

تأثير المعزز الحيوي و الهندباء والمضاد الحيوي (البنسلين) على اداء النمو لدجاج اللحم

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الخلاصة

أجريت هذه الدراسة في احد الحقول التجارية التابعة لمحافظة بابل ناحية المدحتية من الفترة 1/ 1/ 2011 الى 1/ 1/ 2012 لغرض دراسة تأثير الإضافات الغذائية للسابق الحيوي والمضاد الحيوي ونبات الهندباء على الصفات الإنتاجية لفروج اللحم، أضيفت إلى العليقة الأساسية خلال فترة التجربة البالغة 6 أسابيع . باستخدام التصميم العشوائي الكامل، استخدم مئة وستون طير بعمر يوم واحد وزعت على أربعة مجاميع بواقع مكررين لكل معاملة 20 طير لكل مكرر . وكانت المعاملات التجريبية هي :-
المعامل الأول ! السيطرة (العليقة الأساسية) بدون إضافة .
المعاملة الثانية ! العليقة الأساسية + 2% سابق حيوي .
المعاملة الثالثة ! عليقه أساسية + مضاد حيوي (امبسلين) 20ملغم /كغم من العلف.
المعاملة الرابعة ! عليقه أساسية + الهندباء 650 ملغم /كغم من العلف .
اظهرت النتائج عدم وجود فرق معنوي تحت مستوى (p< 0-05) في الوزن الحي واستهلاك العلف النهائي ومعامل التحويل الغذائي النهائي والزيادة الوزنية النهائية بين المعاملات . وأيضا لم يلاحظ اي تأثير معنوي في نسبة النصافي والوزن النسبي لبعض الأحشاء الداخلية ماعدا زيادة معنوية (p<0.05) في وزن القانصة والمعدة الحقيقية لصالح معاملة الهندباء بالمقارنة مع المعاملات الأخرى.

Effect of Probiotic ; Dandelion and Ampicillin on the Growth performance of Broiler chicks.

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Abstract

This work was conducted in commercial chicken farm in Babylon governorate during period from 1 January 2011 to 1 February 2011 for a study The effect of dietary supplementation of prebiotic, Antibiotic and dandelion on productive performance of broiler chicks were added to basal diet during the experimental period of 6 weeks.

Incompletely randomized design , one hundred and sixty one day old broiler chicks were assigned to 4 treatment with 2 replicates (20 chick each replicate). The experimental treatments were:-

T(1):- control group (basal diet)

T(2):- basal diet plus 2 % pre biotic , T(3):- basal diet plus 20 mg /kg feed of antibiotic , and T(4):- basal diet + dandelion 650 mg /kg.

The results appeared that there wasn't significant difference in live weight ,final feed intake , final feed conversion ratio and accumulative weight gain among treatments.

Also there wasn't significant effect on dressing percent and relative weight of some organs except there was significant increate (p< 0.05) of Gizzard and proventriculus weight for dandelion treatment compared with other treatment.

Introduction

The fact of poultry industries since the 1950 largely depend up on two primary management tools vaccination and antibiotics(cook ;2004)

These two tools allowed for prevention of diseases that could greatly impact poultry raised in large flock (Jones and Richard 2003).

Antibiotics were also found to improve poultry growth and feed efficiency over 10% when fed below therapeutic levels (Pontes and Costello, 1995), (Al-Husseiny, 2009). Hence by the late 1950 the use of antibiotics for improving growth in consolidated poultry flocks was common place (Rosen , 1996). In recent years , a growing concern on possible development of antibiotic resistant bacteria from continuous feeding of sub therapeutic levels of antibiotic has resulted in severe restriction on the use of antibiotics in animal feed in many countries (Rate Liff ,2000). Products to improve animal have include :-enzymes ,competitive microbial species; pre colonization of gastro intestinal tract with benefit bacteria, and herbal plant extract. (Calilar *et al.*, 2004 ; Al-Sodini, 2005 ; Kalavathy *et al.*, 2008). Competitive microbial species (as a substitute for antibiotic growth promoter has been considered (Ghiyasi , *et al.*, 2007).

Competitive microbial micro organism which beneficially affect the host animal by improving their intestinal micro flora (Cummings and Macfarlane ,2002) . The dietary supplement action of pre biotics

(Compleitive microbes) benefit the host animal by stimulating appetite and feed consumption (Hoog *et al* 2004) and stimulate the immune system (Ghaffor *et al.*, 2005).

Dandelion (herbal plants) also may be role as growth promoter , there are evidences to suggest that some of this compound has different active ingredients like inulin; essential oil and aromatic compound . These ingredient components act as anti microbial and increase absorption of digestion system (Williams and Losa 2001). There are large number's of researchers mentioned growing interest of inulin (Galib and Noor 2010).

This study was conducted to investigate the effect of dietary supplementation of a pre biotics (saccharo myces: cervisiae); Antibiotics and dandelion plant on broiler performance under commercial condition in Iraq.

Materials and Methods

A total of one hundred and sixty a day old broiler chicks (Hubbard Flex) were obtained from local market and were divided into 4 groups of (40)chicks .

They were randomly assigned to 4 treatment diets each experimental treatment was repeated 2 times (2 replicate)and fed experimental diets for 42 days of (20) chicks per time . the trial was conducted in 2 phases consisting of the start phase from 1-21 day and grower phase from 22 to 42 days.

The chemical composition of the diet are presented in table (1). All bird raised in dust saw floor , feed and water were provided adlibitum during the experiment . The treatments were :-

T(1) :- basal diet without any additive material (control).

T(2) :- basal diet plus 2 gm/kgfeed of saccharo myces cervisiae .

T(3) :- basal diet plus antibiotic (20 mg/kg feed).

T(4) :- basal diet plus dandelion 650 mg/kg feed .

These levels of supplementation selected on based on optimum recommended levels in some researches strict sanitation practices were maintained in the houses before and during course of experiment . The chicks were housed in temperature controlled room with continuous lighting through out the experiment. Feed intake and body weight were determined weekly, weight gain and feed conversion ratio (FCV) were calculated, birds were vaccinated against Gumboro, New castle, (Iosota) according to laboratory recommendation .

At the end of experiment (42 days) five bird from each replicate were selected randomly weighed and slaughtered to pick for eviscerating to calculate dressing percent without the edible gullets (heart, liver and Gizzard). Select organs (heart, gizzard, cecum, liver, fabracia)

Were removed and weighed separately to determine the relative weight of visceral organs as a percentage of body weight.

The data of experiment were analyzed statistically by using CRD (complete random design) and least significant difference (LSD), the computation was done by using the Spss program (Spss, 1988).

Table (1) :- Ingredient (%) and composition of basal diets.

Ingredients (%)	Starter 1-21 days	Finisher 22-42 days
Yellow Corn	58.0	64.0
Soy bean meal(45%pr)	38.0	32.0
Premix*	3.0	3.0
Oil(8900kcal /kg)	0.5	0.5
Salt (NaCl)	0.3	0.3
Methionine	0.1	0.1
Lysine	0.1	0.1
Total	100	100
Calculated chemical analysis		
ME (kcal/kg)	2850	2900
Crude protein (%)	22.4	20.2
Calum %	0.1	0.2
Avial p. %	0.2	0.1
Methionine + cystein	0.8	0.8
Lysine	1.2	1.2

Premix (1 %) provided the following (per kg of complete diets) 1- 1400 in vit A ; 3000 iu vit D3 ; 50 mg vit E ; 4 gm vit k ; 3 mg vit B6 ; 6 mg vit B12 ; 60 mg Niacin , 20 mg panto thenic acid , 0.2 mg folic , acid , 150 mg choline , 4.8 mg ca , 3.18 mg P ; 100 mg MN; 50 mg FE.

Requirements were adjusted according to NRC ,1994 .

Result :-

The effect of the dietary treatments on the mean body weight , accumulative weight gain , final feed intake and feed conversion are summarized in table (2 and 3).

The results showed no significant differences ($p < 0.05$) between the effect of a control diet and a diets the included *saccharo myces cervisae*, dandelion plant and antibiotic on live body weight ,accumulative weight gain , feed conversion and feed intake .

Table (2) also reveal dressing percent which showed no significant differ among treatment .

In table (4) Reveals the relative weights of heart liver , cecum , and fabracia showed no significant difference among treatments but there are significant difference ($p < 0.05$) in proventriculus and Gizzard of the dandelion treatment compared with others groups.

Table (2) :- Effect of probiotic , antibiotic and dandelion on live weight.

Treatment	1week	2	3	4	5	6
Control	73.5	115.3	359.5	534.7	742	1082.7

	1.50 ±	0.25 ±	22.2 ±	1.40 ±	74 ±	102.3 ±
Probiotic	63.6 ±	604.5 ±	291 ±	420.4 ±	735.8 ±	993.0 ±
	3.5 ±	0.50 ±	22.1 ±	7.3 ±	99.7 ±	26.5 ±
Antibiotic	59.0 ±	106.0 ±	324.7 ±	404.1 ±	797.2 ±	906.8 ±
	1.0 ±	1.0 ±	25.3 ±	95.8 ±	36.6 ±	1.25 ±
Dandelion	68.5 ±	115 ±	332.2 ±	541.7 ±	863.5 ±	1077 ±
	3.5 ±	1.50 ±	2.8 ±	13.7 ±	0.05 ±	41.5 ±

Table (3):- Effect of probiotic , antibiotic and dandelion on final feed conversion , accumulative gain feed intake and dressing percent in broiler heky.

	Final feed conversion	Accumulative gw	Final feed intake	Dressing parent
Control	1.7 ±	1038.7 ±	1765.6 ±	70 ±
	0.20 ±	102.3 ±	15.0 ±	0.01 ±
Prebiotic	2.0 ±	948.2 ±	1915 ±	72.0 ±
	0.01 ±	26.9 ±	35.0 ±	0.01 ±
Antibiotic	1.97 ±	862.7 ±	1705.5 ±	71.5 ±
	0.030 ±	1.70 ±	29.5 ±	0.5 ±
Dandelion	1.60 ±	1034.0 ±	1636 ±	67.5 ±
	0.10 ±	41.0 ±	15.0 ±	2.5 ±

Table (4) :- Effect of probiotic , antibiotic and dandelion on relative weights for some visceral organs.

Treatment	Heart	Liver	Gizzard	cecum	Proventriculus	Fabreal
Control	0.012 ±	0.041 ±	0.03 b ±	0.008 ±	0.00 b ±	0.0014 ±
	0.003 ±	0.0008 ±	0.0072 ±	0.003 ±	0.005 ±	0.0004 ±
Probiotic	0.115 ±	0.053 ±	0.047a ±	0.0073 ±	0.0103 b ±	0.0020 ±
	0.029 ±	0.0023 ±	0.0021 ±	0.0010 ±	0.0016 ±	0.00041 ±
Antibiotic	0.0095 ±	0.045 ±	0.36 ab ±	0.0078 ±	0.008 b ±	0.0014 ±
	0.00096 ±	0.005 ±	0.047 ±	0.0013 ±	0.0011 ±	0.00021 ±
Dandelion	0.010 ±	0.049 ±	0.045 a ±	0.0073 ±	0.025 a ±	0.018 ±
	0.0014 ±	0.0074 ±	0.003 ±	0.0098 ±	0.0092 ±	0.00030 ±

a-b means with a column with different super scripts differ (p<0.05).

Discussion:-

The data revealed that birds in control diets performed similarly to birds receiving, probiotic, antibiotics and dandelion. this result might be explained by good and controlled was conducted.

The probiotic alone had not significant on growth performance which is in agreement with finding of Mutus *et al* (2006) ; Weidmer and Hadorn (1999) who

reported non significant improvement in live weight , feed consumption of chick feed supplemented with either a probiotics and antibiotic compared with control diet . The reason of variable effect of

Antibiotics and probiotic additives with and other researches may be confounded by variations in gut flora and environmental.

Condition (mahdavi *et al* ,2005).

Data for dressing percentage was not affected significantly by dietary treatment and varied from 67.5 to 72 % with a tendency of higher for the probiotic treated group as compared to other treatments groups these results are in accordance to Karim *et al.*, (2010); Azadegnmehr *et al.*, (2007) who reported no significant affect with using of probiotic and antibiotic on dressing percent, while Galib and Noor (2010) refer to no significant difference between dandelion and control group.

Table (4) Showed that there were not significant difference among treatment groups in relative weights for some visceral organs (heart, liver, cecum, and fabracia), our findings could be supported by the finding of Karim, *et al.*, 2010, Alhusseiny (2009) who reported that dietary treatments with probiotic and antibiotic didn't causes any changes compared with control .

Relative weight of heart, liver, cecum, and fabracia showed no significant difference of dandelion treatment with other groups but there was significant increase ($p<0.05$) in proventriculus and Gizzard compared with other groups, these results are in accordance to Hernandez *et al.*, (2004) who reported that herbal plants didn't causes any changes in some organs.

The increase of relative weight of proventriculus and Gizzard in dandelion treatment may be to increase thickness of mucous membrane or increase in epithelial cells by oligo saccharide of dandelion plant (Sakat and Inagaki 2001).

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