



An overview of the management practices and constrains at the dairy camps in Khartoum State, Sudan

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Abstract

Management, husbandry and constrains facing dairy farms camps at Khartoum State, Sudan were compared from information that were collected by surveying hundred farms via questionnaire, visits and direct interview with farm owners. Higher illiteracy level (36%) was observed among dairy farms owners in the studied camps, moreover, 22% had informal education. Cows were found as the main milk producing animals and the predominant herds (60%) were cross dairy cows (Friesian and local herd). The data illustrated that herd health, trained labours and availability of feeds are the major problems facing dairy herd owners. Also lack of records and the channels of milk marketing were among the constraints facing those farms. The data revealed that the disease control was not satisfactory as most of the labours give the treatment without consultation of veterinarians. Hence the present study recommended the training of animal keepers and labours (formal and vocational) to increase awareness on house designing, rearing, management, feeding., milk collection points supported by cooling facilities, veterinary services and initiation of collaborative bodies (processing and marketing) are urgently needed.

Key words: Management, Husbandry, Constrains, Dairy Farms Camps, Khartoum State, Sudan

Introduction

The milk from ruminants' animals plays an important role in the nutrition for most people in Sudan in rural and urban areas. Milk production system in Khartoum State, Sudan depends largely on the traditional sector, which produces about 80% of the milk consumed in the state. Other system includes dairy co-operative societies, private sector farms and modern dairy farms (Babiker, 2007). In Sudan, urban milk supply largely comes from village herds and its marketing is by milk vendors who distribute raw milk to households as the organized dairy establishments are limited (Elmagli and El Zubeir, 2006). The improper handling of raw milk, problems of transportation and distribution, high temperature, lack of principles of quality control, poor cooling facilities and neglecting of sanitary standards by the distributors are the major impediments (Mohamed and El Zubeir, 2007). Also the importance of the human factors in explaining variations in farm performance are stressed (Tarabla and Dodd, 1990). Production of milk in small quantities for family needs is traditionally the beginning of dairy development every where because as milk production increase the surpluses are usually sold in the nearby areas. The present survey aimed to give an over view

on the management, husbandry and constrains facing two of the main dairy camps in Khartoum State, which are initially back yards or semi extensive system.

Material and Methods

The present study was carried out at Alrudwan dairy project, located in Western Omdurman and Kuku project in Eastern Nile (Khartoum State). They are ones of the oldest 17 dairy camps erected under the supervision of the Ministry of Agriculture, Animal Resources and Irrigation, Khartoum State. The Kuku project was started in 1960 Alrudwan project was established recently in 1993.

Information about dairy management was collected by questionnaire and direct interview with farms' owners in order to describe the constrains and to identify the weakness that need correction. The data collected included education level of farms owners, owning of land, fodders cultivation, socioeconomic status, financial resources, farms construction materials, animal kept and different management and husbandry practices (record keeping, disease prevention and control and milk marketing). The collected data were grouped on a percentage basis.

Results and Discussion

The dairy herd keepers in Kuku project are older compared to those of Alrudwan project (Fig. 1). This could be due to the recent establishment Alrudwan project (1993), while the dairy farmers owned the cultivated lands in Kuku project since 1960. Similarly the education level of farmer owners was reported to be high in Kuku project in comparison those of Alrudwan project (Fig. 2). This could be due to the fact that the owners at Alrudwan project were initially back yard system or semi extensive system and/or completely nomadic system producers.

Most of the producers were married with a mean of families of more than 10 members and they are from middle income group. They run this business from their personal resources in Alrudwan project, while those in Kuku funded their dairy activities from personal resources (88%), cooperation (10%) and from loan (2%). Rarely women could own a farm and if so it will be run by one of her relatives and this due to cultures and custom as was reported before (Richter, 1997).

The farm constructed materials include available materials and some of dairy units are divided into fences for different age groups of the cows. The producers at Kuku keep records were 64%, while only 7% keep record at Alrudwan project, this in accordance to a previous report (Babiker, 2007). Moreover the information and knowledge are always incomplete and the risk is a major consideration for decision makers as the farm data from production and financial records can be used to analyze past performance (Delorenzo and Thomas, 1996)). Also the health records can be used to control the disease and treatment of cows and to avoid many health hazards (Babiker, 2007).

The dairy cows keepers in Kuku rear the cows as the main milk producing animals (60%) and few sheep (16%) and goats (4%) in addition to chicken (20%). In Alrudwan, they keep cows (60%), and chicken (40%) which were used as biological control for mites. Moreover Fig. 3 indicated that cross breed cows were best adapted and predominated in the farms of Khartoum State (El Zubeir and Ahmed, 2007; Tibin et al., 1990). The imported and cross herds were found to be high in Kuku project compared with Alrudwan project, which might be due to the presence of the Artificial Insemination Centre and the cooperative associations in Kuku Project (Tibin et al., 1990). Natural mating was reported before as the main way to assess reproductive activity in Alrudwan Campus (Babiker, 2007).

The dairy farmers mentioned that the milk yield of the cross breed was reported to be between 20-25L/day, while the Friesian cows yielded about 35L/day (fig. 4). In these projects, the owners have been shifted to cross cows since the local cows are low in milk production

and the Friesian cows are not well-adapted to the environmental conditions of the Sudan, especially high temperature (El amin and El Zubeir, 2002). However, the local cows produce milk with high fat percent in comparison to the Friesian cows and their crosses. The average milk production was show in Fig. 5.

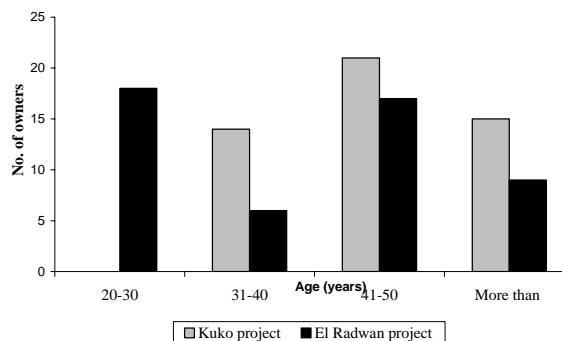


Fig. 1: Age of the dairy farm owners in Khartoum State

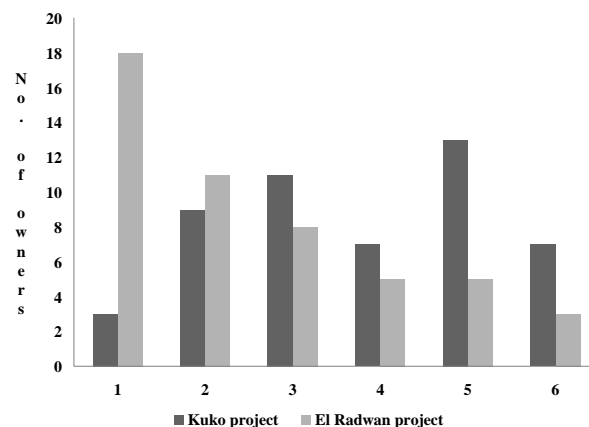


Fig. 2: Education level of dairy farm owners in Khartoum State

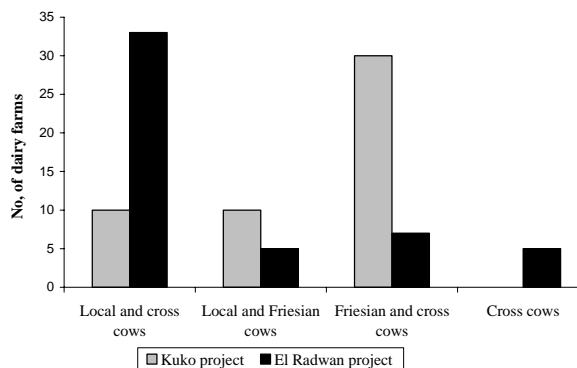


Fig. 3: Types of Animal Kept in dairy farm in Khartoum State

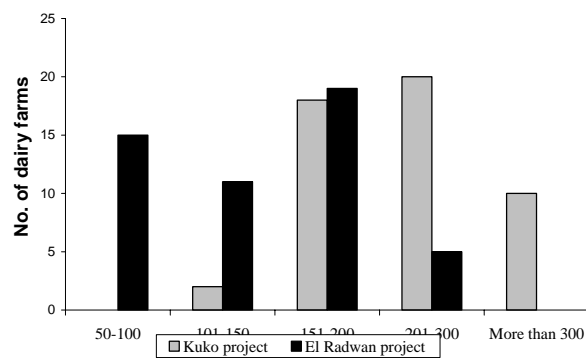


Fig. 4: Types of dairy cows in Khartoum State

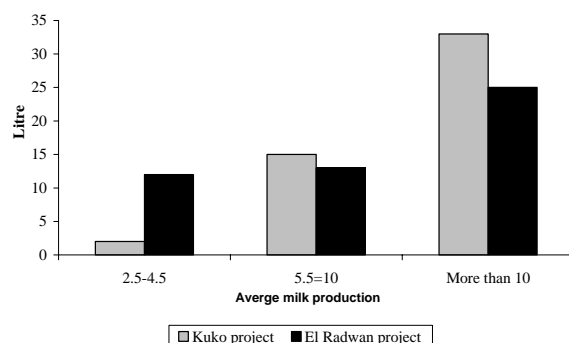


Fig. 5: Average milk production per cows in the dairy farms in Khartoum State

The best seasons for milk production were reported to be summer and autumn at Kuku (96%) and only summer in Alrudwan (90%). In both places the hand milk is practiced twice a day (morning and evening) by well trained milk men. The farmers at Alrudwan project mentioned that the milk price is not suitable to its production cost due the high cost of fodders and concentrated feeds, transport, storage, difficulties of obtaining drinking water and marketing of milk. Farmers in both areas provided the suitable satisfactory feed ration to their milking herds, which were reflected in the health and production. Kuku area is considered to be one of the high producing and marketing area of milk in Khartoum State (Awadalla et al., 2004). The produced milk is marketed via milk marketing institutes (collaborative body), where they cool the milk and processed it into dairy products (pasteurized milk, cheeses, yoghurt, butter, cream etc). However, in Alrudwan no cooling services or processing in or out side the farms.

The labours found in both areas are rent labours (94%) and most of them they have no enough experience to deal with the management of the herds. As they thought that the veterinarians are not important

and so they handle the sick cows themselves and provided the treatment without consulting veterinarian. Higher correlation was noticed between mastitis and veterinary supervision (Babiker, 2007). Hence the present study concluded that training and extension are crucial for properly run up the activities in these farms.

The present study concluded that husbandry practices and management of dairy farms are not satisfactory in Khartoum State. Hence the study recommended implementation of training programs addressing both the animal keepers and dairy labours (formal and vocational) to increase the awareness on house designing, rearing, management and feeding, milk collection points supported by cooling facilities, veterinary services, and initiation of collaborative bodies (processing and marketing) are urgently needed

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