

The Cyprus sheep and goat sector: Results from the DoMEsTic project on economics, policies and social aspects

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Presentation content

- Brief description of the ARIMNet-DoMEsTic project aims
- Overview of the Cyprus sheep and goat sector
- Institutional framework governing small ruminants
- Cyprus case study description and general results
- Sheep and goat milk marketing channels in Cyprus
 - Economics
 - Social Aspects
 - Constraints for marketing efficiency
 - Strategies for improvement



A Network for Agricultural Research In the Mediterranean Area

Rationale

- The countries of the Mediterranean basin face all the key global challenges in agriculture and food security
 - management and utilisation of natural resources
 - threats to agricultural production and sustainability due to climate change
- Mediterranean issues are often examined separately in various regions
- Global problems addressed by local research systems

ARIMNet Objectives

- To create a community of research for the whole region through coordination of national agricultural research programmes
- To jointly address the common key issues for Mediterranean agriculture

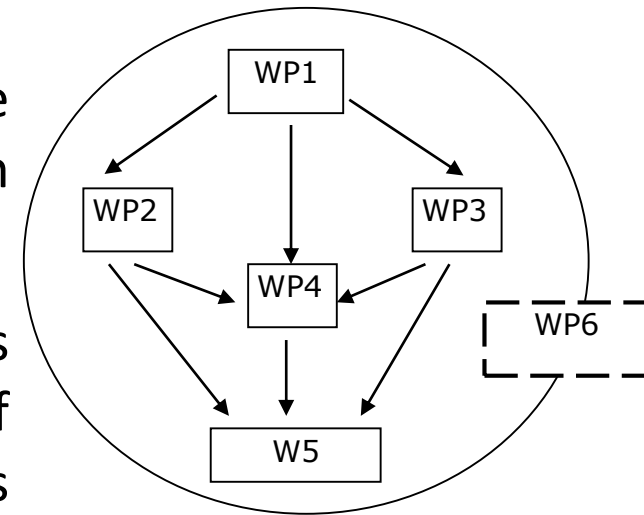


DoMEsTic - www.arim-domestic.net

Mediterranean biodiversity as a tool for the sustainable development of the small ruminant sector: from traditional knowledge to innovation

The DoMEsTic project:

- Studies the factors that influence the sustainability of sheep and goat production systems in the participating countries
- Examines the involvement of various stakeholders and policy makers and the role of (local breed) sheep and goat production systems in local development.
- Proposes adaptation strategies to the socio-economic and environmental challenges



Mediterranean biodiversity as a tool for the sustainable development of the small ruminant sector: from traditional knowledge to innovation

Partners - Research teams

- **Greece** (coordinator) (Hellenic Agricultural Organisation-DEMETER)
Ch. Ligda, E. Sossidou (VRI, Thessaloniki), I. Tzouramani (AGRERI, Athens)
- **France** (Institut National de la Recherche Agronomique)
A. Lauvie, F. Casabianca, J.C. Paoli (SAD LRDE, Corte)
- **Cyprus** (Agricultural Research Institute, Lefkosia)
G. Hadjipavlou, G. Adamides, A. Stylianou
- **Morocco** (Institut Agronomique et Vétérinaire Hassan II, Rabat)
A. Araba, A. Boughalmi



The Cyprus sheep and goat sector

- Important part of animal production in Cyprus
- Contributes ~18% to the total value of animal production
- Faces challenges of different types and does not fulfill its full economic and production potential

Sheep population: Estimated around 267,500 (Agr. Census 2010)

Goat population: Estimated at 241,600 (downward trend)

- Recent population changes associate with management of scrapie disease
- Population trends correlate with meat and milk production



Institutional System governing the Cyprus sheep and goat sector

Veterinary Services

Rules and regulations regarding farm and animal identification, genetic material transfer, animal health and sales, milk safety and disease control (esp. scrapie)

Department of Agriculture

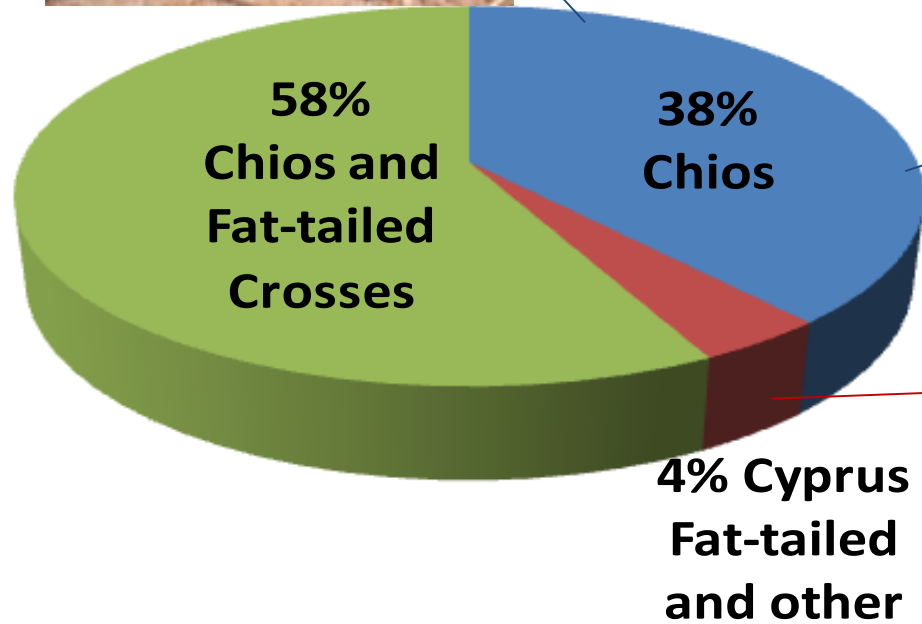
Responsible for farm permits, farm location, shed building, eligibility for subsidies, CAP implementation, yearly surveys, extension services

Agricultural Research Institute and Department of Agriculture

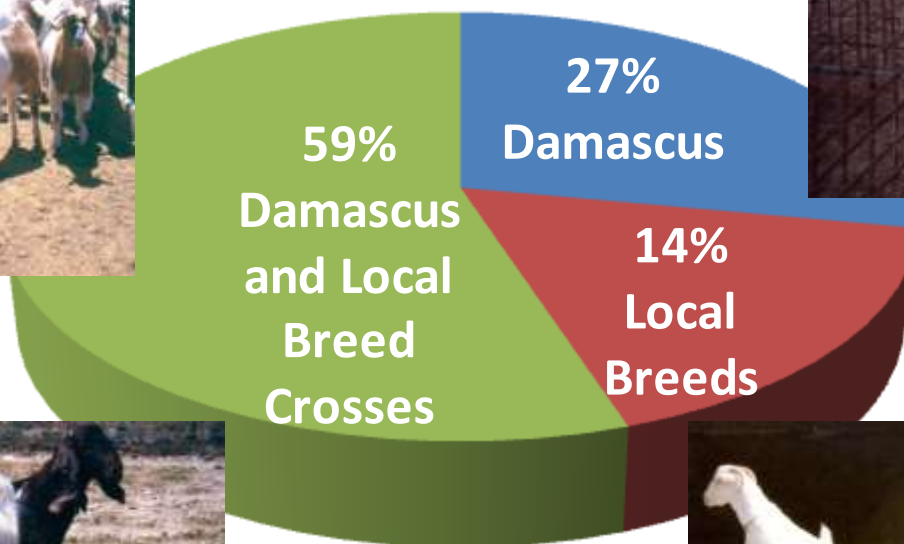
Genetic management: maintenance of nucleus flocks for Chios sheep and Damascus goats and provision of superior genetic stock to breeders



Breed Composition of Sheep



Breed Composition of Goats



Sheep and goat products

Meat production

- Covers ~90% of consumer demand
- Corresponds to 7% of total meat production
- Contributes 10% to the total value of animal production



Sheep and goat milk

- Corresponds to 22% of total milk production in Cyprus
- Contributes 8% to the total value of animal production



Sheep and Goat Farm Description

Animals Kept	Average flock size	Percentage of total farm units (%)
Sheep	150	21
Goats	110	46
Sheep & Goats	198 (106 & 92)	33

- Total number of sheep and goat farms (2011): **2771**
- About 20% of milk is processed on farm (within region variation)

Main milk products:

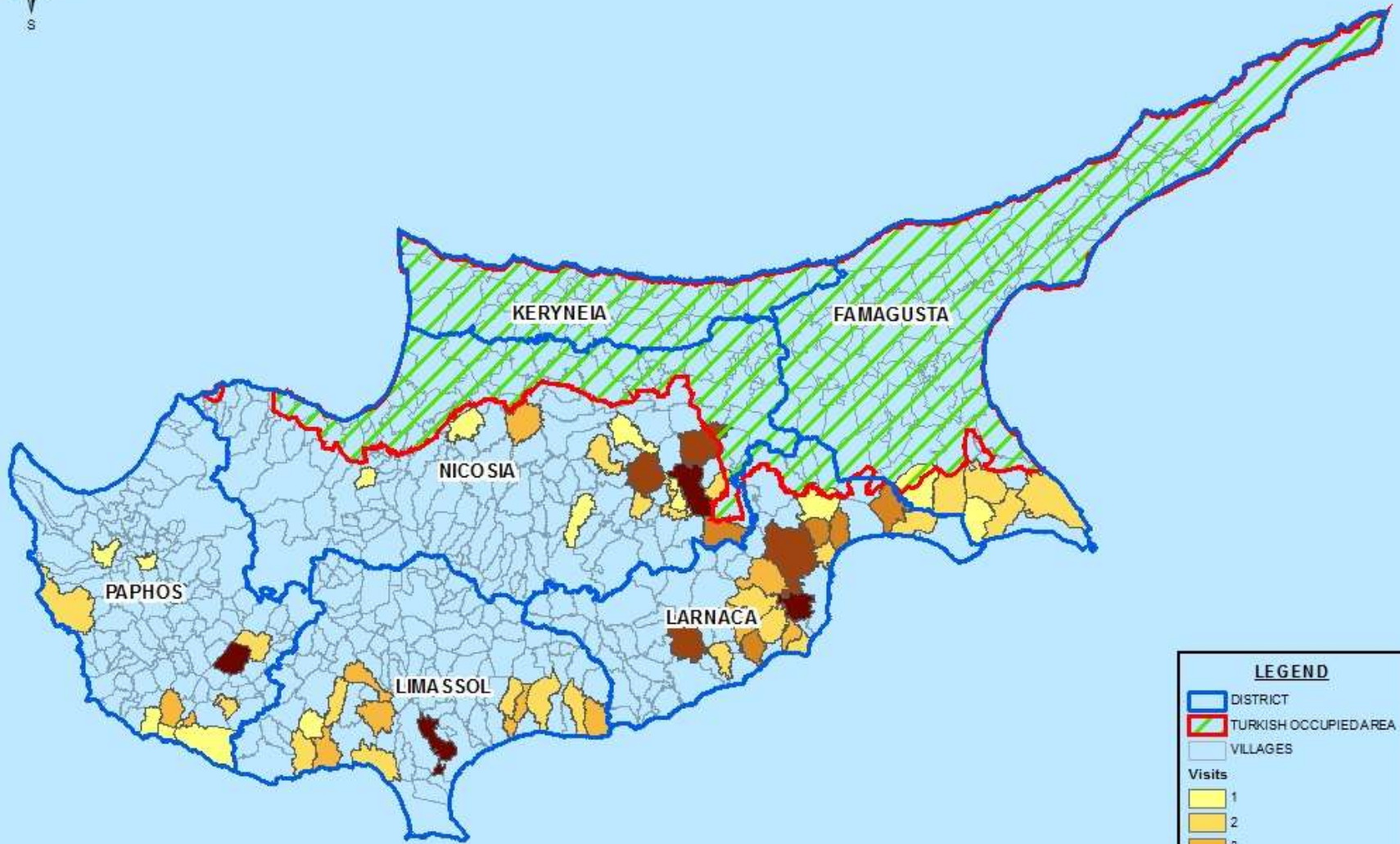
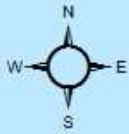
- Local halloumi cheese
- Yogurt
- Anari (whey cheese)
- Trahanas



The Survey for DoMEsTic

- A proportional random stratified method was used to determine the reliable sample size per district
- Two prerequisites:
 - a) A flock size of at least 100 animals
 - b) Farm distribution in 5 districts (Lefkosia, Lemesos, Paphos, Larnaca, Ammochostos)
- A total of 158 farmers were interviewed
- Farms located in 63 distinct villages within the five districts
- 10 farms in Ammochostos, 54 in Larnaca, 36 in Lemesos, 36 in Lefkosia and 22 in Paphos





LEGEND

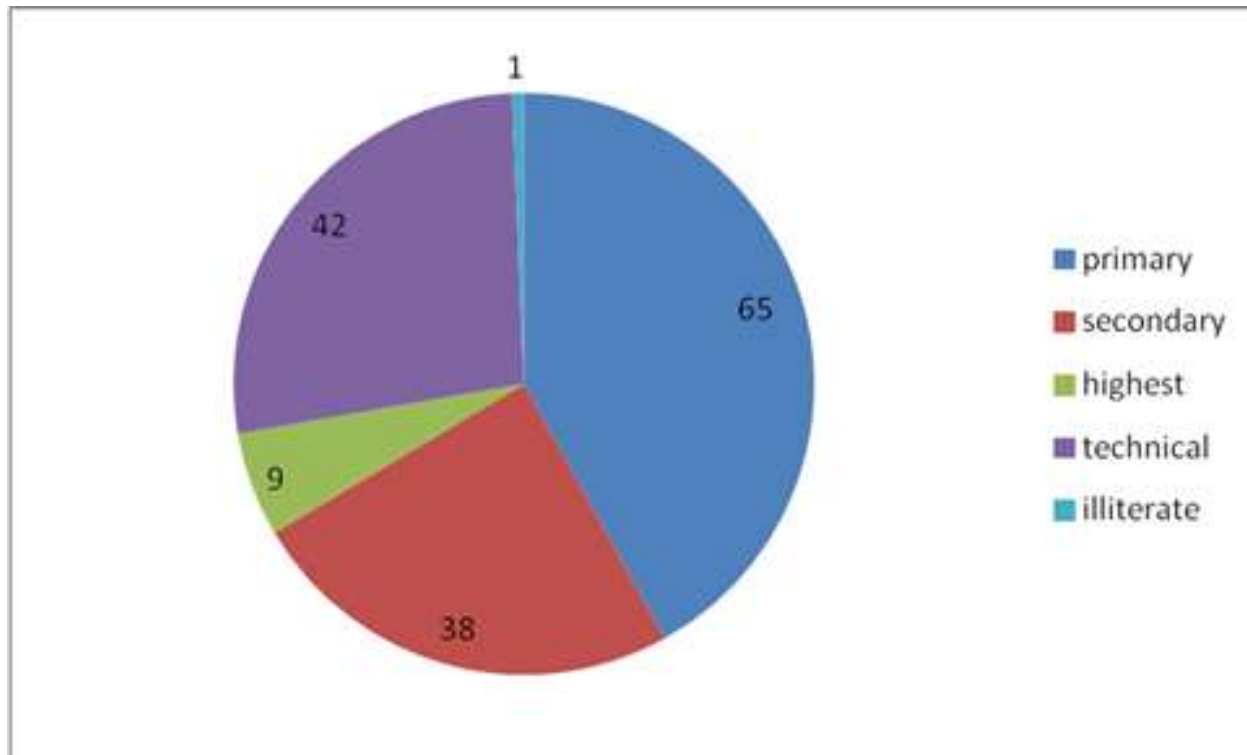
- DISTRICT
- TURKISH OCCUPIED AREA
- VILLAGES

Visits

- 1
- 2
- 3
- 4
- 5
- 6

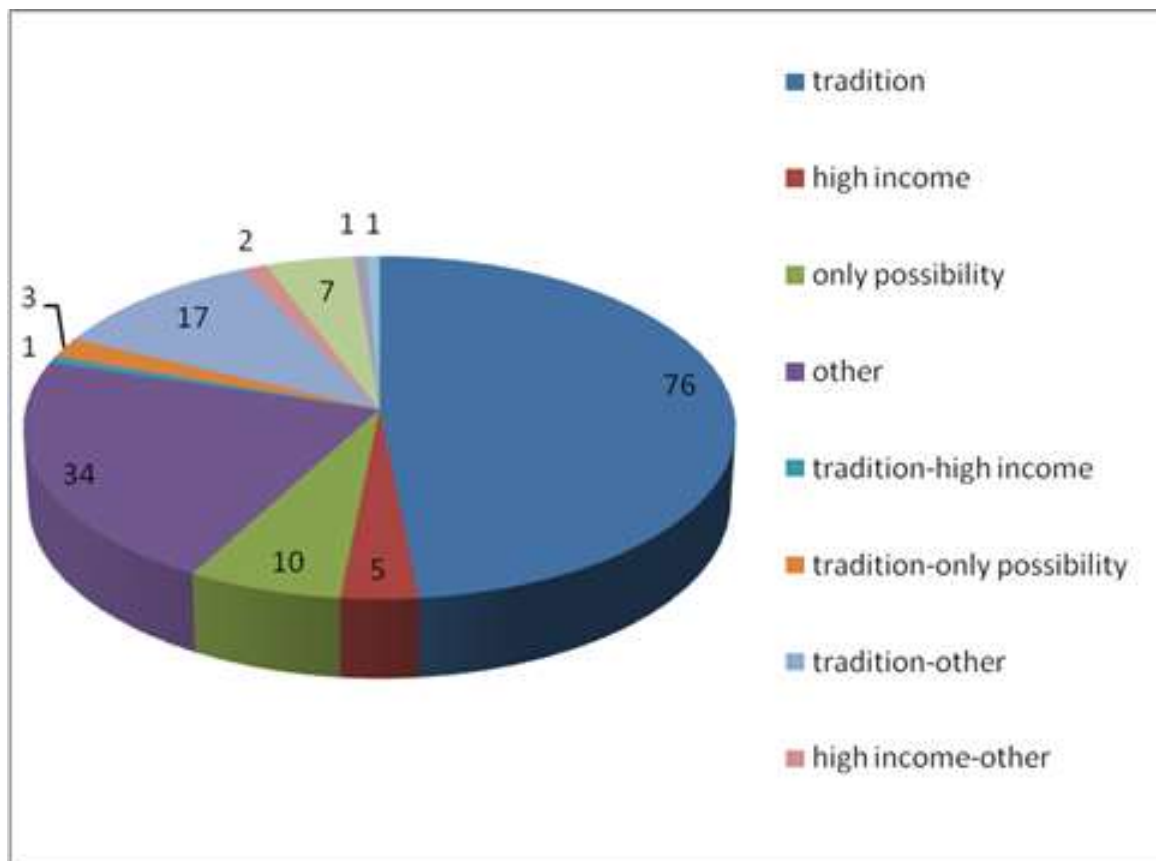
Results from the survey

Education level across 158 farmers interviewed



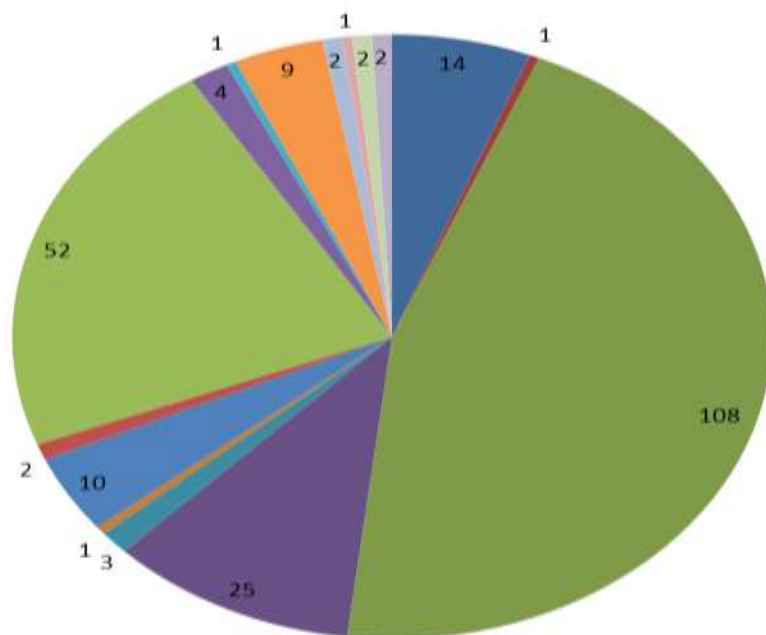
Results from the survey

Reasons provided by breeders for involvement in sheep and goat production



Results from the survey

Reasons for choosing particular (pure-bred or crossbred) sheep and goat breed

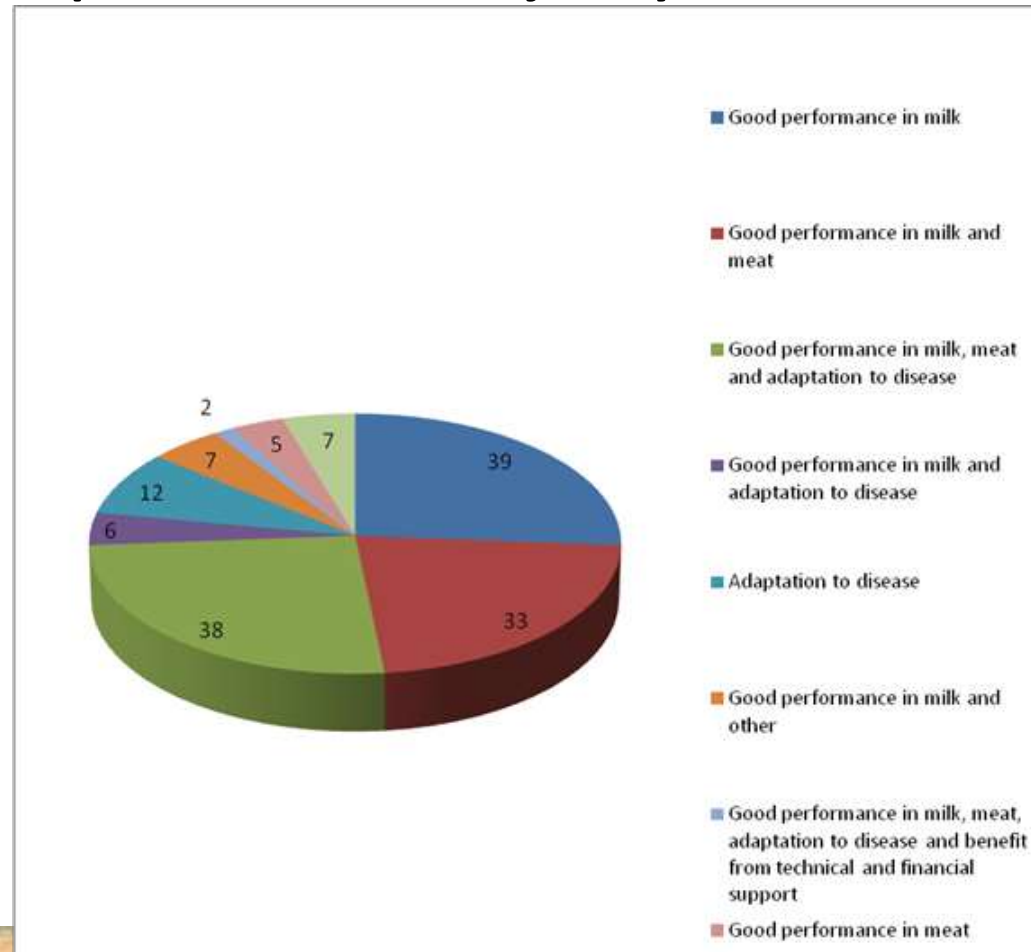


- Tradition
- Only breed in the area
- Good performance in...
- Good adaptation to...
- Other
- Tradition and only breed in the area
- Tradition and good performance in...
- Tradition and good adaptation to...
- Good performance in... and good adaptation to...
- Good performance in... and other
- Tradition, only breed in the area, and to benefit from...
- Tradition, good performance in... and good adaptation to...
- Only breed in the area, good performance in... and good adaptation to...
- Good performance in... good adaptation to... and to benefit from...
- Good performance in... good adaptation to... and other
- Tradition, good performance in... good adaptation to... and to benefit from...



Results from the survey

Performance and adaptation reasons to justify the chosen sheep and/or goat breed(s)

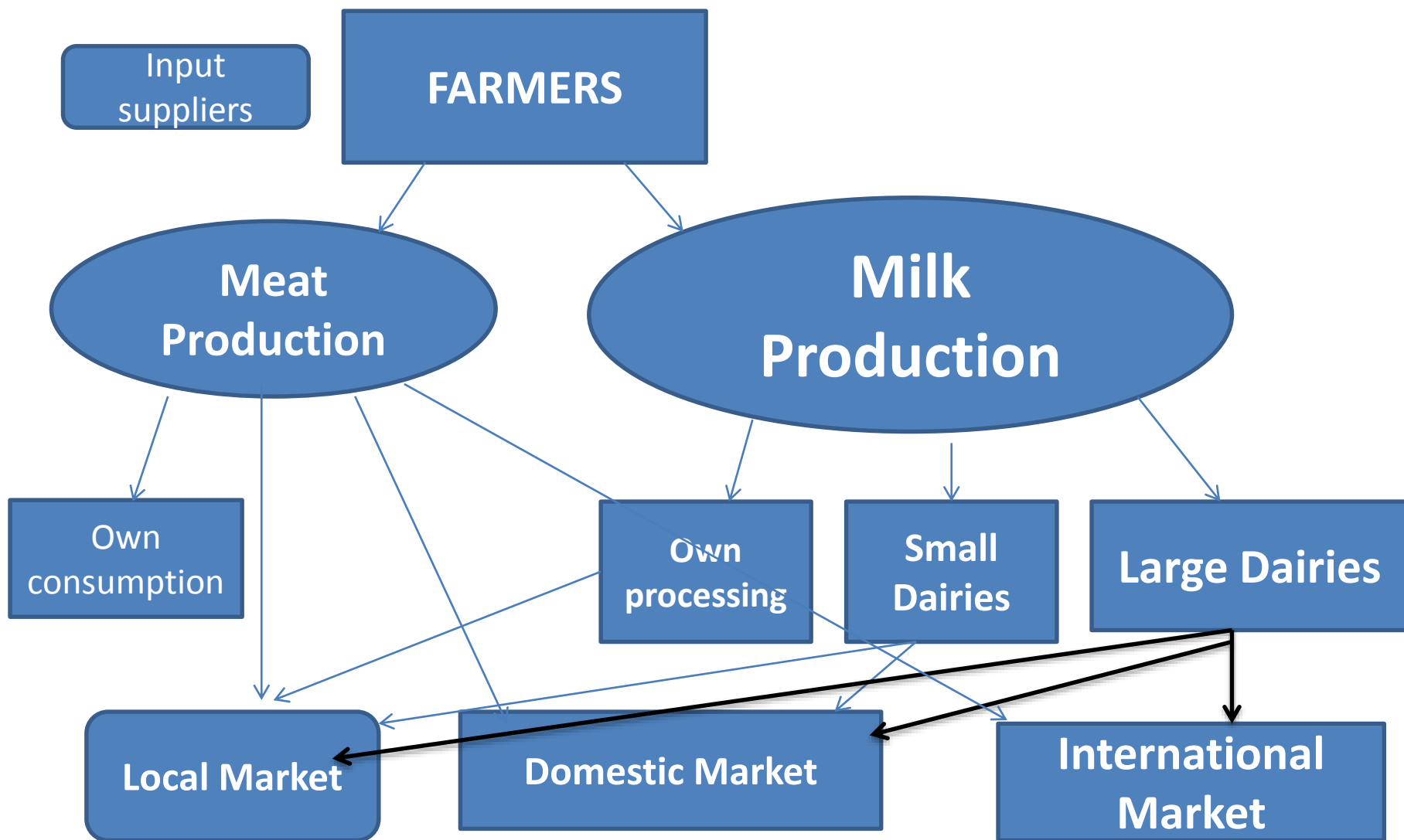


Sheep and Goat Marketing Channels

- Which are the main marketing channels?
- Which factors affect channel choice decisions?
- Identify constraints
- Suggest improvement options



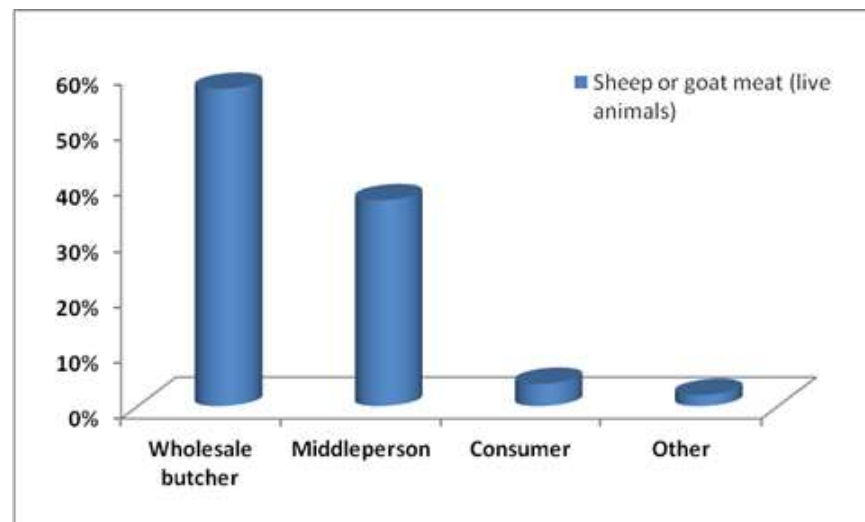
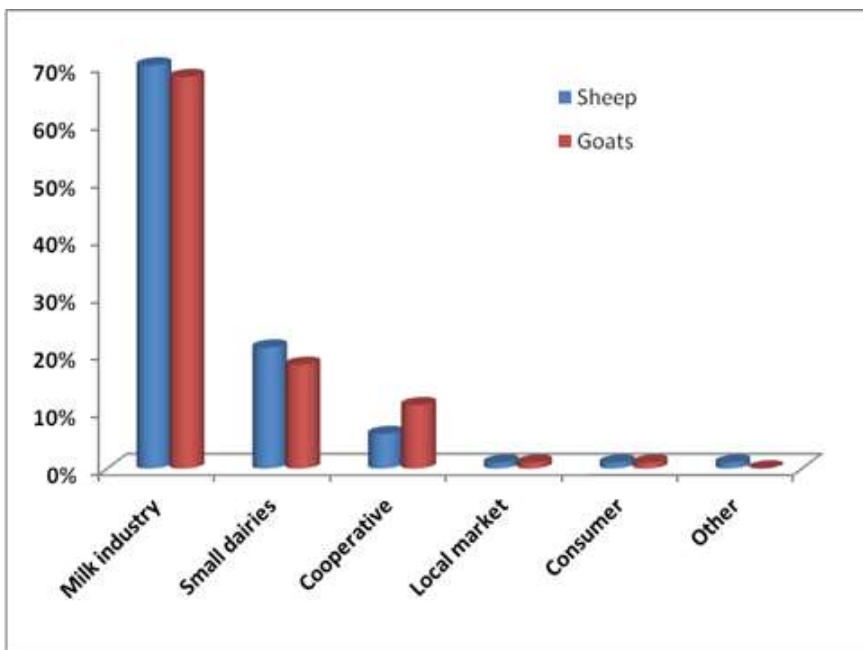
Map of Small Ruminant Supply Chain



Results from the survey

Destination of main farm products

Market channels for milk and meat from sheep and goats

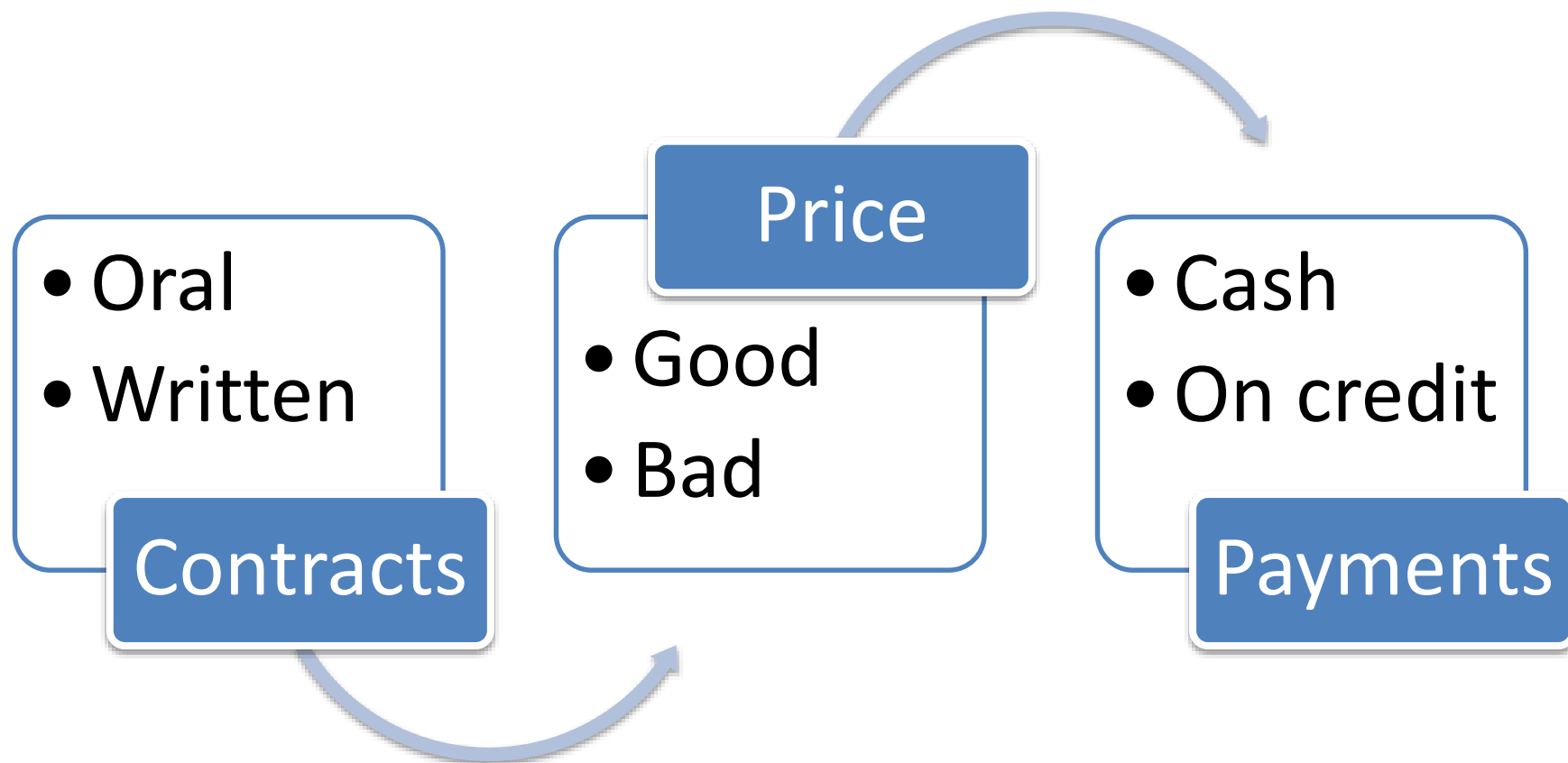


Prices and Animal Productivity per Milk Channel

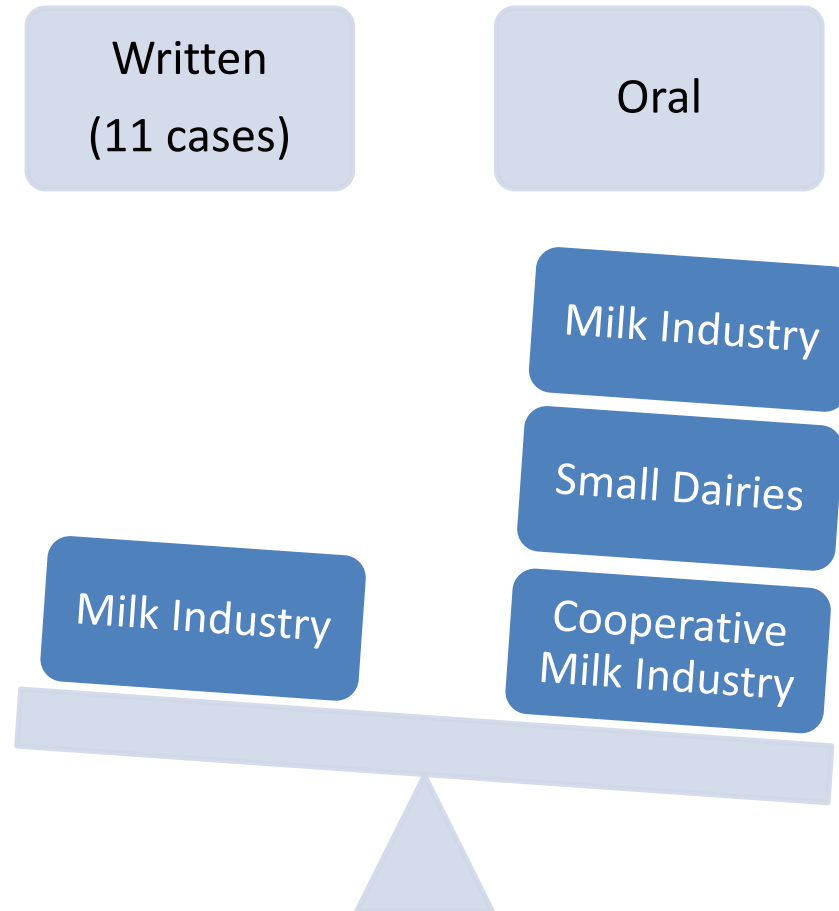
Milk Channels	Mean Sheep Milk Price (€/kgr)	Mean Yearly Milk per Ewe (kgr per animal)	Mean Goat Milk Price (€/kgr)	Mean Yearly Milk per Goat (kgr per animal)
Milk Industry	0.90 (±0.13)	178.87	0.5635 (±0.0661)	355.85
Small Dairies	0.91 (±0.06)	147.84	0.5736 (±0.0498)	169.76
Cooperative Milk Industry	0.87 (±0.05)	119.63	0.5378 (±0.0473)	241.22



Specific Principles and Channel Choice



Contracts



Price Satisfaction

Good
(25 cases)

- Milk Industry (13 cases for sheep milk / 8 cases for goat milk)
- Small Dairies (2 cases for sheep milk / 1 case for goat milk)

Average
(49 cases)

- Milk Industry (21 cases for sheep milk/14 cases for goat milk)
- Small Dairies (7 cases for sheep milk/ 3 cases for goat milk)
- Cooperatives (3 cases for sheep milk/ 1 case for goat milk)

Bad
(94 cases)

- Milk Industry (33 cases for sheep milk/29 cases for goat milk)
- Small Dairies (12 cases for sheep milk/ 8 cases for goat milk)
- Cooperatives (3 cases for sheep milk/ 7 cases for goat milk)



Mode of Payment

CASH

- Milk Industry (3 cases for sheep milk/ 1 for goat milk)
- Small Dairies (6 cases for sheep milk/ 2 cases for goat milk)
- Coop (1 case for goat milk)
- Other (2 cases for sheep milk)

On Credit

- Milk Industry (**13 cases for sheep milk/ 12 cases for goat milk**)
- Small Dairies (1 case for sheep milk/ 11 cases for goat milk)
- Coop (2 cases for sheep milk/ 2 cases for goat milk)

Cheque

- Milk Industry (**55 cases for sheep milk/40 cases for goat milk**)
- Small Dairies (17 cases for sheep milk / 11 for goat milk)
- Coop (5 cases for sheep milk/ 6 cases for goat milk)



Farm Profile as Correlated to Chosen Sheep Milk Channel

Milk Industry

403 animals

65 tons sheep milk

30 ha own Land

300 ha land rented

262 animal/herder

Small Dairies

342 animals

45 tons sheep milk

16 ha own land

207 ha land rented

202 animal/herder

Cooperative Milk Industry

576 animals

61 tons sheep milk

49 ha own land

412 ha land rented

249 animal/herder



Farmer Profile as Correlated to Chosen Sheep Milk Channel

Milk Industry

51.4 years

33.3 % Primary Education

20.4% - Successor

22.7% - Training

60.6% Full Time Work

Small Dairies

45.6 years

7.8% Primary Education

8.7% - Successor

6.2% - Training

1.0% Full Time Work

Cooperative Milk Industry

51.2 years

2.0% - Technical Education

1.9% - Successor

2.1% - Training

1.0% Full Time Work



Farmer Profile as Correlated to Chosen Sheep Milk Channel

Milk Industry

51.9% Technical
Supervision

40.8% Record
Keeping

29.9% Know product
outlet(s)

39.4% Share Info with
other farmers*

Small Dairies

10.6% Technical
Supervision*

12.6% Record
Keeping

12.4% Know product
outlet(s)

13.1% Share Info with
other farmers*

Cooperative Milk Industry

3.8% Technical
Supervision

2.9% Record Keeping

3.1% Know product
outlet(s)

6.1% Share Info with
other farmers*



Constraints Affecting Marketing Efficiency – Sheep Milk Channels

Milk Industry

Changes in CAP*

Poor market coordination*

Poor market infrastructure*

Low promotion*

Small Dairies

Age of farmers/
Lack of successors*

Low promotion*

Poor market coordination*



Constraints Affecting Marketing Efficiency –Goat Milk Channels

Milk Industry

Breeding and reproduction*

Animal health and disease control

Poor market coordination*

Poor market infrastructure*

Low promotion*

Small Dairies

Age of farmers/
Lack of successors*



Strategies for improvement- Farmer's point of view

Milk Industry

Improve farm infrastructure

Promote training of breeders

Increase consumer awareness



Strategies for improvement-

General outcomes from DoMEsTic

A sustainable sheep and goat sector can be achieved in the near future if:

- **The halloumi cheese is successfully labelled as PDO**
 - Increased demand for sheep and goat milk
 - Increased milk prices
- **The sheep and goat farmers form well-functioning breeders associations**
 - Increased negotiation power
 - More competitive milk prices; written contracts; timely payments
 - Could establish own dairy to make and trade halloumi cheese
- **Continuous knowledge transfer and institutional support is provided to the sheep and goat breeders**



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Thank you!

