

1. INTRODUCTION

This **literature review** shows the importance of camel milk and its potential value in improving the consumer health. The aim of this review is to analyse and synthesise the **market situation** of the camel milk and to compare its composition with the cow's milk. We also describe some of the potential **benefits for the human health**.

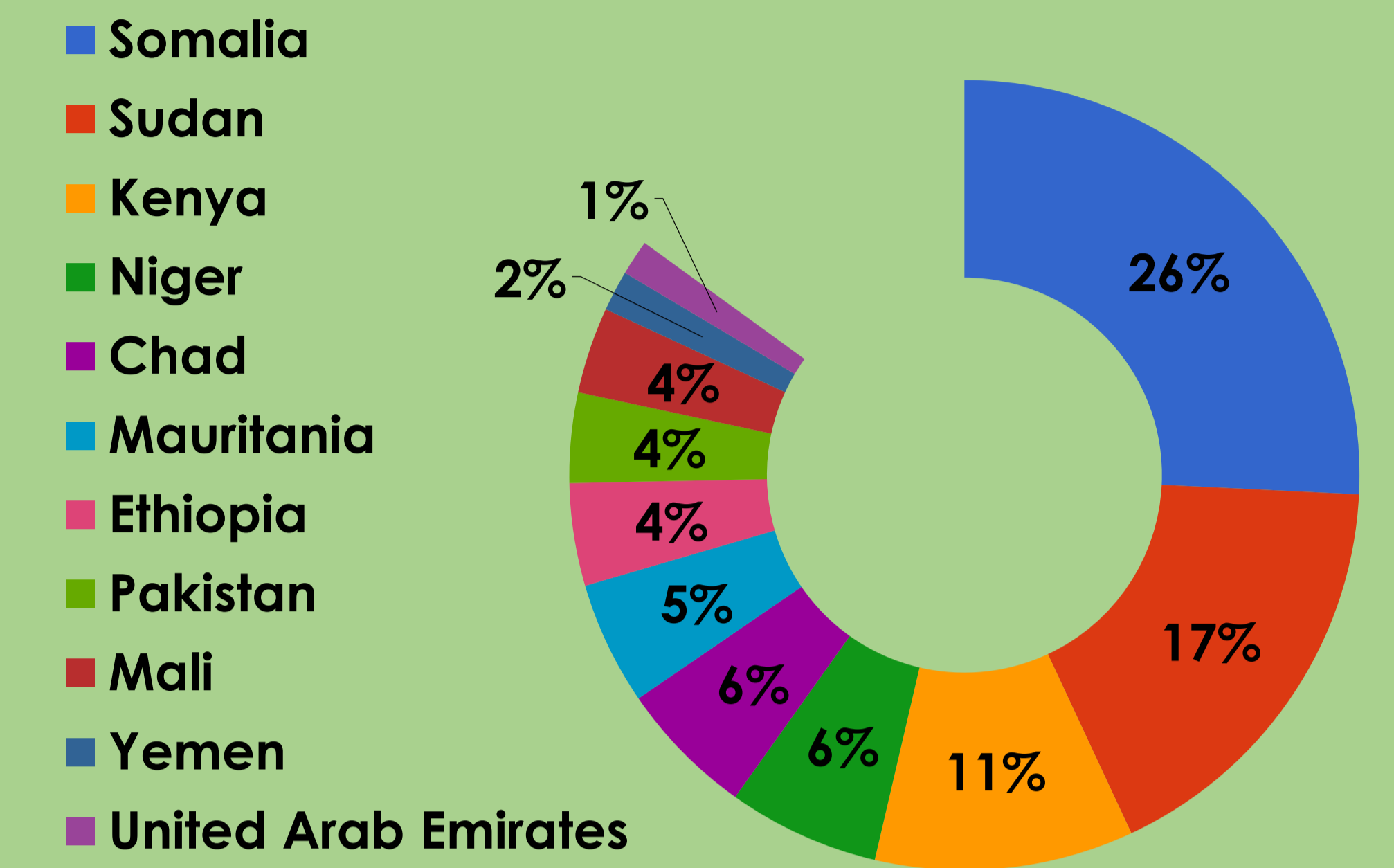


Figure 1. Evolution of cow's milk global production (2004-2014); b) Evolution of camels, are shown the 11 countries camel milk global production (2004-2014) with the largest number of heads 2014

2. MARKET SITUATION

- **Downward** trend cow's milk (84-82%)
 - **Upward** trend camel milk (0.3-0.4%) (growth of **55.1%**)
- ↑ Camel milk production
↑ Census of camels

3. COMPOSITION

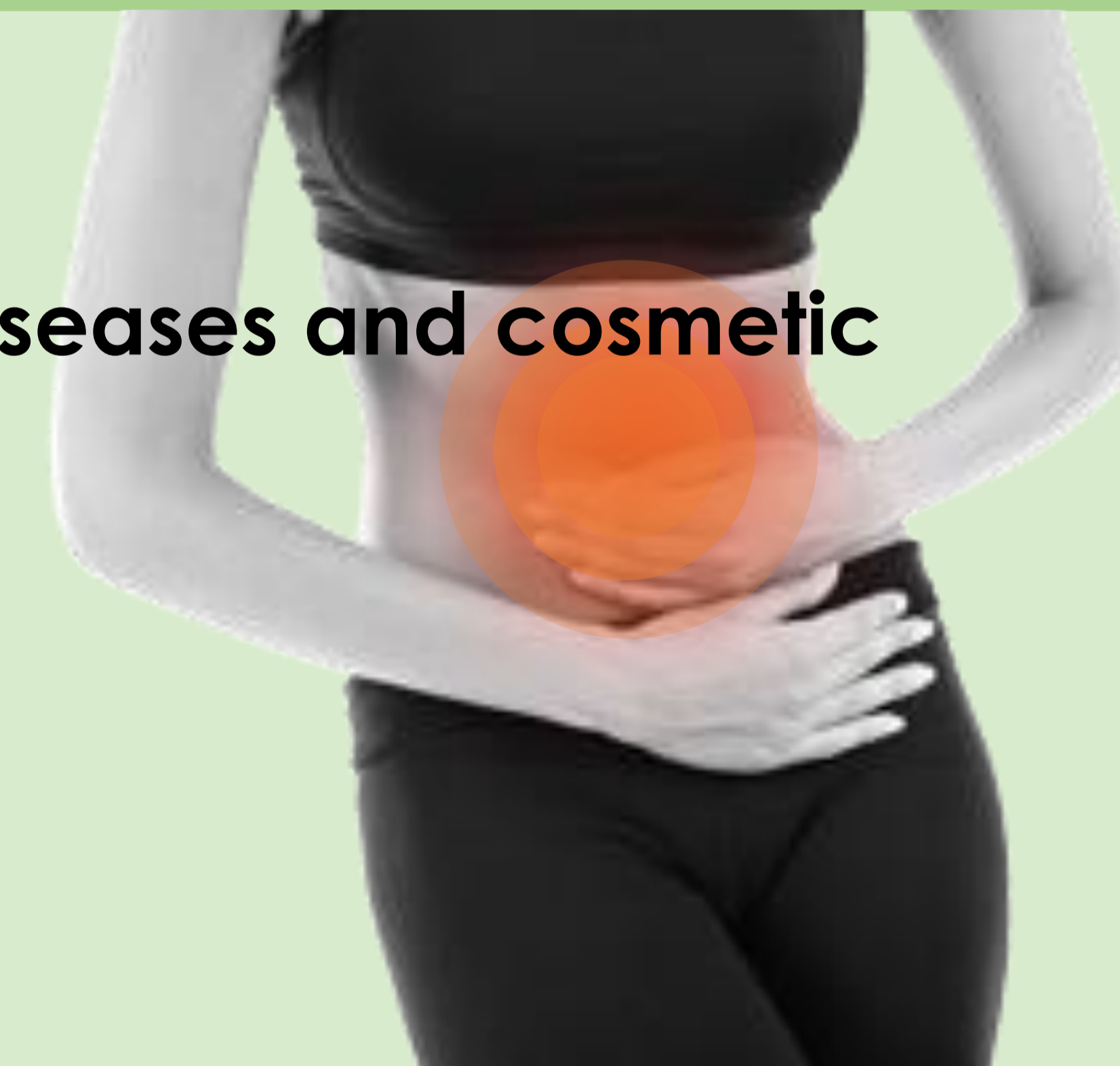
Factors affecting the composition of camel milk:

- Lactation stadium
- Species
- Diet
- Environmental conditions
- Geographical location
- Seasonal variations



4. HEALTH BENEFITS

- Diabetes
- Antibacterial and antiviral properties
- Food allergies
- Antidiarrheal properties
- Effects on cancer, tumours and ulcers
- Hepatitis
- Arthritis
- Dermal diseases and cosmetic value



5. CONCLUSIONS

- Camel milk sector seems to **keep growing**. Therefore, it is plausible thinking in the possibility that camel's milk would gain relevance in the coming years into the market.
- The composition of camel milk makes it **suitable** for people with **allergies** to the cow's milk or lactose **intolerance**.
- The composition of camel milk is more similar to the human milk than other animal milks, making it a **good substitute** of natural human milk or formulas.
- Camel milk could be used as **nutritional adjuvant** in the treatment of some diseases; i.e. in patients with diabetes mellitus I it could **reduce the insulin dose required**.

Table 1:
a) Patel, A. S., Patel, S. J., Patel, N. R., & Chaudhary, G. V. (2016). Importance of camel milk-An alternative dairy food. *Journal of Livestock Science* (ISSN online 2277-6214), 7, 19-25.
b) Månsson, H. L. (2008). Fatty acids in bovine milk fat. *Food & Nutrition Research*, 52(1), 1821.
Table 2:
• Farah, Z., & Atkins, D. (1992). Heat coagulation of camel milk. *Journal of Dairy Research*, 59(02), 229.

3.1. Protein

β-casein > α₁-casein
Lack of κ-casein

Casein

Lack of β-lactoglobulin
↑ lactoferrin content

Whey Protein

3.2. Fat

Table 1. Comparison of Fatty acids profile Camel VS. Cow

FA	Camel (%) ^a	Cow (%) ^b
Saturated	57,30	69,40
insaturated	42,70	27,30
Trans	0,00	2,70

3.3. Vitamins

Table 2. Vitamins content Camel VS. Cow

	Camel	Cow
A	0,10	0,27
B2	0,57	1,56
E	0,56	0,60
C	37,4	11,0