

Feedlot Performance and Carcass Characteristics of Western Baggara and Friesian Crossbred Bulls. 2. Slaughtered at 400-kg liveweight.

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SUMMARY

A total of 16 bulls of an average initial live weight of 238.13 kg, and average initial age of 20.8 months were included in the experiment. They comprised 8 Western Baggara bulls and another 8 Friesian crossbred bulls (Friesian X local Sudan Zebu) which were purchased from the local market. The bulls were kept for a period which ranged from 133 — 156 days. They were intensively fed on molasses feed (11.09 MJ/kg, ME) and Sorghum straw (6.69 MJ/kg, ME) on *libitum base*. Animal were slaughtered at a target weight of 400 kg. The crossbred bulls were found to be significantly ($P<0.05$) higher over Western Baggara bulls in the following studied parameters : feeding period (133 days), live weight gain (1.28 kg) and feed conversion efficiency (6.2 kg DM/kg live weight gain). While Western Baggara bulls were found to be significantly ($P<0.001$) greater than the Friesian crossbred bulls in the following studied parameters : head weight, hide weight, omental fat and kidney fat weight .

INTRODUCTION

There is sample evidence of the ability of Western Baggara cattle to fattening (El Shafie and N4cLeroy, 1965; Ahmed *et al*, 1977). This fact recently attracted investment in feedlots based on the use of agriculture and industrial by-products such as sorghum straw and molasses which are available in great quantities. Crossbreeding is now a common practice in dairy production around big cities in the country. Increasing demand for beef points out to the importance of learning more about

growth and development of different local cattle as well as crossbred cattle under a set of specified management conditions.

This work was designed to study the feedlot performance and carcass characteristics of Western Baggara and 50% Friesian bulls slaughtered at 400 kg live weight, utilizing agroindustrial by-products mainly molasses in fattening diets.

MATERIAL AND METHODS

The experiment involved sixteen bulls (8 Western Baggara and 8 50% Friesian bulls) of an average initial weight of 238.12 kg, and average initial age of 26.4 months. The animals were purchased in May, 1993 from the local market. The initial live weight for the Western Baggara bulls was 237.5 ± 5.59 kg, while that of 50% Friesian bulls was 238.75 ± 6.5 kg. The management, feeding procedure, slaughter practice and statistical analysis were the same as in Eltahir *et al*. (2000) .

RESULTS AND DISCUSSION

Feedlot performance :

As shown in Table 1 the average daily live weight gain was significantly ($P<0.05$) higher in 50% Friesian (1.28 kg) than in Western Baggara bulls (1.08 kg). This superiority in live weight gain in 50% Friesian bulls is in agreement with that shown by Olentine *et al.* (1976) who found that crossbreds gained weight faster than pure-bred. Western Baggara bulls took significantly ($P<0.05$) longer duration (156.4 days) to attain the target slaughter weight (400 kg) than 50% Friesian bulls (133.5 days) (Table 1). This could be due to the breed differences in growth rate (Thiessen *et al.* 1984). As seen in Table 1, total dry matter intake and total concentrate intake were significantly ($P<0.001$) lower in 50% Friesian than in Western Bulls. This might be explained by the fact that Western Baggara bulls took longer duration (156 days) to

attain the target slaughter weight (400 kg) than the 50%

Friesian bulls (133 days). The value of feed conversion

efficiency of 50% Friesian bulls (6.2 kg DM/kg live weight gain) was significantly ($P<0.05$) superior than the value (7.56 kg DM/g live weight gain) of Western Baggara bulls.

This could be explained by the fact that domestic farm animals differ in their growth rate, feed conversion efficiency and carcass composition (Fowler, 1968).

Table 1 . Performance characteristics of Western Baggara bulls and 50% Friesian bulls.

Carcass yield and characteristics :

As seen in Table 2 minor non-significant differences were noted across breed in carcass characteristics. It seems that there was a similarity in dressing percentage (live weight base and empty body weight base). Since dressing percentage increases with increased degree of fatness it seems that either these breeds had similar degree of fatness or the rate of deposition were not different at this weight (400 kg) regardless of the apparent differences that might be

expected in cattle different mature size.

Body components :

As shown in Table 3 head weight was significantly ($P<0.001$) heavier in 50% Friesian bulls than Western Baggara bulls. This is in agreement with that shown by Abdella (1987) who found that crossbred bulls had heavier head weight than purebred. Western Baggara had significantly ($P<0.001$) heavier hide weight compared with 50% Friesian bulls. (Due to breed differences) (Table 3). The omental fat and kidney fat were significantly ($P<0.001$) heavier in Western Baggara bulls than in 50% Friesian bulls. This indicates that Western Baggara bulls tended to put

riore internal fat than the crossbreds. This may be in agreement with Cole *et al.* (1964) who indicated that crossbreds depu:y . less fat than purebreds.

Generally from the overall picture it could be concluded that 50% Friesian bulls could be fattened to 400 kg more efficiently and economically than Western Baggara bulls.

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