

Dedication

To the soul of my Parents,

Brothers,

Sisters

*And all who gave help
I dedicated this word.*

Acknowledgement

Thanks to Allah for giving me fortune, aptitude and patience to conduct this study. I am greatly indebted to my supervisor Dr. Badr Hassab Elrasoul for guidance. I wish to express my thanks to the the staff of Atbara lab. Vet. Especially , Dr.Khalid ,Dr. Taysir and Dr. Somia. I am greatly indebted to my family and to my brothers and sisters for their support. Particularly engineering .Adil Abu-Bakr and Mohand Said Mattar for financial support. Thanks are also extended to the College of Animal Production staff specifically Dr.Elfadil Ahmed Adam for his valuable assistance. Thanks also go to all my friends.

Abstract

A total of 160 one day old broiler chicks (Hubbard), were used in this experiment . Four experimental isocaloric and isonitrogenous experimental diets contained graded levels of hatchery waste (HW) (0.0, 3%, 6% and 9%) were formulated to meet the nutrient requirements for broiler chickens as recommended by NRC (1994) to study the effects of feeding graded levels of hatchery waste on broiler chickens production performance. Feed intake (g/bird), Body weight, Weight gain (g/bird) and feed conversion ratio (g feed/g gain) were recorded on weekly basis and at the end of the experiment. Eight birds from each treatment were slaughtered and then eviscerated, dressing percent was calculated and then carcass, breast, thigh and drum stick weights were recorded.

The result revealed that feeding 9% (H.W) resulted in a significant ($P < 0.05$) reduction in the total feed intake (g/ bird) compared to those fed 0.0, 3 and 6% (H.W). The total weight gain (g/bird) followed the same trend of the mean total feed intake. Final body weight (g/bird) resulted in no significant differences between the birds fed the control diet 0.0% and those fed 3% (H.W), both dietary treatments showed a significant (P

<0.05) improvement in the final body weight (g/bird) compared to those fed 6 and 9% (H.W). The birds fed 9% H.W had significantly ($p < 0.05$) higher feed conversion ratio compared to those fed the control diet 0.0% , 3% and 6%.

Dressing percentage was significantly ($p < 0.05$) lower for birds fed 9% (H.W), the results also showed that the thigh weight was significantly higher in the groups fed the control diet 9% (H.W) compared to those fed 3% and 6% (H.W).

The determined chemical analysis of the HW indicated that HW had 3% ash, 8.6 % ether extract , 21.87% CP, 1.4 % CF, 24% Ca , 1.25 % P and 15.5 ME /Kcal/Kg.

This study has showed that HW is a potential as nonconventional protein source feedstuff in broiler diets. Therefore, it can be concluded that (HW) can be incorporated in broiler diet up to 6% without adverse effects.

ملخص الدراسة

تم استخدام 160 كتكوت غير مجنسه عمر يوم من سلالة الهبارد (Hubbard) حيث تم تركيب اربعة علائق متجانسة الطاقة والبروتين تحتوي علي مستويات متدرحة من مخلفات المفاقس (صفر ، 3 ، 6 ، و 9%) لمقابلة الاحتياجات الغذائية الموصي بها من المجلس العالمي للبحوث (1994) (NRC) وذلك لدراسة اثر إضافة مخلفات المفاقس علي الاداء الانتاجي للدجاج اللحم.

تم تسجيل وحساب العلف المستهلك ووزن الجسم والوزن المكتسب ومعدل التحويل أسبوعياً وعند نهاية التجربة كما تم ذبح ثمانية دجاجات من كل تجربة ومن ثم حساب نسبة التصافي وتسجيل وزن الذبيحة و الصدر والفخذ والساق.

أوضحت النتائج ان إضافة 9% من مخلفات المفاقس لعليقة الدجاج اللحم ادي الي انخفاض معنوي في استهلاك العلف الكلي مقارنة عند اضافته بنسبة صفر , 3 و 6% كما لوحظ ان الوزن المكتسب اظهر ذات النتيجة .لم تظهر فروق معنوية في الوزن النهائي بين الطيور التي اعلفت العليقة الضابطة وتلك التي تناولت العليقة التي تحتوي علي علي 3% من مخلفات المفاقس حيث اظهرا تحسن معنوي في وزن الجسم مقارنة بتلك التي اعلفت علي 6 و 9%. الطيور التي غذيت علي 9% من مخلفات المفاقس اظهرت معدل تحويل غذائي مع ارتفاع وزن الفخذ وانخفاض نسبة التصافي بالمقارنة مع المعاملات الاخري 0.0 ، 3 و 6% .

تم تحليل مخلفات المفاقس حيث احتوت علي 3% رماد, 8.6 دهون , 21.87 بروتين , 1.4 الياف , 24 كالسيوم , 1.25 فسفور و 15.5 طاقة ممثلة.

اوضحت الدراسة ان مخلفات المفاقس يمكن اعتبارها من مصادر الاعلاف الغير تقليدية للبروتين ويمكن اضافته في علائق الدجاج اللحم حتي نسبة 6% دون اي تأثير سلبي.

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