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

**Abstract**

This work aimed to investigate the antibacterial effect of zinc oxide (ZnO) and titanium dioxide (TiO2) on minced meat, followed by the combination of ZnO and TiO2, and 12 mM TiO2 alone. The disc diffusion method showed that ZnO (12 mM) was the most effective concentration used in meat. The antibacterial activity of ZnO, TiO2, and combination of ZnO and TiO2 was also examined by analyzing the bacterial count in minced meat, stored at 4 °C for 17 days. The results indicated that ZnO (12 mM) had a significant reduction effect on bacterial count in minced meat, followed by the combination of ZnO and TiO2, and 12 mM TiO2 alone.

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

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

**Abstract**

According to the obtained results of the current study, tick control can be started in Al-Ahsa area period animals were housed and water was supplied ad libitum. According to the obtained results of the current study, tick control can be started in Al-Ahsa area period animals were housed and water was supplied ad libitum. The overall prevalence rate of identified Ixodide ticks in Al-Ahsa region was 15.72% (95% CI: 12.93% - 18.51%), with the highest prevalence in camels (41.67%), followed by cattle (15.56%), and sheep (13.67%). The incidence rate of ticks significantly increased during the warmest summer months of the year (highest recorded temperature ranged between 47℃ and 50℃), mainly due to the management practices of farmers. During this period, animals were housed in sheds and the shade, which was then followed by cattle (15 tick/infested cow, 5 ticks/cow, and 33.33%, respectively), goats (1.35 tick/infested goat, 0.33 tick/goat, and 23.52%, respectively), and sheep (1.27 tick/infested sheep, 0.3 tick/sheep, and 29.21%, respectively).

**Keywords:** Tick, hard tick, incidence, prevalence, Al-Ahsa region, Saudi Arabia.
### ABSTRACT

Modern pig farming worldwide has been facing substantial economic loss due to perinatal 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 by using general linear models. Two final models demonstrated that the number of total born piglets, stillborn, and mummified piglets were more important than litter weight and average birth weight in explaining the farrowing duration. Two models explained about 19.1-19.5% variation of the farrowing duration. The results also demonstrated that the number of total born piglets, stillborn, and mummified piglets were obtained from 30 pregnant female camels at delivery and the corresponding VUCS and AF correlated positively with venous cord serum Fe, Se, and Zn levels. There was a scarcity of findings of this study indicated an active transport for Fe, Zn, Cu, Mg, Se, and Mn between umbilical cord serum at delivery. The study further investigated the relationships among levels of elements in amniotic fluid (AF), maternal serum (MS), and venous umbilical cord serum (VUCS).

### Keywords:
- Birth weight
- Farrowing duration
- Sow
- Stillbirth
- Total born

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### Table: Multinomial analysis of the factors associated with log-transformed farrowing duration in 210 cows from four farms in the North of Vietnam in 2019

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Regression coefficient</th>
<th>95% CI</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.621</td>
<td>4.981 - 6.265</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>NSM</td>
<td>0.075</td>
<td>0.020 - 0.130</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Litter weight</td>
<td>0.022</td>
<td>0.008 - 0.036</td>
<td>0.002</td>
</tr>
<tr>
<td>ABW</td>
<td>-0.044</td>
<td>-0.105 - 0.019</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Model 1: $R^2 = 0.195$; Model 2: $R^2 = 0.195$

**NSM**: number of stillborn and mummified piglets; **ABW**: average birth weight; **NTB**: number of total born piglets; 95% confidence interval
ABSTRACT
Salmonella, milk quality and mastitis pathogens in cattle dairy herds. Out of the total number of 150 pooled samples, Standard plate count, and Somatic cell count in bulk tank milk. The PCR amplification with (sopB) gene found in 13 (54%) isolates. Phylogenetic and partial gene sequence analysis of "S. Typhimurium" revealed a product with an approximate size of 517 bp. The results of the present study emphasize the importance of more efficacious preventive programs for controlling the mastitis and Salmonella infections in dairy herds.

Keywords:
Typhimurium, Staphylococcus aureus, SigD, hlg, tropism, spessard, toxR, V. parahaemolyticus, V. alginolyticus, V. mimicus, trh, V. parahaemolyticus.
Amino acids alignment report of the sequenced 415 amino acid of *Typhimurium* in Egyptian duck farms. Out of 75 fecal swab samples, 15 (20%) local field *Typhimurium* strain and the different gene-specific primers was conducted with genomic DNA, which revealed a product with the analysis of gene of *Typhimurium* strain and the different *Typhimurium* isolate was related to the common sequence types isolated from humans and the duck farms lacked the requirements of biosecurity, which could facilitate the circulatory were PapC N-terminal domain (107-394bp), *bcfC* gene using NCBI tool and ORF analysis of 56-424bp). The PapC N-terminal domain was a structural domain found at the N-terminus of *Typhimurium* isolates were located in the same geographical area of cattle farms in addition to by 

Most of the duck farms from which we isolated the Egyptian Salmonella *bcfC* and serologically to be *Salmonella* World Vet. J. Reading Paper

Interdigital necrobacillosis with no disease recurrence recorded within the observation period, bodyweight which is considered the routine treatment for interdigital necrobacillosis in the April 2018 to May 2020 on 230 dairy cows with early-stage interdigital necrobacillosis diagnosed 015k-1 strain and oxytetracycline were 80.87% and 83.48%, respectively. The overall odds ratio were considered cured. On day 15, the overall cure rates for Oxytetracycline, Probiotic, Topical administration. World Vet. J. Comparison of Probiotic Research Paper

Intramuscular injection of oxytetracycline at the dosage of 1.0 milligram per kilogram of Lactobacillus acidophilus, 2020; pii:S232245682000045-10; DOI: https://dx.doi.org/10.3638

for the cure rate in the probiotic group versus oxytetracycline was 0.837. However, on day 28, 100%. No recurrence was recorded in any of the cases. It was concluded that the topical Tulemissova ZhK, Torehanov MA, Myktybayeva RZh, Ibazhanova AS, Khussainov DM, Batanova ZHM and Osmangalieva ZS (2020). Comparison of Probiotic Lactobacillus acidophilus locally applied to cattle with early-stage interdigital necrobacillosis.

Dairy cows with early-stage interdigital necrobacillosis


Effect of Different Dietary Crude Protein Levels and Citric Acid on Broiler Chickens' Intestinal Morphology, Carcass Measurements, Blood Parameters, and Gene Expression. Volume 10 : Issue 3, September 2020

The present study was conducted to investigate the effect of dietary protein levels and citric acid on the growth performance, carcass yield, abdominal fat, chemical composition of meat, nutrient digestibility, intestinal morphology, cecal bacterial counts, blood cholesterol reduction, and glycated proteins. In conclusion, citric acid addition could alleviate the indicators of the blood protein glycation. In conclusion, citric acid could significantly improve body weight gain, feed conversion ratio, carcass yield, nutrient digestibility, intestinal morphology, cecal bacterial counts, blood cholesterol reduction, and glycated proteins. Effect of Different Dietary Crude Protein Levels and Citric Acid on Broiler Chickens' Research Paper
On the last day of the study, the animals were euthanized, and their kidney and lung were examined. In the control group, the kidney and lung tissues showed normal histological structures with no signs of inflammation, necrosis, hyperplasia, and large urinary space in Bowman's capsule. In contrast, the second group, which was exposed to the toxic substance (cadmium 6 mg/kg), exhibited significant histopathological changes. These changes included interstitial edema, glomerular hyperplasia, and tubular dilatation. The third group, which received Tribulus terrestris fruits, showed amelioration of these toxic effects, indicating a protective role of the plant extract.

**Table 1:** Comparison of Histopathological Changes in Kidney and Lung Tissues between Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Kidney</th>
<th>Lung</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Cadmium</td>
<td>Edema</td>
<td>Hyperplasia</td>
</tr>
<tr>
<td>T. terrestris</td>
<td>Normal</td>
<td>Normal</td>
</tr>
</tbody>
</table>

**Conclusion:**
The study demonstrated the potential of Tribulus terrestris fruits in mitigating cadmium toxicity in female mice, highlighting their renal and lung protective effects.

**References:**

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**Note:** The images and diagrams are part of the research paper's visual aids and are not transcribed in the text.

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**Keywords:** Tribulus terrestris, cadmium toxicity, kidney, lung, female mice.
Fecal and blood samples were collected from diarrheic dogs and their role in the transmission of Helicobacter pylori to the dog owners. For this purpose, 60 gastric biopsy samples from dog owners and 80 stool samples were subjected to partial genomic analysis. The role of afferent C-fibers in muscle contraction of trachea and bronchi in rats was studied, with the aim to evaluate the effect of the non-adrenergic non-cholinergic system on muscle contraction of the trachea and bronchus. The study revealed that C-fibers, which represent the excitatory non-adrenergic non-cholinergic system, caused smooth muscle contraction by the realization of humeral mechanisms related to tachykinins. This finding became apparent as the contractile muscle responses in Krebs-Henseleit's solution with the elimination of NO-ergic mechanisms led to an increase in the contraction, and the dilatation effect of nitric oxide was associated with preganglionic and postganglionic nerve structures of the intramural ganglia. In conclusion, it is identified that C-fibers, which represent the excitatory non-adrenergic non-cholinergic system, caused smooth muscle contraction by the realization of humeral mechanisms related to tachykinins. This finding became apparent as the contractile muscle responses in Krebs-Henseleit's solution with the elimination of NO-ergic mechanisms led to an increase in the contraction, and the dilatation effect of nitric oxide was associated with preganglionic and postganglionic nerve structures of the intramural ganglia. In conclusion, it is identified that C-fibers, which represent the excitatory non-adrenergic non-cholinergic system, caused smooth muscle contraction by the realization of humeral mechanisms related to tachykinins. This finding became apparent as the contractile muscle responses in Krebs-Henseleit's solution with the elimination of NO-ergic mechanisms led to an increase in the contraction, and the dilatation effect of nitric oxide was associated with preganglionic and postganglionic nerve structures of the intramural ganglia.
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

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


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