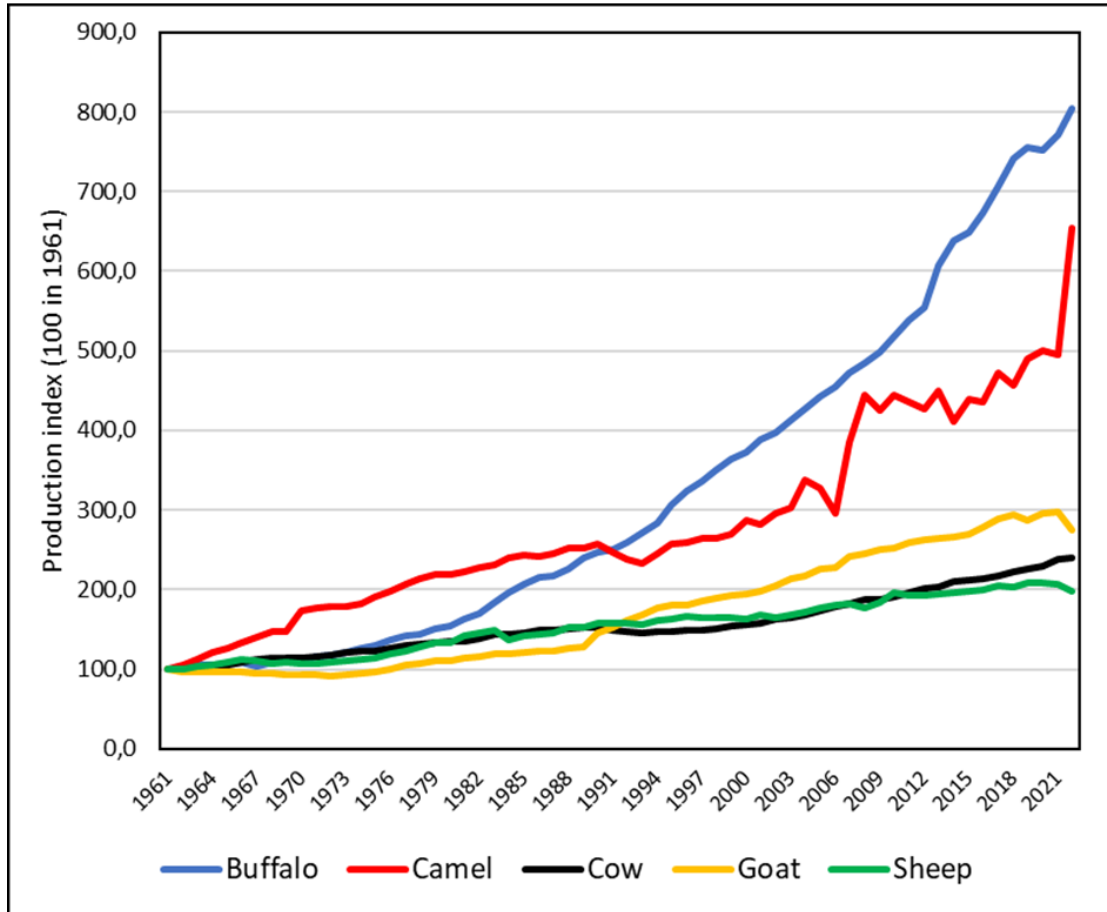


Fragility and challenges in the development of the camel milk sector worldwide”

Dr Bernard Faye
CIRAD Emeritus expert



THE WHITE GOLD OF THE DESERT



In 1961: camel milk =0.18% of the total milk world wide

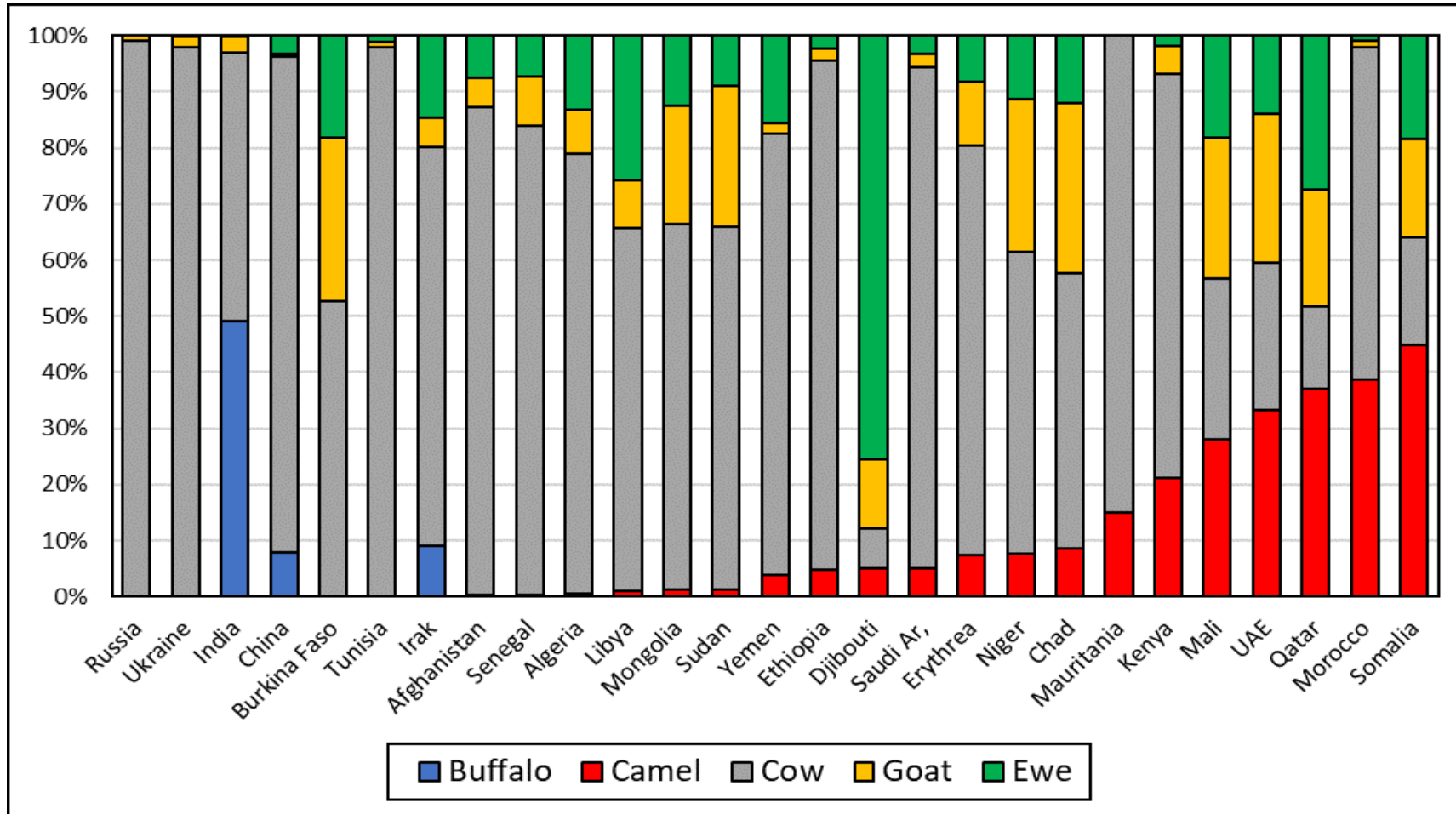


Species	Growth 61-22*	Annual growth
Buffalo	704.0	11.4
Camel	554.3	8.9
Cow	140.2	2,3
Goat	175.4	3,8
Sheep	97.9	1,6

In 2022: 4.16 million Tons (0.44% of the total milk production world wide (FAOstat), but...no recorded production in 21 « camel countries » among 47

Estimated production: **5.35 million tons** i.e., 0.57% of the total milk

The place of camel milk



From 0.001% to 45%



For long time, camel milk was a gift ...

- Except in Soviet Union, camel milk was solely self consumed until recently
- Still now, self-consumption of camel milk is around 60 to 85% according to countries
- In less than 30 years, camel milk has evolved from a "gift economy" to a "market economy" in most camel countries

Le lait de chamelle au risque de l'économie politique : de l'économie du don à l'économie marchande

Bernard FAYE ^{1,2*} Christian CORNIAUX ^{1,2}

Mots-clés

Camélidé, lait de chamelle, filière élevage, valeur économique, pastoralisme, sédentarisation

© B. Faye et al., 2024

Résumé

Le lait de chamelle a longtemps été exclu du marché compte tenu de sa seule disponibilité dans les régions parmi les plus reculées de la planète. Ce contexte est sans doute en partie à l'origine de la conviction qu'avaient les éleveurs chameliers selon laquelle, la vente de lait de chamelle relevait d'un « tabou » à qui on donnait éventuellement une dimension religieuse. Pourtant, associée uniquement

The drivers for the development of camel milk market:

- Climatic changes
- Urbanisation
- Economic globalisation
- Commercial argument of the health claim





In search of added-value: from the market economy to the capitalist economy

- From the camel herder to the entrepreneur
- From **benefit** (difference between selling price and cost of production) to **profit** from employees' work(K. Marx)



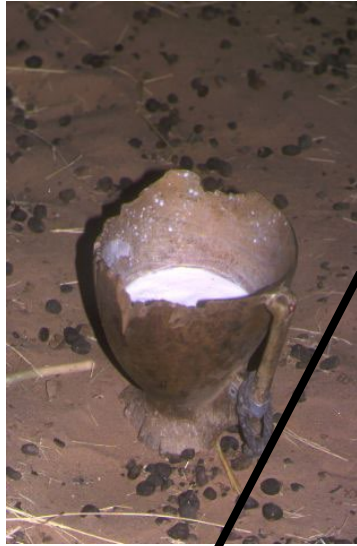
Effects on production systems

- Concentration and gigantism
- Entrepreneurial management
- Intensification of production
- Integrated processing
- Diversification of the products
- « Periurbanization » of pastoral systems



Ex: Camelicious à Dubaï (EICMS)

The diagram illustrates the diverse applications of camel milk in food and beverage products. The central image shows a traditional camel milk can. Arrows point from this central image to ten different products, demonstrating the versatility of camel milk in various culinary contexts, from traditional dairy to modern gourmet items.



The 3 main sectors of camel milk market nowadays

- Local market
- National market
- International market



- Raw or fermented milk
- Direct selling
- No control



- Pasteurized milk and other modern products
- Processing in small-scale dairy plants or semi-industrial
- National control



- Mainly milk powder
- e-market platform
- Industrial dairy plant

The emergence of camel milk production in Western countries

Camel milk production in USA, Australia.....

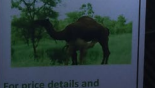


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...and in Europe



Smits Farm -Holland



Goroy Farm -Spain



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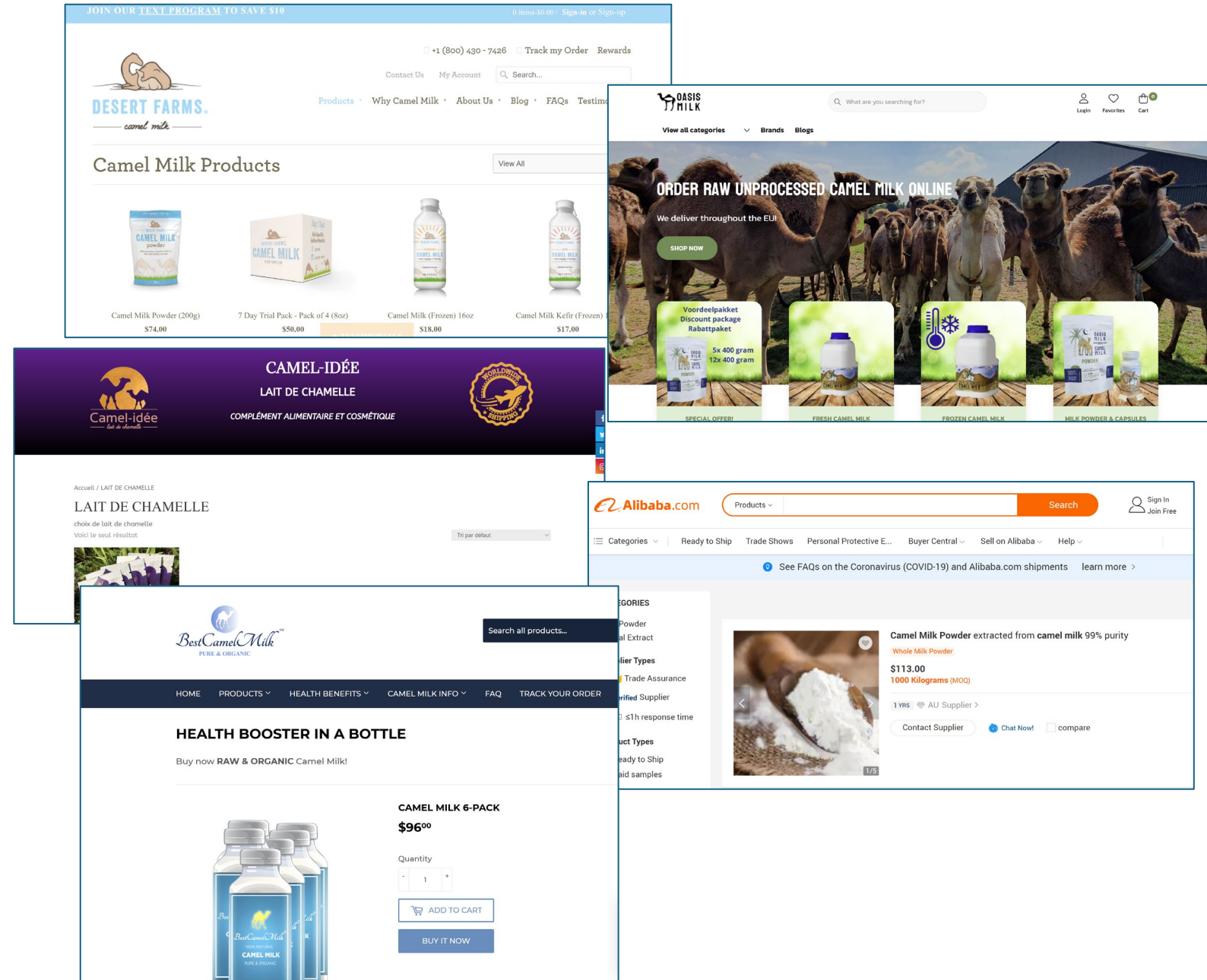
La Camelerie-France

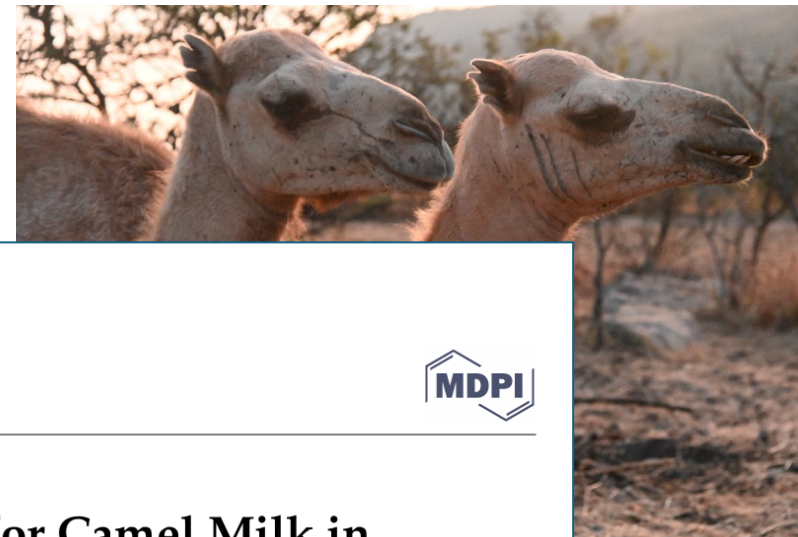


Seranne Larzac-France

Development of e-market

Camel milk (liquid or powder) available in online sales platforms = New business opportunities gradually structured leading to the constitution of camel milk value chain at international level





The fragilities of the camel

- ☐ the price
- ☐ the low
- ☐ the weak channel information
- ☐ the distant consumer (difficult)
- ☐ the reluctance of whom to pay high price (up to 10 to 20 USD/L) is limited when special health characteristics are not (Profeta et al., 2022),



sustainability



Article

Consumer Acceptance and Preference for Camel Milk in Selected European and Mediterranean Countries

Adriano Profeta ^{1,*}, Ulrich Enneking ², Anna Claret ³, Luis Guerrero ³ and Volker Heinz ¹

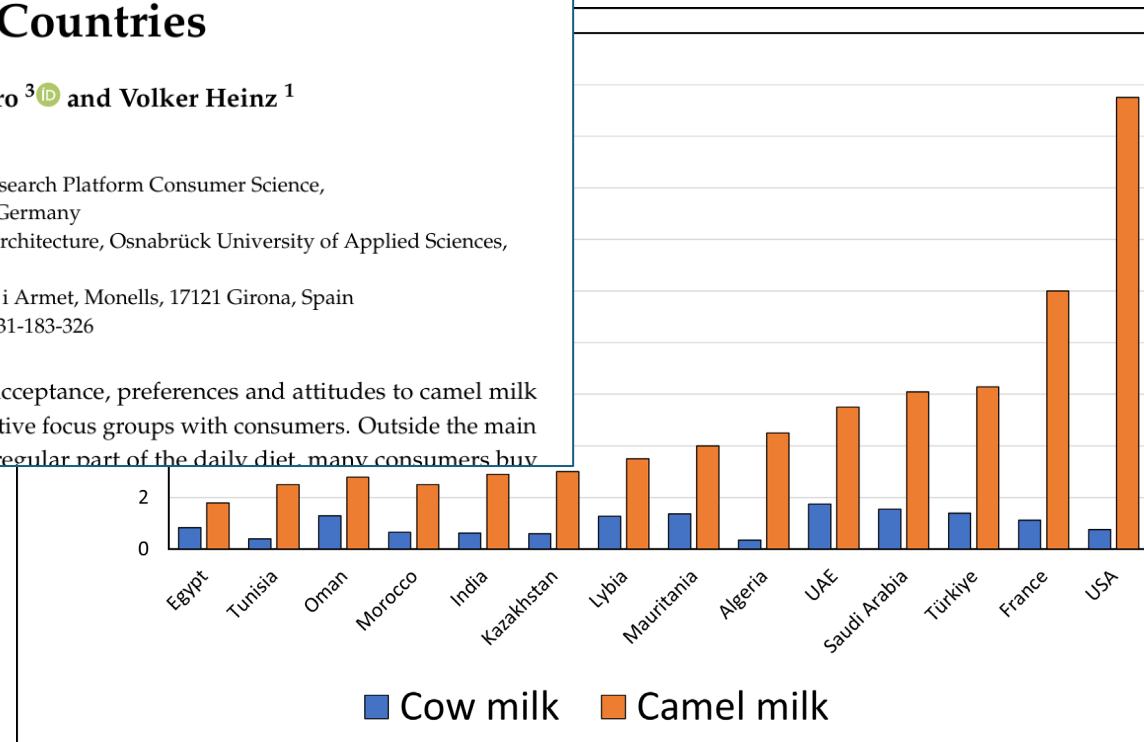
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Abstract: In this paper, we analyse consumer acceptance, preferences and attitudes to camel milk based on a cross-country study based on qualitative focus groups with consumers. Outside the main consumption countries where camel milk is a regular part of the daily diet, many consumers buy



The fragilities of the camel milk market

- ❑ A limited part of the camel milk is processed (pasteurization), and the consumers in southern countries prefer raw milk, despite its generally low hygienic quality
- ❑ Except in Gulf countries and central Asia, most of the dairy plant processing milk are small-scale structures, limiting the diversity of dairy products to put on the market (cheese, ice cream, yoghurt)





The fragilities of the camel milk market

- ☐ The small-scale dairy plants face to the seasonal production and consumption of camel milk leading to difficulties in the management of the factory (Abeiderrahmane, 1997)
- ☐ Except in case of shops belonging to dairy factory, the distribution network is limited to small shops, the supermarkets demanding huge and regular volumes



The fragilities of the camel milk market

- ❑ Processing into camel milk powder requires high-quality primary matter, huge volume of milk and important investment, that is difficult to obtain in most of the camel countries.
- ❑ There is a competition between formal (dairy plants) and informal (direct selling of raw milk) market in term of price, despite the difference of hygienic quality



The fragilities of the camel milk value chain

- ❑ The lack of national standards for camel milk processing (Konuspayeva et al., 2023b)
- ❑ The importance of milk processing to prepare camel milk, leading to standards which are different from those of cow milk (al., 2023b)



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What are the challenges for implementing an “organic label” to camel milk?

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Increasing demand for camel’s milk worldwide occurred in the context of the development of the organic sector in agriculture. The implementation of an organic label for camel milk has never been established. However, the creation

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Products in Central Asia

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ABSTRACT

Human populations from Central Asia have a cultural background mainly evolved from nomadic systems based on breeding different animal species (cattle, horse, sheep, goat, camel, yak, reindeer) explaining the domination of animal proteins (meat, milk) in their diet. In their living conditions, the most popular way to preserve a highly perishable product such as milk was fermentation. The combination of both the variety of animal species and the process of changing from one ethnic group to another led to a

Conclusion

- Camel milk sector is experimenting a prodigious development worldwide
- However, this development is facing to important constraints in many countries
- Despite this fragility, a growth of the camel milk sector by 6-8% annually is expected for the next decennia.

