ISSN 2049-4700

APRIL 2013

VOLUME 4 PART 1

Innovation from Animal Science - a necessity not an option

Proceedings of the British Society of Animal Science and the Association of Veterinary Teaching and Research Work includes papers from the Rare Breeds Survival Trust 40th Anniversary Seminar and the Colloquium for Equine Reproduction 2013

advances in animal biosciences

CAMBRIDGE UNIVERSITY PRESS

Proceedings

of the British Society of Animal Science
and the Association of Veterinary
Teaching and Research Work
includes papers from the
Rare Breeds Survival Trust 40th Anniversary Seminar
and the Colloquium for Equine Reproduction 2013

2013

Advances in Animal Biosciences

This book is part of a series which is a companion to the journal ANIMAL

bsas
british society of animal science

AVTRW

"putting science into practice"

RBST
Rare Breeds Survival Trust

FER
Colloquium For Equine Reproduction

cost
European Cooperation in
Science and Technology

The Proceedings of the British Society of Animal Science constitute summaries of papers presented at the Society's Annual Conference, *Innovation from Animal Science - a necessity not an option*, held in Nottingham UK, 16-17 April 2013.

The meeting was organised jointly with the Association for Veterinary Teaching and Research Work and includes papers from the Rare Breeds Survival Trust, Colloquium for Equine Reproduction and COST (European Cooperation in Science and Technology).

The summaries have been edited. Views expressed in all contributions are those of the authors and not those of the BSAS or AVTRW.

This publication contains all the summaries that were available at the time of going to press.

ISSN 2040-4700

CONTENTS

Diets, Biomass, Byproducts, Growth and New Entrants

Farm Animal Medicine and Anti-Microbial Resistance

Selection, Diets, Mastitis, Manure and Obesity

Performance of rabbits fed graded levels of roasted pigeon pea meal

K Akande, O Adeleye
Newcastle University, UK
Email:kemi777akande@gmail.com

Introduction The pigeon pea plant as a whole has been found to be a useful feed source. Iorgyer *et al.* (2008) reported that boiled pigeon pea can be incorporated in diets for feeding rabbits without any deleterious effects on productive performance. There is dearth of information about the use of roasted pigeon pea as a protein source for rabbits; hence this study aims at looking at the effect of incorporating different levels of roasted pigeon pea meal in rabbit diet.

Material and methods Forty male and female Dutch x Chinchilla rabbits aged 5 - 7 weeks, with an average initial live weight of 725g were used in the study. The rabbits were assigned to four dietary treatments, balancing for breed, sex and weight. Each treatment was replicated five times with each replicate having two rabbits. The experimental design was the completely randomized design (CRD). The experiment was carried out at the Rabbit Research House of the Abubakar Tafawa Balewa University, Bauchi. Bauchi town is located at latitude 13° 30'N and longitude 11° 50'E in the Northern Guinea and Sudan Savanna zones of Nigeria. Roasting of pigeon pea at about 80^{0}C took 3 - 5 minutes. The seeds were allowed to cool and then milled in a hammer mill. The heat treated pigeon pea meal (PPM) was used in compounding the experimental diets. Treatment 1 (control) was maize-soybean based diet with 0% PPM while treatments 2, 3 and 4 contained 10, 20 and 30% PPM in the diets respectively. Diets were iso-nitrogenous and iso-caloric. The rabbits were housed in a single tier rabbit cage located. The feeding trial lasted for five weeks during which data were recorded for feed intake and body weight. Data obtained from performance parameters were subjected to the analysis of variance (Steel and Torrie, 1980).

Results There were no significant effects of dietary treatments on all the performance parameters examined (Table 1). The results obtained in this study for Daily feed intake (DFI), daily weight gain (DWG), feed conversion ratios (FCR) and final live weight (FLW) agree with the findings of Iheukwumere *et al.* (2008) who reported that the DFI, DWG, FCR and FLW of rabbits fed diets containing boiled pigeon pea meal were not significantly different from the control diet.

Table 1 Effect of graded dietary levels of roasted pigeon pea meal on performance of rabbits

Parameters	Dietary levels of PPM (%)				SEM
	0	10	20	30	
Initial live weight (g)	865	788	875	748	56.0^{NS}
Final live weight (g)	1389	1435	1420	1284	96.0^{NS}
Daily feed intake (g)	54	58	54	42	2.2^{NS}
Daily weight gain (g)	14	16	13	12	1.1^{NS}
Feed conversion ratio	4	4	5	3	0.2^{NS}

SEM = Standard error of mean
NS = Not significant

Conclusion The results obtained from the experiment indicate that PPM could be included up to 30% in the diets of rabbits without negatively influencing performance of rabbits.

References

Iheukwumere, F. C, Onyekwere, M. U. and Egu, U. E. 2008. Growth, carcass and reproductive characteristics of male rabbits (bucks) fed raw and boiled pigeon pea seed (Cajanus cajan) meal. Pakistan Journal of Nutrition, 7, 1: 17-20

Iorgyer, M. I., Carew, S. N. and Ayoade, J. A. 2008. The replacement value of pigeon pea (Cajanus cajan) for maize in weaner rabbit diets. In: Repositioning Animal Agriculture for the Realization of National Vision 2020. Proceedings of the 13th Annual Conference of the Animal Science Association of Nigeria, 15 - 19 September, Zaria pp. 456- 459

Steel, R. G. D. and Torrie, J.H. (1980). Principle and procedure of statistics. A Biometrical Approach. Second edition. McGraw-Hill book company.