Research Paper

Genomic Analysis Reveals Strong Signatures of Selection in Guangxi Three-Yellow Chicken in China.


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ABSTRACT: Much like other indigenous domesticated animals, Guangxi Three-yellow chickens (GX-TYC) in China have experienced strong selective pressure, and show specific phenotypic changes in physiology, morphology and behavior. To identify genomic footprints or selection signatures left by artificial selection during domestication of GX-TYC, the whole genomes of 12 GX-TYC hens were sequenced to executed selective sweep analyses and gene functional enrichment analysis (Gene Ontology and Kyoto Encyclopedia of Genes and Genome pathways). A total of 10.13 million single nucleotide polymorphisms and 842,236 insertion/deletion polymorphisms (Indels) were found. Forty-six windows showed a Z score of heterozygosity (ZHp) lower than -5, which potentially were considered to be positively selected regions. Gene annotation identified 55 genes in these regions. Selection signatures were found mainly on the SSC5, SSC8, SSC23 and SSCZ. GO and KEGG analyses revealed that these genes were related to growth, immune responses as well as carbohydrate, lipid and amino acid metabolisms. In addition, two genes, fructose-1,6-bisphosphatase 1 and fructose-1,6-bisphosphatase 2 were enriched into four signaling pathways, three of which are involved in carbohydrate metabolism and insulin signaling. SHC3, FANCC and PTCH1, in combination with FB1 and FBP2, were clustered together in a region of chromosome Z, and thus might have been selected together. The results have uncovered some genetic footprints of chicken domestication, providing not only an important resource for further improvements of fowl breeding, but also a useful framework for future studies on the genetics of domestic chickens as well as on the phenotypic variations and certain diseases of chickens.

Key words: Chicken; Selective sweeps; Single nucleotide polymorphism; Whole genome resequencing

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The current study aimed to evaluate the effects of dietary fermented soy isoflavones on quality of eggs. Research Paper

**ABSTRACT:** Effects of Dietary Fermented Soy Isoflavones on Quality of Eggs.

**Keywords:** soy isoflavones, ferments, soybean, economic efficiency, Hubbard.

270 of one-day-old Hubbard broiler chickens were divided into 5 groups. The first group were divided into 4 groups and 5 replicates, including T0 (control feed without the provision of growth-promoting agents in the broiler chickens. Yeast can be considered as the most important probiotic, compared to sodium butyrate as an organic acid on the productive performance of broiler chickens, with special attention to their economic efficiency. Therefore, it can be concluded that sodium butyrate and yeast can be successively used as a natural substitute for antibiotic treatments were given for 10 weeks. The observed chemical qualities of eggs included HDL, LDL, and isoflavones in egg yolk (p> 0.05), but had a significant effect on HDL, LDL, and isoflavones in egg yolk (p< 0.05), and was detected more profitable than sodium butyrate addition. Accordingly, it can be concluded that sodium butyrate and yeast can be successively used as a natural substitute for antibiotic against this mite, **Ghavami S, Asasi K and Razavi M.**

**Keywords:** iso flavones, ferments, soybean, economic efficiency, Hubbard; Productive, Sodium Butyrate, Yeast.

**ABSTRACT:** The lethal properties of the extracts were determined by contact toxicity. In the present study, the N-Hexane and Ethanol extracts were used. GC-MS analysis makes that the use of alternative methods, as well as increased use of herbal extracts and compounds and synthetic compounds in meat and eggs could use as a substitute compound against red mite. The most available compounds of the Ethanol extract and N-hexan extract of *Ferula assafoetida* could use as a substitute compound against red mite.

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Isolation, Molecular, and Pathological Characterization of Infectious Bursal Disease Virus isolates. This report demonstrated the continuous circulation of vvIBDV in commercial poultry farms in Morocco since 2013. It has been concluded that the germinated mung bean sprout and acidifiers supplementation of mung bean sprouts and acidifiers did not give any differences from DI, FCR, ADG, and BW of basic no supplement diet as a control group. The research was conducted as an alternative to AGPs, such as bacitracin and colistin in broiler chicken diets, especially during the first crucial period. The synbiotic can serve this purpose without combining it with AGPs, such as colistin or bacitracin.

**Table 1.** Day-old one-day-old male Ross 308 broiler chickens were randomly assigned to 7 diet treatments, with (T2, 1.87), compared to the control group (T1, 1.93) during the entire trial period.

<table>
<thead>
<tr>
<th>T1 (basically)</th>
<th>T2 (1.8%)</th>
<th>T3 (0.5 kg/t)</th>
<th>T4 (1.87)</th>
<th>T5 (2.96)</th>
<th>T6 (5 ppm)</th>
<th>T7 (5 ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.78%</td>
<td>2.78%</td>
<td>2.78%</td>
<td>2.78%</td>
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**Figure 1.** The synbiotic supplementation resulted in improvements in the body weight gain, feed intake, and feed conversion in broiler chickens during the entire trial period.
ABSTRACT: Avian Influenza and Newcastle disease are the two most important diseases of poultry and are globally considered as threats to public health and economy. There is little information published about these diseases in peacocks and other common backyard poultry in Guatemala. Therefore, an exploratory serosurvey was conducted to determine the presence of circulating antibodies to Avian Influenza (AI) and Newcastle Disease (ND) viruses in a semi-captive population of peacocks in southwestern Guatemala. Additionally, the circulation of antibodies to these pathogens in backyard chickens, ducks, and turkeys from a neighboring community was explored. Blood samples were obtained from 48 peacocks, 30 chickens, 6 ducks, and 4 turkeys. The samples were processed in the Regional Reference Laboratory for Animal Health, at the Veterinary Medicine Faculty, University of San Carlos of Guatemala, located in Guatemala City. Antibodies against AI virus were investigated by Agar Gel Immunodiffusion, and antibodies against ND virus were examined using Hemagglutination Inhibition. No antibodies against AI virus were detected. Most of the samples (97.7%) were negative for antibodies against ND virus, except for two turkeys that carried low antibody titers. The findings of the present study indicate that no virulent strains of AI or ND viruses were circulating in the investigated site.

Keywords: Avian influenza, Epidemiology, Newcastle disease, Serology, Zoonoses