

## The Milk Yield and Composition of Damascus (Shami) Cyprus Goats in intensive system Eastern Sudan

Omer M. O. M<sup>\*1</sup>, Ahmed K. A<sup>\*\*2</sup>.and Amani A.E.B<sup>\*\*\*3</sup>

Ministry of Agriculture and Animal Resources, Eastern State-Kasala<sup>1</sup>

College of Agricultural Studies - Department of Animal Production - Sudan University of Science and Technology<sup>2</sup>

Faculty of Agriculture and natural resources - Department of Animal Production- University of Kassala<sup>3</sup>

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### Abstract

*Damascus (Shami) goats of Cyprus was imported to Sudan from Cyprus and kept under local environmental conditions (intensive system). The result showed that the milk yield of the Shami Cyprus goats in the seasons winter and summer. In winter the yield per day was 3.16±0.82 liter, 3.69±0.53liter for the single and twins does respectively, while milk yield in summer per day was 2.4 ±0.8 liter, 3.4± 1.2 liter for the single and twins does respectively. The average milk yields in both seasons were 3.16 ±0.84 liter per day. The average milk yield through the lactation period was (528 – 682 liter) according to the season. The component of milk: fat, protein, lactose, ash and the percentage of total solids were 3.81± 0.72%, 3.71± 0.13, 4.63±0.26, 0.83±0.03,12,98±1.14%respectively.*

**Keywords:** *Damascus – Cyprus – Milk yield – Composition.*

### 1. INTRODUCTION

Goats play an important role in the livelihood of rural people in communal farming systems (Devendra, C. *et al* 1970). The Damascus (Shami) goats of Cyprus is a dairy goat breed known for its high milk yield and reproductive performance in Middle East countries such as Turkey , Syria, Lebanon, Jordan, and Cyprus,(Epstein, H. *et al* 1964).

The Damascus goat, also known as the Shami, is a native breed of Syria and other Near East countries. It was imported into Cyprus some 70 years ago to upgrade the local Cypriot goat population. For over 40 years it has been improved through genetic selection for milk and meat, (Mavrogenis A.P. *et al*, 2006). Recently about 2000 of the Damascus (Shami) goats from Cyprus introduced to Sudan during the year of 2008-2011. The animals are distributed in three big governmental breeding farms in: Northern, Khartoum and Kasala States and in some private farms in number of localities. A numbers of animals are also distributed through Zakat Chamber within the framework of supporting the poor families, Ahmed, K. A., personal communication, 2011.

According to Mavrogenis A.P. *et al*, (2006).Damascus (Shami) goats of Cyprus, total milk production, including the quantity of milk produced until weaning of off springs, ranges between 350 kg.

and 650 kg per goat per lactation. The suckled by the kid(s), is 190 kg to 240 kg, depending on the length of the suckling period (35 or 70 days). Milk production for commercial purposes is high (200 kg to 350 kg per goat per lactation) depending on the management system and the level of feeding. The fat and protein content of the milk are characteristic for high yielding breeds, ranging from 3.8% to 4.5% for fat and from 4.0% to 4.8% for protein. The milking goat responds positively to high protein diets with increased milk output and longer maintenance of lactation at a high level.

The greater milk yield was recorded for goats rearing multiple kids so, the effect of litter size was significantly with highest value of daily milk yield found in goats with three and more kids (Ciappesoni *et. al.*, 2004).

### 2. MATERIALS AND METHODS

The Damascus (Shami) Cyprus goats were imported by the Ministry of Agriculture and Animal Resources, Eastern State-Kasala, hundreds of it were consist of female goats (1.5 to 2.0 year old) were subjected to the research. The animals are kept in a good condition with regard to housing, feeding, health care and general management. The feeding regime consisted of hay of Medic ago Sativa 3.5 - 4% body weight. The concentrates provided 250 g per animal; consist of (sorghum grain, cotton seed cake, wheat bran, salt, and vitamins) per head/day.

### 3. RESULT AND DISCUSSION

#### 3.1 Milk yield

Season	Variab.	Means + SD	N	S E	Sig.
Winter	Single	3.16±0.82 liter/day	49	0.09	*
	Twins	3.69±0.53 liter /day	68	0.12	**
summer	Single	2.4 ±0.8 liter /day	24	0.13	*

\*\* = P<0.01

Sig = significant

**Table 1:** The Milk yield of the Shami Cyprus goat in two seasons.

The data in table (1) show the milk yield of the Shami Cyprus goats in the two season’s winter and summer. In the winter the yield per day was 3.16±0.82 liter, 3.69±0.53liter for the single and twins does respectively, while milk yield in summer per day was 2.4 ±0.8 liter, 3.4± 1.2 liter for the single and twins does respectively. The average milk yield in both seasons was 3.16 ±0.84liter per day.

The milk yield in the winter was higher than the yield in the summer. The result showed that the does producing twins produces more milk yields than the doe produce single. The average milk yield through the lactation period was (528 – 682 liter) according to the season this result was similar to Mavrogenis A.P.*et al* (2006).

#### 3.2 Lactation Period Length

Variables	Litter size	N	Mean ± SD	Std.Error	Sig
Lactation length	Single	54	225.91 ±4.73	0.64	
	Twins	79	236.15 ±7.54	0.83	**

\*\*=P<0.01

Sig= significant

**Table 2:** The Milk yield of the Shami Cyprus Goat in two seasons.

The data in table (2) showed that the overall mean of lactation period length of the Damuscus (shami) Cyprus goats were (225.91 ±4.73 days), (236.15 ±7.54 days) in the doe offered single and twins respectively and the results were showed high significantly different (P<0.01) in lactation period length. This result agree with

Papachristoforou *e al* (2000) who revealed that, the lactation length had a significant influence on the total milk yield and was lower than the breeds investigated by (Ahuya *et al*, (2009) who study on performance of Toggenburg dairy goats under smallholder production systems that the lactation length was (296 days).

### 3.3 Milk Component

Variable	Components	N	Means + S D	S E
Winter	Protein	20	3.7 ± 0.13	0.44
Summer	Protein	20	3.2 ± 0.19	0.04
Winter	Fat	20	3.81 ± 0.72	0.22
Summer	Fat	20	3.5 ± 0.21	0.05
Winter	Lactose	20	4.63 ± 0.26	0.08
Summer	Lactose	20	4.06 ± 0.3	0.06
Winter	Ash	20	0.83 ± 0.03	0.10
Summer	Ash	20	0.78 ± 0.03	0.01
Winter	Total solide	20	12.98 ± 1.14	0.84
Summer	Total solide	20	11.58 ± 0.18	0.05

**Table 3:** Milk Component Percentage of the Shami Cyprus Goats in winter and summer.

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