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


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.
According to the obtained results of the current study, tick control can be started in Al-Ahsa area Haemaphysalis sulcata (2.09%), (11.28%), (2.33%) during the period from January to December 2010. In total, 5320 ticks were collected from 1125 infested animals (27.65%). The overall prevalence rate of identified Ixodide ticks was: (18.33%), (8.56%), (14.04%) and 1 (1.03%)

Incidence and Prevalence of Hard Ticks in Ruminants of Al-Ahsa Oasis Region, Kingdom of Saudi Arabia. From 24 herds distributed in eleven localities, a total of 5320 ticks were collected from 1125 infested animals (27.65%). The overall prevalence rate of identified Ixodide ticks was: (18.33%), (8.56%), (14.04%) and 1 (1.03%)

During hot months, thereby increasing animal density and humidity in the shaded farms. It is concluded that 12 mM ZnO nanoparticles have the best antibacterial effect against Escherichia coli in Minced Meat.

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

Modern pig farming worldwide has been facing substantial economic loss due to perinatal conditions. Intensive indoor conditions can lead to a higher number of stillborn and mummified piglets, which in turn can affect the overall productivity of the farm. The association between potential risk factors and farrowing duration was analyzed in this study. The results demonstrated that the number of total born piglets, stillborn, and mummified piglets, litter weight, and average birth weight were 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 variation of farrowing duration.

Keywords: Associated Factors, Farrowing Duration, Sows, Natural Parturition, Intensive Conditions.


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of Egyptian isolated strain showed a great identity with the different Staphylococcus aureus.

A total of 130 (53%) Staphylococcus aureus isolates were resistant to ampicillin, erythromycin, streptomycin, and gentamicin. The present study aimed to determine the prevalence of V. parahaemolyticus spp. in seabass and seabream in fish markets, especially streptomycin-resistant strains that can pose a great risk to human health. A total of 30 seabass (V. parahaemolyticus 8.3%, V. mimicus 4.3%, V. harveyi 3.3%) and 30 seabream (V. parahaemolyticus 30.0%, V. alginolyticus 26.66%, including toxR 1.6%), and 30 seabream (V. mimicus 7.5%) isolates were resistant to ampicillin, erythromycin, streptomycin, and gentamicin.

The PCR assay was used for the detection of virulence genes (tdh, trh, aadA1), V. parahaemolyticus isolates while V. mimicus isolates showed sensitivity to ciprofloxacin, norfloxacin, cefotaxime, and chloramphenicol. The results indicated that good hygienic measures should be taken to avoid infection with Vibrio spp. especially V. parahaemolyticus that can pose a great risk to human health.

The PCR identification of Staphylococcus aureus, gene Salomonella and molecular identification to be (hlg) gene found in 13 (54%) Staphylococcus aureus Typhimurium isolates (100%). Phylogenetic and partial gene sequence analysis of (hlg) virulence gene of Egyptian isolated strain indicated a great homology with the different Staphylococcus aureus Typhimurium isolates (100%).
Salmonella vaccine production against Typhimurium. Phylogenetic and partial gene sequence analysis of gene showed great homology between the Egyptian S. and serologically to be Typhimurium strain and the different Typhimurium. A PapC N-terminal conserved domain can be used as a vaccine target for Sequencing of Typhimurium showed clear clustering of Egyptian isolates of Salmonella a Salmonella typhimurium bcfC approximate size of 467 bp. The bcfC S. transmission of salmonella strains between the human beings and other animal farms, including Salmonella FimD Outer membrane usher protein FimD/PapC (cell motility, extracellular structures, gene using NCBI tool and ORF analysis of Typhimurium in Egyptian duck farms. Out of 75 fecal swab samples, 15 (20%) local field different strains uploaded from GenBank. Nucleotide alignment report of the sequenced Typhimurium and different reading frames of a specified minimum size in a sequence of (453 bp). The 3 conserved were PapC N-terminal domain (107-394bp), Typhimurium strains from GenBank revealed 99.8-100% homology. Open reading frame (ORF) Typhimurium. gene-specific primers was conducted with genomic DNA, which revealed a product with the bcfC ABSTRACT analysis of Typhimurium isolates were located in the same geographical area of cattle farms in addition to gene at (417bp) demonstrated great homology between the Egyptian gene of bovine-based products across the world especially in the United Kingdom, USA, Ireland, and México. strains uploaded from GenBank. Sequence identities between the isolated Egyptian strain and Salmonella bcfC domains region in the nucleotide sequence Typhimurium. The PCR amplification with [Full text-
Tribulus terrestris were observed. The lungs of some mice exposed to cadmium and treated with Tribulus terrestris indicated normal tissue appearance, while others showed large aggregations of effects against cadmium in the lung tissue. These results demonstrated that...
**Research Paper**

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

**Authors:** 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

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**Research Paper**

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

**Authors:** Khames M, Zúñiga-Ripa A, Pérez Gómez S, Oumouna M and Moriyón I.


**Abstract:**

Despite the paucity of data, brucellosis is considered as a major problem in Algeria. The aim of the 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