

بسم الله الرحمن الرحيم

قال تعالى:

(يوتي الحكمة من يشاء ومن يؤت الحكمة فقد أوتي
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صدق الله العظيم

DEDICATION

To those who have
maintained peace in
my country and the
world

To my family

To all my friends

With love and respect

Yagoub

Acknowledgement

I would like to express my sincere gratitude to my supervisor **Dr. M. Eltigani Salih** for his invaluable guidance and instruction throughout the period of preparing and writing the research. The remarkable professionalism and constructive criticism displayed by the supervisor is highly appreciated.

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ABSTRACT

An experiment was conducted at the experimental units of the Department of Animal Science, Faculty of Agricultural Studies, Sudan University of Science and Technology, during the period from 24 December 2002 to 12 February 2003 to investigate the effect of feeding cassava root meal (CRM) as a replacement of sorghum grains on the performance of broiler chicks. Fresh cassava roots were processed according to the traditional procedure adopted in the Blue Nile area for making cassava root flour.

Diets containing 0%, 10%, 20% and 25% (CRM) as a substitute for sorghum, were fed to one hundred unsexed Ross 308 broiler chicks. All diets were isonitrogenous and isoenergetic and were prepared in a mash form, vegetable oil was added to balance the energy and to reduce the powdery characteristic of cassava root flour.

Replacement of cassava root meal up to level of 20% in broiler ration at early age (0 – 3) weeks significantly ($P \geq 0.05$) affected the bodyweight and feed conversion ratio. On the other hand, at high level of 25% replacement of CRM there was significant ($P \geq 0.05$) reduction on body weight gain at all ages.

The treatment groups did not differ significantly ($P \leq 0.05$) on dressing percentage for cold and hot weights. The replacement of

CRM sorghum had no significant effect on the mortality percentage (1%) ($P \leq 0.05$).

Treatment effect was not significant ($P \leq 0.05$) on commercial cuts, meat percentage of selected cuts thigh, drumstick and breast.

Also no significant effect ($P \leq 0.05$) on the weight of liver, heart and gizzard was noticed. The panel test for all treatments was very good, and showed in significant different ($P \leq 0.05$).

Cassava root meal could be used as substitute for sorghum up to 20% in nutritionally balanced rations for broiler as indicated by the study.

بسم الله الرحمن الرحيم

خلاصة الأطروحة

أجريت هذه التجربة في قسم الإنتاج الحيواني ، كلية الدراسات الزراعية ، جامعة السودان للعلوم والتكنولوجيا في الفترة من 24 ديسمبر 2002 إلى 12 فبراير 2003 لدراسة تأثير إحلال جذور الكسافا للذرة في أعلاف الدجاج اللحم. حيث عوملت جذور الكسافا بنفس الطريقة التقليدية المتبعة في مناطق جنوب النيل الأزرق لتصنيع دقيق الكسافا.

تم إحلال الكسافا للذرة في العلائق بالنسب الآتية 0% ، 10% ، 20% و 25% وتمت رعاية 100 كتكوت غير مفروز من سلالة روص 308 قسمت إلى 4 مجاميع 5×5 مكررات 5×5 كتكوت).

صنعت العلائق بحيث تكون متساوية في الطاقة والبروتين وبصورة ناعمة كذلك أضيف الزيت النباتي لوزن الطاقة وتقليل خاصية الغبارية لدقيق الكسافا. أظهرت النتائج أن إحلال جذور الكسافا للذرة في علائق الدجاج اللحم حتى المعدل 20% أحدث فروق معنوية ($P \geq 0.05$) في بداية التجربة (0 – 3) اسبوع في زيادة الوزن والكفاءة التحويلية. بينما إحلال جذور الكسافا للذرة حتى المعدل 25% أحدث تدهور معنوي ($P \geq 0.05$) في الوزن في جميع الأعمار.

أوضحت النتائج المتحصل عليها عدم وجود تأثير معنوي ($P \leq 0.05$) للمعاملات المختلفة على نسبة النفوق حيث كانت 1% أيضاً سجلت النتائج المتحصل عليها عدم وجود فروق معنوية ($P \leq 0.05$) بين المعاملات في نسبة التصافي في الوزن الحار والبارد.

لم يكن الأثر معنوياً ($P \leq 0.05$) في المعاملات المختلفة بالنسبة لأوزان الكبد ، القلب والقانصة ، كذلك لم يوجد فرق معنوي ($P \leq 0.05$) بالنسبة للتركيب الكيميائي للحم.

شملت الدراسة أيضاً الاختبارات الحسية للقطع المختارة (الفخذ ، الصدر ، الساق) وكانت النتائج جيدة جداً ولكن الفروقات بينهما غير معنوية ($P \leq 0.05$) ومن ثم يتضح أنه يمكن إحلال جذور الكسافا للذرة في علائق الدجاج اللاحم حتى المعدل 20% بدون إحداث أي أضرار على التغذية.

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