شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

A STUDY OF SUBSTITUTING YELLOW CORN AND SOYBEAN MEAL BY SORGHUM GRAIN AND RAW SUNFLOWER ON THE PERFORMANCE OF JAPANESE QUAIL

By

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B.Sc. (Agric., Animal Production, 1991)
M.Sc. (Agric., Poultry Nutrition, 1996)

Thesis

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APPROVAL SHEET

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THESIS

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ABSTRACT

The experimental work of the present study was carried out at the Poultry Research Station, Poultry Production Department, Faculty of Agriculture, Fayoum, Cairo University. Chemical analysis was performed in the laboratories of the same institute according to the procedures outlined by AOAC, 1990.

Two experiments were conducted during the period from December 1998 to March 1999 including growing and laying periods of Japanese quail to study effects of substituting yellow corn (YC) by four varieties of sorghum grain (SG): Baladi ,Giza 15, Mena and Strain 113 on Japanese quail performance (experiment 1). YC of the control diet was partially substituted by that of varieties of SG at replacement ratio of 0, 50 or 100 %. Also, effects of substituting soybean meal (SBM) by three varieties of raw full-fat sunflower seeds (FSFS): Isoflower , Vebes and Vedock, (experiment 2). Soybean meal protein of the control diet was partially substituted by that of FSFS at replacement ratio of 0, 10 or 20 %. The experimental diets were formulated to be isonitrogenous and isocaloric.

Six hundred and forty one-day old unsexed Japanese quail birds were used in both experiments and were initially fed a control diet for one week. Then, chicks were individually weighed, wing-banded and randomly allotted to dietary treatments. Chicks were raised in electrically heated batteries with raised wire floors and had free access to feed and water. The birds were given the experimental diets from the end of the first week until 42 days of age (growing period) and from 43 to 112 days of age (laying period).

The following results were obtained:

Experiment 1: There are differences between diets in amino acids analyses. It may be observed for that essential amino acids (EAA) were adequate and supplied more than required by NRC (1994).

Growing period: The results indicated generally, insignificant effect of substituting yellow corn (YC) by SG varieties on live body weight (LBW), live body weight gain (LBWG), feed conversion (FC), crude protein conversion (CPC), caloric efficiency ratio (CER), slaughter parameters, plasma constituents, chemical composition of meat, mortality rate of Japanese quail during the period from 7 to 42 days of age. Therefore, the four SG varieties used in this experiment can completely substitute YC during the period from 7 to 42 days of age.

Laying period: The results indicated generally, significant effects of substituting YC by SG varieties on egg production, feed intake (FI) and FC, CPC and CER during the laying period. Conclusively, and from a practical point of view, the results indicated that SG in laying quails diets adversely affected the economic parameters.

Experiment 2: There are differences between diets in amino acids analyses. It was observed that EAA were adequate and supplied more than required by NRC (1994).

Growing period: The results indicated generally, insignificant effect of substituting FSFS on LBW, LBWG, GR, FC, performance index (PI), CPC, CER, slaughter parameters, plasma constituents, chemical composition of meat, mortality rate economic parameters of Japanese quail. Therefore, it may be concluded that the three FSFS varieties used in this research can substitute SBM up to 20% during the period from 7 to 42 days.

Laying period: The results indicated generally, the three FSFS varieties used in this research can substitute SBM up to 20% during the period from 43 to 112 days of age without any detrimental effect on egg production FI, FC, CPC, CER and economic parameters of Japanese quail.

key words: substituting yellow corn , soybean meal, sorghum, sunflower seeds, performance, Japanese quail

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