Research Paper

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

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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
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.
Reptile plays an essential role in human life and act as a reservoir of pathogenic bacteria. A total of 129 fresh faecal samples were collected from 72 snakes, 43 lizards and 14 tortoises. The isolation was conducted using the Micro ID system. All the isolated bacteria were tested against several antibiotics using disc diffusion method, and SM extract using minimum inhibitory concentration test. The isolated bacteria were proved that SM extract potential to inhibit the colonisation of both resistant and susceptible isolated bacteria was 62.5 mg/mL. This study aimed to evaluate the potency of Sansevieria masoniana Extract against Antimicrobial Resistant Bacteria isolated from Faeces of Pet-Reptile. A total of 129 fresh faecal samples were collected from 72 snakes, 43 lizards and 14 tortoises. The isolation was conducted using the Micro ID system. All the isolated bacteria were tested against several antibiotics using disc diffusion method, and SM extract using minimum inhibitory concentration test. The isolated bacteria were proved that SM extract potential to inhibit the colonisation of both resistant and susceptible isolated bacteria was 62.5 mg/mL. This study aimed to evaluate the potency of Sansevieria masoniana Extract against Antimicrobial Resistant Bacteria isolated from Faeces of Pet-Reptile. A total of 129 fresh faecal samples were collected from 72 snakes, 43 lizards and 14 tortoises. The isolation was conducted using the Micro ID system. All the isolated bacteria...
Effect of Zeolite Dietary Supplementation on Physiological Responses and Production of Laying Hens

ABSTRACT

This study conducted to investigate the effects of dietary zeolite on egg production, egg quality and physiological responses of laying hens. The hens were divided into six equal groups (30 hens/group). 1 Group (T), hens drank tap water and fed basal diet. 2 Group (T1), hens drank tap water and fed diet containing 2% zeolite. 3 Group (T2), hens drank tap water and fed diet containing 4% zeolite. 4 Group (S), hens drank saline well water and fed basal diet. 5 Group (S1), hens drank saline well water and fed diet containing 2% zeolite. 6 Group (S2), hens drank saline well water and fed diet containing 4% zeolite. The results indicated that the group fed 4% zeolite showed significant decrease in total protein, globulin, glucose and total antioxidant capacity 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 the hens of T, S and S1 groups. In conclusion, under the conditions of this study, drinking saline water and feeding zeolite at levels of 4% might improve the productive performance and eggshell quality of laying hens.

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Influence of Treated Orange Pulp on Growth Performance, Nutrients Digestibility and Plasma Constituents of Rabbits

ABSTRACT

The current study investigated the effect of replacement of Untreated Orange Pulp (UOP) and Treated Orange Pulp (TOP) protein by basal diet protein on growth performance, digestion efficiency and some blood constituent of rabbits. Sixty cross bread (New Zealand White, NZW X California), six weeks of age with live body weight ranging from 729.20 to 738.30 g were divided into five experimental groups. The results indicated that TOP by yeast treatment didn’t affect on digestibility and nutritive value of growing rabbits. The best economic efficiency observed with 10%UOP followed by 5%TOP. It was concluded that rabbit group fed 5%TOP recorded a better feed conversion ratio, some blood constituent of rabbits and economic efficiency of growing rabbit diets.

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Effect of Early Heat Shock Exposure on Physiological Responses and Reproduction of Rabbits

ABSTRACT

This study aimed to apply early heat shock exposure programs for releasing HSP70 gene expression to improve production of rabbits reared under hot desert conditions at Egypt. 120 rabbits were randomised into two main groups of control (C) and exposed group (E), namely T1, T2, T3, T4, T5 and T6. T1 served as control. The rabbits of second, third, fourth, fifth and sixth treatments were exposed to heat shock (36±1 °C for 3 hours from 12:00 - 15:00 for three successive days). Rabbits of T2, T3, T4, T5 and T6 were exposed to heat shock at 3, 25, 60, 3+25 and 3+25+60 days of age, respectively. HSP70 expression and heat shock at 3, 25, 60, 3+25 and 3+25+60 days of age, respectively. HSP70 expression and HSP70 mRNA expression and HSP70 protein expression were significantly (P<0.05) increased in rabbits fed low replacement level of OP (5% UOP and 5%TOP). Total lipid of plasma was significantly different (P<0.05) in groups fed experimental diets. Best economic efficiency observed with 10%UOP followed by 5%TOP. The results indicated that TOP by yeast treatment didn’t affect on digestibility and nutritive value of growing rabbits. It was concluded that rabbit group fed 5%TOP recorded a better performance, Rabbits.
Microscopically, various pathological changes in kidneys, liver, lung, heart, and intestine were also demonstrated. The severity of these changes varied from mild to severe depending upon the dose of melamine. Interestingly, rats treated with honey successfully reduced the noxious effect of melamine on different body organs.

Formaldehyde Toxicity in Male Rats.

ABSTRACT

The present study aimed to evaluate the impacts of probiotic mixtures as a biological feed additive on the productive and reproductive performance and metabolic profile of Barki ewes. Seven groups of Barki lambs were used to evaluate the effect of different levels and forms of biological additives mixtures on Barki ewes. The differences among the groups were significant (P<0.05) for feed intake, milk yield, and mortality rate from birth to weaning. The number of lambs born alive was significantly higher in MPP groups (19 lambs for group 2, 18 lambs for group 3, 16 lambs for group 4, 15 lambs for group 5, and 13 lambs for group 6) compared to the control group (18 lambs). The gain of lambs as much as live body weight and milk production of ewes were also significantly higher in MPP groups.

Keywords: Probiotic mixtures, biological feed additive, Barki ewes, productive and reproductive performance, metabolic profile.