Journal of Genetic and Environmental Resources Conservation, 2018, 6(1):18-20.
www.jgerc.com Print ISSN: 2306-8663, Online ISSN: 2306 – 8280

Effect of Anson oil on productive traits of broiler

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Abstract

A totally 84 broiler chicks of Rose with 41g weight for 6 weeks were fed on experimental diet contained different levels of Anson oil which added to diets as fallow: 0% A.O. (control), 0.2% A.O. (T2), 0.4% A.O.(T3) and 0.6% (t4) the chicks randomly distribution into 4 treatments with 3 replicated (7 chicks /rep.). Statistical results for body weight, food intake ,and feed conversion factor showed significant increase in T3 in compared with other treatment and there is insignificant differences between T3,T2 and T4 while there is significant decrease in these traits in T1 (control) , from that we can conclusion add different level of A.O. to the broiler diet will improve its productive traits.

Keywords: Anson oil, Broiler, Productive traits.

Introduction

Medical plants occupies distinctive and significant position in the global agricultural production as it contains natural chemicals of large and important influence physiological and therapeutic activity (Garallah, 2001) and related side effects on human and animal health , compared with chemical medicines which affecting negatively on consumer health due to deposition residues in meat and eggs of poultry and this will generate bacterial resistance to these drugs (SaadEddin, 1986) and this become an urgent need to find effective materials improvement of poultry performance less dangerous and negative impacts on human health .Therefore , used many medical plants and extracts widely in poultry diets as natural anti-oxidants and catalysts and it raised the immunity by stimulating the immune system and to improve productivity , physiology and immunity traits of poultry suchs Coriander and Thyme (Agha, 2002; Khailany *et al.*, 2009) and Trigonella (Taha, 2008), *Nigella sativa* (Ahmed Naji, 2007), Garlic (Al-Hayani, 2007; Al-Fadhlee, 2011), Anson seeds (Al-Daraji, 2008) and Chamomile (Al-Mashhadani, 2008).

Anson one of medical and common plant which contains many active compounds (Anethole, Astrakul, and Shaficol Methyl), furano-komren, fatty acids, estrogens plants, starch, protein, choline, vit. B, magnesium, potassium and iron (Al-Shahat, 1992). Anson has several properties, it acts as anti-bacterial, anti-viral, anti-fungal, anti-inflammation and digestive (Chevllier, 1996).

This study aimed to detect the effect of adding deferent levels of Anson seed oil (A.O.) to broiler diets on the productive performance .

Materials and Methods

This study was carried out at poultry farm at Animal Resources and Fisher/ Agricultural Research / Ministry of Science and Technology from 24-9-2012 until 4-11-2012 , to detect the effect of adding deferent levels of Anson seed oil(A.O.) to broiler diet on productive performance .

A total of 84 Rose broiler chick one day old with 41 gr. Body weight were distributed into 4 treatments with 3 replication / treatment (7 chick/ rep.) . Using continuous lighting program (24 hr. /day) from first day till the end of experiment, chicks were fed *Add-libitum* on diet with 21.14% protein and 3032 Kcal./ Kg. (Table 1). The chicks were divided into:

T1 Control: Ordinary diet + 0% A.O.
T2 : : Ordinary diet + 0.2% A.O.
T3: Ordinary diet + 0.4% A.O.
T4: Ordinary diet + 0.6% A.O.

Anson oil obtained from local market . Food Intake, Body Weight ,Food Conversion Efficiency and Mortality data recorded weekly. Used a global test applied to the design of a random full(CRD)were compared between the moral test averages Duncan (Duncan, 1955) polynomial and use the program SAS(SAS, 2001) in statistical analysis.

Table (1) The constitutive and chemical composition % of diet

Ingredients	%
Yellow Corn	43
Wheat	12
Barley	9
Soybean meal	20
Protein	12
Oil	3
Lime stone	0.7
NaCl	0.3
Total	100%
Calculated chemical analysis	
Crud Protein %	21.14
Metabolism energy (Kcal / Kg)	3032
Energy/ Protein ratio	143
Lysine (%)	0.82
Methionine +Sistine%	0.73
Fiber%	2.16

The chemical composition of experimental diets according to NRC(1994).

Results and Discussion

A- Body Weight (g): Table (2) show the effect of adding different levels of Anson oil to the diet of broiler and it show significant increase ($p \leq 0.05$) in body weight , the highest body weight was recorded in T3(0.04% Anson oil) and T4(0.06% Anson oil) which it 2269 gr. , 2183 gr. respectively and then T2(0.02%Anison oil) with 2125 gr. while T1 (control) had insignificant increase (1908 gr.) in body weight .

The data show that the high level of Anson oil treatment had the best body weight at 42 day old, this may be related to the influences of A.O. which used as antioxidant and stimulated the immune system because it contains active compound (Anethole, Eugenol, Methylchvicol, Anisaldhyde, Estragole, Linalool, Camphor, Limonene, Trans-anethole)(Al-Naimi, 2008).

Table (2) Effect of different levels of Anson oil(A.O.) addition on productional performances(Body Weight(B.W.) , Food Intake(F.I.) , Food Conversion Factor(F.C.)) for broiler at the age 21day and 42 day.

Treatment	21 day age			42day age		
	B.W.	F.I.	F.C.	B.W.	F.I.	F.C.
T1	674.1± 1.18 d	1158± 3.30 a	2.00± 0.06 a	1908± 2.87 c	3805± 4.23 a	2.17±0.09 a
T2	690± 1.12 c	1078±3.04 b	1.76±0.02 b	2125±3.01 b	3792±2.86 b	1.82±0.05 b
T3	745±0.72 a	1103±1.8 c	1.41±0.02 c	2269±2.36 a	3693±3.51 c	1.66±0.07 c
T4	710.7±0.88 b	1104±2.04 c	1.83±0.03 b	2183±2.12 ab	3772±2.28 b	1.86±0.04 b

Mean ± S.E. ($P \leq 0.05$)

B- Food Intake (g): Results in table (2) shown significant ($p \leq 0.05$) increase in food intake in the T1 and T2 which record (3805, 3792 g.) respectively and insignificant in T3 and T4 which record 3693, 3772 g . respectively .

C- Food Conversion Factor: In table (2) T3 show significant improvement ($p \leq 0.05$) in food conversion factor which was 1.66 in compared with T1,T2 and T4 which were 2.17, 1.82 and 1.86 respectively, there were insignificant differences between T2 and T3 while the differences are significant between T1(control) and all A.O. treatment .

This improvement in productive traits may be due to the effect of A.O. as digestive system stimulator and appetizer (Al-Naimi, 2008) while Kamel and Jamraz (2002) mention that the Anethol (one of Anson oil compound) increase digestion of protein ,lipid and fiber. Also A.O. improve digestion in duodenum and increase activity of pancreas

through the increasing the activity of Lipase and Amylase (Hernandez *et. al.*, 2004) and also increase the production of digestion enzymes and improve liver function to uptake the digestive production (Langhout, 2000) .

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