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 world. 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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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.
became necessary because of some bacteria resistant against several antibiotics. This study
pet-reptile, even though, several of those isolates resistant against several commercial
ABSTRACT
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Salmonella enteritidis
Salmonella enterica arizonae
bacteria from the faeces of pet-reptile. A total of 129 fresh faecal samples were collected from
(55.03%), and
Enterobacter cloacae
(53.48%). Those isolated bacteria indicated various resistance patterns against several
Keywords:
Potency of Sansevieria masoniana Extract against Antimicrobial Resistant Bacteria
isolated from Faeces of Pet – Reptile.

Kurnianto A, Puspitasari, Widyaningrum LY, Widiyono I and Prakoso YA. proved that SM extract potential to inhibit the colonisation of the isolated bacteria from faeces of

Reptile plays an essential role in human life and act as a reservoir of pathogenic bacteria. It
commercial antibiotics. The minimum concentration of SM extracts that potential to inhibit the colonisation of both resistant and susceptible isolated bacteria was 62.5 mg/mL. This study


The purpose of study was to evaluate the influence of hairline crack eggs on hatchery parameters and later life of chicks. The study was conducted from October to December 2018

The defects like breakage of this packaging increase the risk of microbial contamination. In this experiment, the crack eggs like hairline crack eggs were detected by
dead in the shell for normal and hairline crack eggs. The highest hatchability (49.07 ± 0.51b)

higher for hairline crack eggs as compared normal eggs of same flocks. The highest blasting of

The The purpose of study was to evaluate the influence of hairline crack eggs on hatchery parameters and later life of chicks. The study was conducted from October to December 2018


This study conducted to investigate the effects of dietary zeolite on egg production, egg quality, and other physiological responses. Eggs were collected from hens that were divided into different groups: T1, T2, and S2. Hens in group T1 drank tap water and fed diet containing 4% zeolite, while those in group T2 drank tap water and fed diet containing 2% zeolite. Hens in group S2 drank saline well water and fed diet containing 2% zeolite. Egg production was significantly decreased in the S1 group compared to other treatments. In conclusion, under the conditions of this study, drinking saline well water, addition of zeolite to laying hens’ diets at levels 4% might improve total protein, globulin, glucose, and total antioxidant 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 other treatments. Aldosterone hormone was significantly decreased in the hens of the T group.
Melamine is considered as one of urea derivatives. Recently it is added to feed stuffs for productive and reproductive performance and metabolic profile of Barki ewes. A total number of 100 Barki ewes were randomly assigned and divided into five equal groups (20 each). The first mixture of probiotic added as liquid forms (Mixture Probiotic Liquid, MPL), 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 productivity. The first mixture of probiotic added as liquid forms (Mixture Probiotic Liquid, MPL), 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 productivity. The apicomplexan parasites utilized lipid particles for various purpose including changing permeability and fragility of host cells, support the insertion of parasite into the host cell and facilitate encystation and vesicle formation as well as initiation of immune system and production of more complex lipids, develop protective mechanisms against host innate and adaptive responses. For the pathogen, lipid droplets also employed to facilitate attachment, invasion and other stages of parasitic infection. So parasitic infection is characterized by marked oxidative stress and toxic effect on different body organs, especially the liver and urinary system. As distension of the urinary bladder, crystals deposition and stone formation were detected with variable degrees in group 1; negative control, while groups 2, 4, 6 received melamine-formaldehyde orally at dose 5% for G2, G3, G4 and G5, respectively, while the mortality rate increased (P<0.05) by 11% in melamine plus the bee's honey showed mild changes in comparison to the only melamine treated rats showed marked oxidative, biochemical, hematological changes as well as pathological alterations in vital assets especially liver and urinary system. The severity of these changes varied with melamine.