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.
Enterococcus faecium analysis. The results of water quality parameters examination revealed that the mean values of cholesterol, urea, creatinine levels, and AST, ALT, GPX, CAT, SOD activities significantly except for ammonia were within the permissible limit. The bacterial isolation results revealed 38 species isolated from water samples. Of those 38 positive fish samples, 25 (65.78%) were streptococcal species directly from organs from fish and water samples revealed that 5 Enterococcus faecium species from water samples were isolated. The biochemical results indicated that the infected fish with the streptococcal species had reduced total protein, albumin, and globulin in the blood serum while total and triglyceride levels increased. The study concluded that 12 mM ZnO nanoparticles have the best antibacterial effect against E. coli using a transmission electron microscope and it was found that 12Mm ZnO had a higher destructive effect on bacterial cell than the mixture of ZnO + TiO2, and 12Mm TiO2 alone. The results suggested that antibacterial nanoparticles are a new approach to control the safety of meat and meat products.
ABSTRACT

The results also demonstrated that the number of total born piglets, stillborn, and mummified 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. Two models explained about 19.1-19.5% variation of the farrowing duration.

Keywords:

- Farrowing duration
- Natural farrowing
- Farrowing process
- Factors affecting farrowing duration
- Intensive indoor conditions

The data analysis revealed that the number of total born piglets, stillborn, and mummified mortality was associated with the farrowing duration. The models explained about 19.1-19.5% of the variation in farrowing duration.

References:


The study concluded that the number of total born piglets, stillborn, and mummified mortality was significantly associated with the farrowing duration. The models explained about 19.1-19.5% of the variation in farrowing duration.
**ABSTRACT**

Out of the total number of 150 pooled milk samples collected from 150 cattle dairy farms, 13 locally field isolates were detected and confirmed phenotypically by culturing, gram staining, biochemical, and molecular identification to be *Salmonella Typhimurium* isolates (100%). Phylogenetic and partial gene sequence analysis of the *sopB* gene found in all *Salmonella* isolates uploading from the gene bank. Phylogenetic analysis of the *hlg* gene in the overall herd by the prevalence of 8.6%. Isolation and identification of *Staphylococcus aureus* strains uploaded from the gene banks. The results of the present study emphasize the importance of more efficacious preventive programs for controlling the mastitis and determining the level of bacteriological quality of bulk tank milk and monitoring mastitis economic losses.

**Keywords:** Mastitis, PCR, phylogenetic analysis, risk factors, *Salmonella*.


group was given cadmium (6 mg/kg) plus the alcoholic extract of the sample for histological study. The kidney tissue in mice exposed to cadmium showed cellular

On the last day of the study, the animals were euthanized, and their kidney and lung were protected the kidneys against the toxicity of the cadmium while this plant had fewer protective

Tribulus terrestris

The current study was designed to evaluate the protective effects of Tribulus terrestris

aggregations of lymphocytes around the bronchus and edema in the lungs exposed to cadmium

inflammation, necrosis, hyperplasia, and large urinary space in Bowman's capsule in

lymphocytes between alveolar sacs and thick interalveolar septa. The

albino mice were randomly assigned into three groups; the first group served as the control

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comparison to the normal appearance of tissues in the mice in the other two groups. The large

values for BW at 4, 8, 10, and 12 weeks for both breeds, but that was obtained from

breed was demonstrated first). Weaning was 0.22 ± 0.07. Meanwhile, there was a positive genetic correlation between BW and

G×V exceeding those from their reciprocal cross. In conclusion, direct additive variance was

considerably effective, and consequently body weight at weaning and post-weaning growth

was moderate for both breeds, and its reciprocal cross ranged from 0.2 to 0.25, and BW at

Weaning was implemented on the 28th day of the kits' age. Post-weaning litter traits were

maximum likelihood. The results revealed that

Assessment of Genetic Capability for Post-Weaning Growth Traits of Reciprocal Cross

environmental correlation between BW at different age ranges were negative, except of those

between BW

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Suwarno, Ernawati R and Widjaja NS (2020). Cross Protectivity of Yolk Immunoglobulin Anti-Hemagglutinin Protein of High Pathogenic Avian Influenza A subtypes H5N1 Administered on Chicken Infected by High Pathogenic Avian

mortality of infected chicken (80-100%). The best dose of the IgY to protect them from infection

Pathogenic Avian Influenza (HPAI) clade 2.1 (A/Chicken/Blitar/2003) could protect chickens

against the infection of HPAI clade 2.3.2 (A/Duck/Sidoarjo/2012), even though they belong

and immunodiagnostic techniques. Application of IgY mixed in drinking water is known effective

could be concluded that administration of IgY anti-Hemagglutinin Protein (anti-HA) of High

chickens were euthanized for immunohistochemistry assay. The result showed that anti-HA IgY

EID50/ml of HPAI clade 2.3.2 (A/Duck/Sidoarjo/2012).  Yolk Immunoglobulin with different

2,3-alfa galactosa (SA α 2,3 gal) blocking activity in septa alveoli. By the end of observation all

managed for immunohistochemistry assay to observe the present of virion and IgY sialic acid

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Tribulus terrestris

Farhan AS (2020). Effects of Tribulus terrestris Fruits on Renal and Lung Tissues in Female Mice Administered with

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Assemblage A (Zoonotic) 
Diarrheic children 
Calves (closed farm)

Assemblage E (Non-Zoonotic) 
Calves (open farm)


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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