Research Paper

Molecular Analysis of *Coxiella Burnetii* by Isocitrate Dehydrogenase Gene Sequence-Based Typing and PCR-RFLP in Isfahan, Iran.

Nokhodian Z, Khalili M, Ataei B, Feizi A, Moradi A, Rostami S and Yaran M.


**ABSTRACT**
In the recent years, considerable advances have been made in the detection and genotyping of *Coxiella burnetii*, the causative agent of Q fever. The selection of appropriate genotyping method has enabled description of the clonal diversity of *C. burnetii* around the word. Since, in the place of study, *C. burnetii* genotyping has not been done, the *icd* gene Restriction fragment length polymorphism (RFLP) and sequence-based typing for differentiation between the genomic detected *C. burnetii* from the various sources and compared the two methods is used. In an observational study, a total of 15 genomic positive cases of *C. burnetii* infection from different sources in Isfahan province (Central Iran) were enrolled and underwent two genotyping methods: the *icd* gene PCR-RFLP and *icd* gene sequence-based typing. The degree of similarity between the *icd* gene sequences was high (98.3-100%). In compare with *C. burnetii* Nine Mile *icd* gene sequence, the nucleotide sequences were different at 11 positions, which resulted in 7 differences in the amino acid sequences. After digesting the 370 bp amplified *icd* gene fragments all the samples indicated only one band of 370bp, while amplified *C. burnetii* Nine Mile strain *icd* gene were digested into two bands with sizes of 221bp and 149bp. The results of two genotyping methods matched together. Used methods in present study were cheaper and easier than new methods and they can used for detection of acute and chronic phases of infection.

**Keywords:** *Coxiella burnetii*, Isocitrate dehydrogenase, Iran, Restriction fragment length polymorphism, Sequence-based typing
The Protective Role of Date Palm (*Phoenix Dactylifera* Seeds) against Aflatoxicosis in Broiler Chickens Regarding Carcass Characteristics, Hepatic and Renal Biochemical Function Tests and Histopathology.

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**ABSTRACT**

Harmful effects caused by aflatoxin (AF) directed researchers towards to find out new strategies for its control and detoxification increasing the safety of poultry feed. The aim of the present work was to study the protective role of date pits (*Phoenix dactylifera*) seeds against aflatoxicosis regarding carcass traits, biochemical function tests and histopathology of both liver and kidney in broiler chickens. 210 one-day old Arbor Acres broiler chicks were allotted into 7
equal groups as the first control (G1) supplemented by the basal diet, G2 had the basal diet with date pits supplementation 2%, G3 fed on the basal diet with date pits 4%, G4 was fed a basal diet containing 100µg aflatoxin/kg (100 ppb). G5 fed on a basal diet containing Hydrated Sodium Calcium Aluminum Silicates (HSCAS) 0.3% plus aflatoxin, (G6) fed a basal diet containing date pits 2% plus aflatoxin and finally G7 fed a basal diet containing date pits 4% plus aflatoxin. The aflatoxin supplemented to the broiler ration from first day to the end of experiment at 35 days. Aflatoxins supplementation significantly increased relative liver and small intestine weight, affect liver and kidney biochemical function tests and induced histopathological changes as fatty degeneration of hepatocytes, and interstitial nephritis with mononuclear cell infiltrations in both liver and kidney, respectively. However, addition of date pits (2% and 4%) and HSCAS (0.3%) to broiler's diet partially ameliorated these harmful effects of aflatoxins, indicating their protective effect against aflatoxicosis and this protection is dose-related. Addition of date palm seed (2% and 4%) gave a better results regarding carcass traits, biochemical parameters and histopathological examination of liver and kidney, finally concluding that date palm seed powder could be used as an effective feed additive to control aflatoxicosis in poultry with avoiding harmful effect of chemical mycotoxin binders (HSCAS).

**Keywords:** Aflatoxins, Broilers, Biochemical traits, Carcass characteristics, Date palm, Histopathological changes.

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**ABSTRACT**

The objective of this study was to analyze the epidemiological occurrence of Peste des petits ruminants in sheep and goat in Palestine during 2005-2017. Data were collected from the annual agricultural census released by the Palestinian central bureau of statistics and the reports of world organization for animal health, submitted by the general directorate of veterinary services and animal health between 2005 and 2017. The study indicated that Peste des petits ruminants is enzootic in Palestine, reported in each year of the study period. The incidence rate ranged from 1.78 to 14.36% with an average of 6.39% per year and per 104 animals. The average morbidity, morbidity and case fatality rate were 8.89%, 2.89%, and 33.57% respectively. Temporal analysis obtained that Peste des petits ruminants is more epizootic in the dry season between April and August with a significant peak on June. The Peste des petits ruminants vaccination rate in Palestine was low and not well organized, ranged from 0.77-34.39% with an average rate of 9%. The appropriate data recording, improving owner awareness, expand the use of the Peste des petits ruminants vaccine and a systematic disease monitoring program are required to control the spread of the disease.

**Keywords:** Epidemiology, Goat, Palestine, Peste des petits ruminants, Sheep

Antibiotic, Pet – reptile, Reservoir, Resistance, Sansevieria masoniana.
Prevalence of Rabbit Coccidia in Meade Province, Algeria.

ABSTRACT

Weaners had the highest prevalence (77%, 77/100, P< 0.0001), followed by growing rabbits (46.8%, 30/64) and the adult rabbits showed the lowest prevalence (36%, 18/50). In breeding rabbits, females were more infected with a prevalence of 40% (P< 0.0001). Eleven rabbit species were present and identified from oocyst positive samples.

Keywords:

Bachene MS, Temim S, Ainbaziz H and Bachene A.

Coccidiosis is a common parasitic disease of fowl and livestock which is caused by coccidian protozoa species from the genus Eimeria and has a negative impact on production. In addition, coccidian parasites cause economic losses for poultry and livestock. The current study examined the prevalence of coccidiosis among rabbits in Meade province, Algeria.

A total of 197 oocysts of coccidial origin were identified morphologically from samples containing isolated and sporulated oocysts. The overall prevalence of coccidial infections was 47.6% (197/414). The prevalence was higher in weaners (77%, 77/100), followed by growing rabbits (46.8%, 30/64), whereas the lowest prevalence was recorded in adult rabbits (36%, 18/50). In breeding rabbits, females were more infected with a prevalence of 40% (P< 0.0001). Eleven rabbit species were present and identified from oocyst positive samples.

The results indicate that coccidiosis is a common parasitic disease among rabbits in Meade province, Algeria. The high prevalence of coccidiosis in weaners suggests the need for preventive measures, such as vaccination, to reduce the incidence of this disease and its economic impact on the rabbit farming industry.
Melamine is considered as one of urea derivatives. Recently it is added to feed stuffs for industrial purposes (falsely elevate its protein contents), however addition of melamine resulted in marked oxidative stress and toxic effect on different body organs, especially the urinary bladder, crystals deposition and stone formation were detected with variable degrees in all groups treated only with melamine. Microscopically, various pathological changes in kidneys, liver, pancreas and spleen were seen. As expected, the rats treated with 0.9% melamine showed significant increases in body weight, feed intake, and milk yield. The pathological changes in the organs were more pronounced in groups treated with higher melamine doses.

Keywords: Melamine, Vital assets toxicity, Bee's honey, White albino rats

ABSTRACT

Present study aimed to evaluate the impacts of probiotic mixtures as a biological feed additive on productive and reproductive performance, metabolic profile, and immune system of Barki ewes. The research was conducted on 90 Barki ewes, 30 ewes per group, divided into five groups: group 1; negative control, while groups 2, 4, 6 received melamine-formaldehyde orally at dose 0.9, 90, 9000 ppm, respectively while groups 3, 5, 7 received the same melamine dose beside enzymes mixtures and obtained through an anaerobic fermentation process of enzymes used at two levels (6 and 10ml or g/h/d). The two additives formed of exogenous enzyme preparations of MPL and MPP to sheep rations, may improve weaning weight and daily weight gain. The milk yield tended to increase in MPP then MPL groups. The birth and conception rates were higher in MPP and MPL groups while the second added as powder forms (Mixture Probiotic Powder, MPP). The two forms, MPL and MPP, showed slight increases in thyroid hormones T3 and T4 concentrations (P<0.05) with enzymes mixtures. Weaning weights as well as average daily gain increased (P<0.05) in MPL and MPP groups. While the feed intake was higher in MPL and MPP groups compared to control group. The milk yield tended to increase in MPP then MPL groups. The birth and conception rates were higher in MPP and MPL groups while the mortality rate increased (P<0.05) by 11% in group 2 (G2) and 18% for group 3 (G3) followed by MPL groups (16 and 18 lambs for group 4 and 6, respectively).

El-Hawy AS, El-Bassiony MF, Abo Bakr S, Gawish HA, Badawy MT and Gado HM.

Potential Ameliorative Effect of Bee Honey on Experimentally Induced Melamine Toxicity in Main Albino Rats.

Potential antioxidants effect of bee’s honey on experimentally induced melamine-induced toxicity in main albino rats. The results showed mild changes in comparison to the only melamine pathological alterations in vital assets especially liver and urinary system. As distension of the stomach was observed in all groups treated only with melamine. Microscopically, various pathological changes in kidneys, liver, pancreas and spleen were seen. As expected, the rats treated with 0.9% melamine showed significant increases in body weight, feed intake, and milk yield. The pathological changes in the organs were more pronounced in groups treated with higher melamine doses.