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 a 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

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**Research Paper**

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.

Abdel-Sattar WM, Sadek KM, Elbestawy AR and Mourad DM.

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.
The objective of this study was to analyze the epidemiological occurrence of Peste des petits ruminants in sheep and goats during 2005-2017 in Palestine. Data were collected from the annual agricultural census released by the Palestinian central bureau of statistics and the Department of Animal Health and Veterinary Services and animal health between 2005 and 2017. The study indicated that Peste des petits ruminants is an annual disease, with an incidence rate ranging 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 objective of this study was to analyze the epidemiological occurrence of Peste des petits ruminants in sheep and goats during 2005-2017 in Palestine. Data were collected from the annual agricultural census released by the Palestinian central bureau of statistics and the Department of Animal Health and Veterinary Services and animal health between 2005 and 2017. The study indicated that Peste des petits ruminants is an annual disease, with an incidence rate ranging 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.
This study conducted to investigate the effects of dietary zeolite on egg production, egg quality, and the biological capacity concentrations as compared to the hens of T and T2 groups. Alanine transaminase, aspartic transaminase and creatinine were significantly increased in the hens of S group compared to them in T, T1 and T2 groups. Egg weight significantly increased in the hens of S group compared to the hens of T and T2 groups. Hens of S group had significantly improved feed conversion compared to hens of S group. Hens of S group had significantly decreased shell thickness compared to other treatments. In conclusion, under drinking saline well water, addition of zeolite to laying hens' diets at levels 4% might improve productive performance and eggshell quality.
A Review on the Role of Lipid in Selected Apicomplexan, Anaerobic, Kinetoplastid and Intestinal Parasitic Infections.

**Mechanism to mobilize lipid**

**Lipid droplets**

**Parasites from each groups**

**PROBIOTICS**

Potential Ameliorative Effect of Bee’s Honey on Experimentally Induced Melamine Formosanohydra Toxicity In Male Albino Rats

2.5 g/kg B.w.

Melamine 0.9 g

Melamine 5000 ppm

Melamine 5000 ppm

5 Male albino rats

5 Male albino rats

5 Male albino rats

No remarkable toxic effects

Reduced toxic effects