International Conference: Camel milk overview in the Mediterranean basin

Boosting quality and quantity of camel milk production around Mediterranean Basin

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Boosting quality and quantity of camel milk production around Mediterranean Basin
State of the arts

- Incomplete data regarding camel population (Europe)
- No declaration of milk production in FAOstat database (Egypt, Syria, Israel and Palestine, Turkey...)
- Importance of self-consumption: Milk production ≠ Milk market
- Milk processed into non-food product
Total camel population: 1,061,500 heads

2,75% of the world camel population
Total Milk production in 2020: 28,000 tons
Estimation in 2020: 215,000 tons

0.9% of the world camel milk production (Estimation: 3%)
Camel milk Production since 1961

After a decreasing population until 2000, a regular increase is occurring.

The total milk production according to FAO was 28000 tons in 2020, but the estimations are almost 8 times more (215000 tons).

Estimation on the basis: 14 to 17% lactating producing 1200L/year)
A part of the increase is due to the increasing percentage of lactating camels.

- The % increased from 11.7 to 16.4 % between 1961 and 2020 (14.7 to 21.5% at world level in 2020)
The challenges

- Introduction of camel milk on market
- Price of camel milk
- Modernization of the camel production system
- Choice of the best dairy camels (Camel and embryo export)
- Quality of the product
- Diversification of the products
- European and national rules
Market integration: A pioneer, the Tiviski dairy plant in Mauritania

From the taboo on selling to semi-industrial processing
Differential milk prices cow/camel (raw milk)

- Vache (Cow)
- Dromadaire (Camel)

Prix pour un litre de lait (en €)

From 2.5 to 25 more expensive
Modernization of the production system

- Milking machine
- Feeding supplement
- Milk storage in cooling tank
- On-Farm processing
- Biotechnology of the reproduction?
- Marketing
The camel is a dairy animal?

<table>
<thead>
<tr>
<th>Hautes productives (&gt; 3000 L/lactation)</th>
<th>Medium productives (1500-3000L)</th>
<th>Faibles productives (&lt;1500 L/lactation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marecha Pakistan</td>
<td>Hoor Somalia</td>
<td>Bactrian camel Central Asia</td>
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<tr>
<td>Al-Majaheem Saudi Arabia</td>
<td>Al-Homor Saudi Arabia</td>
<td>Magrebi Manga North Africa</td>
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<tr>
<td>Sirtawi Libya</td>
<td>Anafi Sudan</td>
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<tr>
<td>Arvana Turkmenistan</td>
<td>Dankali Ethiopia</td>
<td>Bishari Sudan</td>
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<tr>
<td>Bikaneri India</td>
<td>Azbin Niger</td>
<td>Al-Shameya Syria, Iraq</td>
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<td>Barrela Pakistan</td>
<td>Birabish Mauritania</td>
<td>Anafi Sudan</td>
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<td>Shallageea Sudan</td>
<td>Waddah Saudi Arabia</td>
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<td></td>
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<td>Fakhreya Libya</td>
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<td></td>
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<td>Eyddimo Somalia</td>
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</tbody>
</table>

In Turkey?

Canary Islands: a turntable
The boom of camel milk production

In proportion at world level, camel milk production increased higher than cow, sheep and goat milk.

<table>
<thead>
<tr>
<th>Species</th>
<th>1961</th>
<th>2020</th>
<th>%annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffalo</td>
<td>100</td>
<td>753</td>
<td>10.9</td>
</tr>
<tr>
<td>Camel</td>
<td>100</td>
<td>501</td>
<td>6.7</td>
</tr>
<tr>
<td>Goat</td>
<td>100</td>
<td>296</td>
<td>3.3</td>
</tr>
<tr>
<td>Cow</td>
<td>100</td>
<td>229</td>
<td>2.1</td>
</tr>
<tr>
<td>Sheep</td>
<td>100</td>
<td>208</td>
<td>1.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Camel</th>
<th>1961</th>
<th>2020</th>
<th>%annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>100</td>
<td>501</td>
<td>6.7</td>
</tr>
<tr>
<td>Med. Basin</td>
<td>100</td>
<td>147</td>
<td>0.8</td>
</tr>
</tbody>
</table>

BUT 5%/year since 1998
The drivers of the rise of camel milk market since years 2000/:

- Climatic changes
- Market integration of camel milk in the frame of growing urbanization
- Commercial argument of the « medicinal » virtues of camel milk (legends, empirical observation, scientific proofs)
- Proximity of the camel farming to cities (periurbanization and intensification)
The development of process for making long-shelflife diversified products

- Pasteurization
- Modern process of fermentation
- Cheese processing and new whey beverages
- Diversification of the products
The conquest of national markets

from remote areas using the "health effect" argument of camel milk at high prices compensating higher production costs
Access to international market: camel milk powder processing

Market driven particularly by Chinese demand, but MB not present
Camel milk from South part of MB not yet access to European market

UE agreement for dairy products from UAE only

Opportunity for European producers
Emergence of camel milk production in Europe

But what about the legislation in Netherland, excluding camels from « domestic animals? »!!!!
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.

Commerce en ligne du lait de chamelle : nouveaux acteurs, nouveaux marchés

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Mots-clés

Lait de chamelle consommation, exportation, commerce international, commerce électronique

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Résumé

La croissance rapide du cheptel mondial de dromadaires et de chameaux vise notamment à répondre à une demande croissante en lait de chamelle. Nous analysons ces mutations en étudiant le commerce en ligne, apparu récemment, de produits issus de lait de chamelle. Cette étude souligne l’émergence d’acteurs investis dans la production intensive de lait de chamelle, mais aussi dans le commerce de lait en poudre, de lait fermenté et de fromages. Ces nouveaux entrepreneurs du lait de chamelle sont implantés pour une bonne partie dans des pays dépourvus d’élevages camélins, notamment en Europe, aux États-Unis, au Canada et dans
Perspectives: en Europe

Expected growth of 8.5%/year until 2027
The constraints in North and South Animal Welfare

- Genetic improvement
- Live animals import
- European rules and legislation
- Organization of camel producers
- Camel meat
- Access to market
- Lack of subsidies
- Quality
- Productivity
- Price differential
- Marketing
Camel research in Mediterranean Basin

- CIRAD
- IRTA
- Universities
- University of Bari
- Universities
- IAV-Rabat
- IRA-Medenine
- DRC-Mathrouh
- University of Casablanca
- ACSAD
Conclusion

• A species in territorial and demographic expansion
• Growing domestic markets
• A changing productive sector
• An emerging industrial processing sector
• A growing international market
• Attractive prices for producers and processors
• But remains a niche market in the countries of the North
• A growing market in the Arab world for cultural reasons
• But, is not a substitute market for cow's milk
BUVEZ DU LAIT DE CHAMELLE!!