

**SUDAN UNIVERSITY OF SCIENCE & TECHNOLOGY**

**College of graduate Studies**

**Comparative Study on the Nutritive Value of Millet and  
Sorghum Grain (Feterita) in Broiler Chicken Diet**

**القيمة الغذائية للدخن والفرّة (الفتويّة) في علف الدجاج اللحم:  
دراسة مقارنة**

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# **DEDICATION**

**To my Mother, Father, Brothers and Sisters**

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## **ABSTRACT**

The present experiment was designed to evaluate the nutritive value of Millet Vs Feteriata in Broiler diet.

192 unsexed one day old broiler chicks (Ross 308) were randomly distributed into six groups (treatments) with four replicates each (8 chicks/replicate) at Kuku Poultry Research Unit Farm at Animal Production Research Center for seven weeks of age from 24/11/2006-10/1/200, the temperature range was 15-38°C.

The experimental diets were formulated to be isonitrogenous and isocaloric with the same level of essential amino acids according to the NRC (1984). A control diet (C) was formulated to contain Sorghum grain as sole source of energy and then replaced by graded levels of

Millet grain (0%, 10%, 20%, 30%, 40% and 50%) respectively.

Results obtained from the present experiment showed no significant difference ( $P>0.05$ ) among tested groups for the data average feed intake, live body weight, body weight gain and food conversion ratio.

Live body weight, hot carcass weight, cold carcass weight and carcass cuts [Chest, back, drumstick, wings and giblets (liver, heart and gizzard)] were not statistically significant ( $P>0.05$ ) among the tested groups. Thigh showed significantly higher weight ( $P<0.05$ ) for group fed on 10% Millet level. On the other hand, both groups fed on diet M40 and M50% level exhibited significantly ( $P<0.05$ ) higher abdominal fat and neck weight.

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Feed cost per/kg for the tested groups were almost similar (0.738, 0.738, 0.737, 0.735, 0.730 and 0.722 Sudanese pounds).

The present study indicated that Millet can replace Sorghum grain up to 50% level in broiler diet without adverse effect.



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Key words:

Millet, Sorghum, Broiler, Carcass.

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بسم الله الرحمن الرحيم

## الخلاصة

التوبة الحالية صممت لتقييم القيمة الغذائية للدخن بالمقارنة بالنورة (فؤيتة) في علف الدجاج اللحم .

192 كتوت عمر وم غير مجنس (روس 308)وزعت عشوائياً إلى 6 مجموعات (معاملات) بيابعة مكورات لكل (8 كتاكيت لكل مكر) ووحدة أبحاث واجن حلة وكو لمدة 7 أسابيع من العمر 14/11/2007 وحتي 10/1/2007 م .  
كنت أعلاف التوبة بحيث تكون مؤرانة اليوتين والطاقتو بنفس مسوي الأحماض الأمينية الأساسية وفقاً ل (NRC, 1984) .

العليقة الضابطة C تحوي علي حوب الة كمصدر وحييد للطاقة ثم استبدلت بمسويات متوجة من حوب الدخن بالنسب 0 ، 10% ، 20% ، 30% ، 40% ، 50% علي التوالي .

النتائج المتحصل عليها من التوبة الحاليو ضحت عدم وجود فرق معنوي ( $P>0.05$ ) بين المجموعات المختوة لمعدلات استهلاك الغذاء ، لوزن الحي ، لوزن المكتسب ومعامل التحويل الغذائي .

لوزن الحي ،وزن الذبيحة الساخن ، الذبيحة الباردة قطع الذبيحة (الصدر ، الظهر ، الأرجل ، الإجنحة) بالإضافة إلي (الكبد ، القلب والقانصة) لم تظهر فرق معنوي ( $P>0.05$ ) بين المجموعات المختوة . الفخذ أظهر فرقاً معنوياً بالنسبة للمجموعة التي تغذت علي نسبة دخن 10% .

ومن جانب آخر فإن المجموعتين اللتين تغذتا علي التوالي 40% و50% دخن أظهرتا مسوي معنوياً عالياً ( $P<0.05$ ) في الدهن البطني ووزن العنق .  
تحت ظروف الواسة الحالية اثبتت النتائج أنه يمكن استخدام حوب الدخن كبديل للة (الفوتية) حتي 50% .