SOCIOECONOMIC CHARACTERISTICS AND CONSTRAINTS AFFECTING DAIRY CATTLE PRODUCTION IN KANO STATE

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ABSTRACT
Milk production in Nigeria is dominated by cattle as virtually nothing in terms of milk comes from Nigerian goat and sheep. However, due to unorganized nature of the Nigerian dairy industry and other challenges, the potential of indigenous cattle to provide milk as the main income earner remains unknown to majority of the cattle farmers. The study examines the socioeconomic characteristics and general constraints affecting dairy cattle production in some selected local government areas of Kano State, Nigeria. A total of 123 dairy cattle farmers were randomly selected and interviewed using well-structured questionnaires. Data collected were analyzed using descriptive statistics. The finding of the results showed that majority (93.90%) of the respondents were male with majority (39.00%) falling within the age range of 31 – 40 years. Sixty-eight percent of the respondents had no formal education. The result also indicated that 48.00% of dairy farmers owned between 20-40 cows with more than 20 years dairy experience. About 96.70%, 95.90% and 78.90% of the dairy farmers prefer bull service, employed hand milking and milked their cows two twice a day respectively. The findings of the constraints affecting dairy cattle production in the study area revealed that high cost of feed, diseases and parasites and lack of grazing land were the major constraints affecting dairy cattle farming in the study. Dairy farmers are encouraged to preserve excess feed to be used during period of scarcity. Provision for feed during the dry season and adequate veterinary care were recommended.
Keywords: Dairy cattle, Farmers, Milk Production, Breed, Constraints.

INTRODUCTION
Dairy cattle production contributes to people's livelihoods through provision of meat, milk, lather, farm energy, manure, transport, soil conservation and employment (Njambe *et al*., 2002). Milk production in Nigeria is dominated by cattle as virtually nothing in terms of milk comes from Nigerian goat and sheep. Three major production systems can be identified in the country which include; pastoral (traditional), semi-intensive and commercial (intensive) with pastoral and semi-intensive system producing the bulk of the milk consumed in the rural and urban areas of Nigeria (Saleh *et al*., 2016). The Nigerian dairy industry is largely subsistent producing an estimated milk of 450, 000 tons per annum (FAO, 2010). This production has been found to be inadequate to satisfy the dairy demands of Nigerian (FAO, 2010). The productivity of cattle in Nigeria is said to be poor due to a number of reasons which is includes low genetic capacity of the indigenous cattle, feed shortage, disease prevalence, low level of management and poor breeding practice (FAO, 2018)). This study attempt to analyze the socioeconomic characteristic and general challenges faced by dairy cattle farmers in some selected local government areas of Kano state.

MATERIALS AND METHODS
The study was conducted in 16 local Government Areas of Kano state, Nigeria. Kano is situated between latitude $12^{0}00$'N and longitude $8^{0}31$'E at 460m above sea level with average rainfall of 980mm and total land area of 20,131km^2 respectively (KNARDA, 2001). The climate is semi-arid characterized by a long dry season and a short wet season with a mean annual temperature of 26°C, relative humidity ranges from 80% in August to 23% between January and March. The area has two distinct seasons; a short raining

season (May - October) and longer dry season (October - May). Crop and livestock production are the main occupation of people in the study area.

Data Collection and Analysis

A total of 123 dairy farmers, mostly pastorals and few commercials were randomly selected from 16 local government area of the state namely; Kumbotso, Dawakin Kudu, Kura, Garun Malam, Madobi, Gwarzo, Kiru, Karaye, Dawakin-Tofa, Tarauni, Wudil, Sumaila, Ajingi, Ungogo, Minjibir and Tudin Wada. A structured questionnaires were used for data collection which lasted for 4 months (October 2019 and January 2020). The questionnaire captured information on socio-economic background, Milk production and constraints affecting dairy cattle production in the study area. The collected data were analyzed using descriptive statistics.

RESULTS AND DISCUSSION

The result in Table 1 shows the socioeconomic background of dairy cattle farmers in the study area. Majority (95.90%) of the dairy farmers were male, semi-literate (68.30%) and mostly (39.00%) were in their active productive ages. This is necessary because dairying is a physical activity that is usually dominated by men. The findings of the study also revealed that majority (48.00%) of the dairy farmers owned between 21 and 40 dairy cattle with more than 20 years (48.00%) of dairy farming experienced. This finding is in line with the report of Kurume (2013) who reported that the age of peopled involved most in dairy cattle production in peri-urban areas of Temeke municipality, Tanzania ranged from 30 to 60 years old. It was observed that majority (96.70%) of the farmers interviewed prefer natural breeding for their cows, employed hand milking (95.90%) and milking is done two times in a day. The reason could be due to lack of resources and that cows are milked twice per day produce more milk than cows milked only once. Similar observation was reported by Stelwagen *et al.* (2007) who reported that cows milked once produce less milk than those milked twice. The result was also in line with that of wangdi *et al*. (2014) who reported that most (69.30%) of the dairy farmers milk their cows twice and the rest (30.70%) once or three times in a day.

The constraints affecting dairy cattle production in the study area were presented in Table 2. High cost of feed (19.48%) was the major constraint to dairy cattle farming and hence contributing factor to low milk yield of indigenous breeds. The high cost of feed is a limitation to its availability of which most of the farmers cannot afford and the cows were deprived of necessary nutrients, hence contributing factor to low milk yield of indigenous breads. Similar observation was made by Guadu and Abebaw (2016) who reported that the primary constraints of dairy cattle production in Ethiopia were inadequate feed, poor pasture development and and high cost of feeding. This disagree with Olorunnisomo *et al*. (2010) who found that inadequate capital for running the herd was the major constraint affecting commercial milk production in three agricultural zones of Oyo State, Nigeria. Diseases and parasites, lack of grazing land, low product price, storage and transportation problems, inadequate veterinary services and lack of extension services were other challenges militating against dairy production in the state.

CONCLUSION AND RECOMMENDATION

Dairy farming plays a crucial role for economic development as source of feed and income. It is mostly practice by semi-literate and experienced males in their active productive ages. High cost of feed was the major constraint to dairy cattle production. Dairy farmers should be encouraged to adopt suitable methods of preserving excess feed. Provision of services such as adequate veterinary care, use of improved breed, feed subsidy and appropriate breeding program were recommended.

Table 1: Socio-economic characteristics of dairy cattle farmers in some selected local government areas of Kano State

Variable	Frequency	Percentage (%)
Sex		
Male	118	95.90
Female	5	4.10
Total	**123**	**100**
Age (years)		
Below 30	33	26.80
31 – 40	48	39.00

41 – 50	32	26.00
Above 50	10	8.10
Total	**123**	**100**
Education		
Non formal	84	68.30
Primary	18	14.60
Secondary	15	12.20
Tertiary	6	4.90
Total	**123**	**100**
Herd size		
Below 20	20	16.30
21 - 40	59	48.00
41 – 60	21	17.00
61 – 80	14	11.40
Above 80	9	7.30
Total	**123**	**100**
Dairy experience (years)	3	2.40
Below 5		
6 – 10	13	10.60
11 – 15	15	12.20
16 – 20	23	26.80
Above 20	69	48.00
Total	**123**	**100**
Preferred breeding practice		
Bull service	119	96.70
AI	1	0.80
Both	3	2.40
Total	**123**	**100**
Frequency of milking		
Once	26	21.1
Twice	97	78.9
Total	**123**	**100**
Milking method		
Hand milking	118	95.9
Machine milking	1	0.8
Both	4	3.3
Total	**123**	**100**

Source: Field survey 2020

Table 2: Constraints affecting Dairy Cattle Production in some selected local government areas of Kano State

Constraints	**Frequency**	**Percentage**
High cost of feeds	95	19.48
Diseases and parasites	71	14.54
Lack of grazing land	62	12.70
Lack of extension service	55	11.27
Lack of veterinary service	54	11.07
High cost of other input	50	10.25
Low product price	45	9.22

Storage problems	33	6.76
Transportation problems	23	4.71
Total	488	100

Source: Field survey 2020

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