

# Dromedary Camel: A Sustainable Dairy Animal in Challenging Environments

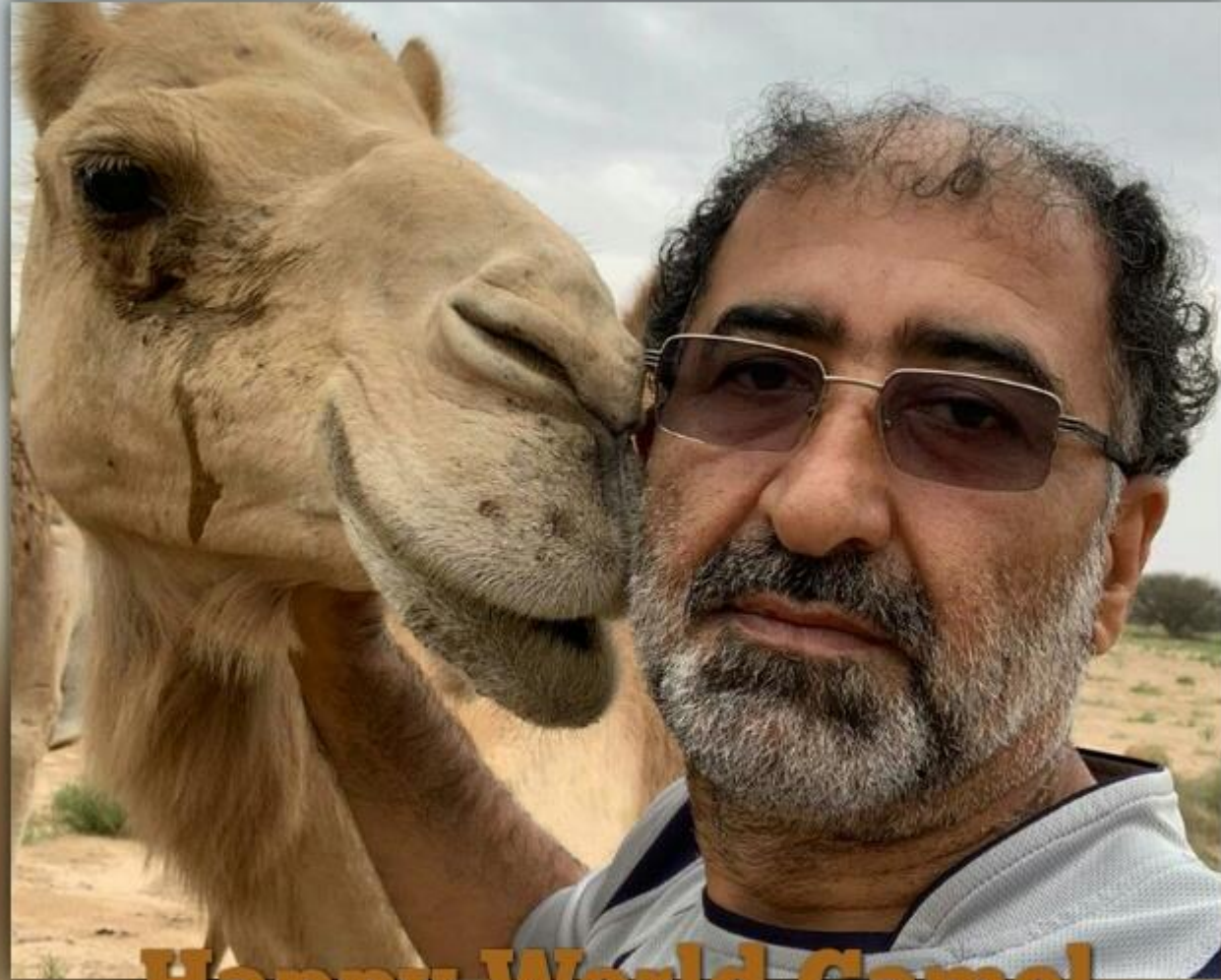
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WORLD CAMEL DAY 22 JUNE, 2020

*CAMEL, THE ANIMAL OF FUTURE*

VIRTUAL UNIVERSITY LAHORE, PAKISTAN





**Happy World Camel  
Day**

# World Camel Day

Why camel day on 22<sup>nd</sup> June?

<http://camel4all.info/index.php/2020/06/21/why-a-world-camel-day-on-22-june/>

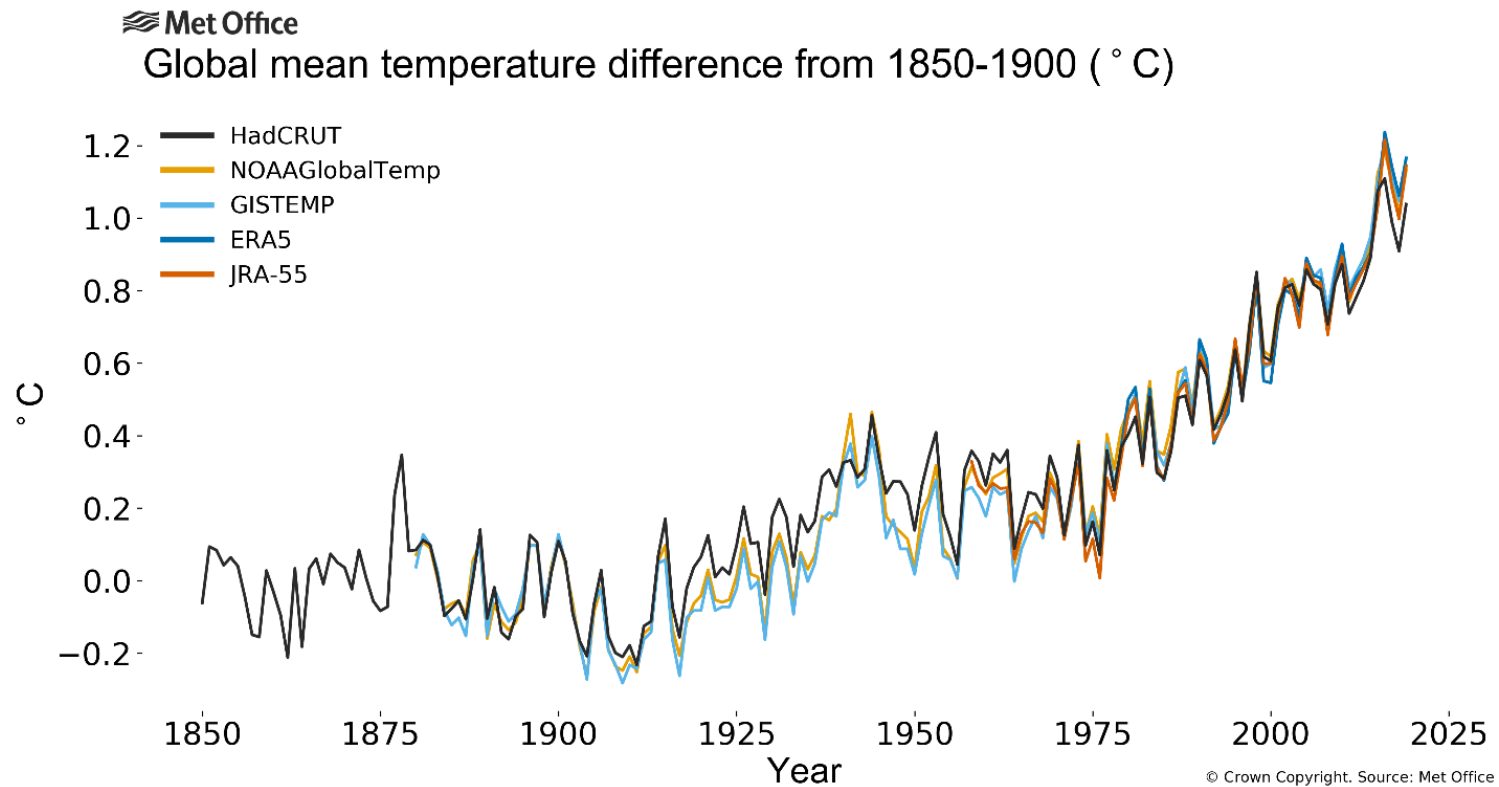
History of world camel day

<https://camel4all.blog/2020/06/20/history-of-world-camel-day-22-june/amp/>

# Natural Climate Change Materialized Camel Domestication

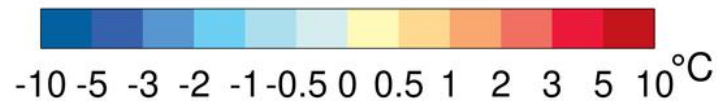
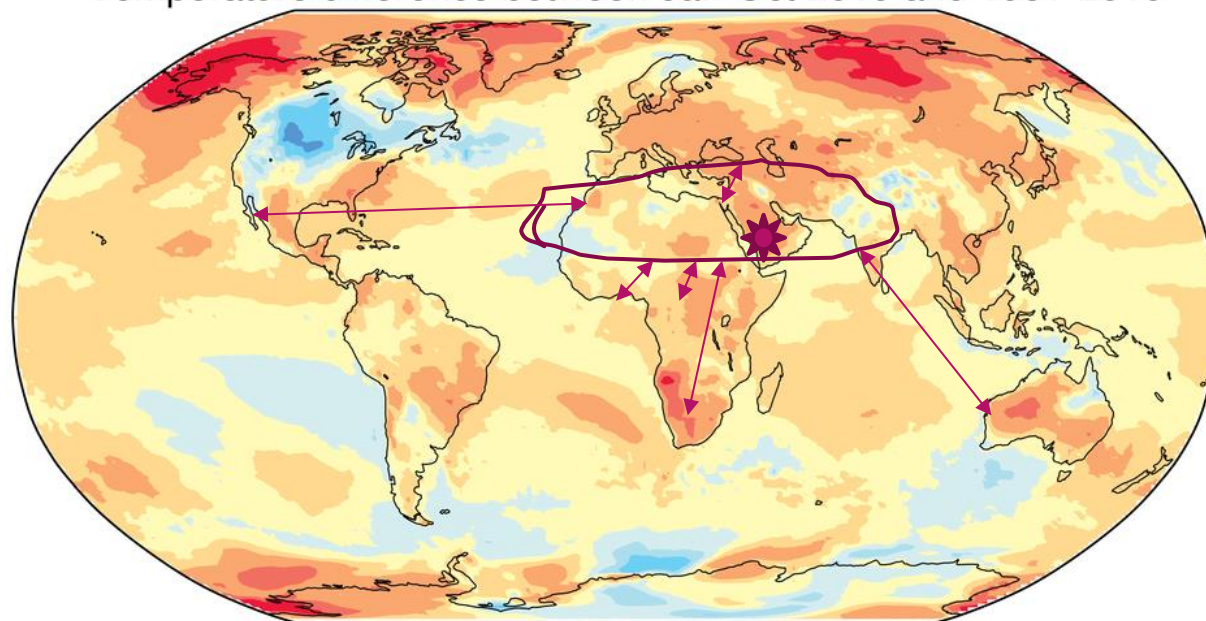
- ▶ 3-5 thousands years before
- ▶ Camel was domesticated for milk
- ▶ Aridity and other environmental challenges made the camel domestication possible
- ▶ Food security challenges in the desert lands
- ▶ Adapted livestock with low input or zero inputs
- ▶ Sustain productivity in challenging climatic conditions
- ▶ Strong power of walking ability

# How Quick the climate is Changing Quickly?



# Industrial climate change

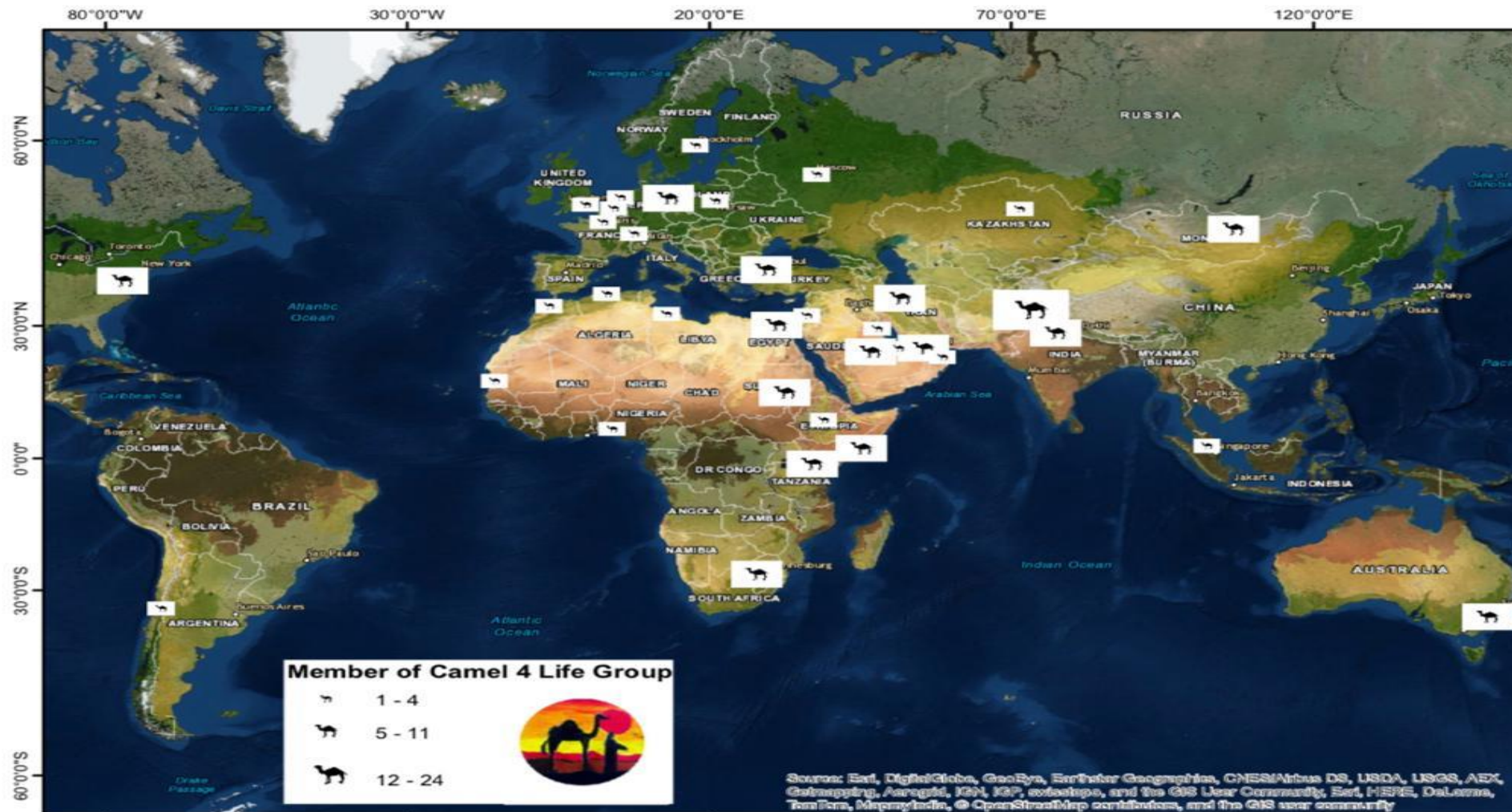
Temperature difference between Jan-Oct 2019 and 1981-2010



Data source: ERA5



# Global Interest in camel milk



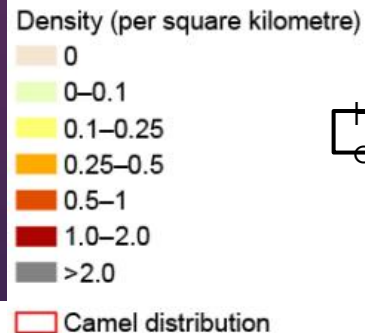
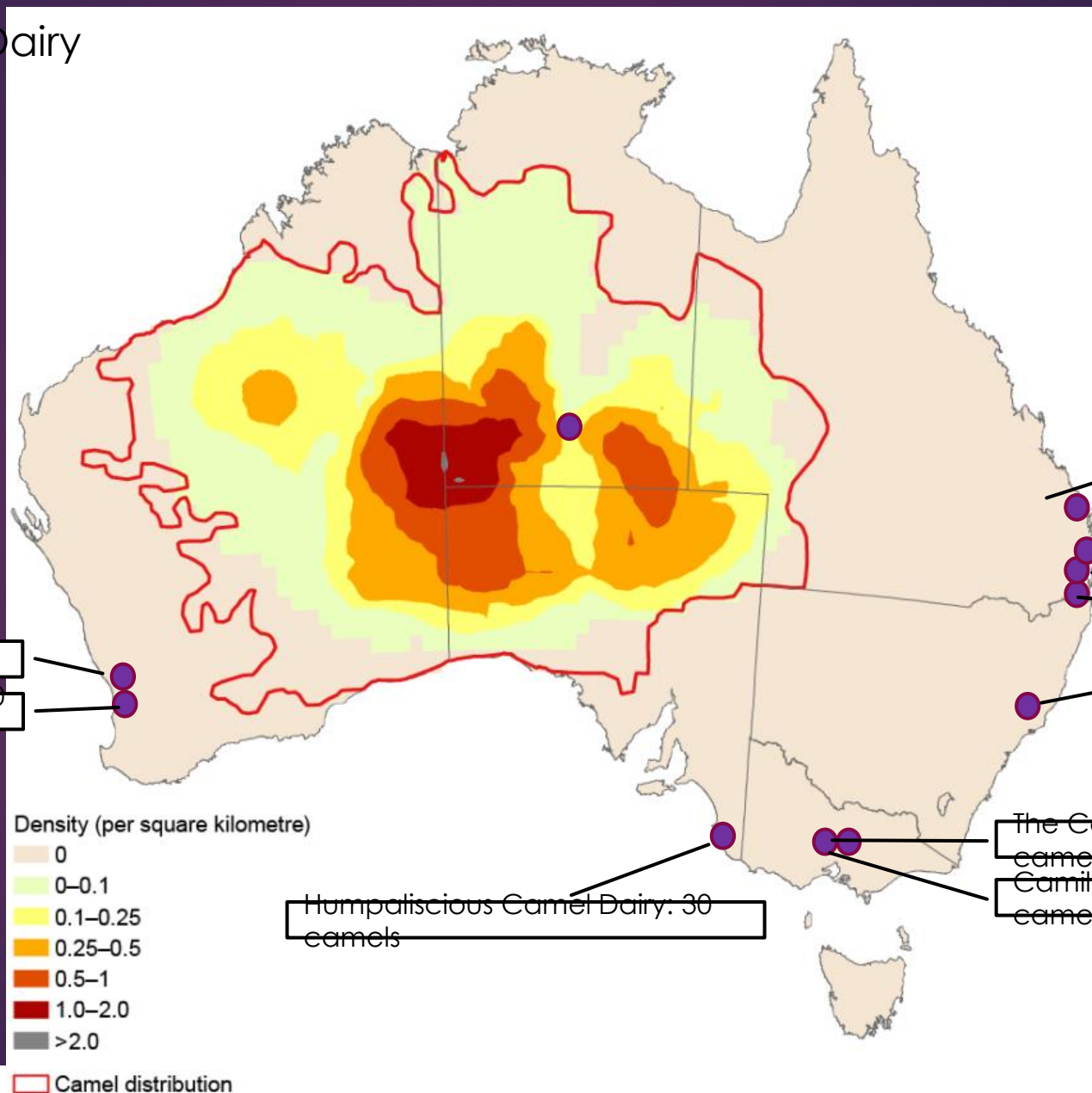
# The Australian Camel Dairy Industry

## Industry

Approx 500,000 feral camels in central Australian regions. Captured and transported to camel dairies for domestication and milking.

- 10 camel dairies.
- 3 commercial scale (>150 camels)

Dairies located around capital cities to profit from strong increase in demand for camel milk products.



Good Earth Camel Dairy: 40 camels  
Calamunda Camel Dairy Farm: 40 camels

Humpalicious Camel Dairy: 30 camels

Camel Toe Dairy: 48 camels  
Camelot Dairy: 12 camels  
QCamel: 75 camels  
Summer Land Camels: 650 camels  
Camel Milk NSW: 30 camels  
The Camel Milk Co: 300 camels  
Camilk Camel Dairy: 180 camels



## The Australian Camel Dairy Industry - Challenges

Govt culling of wild camels and long distances to transport to coastal markets.

Cost, time and lack of knowledge in training wild camels to dairy camels.

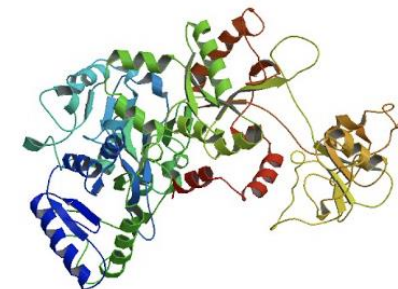
Wild camel genetics = low milk yield. Higher costs of production compared to other countries.



## The Australian Camel Dairy Industry - Opportunities

Growing acceptance and understanding of camels and camel milk in Australia. In some cases winning awards. Most dairies are inviting the public into the farm to educate and build connection to camels and supplement income streams.

Universities and government very keen on research and building health database.



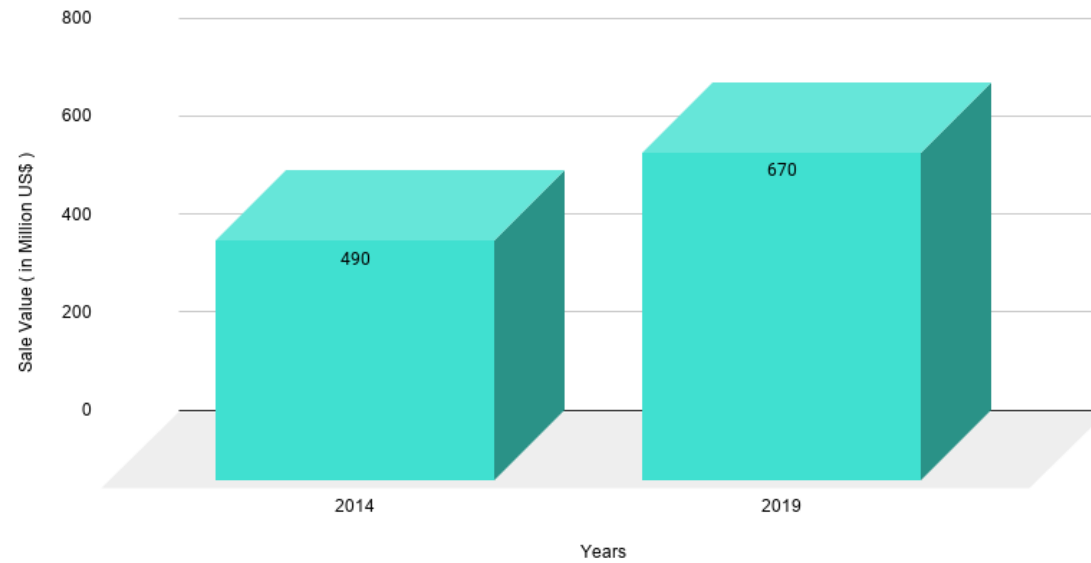
# EU is supporting camel milk inside the continent

- ▶ CAMELMILK project under PRIMA program and supported by EU (EU)
- ▶ CAMELMILK project, the following specific objectives are proposed
  1. Improve camel milk production systems
  2. Produce innovative, nutritional and high-quality camel dairy products
  3. Determine regulatory issues and legislation to commercialize camel dairy products
  4. Analyze and improve the camel milk value-chain in EU member states, Turkey and Algeria
  5. Prepare for a successful market implementation and exploitation
  6. Define consumer acceptance of innovative camel milk and camel dairy products in EU, Turkey and Algeria
  7. Devise a dissemination and communication plan for maximum outreach to all relevant stakeholders

	Milk yield	Milking females	Farm	Website
Poland	3-4	4	wielbladziafarma	<a href="http://wielbladziafarma.pl/">http://wielbladziafarma.pl/</a>
Germany	3-4	10	Kamelfarm Hiddingen	<a href="https://www.kamelfarm.de/">https://www.kamelfarm.de/</a>
Netherlands	6	60	Kamelenmelk Smits	<a href="https://www.kamelenmelk.nl/de/">https://www.kamelenmelk.nl/de/</a>
France	3-4	20	Camelerié	-
Switzerland	3-4	4	Bens Kamelfarm	<a href="https://www.benskamelfarm.ch/">https://www.benskamelfarm.ch/</a>

# EU and USA CaM Market Value

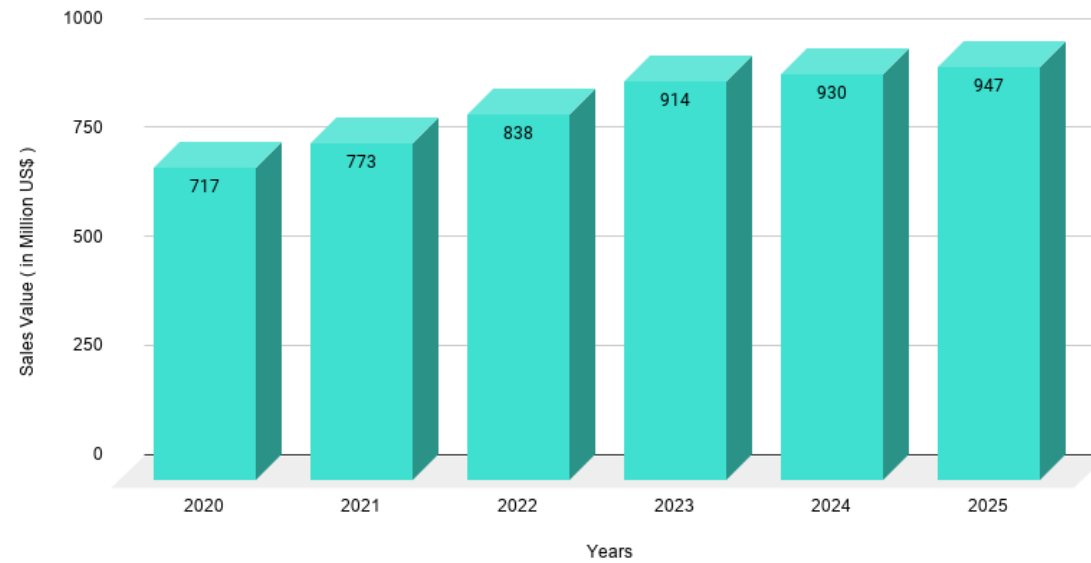
Europe & USA Camel Dairy Market Sale Value  
( in Million US\$ ) 2014 & 2019



# Camel Milk USA

## Eruope & USA Camel Dairy Market Forecast

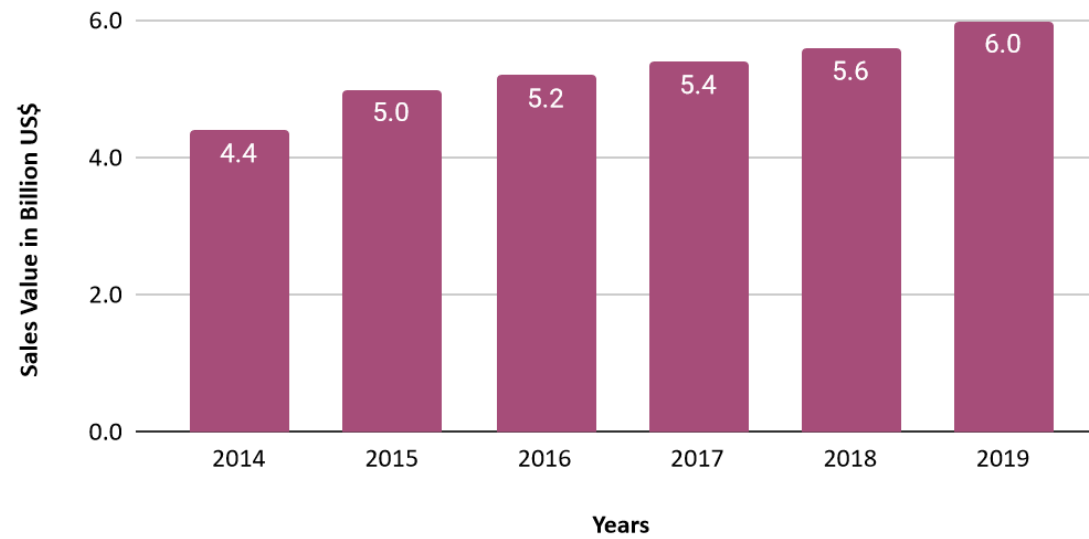
Sales Value ( in Million US\$ ) 2020-2025



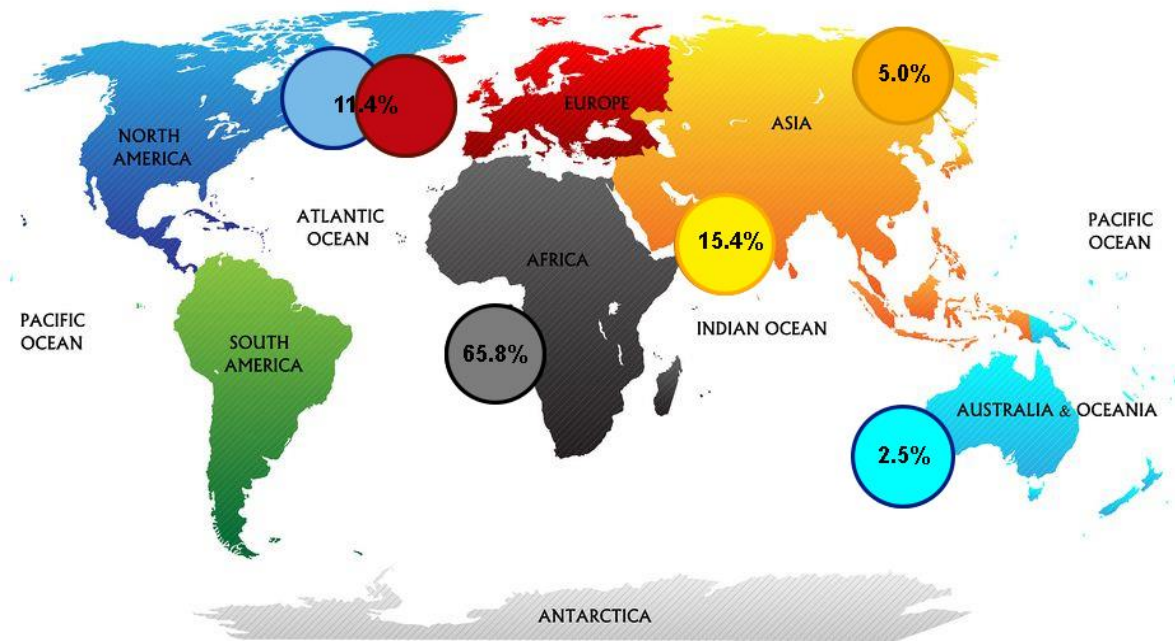
# Global CaM Market

## Global Camel Dairy Market

Sales Value (in Billion US\$) 2014 2019



Expected consumer of camel dairy products across the globe by regions in 2025



# Farm level comfort and welfare



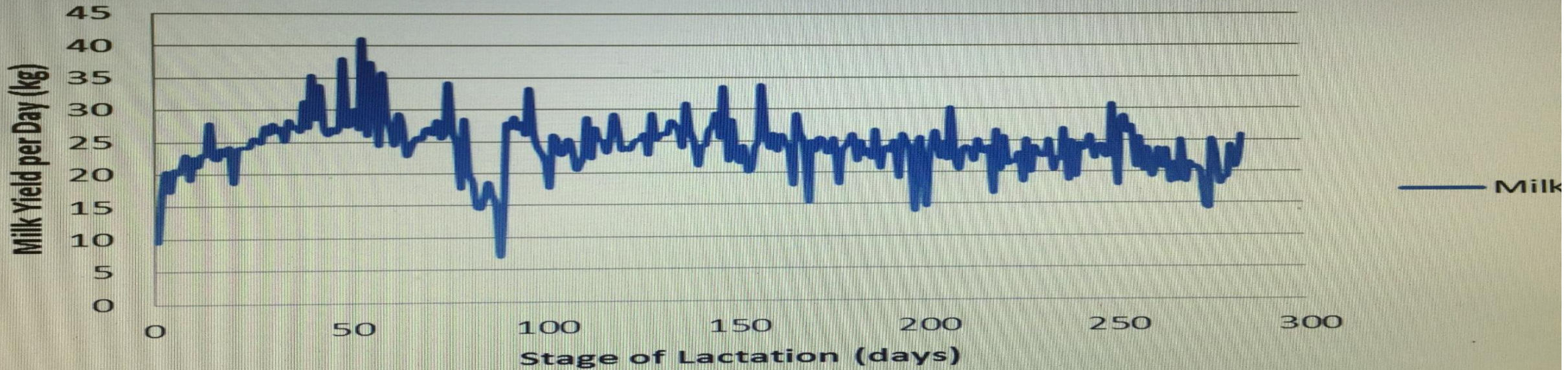


# The Camel Dairy tops the other

- ▶ Low input system in provision of comfort in the same E conditions
- ▶ Low water requirement (drink 8-10 times less than dairy cow per liter milk produced)
- ▶ Longer period of reproductive efficiency
- ▶ Strong reproductive efficiency, lesser complications
- ▶ Better feed conversion efficiency
- ▶ Shorter list of diseases
- ▶ Lesser milk dents because of climatic conditions and sudden change in system

# Camel potential as a dairy animal, an example

## Milk Production Potential of an Efficient Naqa



# VARIABILITY AMONG INDIVIDUAL NAQAs

Cow	DIM	Daily Yield %	Daily Avg. Yield	Avg. AMT
2	298	-16	13.4	5.7
11	234	-22	11.1	6
12	294	-5	4.9	4.2
14	440	-2	5.5	5.2
15	207	6	14	5.8
17	244	4	7.6	5.5
22	217	16	15.8	5.5
28	290	-20	6.7	5.3
32	246	0	18.4	7.8
33	244	8	21.7	7.3
35	352	-7	3.6	4.5

# Conclusion

- Originally domesticated for milk, camel has tremendous potential as a dairy animal
- Camel is the only option in the changing climate change scenario
- The future hope for camel is so bright because of the milk as a natural pharmacy
- Needs advanced and policy levels interventions for marketing opportunities of camel milk, the next oil but white





THE END