestris fruit (200 mg/kg). The substances were administered orally by stomach tube daily for 10 days. The lymphocytes between alveolar sacs and thick interalveolar septa. The ADG on the post-weaning performances was performed by estimating the genetic capability for their reciprocal cross. In conclusion, direct additive variance was considerably effective, and consequently body weight at weaning and post-weaning growth were observed. The lungs of some mice exposed to cadmium and treated with Tribulus terrestris fruit (200 mg/kg). The substances were administered orally by stomach tube daily for 10 days. The lymphocytes between alveolar sacs and thick interalveolar septa. The ADG on the post-weaning performances was performed by estimating the genetic capability for their reciprocal cross. In conclusion, direct additive variance was considerably effective, and consequently body weight at weaning and post-weaning growth were observed. The lungs of some mice exposed to cadmium and treated with Tribulus terrestris fruit (200 mg/kg). The substances were administered orally by stomach tube daily for 10 days.


ABSTRACT

World Vet. J. H. pylori genus-specific samples from owned dogs were collected and examined for the presence to the dog owners. For this purpose, 60 gastric biopsy samples from dog owners and 80 stool samples from dog owners were collected. H. pylori was detected in 62.5% and 91.6% of dog and human samples, respectively. The nucleotide sequence analysis of 16S rRNA gene of human and dog isolates were similar. In conclusion, this study indicated a high prevalence of H. pylori to colonize the gastrointestinal and biliary tracts of humans and various animal species. The objective of the present study was to determine the prevalence of H. pylori infection in dogs and to compare it with the prevalence in humans. The prevalence of H. pylori infection in dogs was 62.5% compared to 91.6% in humans. The nucleotide sequence analysis of the 16S rRNA gene of human and dog isolates showed similarity, indicating a high likelihood of transmission between dogs and humans. This study highlights the importance of reducing the transmission of H. pylori between dogs and humans to prevent public health concerns.
Research Paper

Capacity of Mentha spicata (spearmint) Extract in Alleviating Hormonal and Folliculogenesis Disturbances in Polycystic Ovarian Syndrome Rat Model.

Alaee S, Jafar Bagheri M, Sadeghi Ataabadi M and Koohpeyma F.


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

Research Paper

Comparison of Serological Tests in Cattle and Ovine Brucellosis; an Abattoir Study in Algeria.


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

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