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 \textit{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 \textit{Cryptosporidium} oocysts. Lettuce had the highest rate (n= 16, 47.1\%) of contamination with \textit{Cryptosporidium} oocysts while basil and parsley showed the lowest rates of contamination (n= 6, 20\%). There was a significant association between the occurrence of \textit{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 \textit{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 \textit{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 \textit{Cryptosporidium} infections in humans. Moreover, the vegetable fields within the city of Yazd are contaminated with \textit{Cryptosporidium} oocysts which can pose public health problems. 

\textbf{Keywords:} \textit{Cryptosporidium}, Oocysts, Raw vegetables, Yazd city, Iran.
Incidence and Prevalence of Hard Ticks in Ruminants of Al-Ahsa Oasis Region, Kingdom of Saudi Arabia.

**ABSTRACT**

A total of 4068 animals (123 camels, 60 cattle, 1780 sheep, and 2105 goats) were individually examined during hot months, thereby increasing animal density and humidity in the shaded farms. The tick infestation was recorded on 479 animals, thereby increasing the tick infestation in the farms. The tick species identified were *Amblyomma variegatum*, *Rhipicephalus kohlsi*, *Amblyomma gemma*, *Hyalomma dromedarii*, *Haemaphysalis sulcata*, *Hyalomma anatolicum excavatum*, and *Amblyomma anatolicum*. The highest incidence was recorded on camels (15.2 tick/infested camel, 58.26% of the total number of ticks), followed by cattle (65 ticks/cow, 87.10%, respectively), goats (1.35 tick/infested goat, 0.33 tick/goat, and 23.52% for the total number of ticks), and sheep (1.27 tick/infested sheep, respectively). The highest prevalence was recorded on goats (15.22% of the goats examined), followed by cattle (15% of the cattle examined), sheep (11.67% of the sheep examined), and camels (10.33% of the camels examined). It is concluded that tick control can be started in Al-Ahsa area every second week during the period from January to December 2010. In total, 5320 ticks were collected and followed up to record the incidence of tick infestation in Al-Ahsa Oasis in the Eastern Region of the Kingdom of Saudi Arabia. From 24 herds distributed in eleven localities, a total of 5320 ticks were collected.

**Keywords:** Incidence, Prevalence, Hard Ticks, Camels, Cattle, Sheep, Goats, Al-Ahsa Oasis Region, Kingdom of Saudi Arabia.
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 farm. The results also demonstrated that the number of total born piglets, stillborn, and mummified piglets during the farrowing process had a negative association with whereas the other three factors had positive associations with the farrowing duration. Two models explained about 19.1-19.5% variation of the farrowing duration. Hoai Nam N and Sukon P.

Keywords: farrowing duration, sows, natural parturition, intensive farm.
The geometric mean of somatic cell count (SCC)/ml in Bulk tank milk samples of 150 Typhimurium field isolates from bulk tank milk samples revealed that 20 locally field isolates Typhimurium. The study provided various risk factors that had a clear and effective role in Typhimurium isolates (100%). Phylogenetic and partial gene sequence analysis of SopB determining the level of sopB

Keywords: Salmonella

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The main objective of this study was to apply the outer membrane usher protein (56-424bp) and serologically to the PapC N-terminal domain was a central conserved domain encoded in the bcfC gene. The PCR amplification with sequenced reading frames of a specified minimum size in a sequence of (453 bp). The 3 conserved amino acids alignment report of the sequenced 415 amino acid of Salmonella Typhimurium showed clear clustering of Egyptian isolates of Salmonella Typhimurium.
Effects of Tribulus terrestris Fruits on Renal and Lung Tissues in Female Mice

The substances were administered orally by stomach tube daily for 10 days. On the last day of the study, the animals were euthanized, and their kidney and lung were sampled for histological study. The kidney tissue in mice exposed to cadmium showed cellular aggregations of lymphocytes around the bronchus and edema in the lungs exposed to cadmium were observed. The lungs of some mice exposed to cadmium and treated with Tribulus terrestris were protected against the toxicity of the cadmium while this plant had fewer protective effects on the lymphocytes between alveolar sacs and thick interalveolar septa. The Tribulus terrestris may have inhibited the inflammatory process around the bronchus and alveolus, and also interacted with the alveolar septa in the lungs exposed to cadmium.

ABSTRACT

Data were examined by animal model, which was performed utilizing derivate free limited maximum likelihood method. The results revealed that the incorporation of Pentadiplandra brazzeana powder to broiler chickens via drinking water (2 g/l) or dry feed (2 g/kg) and comparing the results revealed that the incorporation of Pentadiplandra brazzeana powder in feed and the negative control diet. The low feed conversion ratio was reported with the water supplemented with Pentadiplandra brazzeana powder. The carcass yield was significantly higher with the inclusion of the powder via drinking water (2 g/l) or dry feed (2 g/kg) and comparing the result to the birds fed with the powder in feed and the negative control diet. The feeding method did not affect the mortality of infected chicken (80-100%). The best dose of the IgY to protect them from infection was observed through Immunohistochemistry. Sixty chickens were infected with 10^5 EID50/ml of HPAI clade 2.3.2 (A/Chicken/Blitar/2003). The IgY activity was observed through Immunohistochemistry. Sixty chickens were infected with 10^5 EID50/ml of HPAI clade 2.3.2 (A/Duck/Sidoarjo/2012). It was observed that the IgY protected against the infection of HPAI clade 2.3.2 (A/Duck/Sidoarjo/2012), even though they belong to the same species. IgYprotected against the infection of HPAI clade 2.3.2 (A/Duck/Sidoarjo/2012), even though they belong to the same species.

Keywords:

References:


Diarrheic children

Assemblage A (Zoonotic)

Calves (closed farm)

Assemblage E (Non-Zoonotic)

Calves (open farm)


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

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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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