

Milk production from sheep in European Union countries, with special reference to Greece

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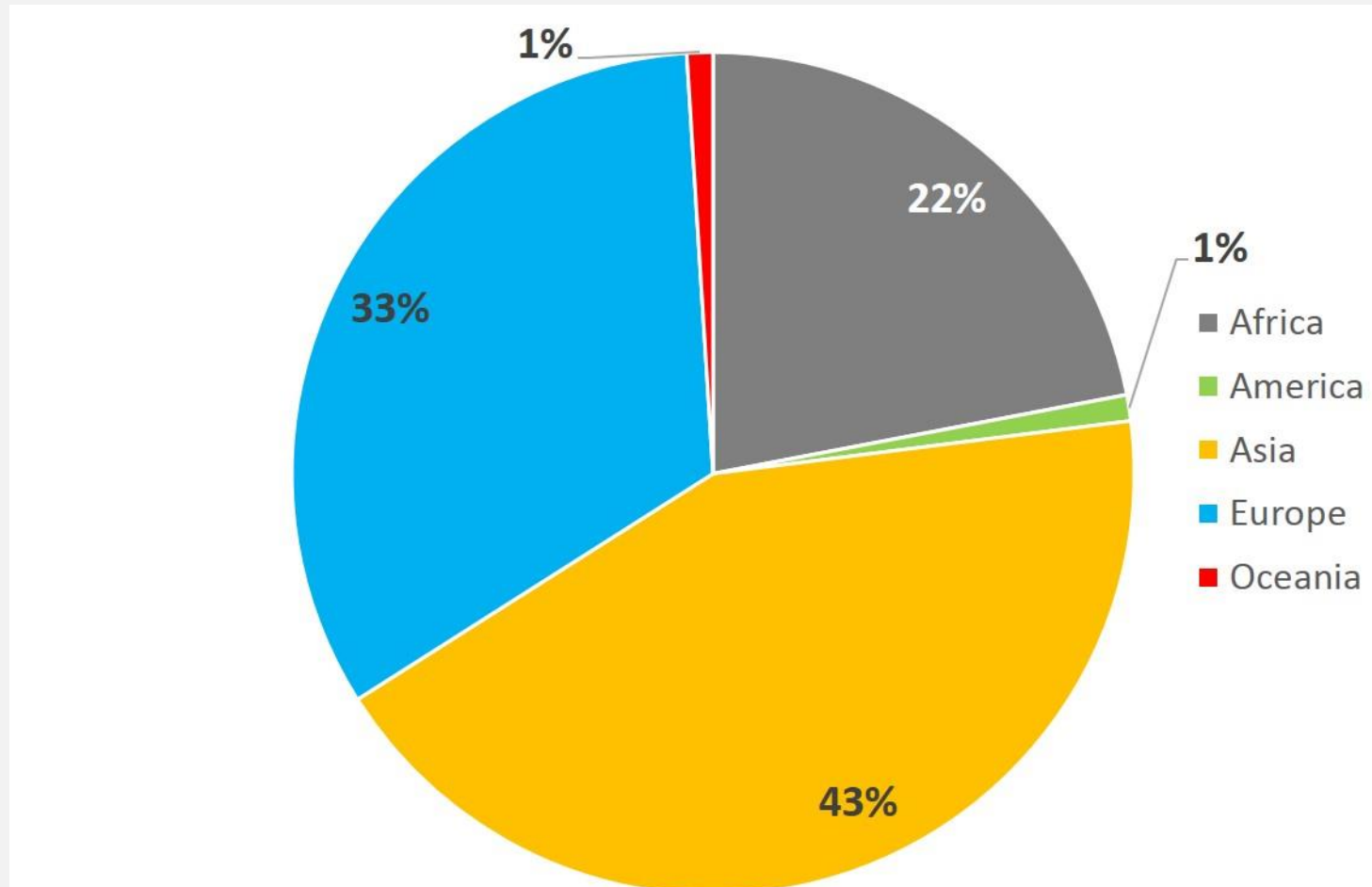
EUROPEAN COLLEGE OF
Small Ruminant
HEALTH MANAGEMENT



Dairy sheep farming

- A 10,000-year old agricultural activity in the Middle East and the para-Mediterranean countries
- Cyclop Polyphemus mentioned as an early shepherd and cheese-maker (Homer)
- Evolvment of the practice concurrently with rural communities
- Significant role of the practice for the less favoured and remote areas
- Use of lands not suitable for other uses, adding to rural families' income

Dairy sheep farming in the world



Dairy sheep farming in the European Union

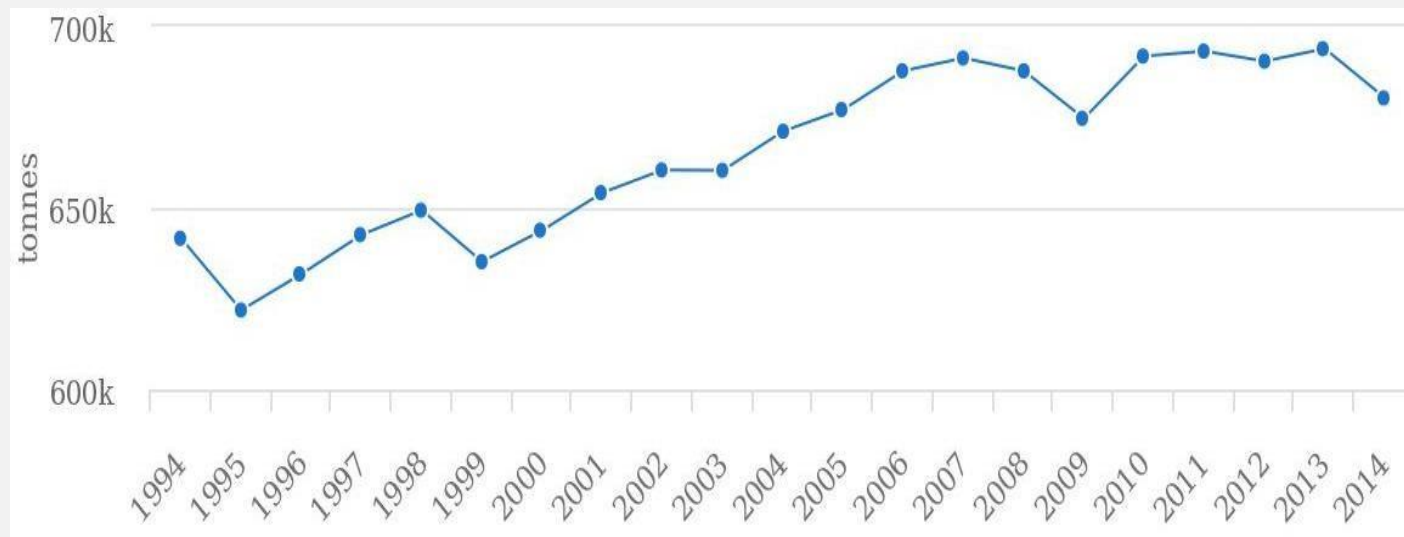
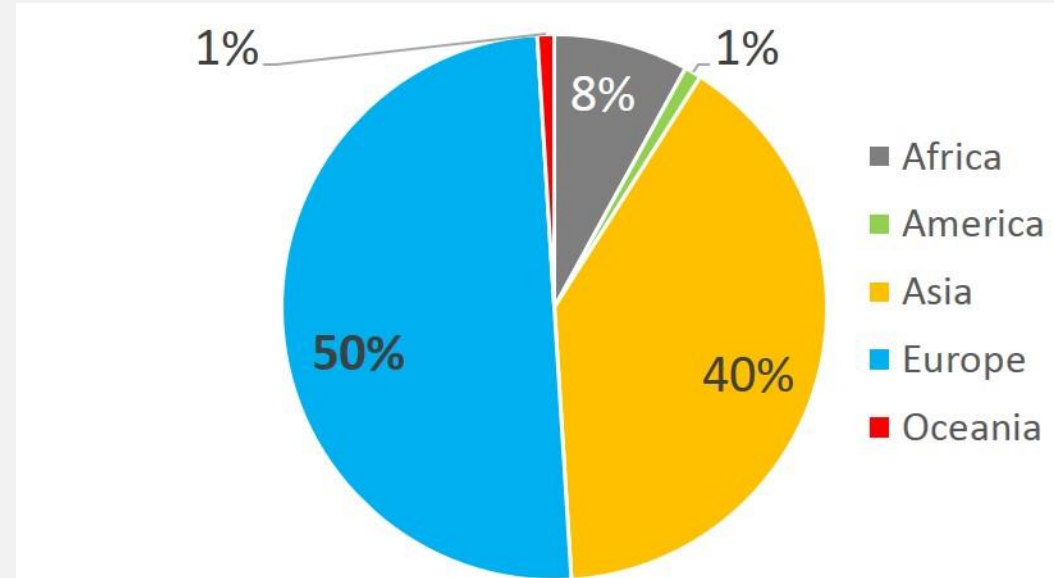
Country	Dairy ewes (n)	Production (tnL of milk)	Country	Dairy ewes (n)	Production (tnL of milk)
Austria	27,500	12,000	Malta	8,000	1,500
Bulgaria	1,026,000	69,500	Poland	40,500	500
Croatia	124,00	9,000	Portugal	340,000	71,000
Cyprus	215,000	30,000	Romania	7,649,500	527,500
Czech	81,500	2,500	Slovakia	188,000	11,500
France	1,225,000	270,000	Slovenia	2,500	500
Greece	6,862,000	732,000	Spain	2,272,500	514,000
Hungary	19,000	1,000	Europ. Union	25,212,000	2,663,500
Italy	5,130,000	410,500	World	245,185,000	10,400,000

Dairy sheep farming around Europe

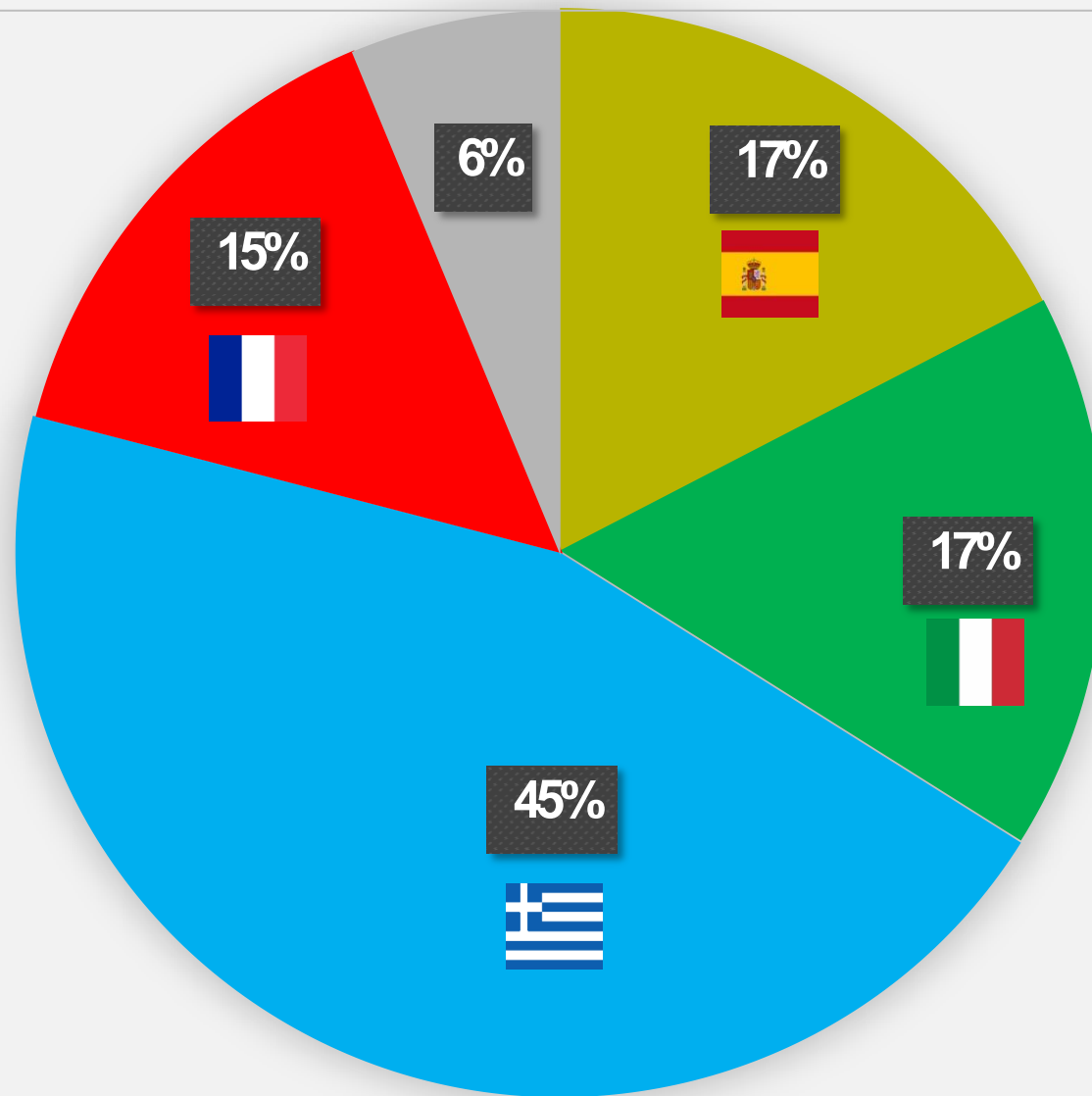
approx. 45% of the world sheep milk is produced in para-Mediterranean countries



Cheese production from sheep milk



Cheese production from sheep milk



Cheese production from sheep milk

- **Greece:** Feta, Graviera, Kefalograviera, Ladotyri, Kasseri, Manouri, Anevato, Galotyri, Kalathaki, Katiki, Kopanisti, Metsovone
- **Italy:** Pecorino (Romano, Sardo, Siciliano, Toscano, di Filiano), Canestrato Pugliese, Fiore Sardo, Formaggio di Fossa, Murazzano, Vastedda della valle del Belice
- **France:** Roquefort, Brocciu, Cazelle de Saint Affrique, Ossau-Iraty, Abbaye de Belloc
- **Spain:** Manchego, Zamorano, Roncal, Idiazabal, Torta de la Serena, Torta del Casar, Brandy, Ros, Tronchon, Odre

Cheese production from sheep milk



Dairy sheep farming

- China and Turkey are the larger producers of sheep milk worldwide
- Greece is the larger producer in cheese from sheep milk worldwide
- USA is the larger importer of cheese from sheep milk, mainly from Europe
- In the USA, sheep cheese products are primarily niche-products

Dairy sheep farming

- **Emerging producers:** **-Bulgaria and Romania**
 -New Zealand (milk powder)
- **Emerging markets:** **China, Latin America, USA**

Problems in dairy sheep farming

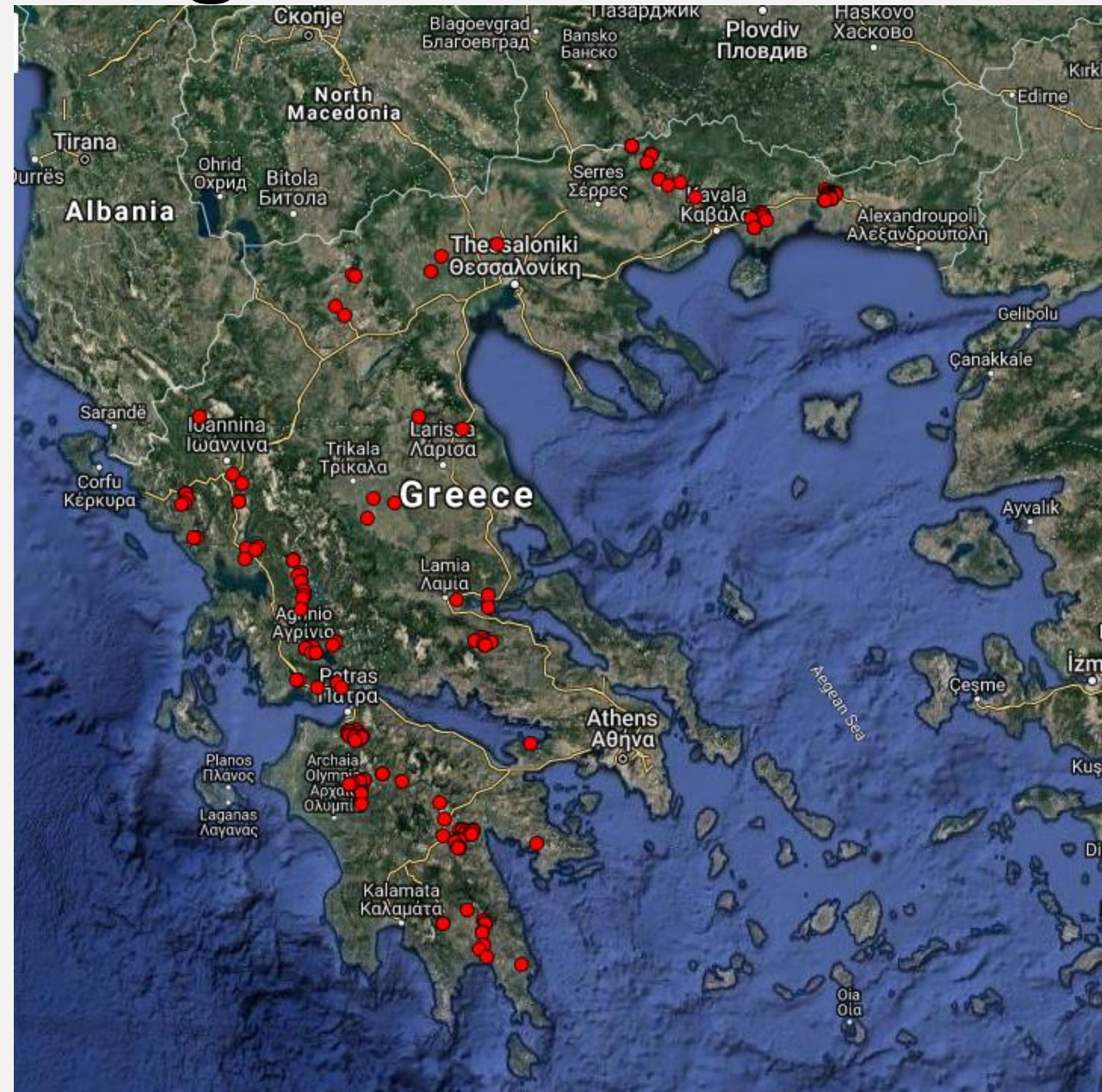
- Inadequate education and know-how of farmers
- Decreased productivity, mainly due to increased production cost
- Insufficient linking of crop production to dairy sheep production
- Variations in the quality of the produced milk

Problems in dairy sheep farming

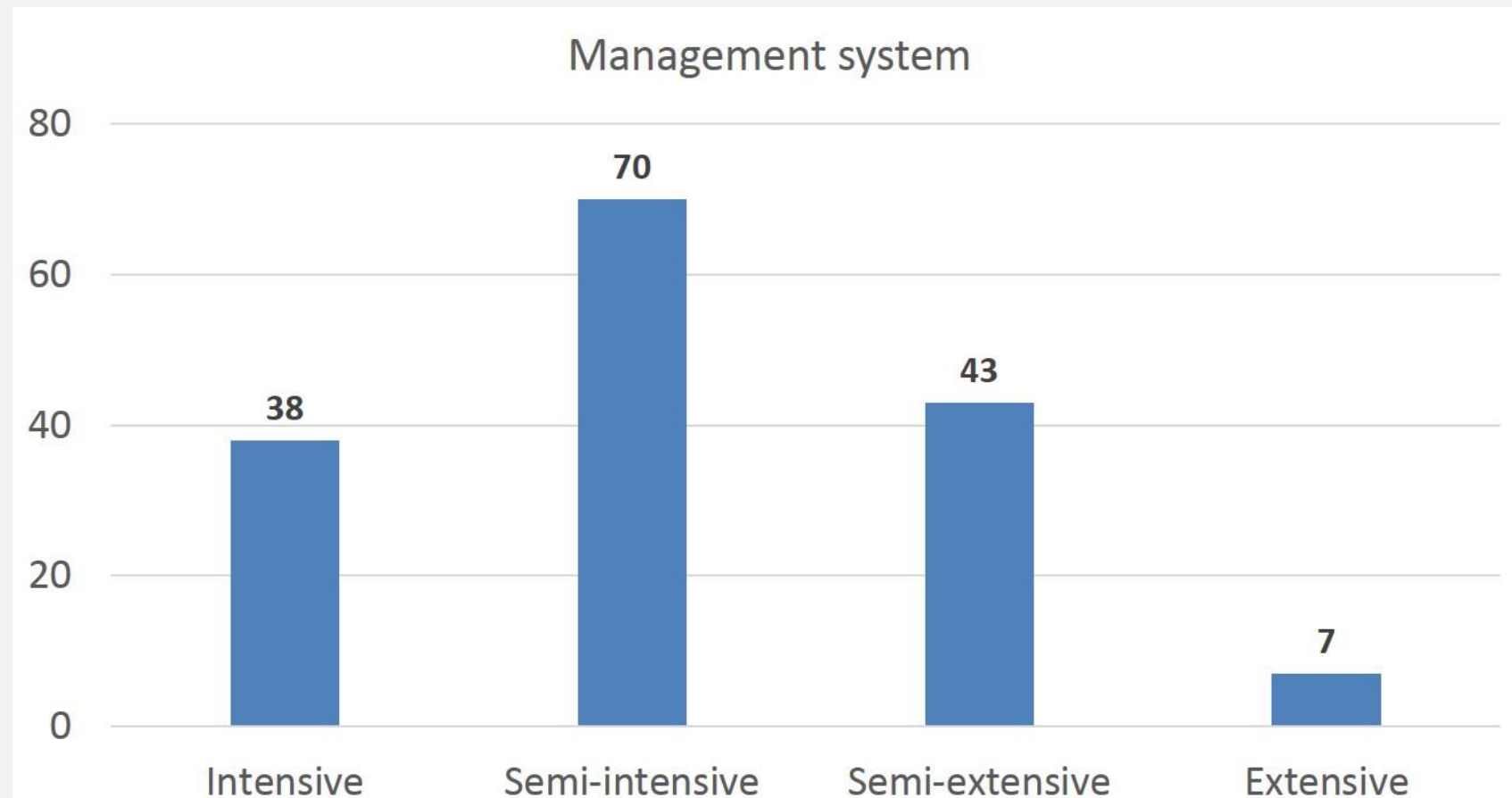
- Social isolation and low social rank of sheep farmers
- Inadequate logistics, networking and search for new markets
- Insufficient R&D and innovation for sheep-milk products and inadequate marketing to reshape consumer habits and opinions
- Lack of targeted strategic planning for development of the sector

Dairy sheep farming in Greece

- 165 farms around the country
- Detailed interview with 520 questions
- Collection of samples



Dairy sheep farming in Greece







Dairy sheep farming in Greece





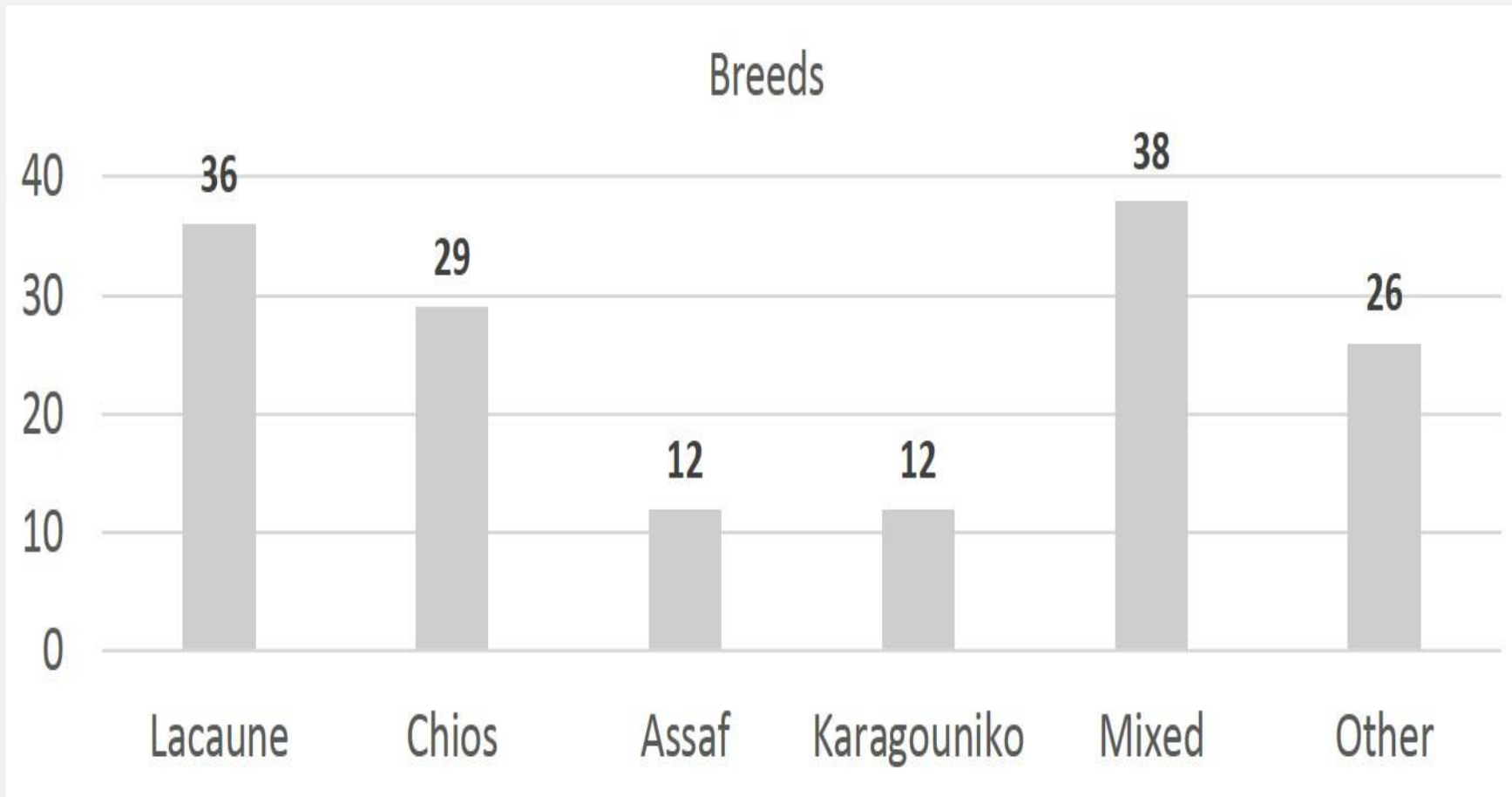




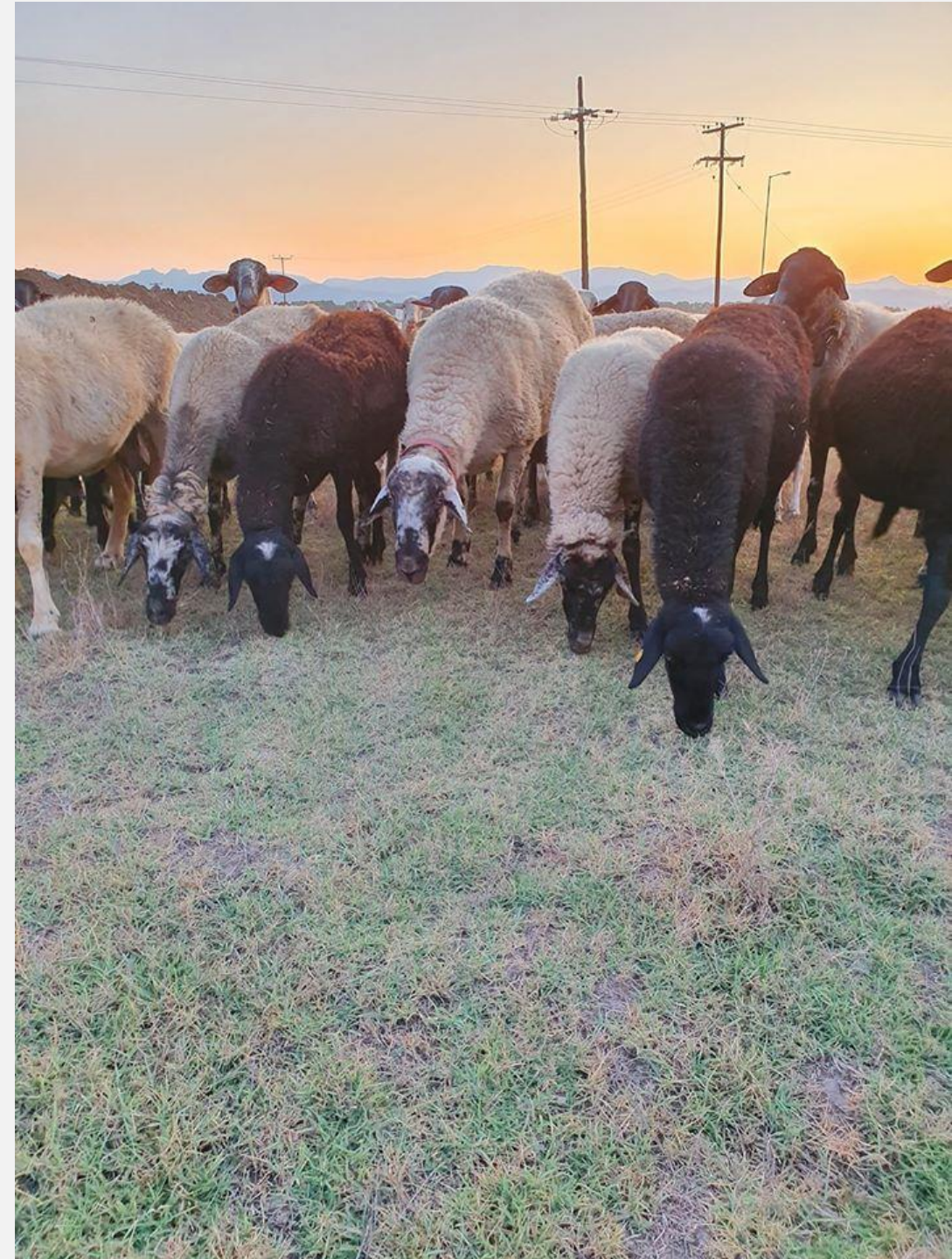




Dairy sheep farming in Greece







Dairy sheep farming in Greece

- **Average milk production per year: 271 L over 180 days**
- **Average fat content of milk: 6.41%**
- **Average protein content of milk: 4.67%**

Dairy sheep farming in Greece

- **Average total bacterial counts in milk: 3,530,000 cfu mL⁻¹**
- **Average somatic cell counts in milk: 730,000 cells mL⁻¹**

Dairy sheep farming in Greece

- **78% of farmers consider mastitis as the most important disease**



Dairy sheep farming in Greece

- 72% of farmers have family tradition in agriculture
- Median age of farmers: 46 y
- 10% of farmers have tertiary education degree &
19% have gone through technical education
- 52% of farmers employ farm staff

Dairy sheep farming in Greece

- **Challenges:**
 - recruitment of young people in the sector**
 - imports from Bulgaria & Romania**
 - improvement of productivity**
 - small (0.3%) contribution to the country's GDP in comparison to proportion of people involved (1.1%)**

