

# Sustainable and low input dairy goat production in Greece

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# Introduction

- **Goats has been milked since time immemorial in Greece**
- **Goats have played a vital role in maintaining rural tradition, sustaining development in line with environmental protection**
- **The national flock of Goats in Greece is the largest in the EU (5 million heads)**



# The Greek National flock of goats

| Flock size | Number of flocks | Animals          |             |
|------------|------------------|------------------|-------------|
| >1,000     | 58               | 73,156           | } 668,093   |
| 901-1,000  | 38               | 37,337           |             |
| 801-900    | 59               | 50,633           |             |
| 701-800    | 110              | 82,408           |             |
| 601-700    | 250              | 162,061          |             |
| 501-600    | 479              | 262,498          |             |
| 401-500    | 1,008            | 452,836          | } 2.166,803 |
| 301-400    | 2,416            | 746,694          |             |
| 201-300    | 3,924            | 967,273          |             |
| 101-200    | 7,278            | 1.062,095        | → 1.062,095 |
| 81-100     | 2,122            | 193,394          | } 1.127,955 |
| 61-80      | 2,841            | 199,865          |             |
| 41-60      | 4,301            | 214,403          |             |
| 21-40      | 8,803            | 253,415          |             |
| 11-20      | 10,727           | 162,904          |             |
| 0-10       | 20,617           | 103,974          |             |
|            | <b>65,031</b>    | <b>5.024,946</b> |             |

(Census 2011)



# Production systems of dairy goats in Greece

Extensive pastoral system (8% of goats)



Semi-intensive (82% of goats)



Intensive (10% of goats)



# Objective

**To assess any phenotypic differences between goat breeds that are perceived to be adapted to low input systems in terms of:**

- productivity,**
- animal health and welfare**
- milk quality.**



# Material and Methods

## PHASE 1:

Assessment of a randomly selected population of goats

103 flocks

37,484 goats

Structured questionnaire for in depth interviews and on farm assessment



## Average characteristics of dairy goat farms in Greece (n=103)

| Assessed Parameter                  | Mean |
|-------------------------------------|------|
| <b>Animals/flock and management</b> |      |
| Adult goats                         | 364  |
| Bucks                               | 26   |
| Yearlings                           | 74   |
| Annual replacement rate             | 0.13 |
| Prolificacy (kids per goat)         | 1.50 |
| Milking goats                       | 317  |
| Machine milking installed in farms  | 0.31 |
| Number of <u>milkings</u> per day   | 2.07 |
| Milk yield/goat (lt)                | 207  |
| Age of kids at weaning age (days)   | 82   |
| Age of yearlings at mating (months) | 9.2  |
| Goats body weight (kg)              | 48   |
| Bucks body weight (kg)              | 68   |
| Kids carcass weight (kg)            | 9.6  |
| Milk price (€/lt)                   | 0.58 |
| Meat price (kids) (€/kg)            | 5.40 |
| Meat price (adult animals) (€/kg)   | 2.50 |

|  |      |
|--|------|
| <b>Land use/farm (hectares)</b>          |      |
| Cultivated land                          | 28   |
| Cultivated land per livestock unit       | 0.37 |
| Irrigated land                           | 2.46 |
| Non-irrigated land                       | 25   |
| Cultivated land for grazing              | 11.7 |
| <b>Duration of grazing (hours)</b>       |      |
| Spring                                   | 8.2  |
| Summer                                   | 10.7 |
| Autumn                                   | 8.6  |
| Winter                                   | 4.5  |
| <b>Walking distance for grazing (km)</b> |      |
| Spring                                   | 7.3  |
| Summer                                   | 9.3  |
| Autumn                                   | 7.1  |
| Winter                                   | 4.0  |
| <b>Feedstuffs per farm/year (tones)</b>  |      |
| Roughages                                | 37   |
| Concentrates                             | 78   |
| Straw                                    | 7    |
| <b>Personnel</b>                         |      |
| Number of workers                        | 1    |
| Number of family members                 | 1.3  |
| Total <u>labour</u> units                | 2.9  |
| Livestock units per worker               | 22   |



# Material and Methods

## PHASE 2:

**Animals:** 900 dairy goats in 7 herds

**3 breeds:**

2 local (Skopelos and indigenous Greek)

1 foreign (Damascus)

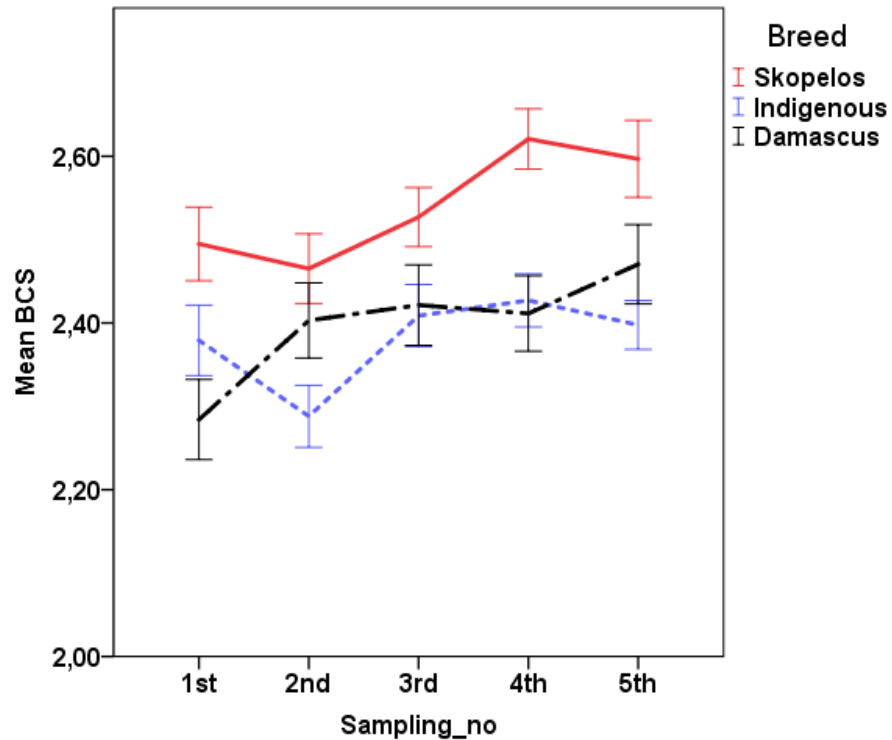
**Monitoring and Sampling time:** 2 years

- Body condition score
- Individual milk samples
- Milk yield
- Milk quality (fat, protein, lactose, SNF, SCC, TVC)

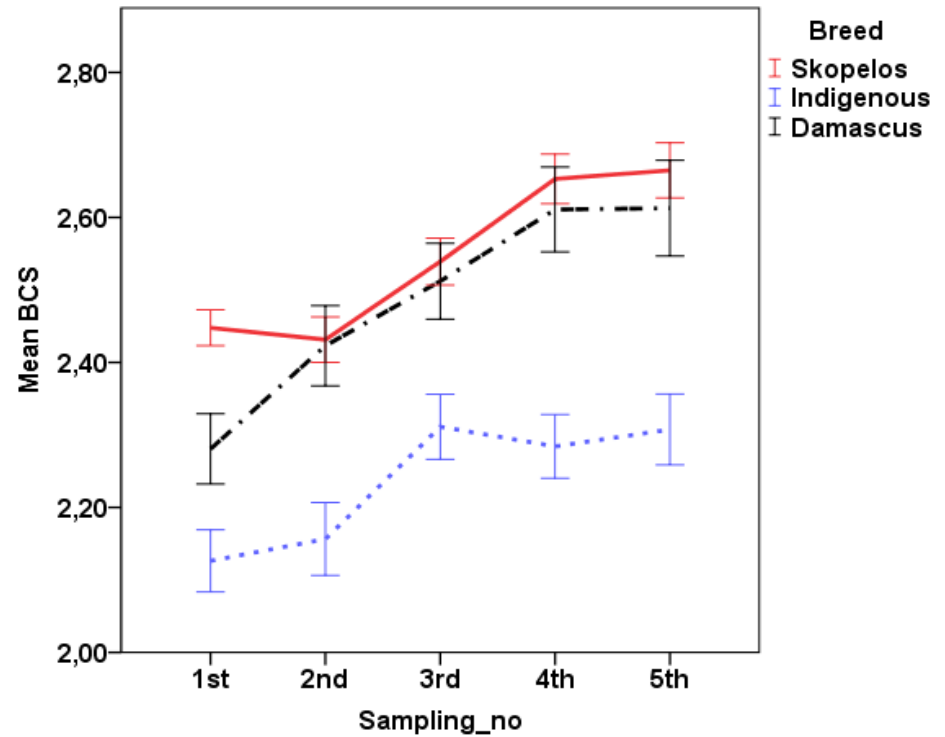




# Results



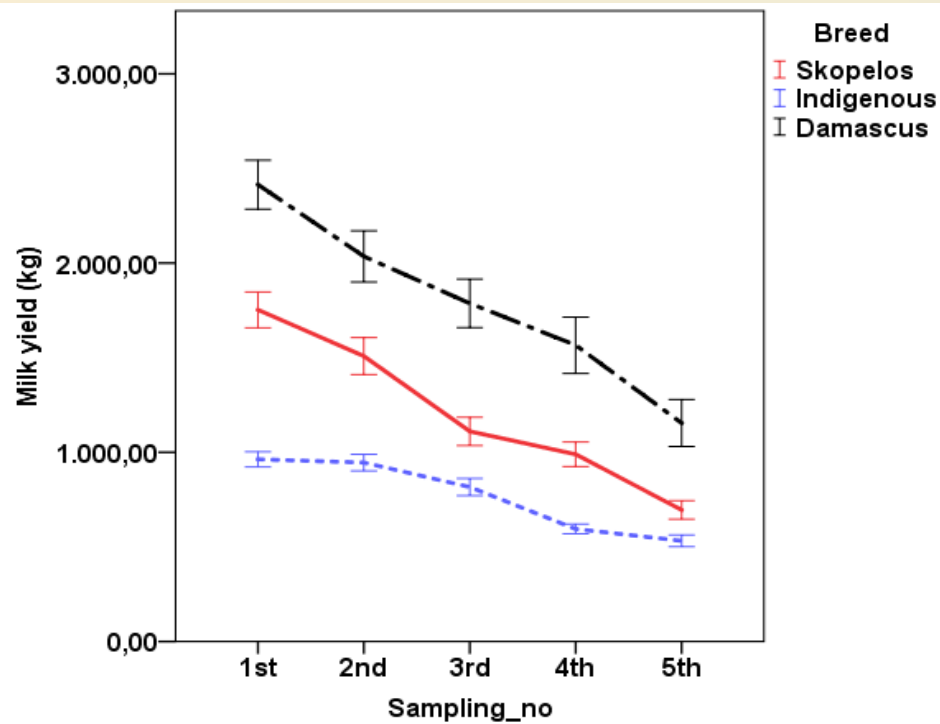
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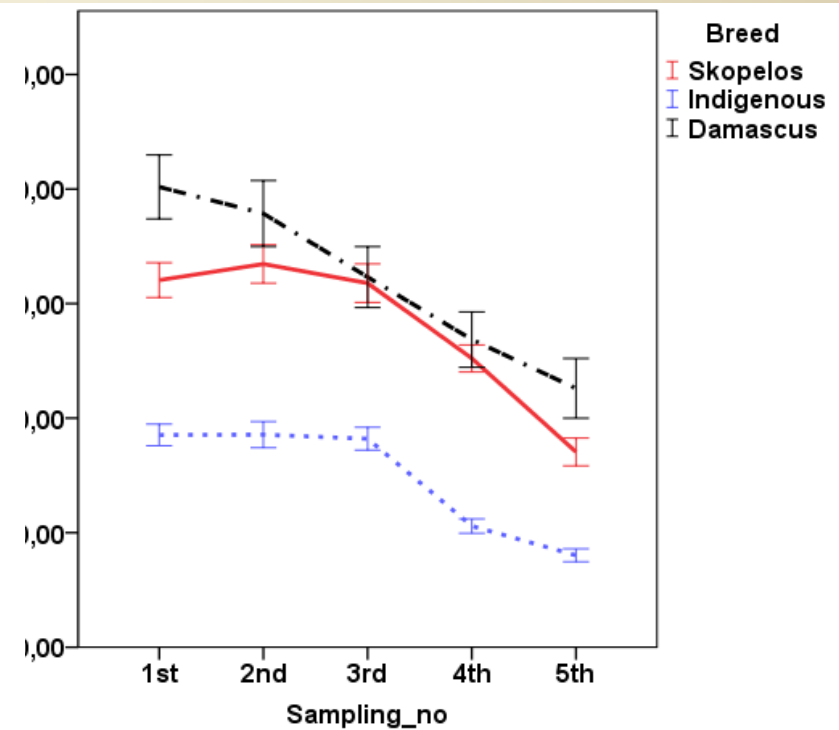
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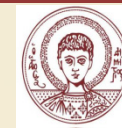
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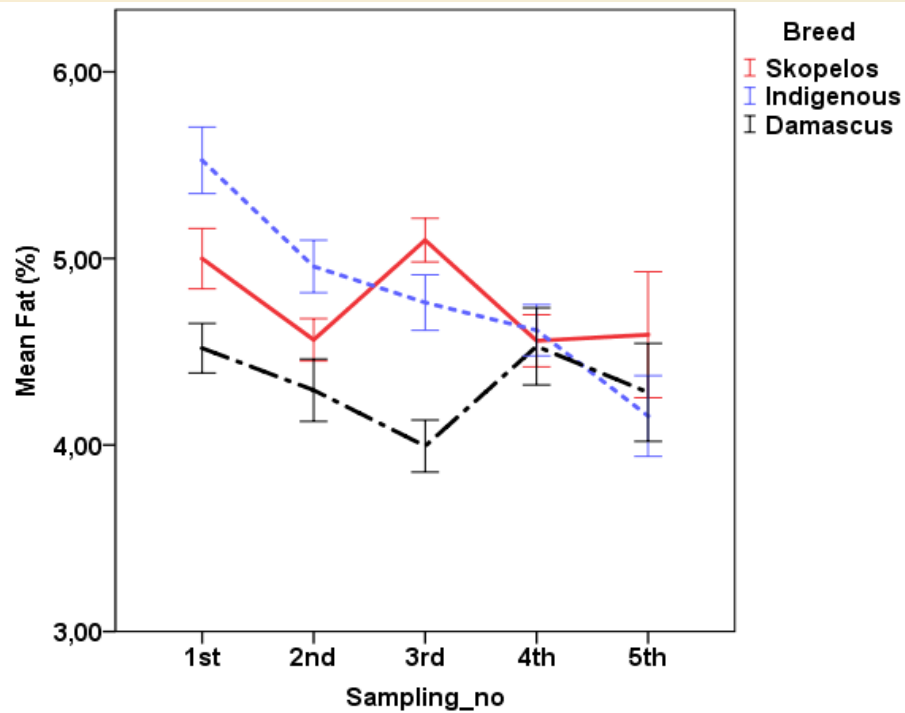
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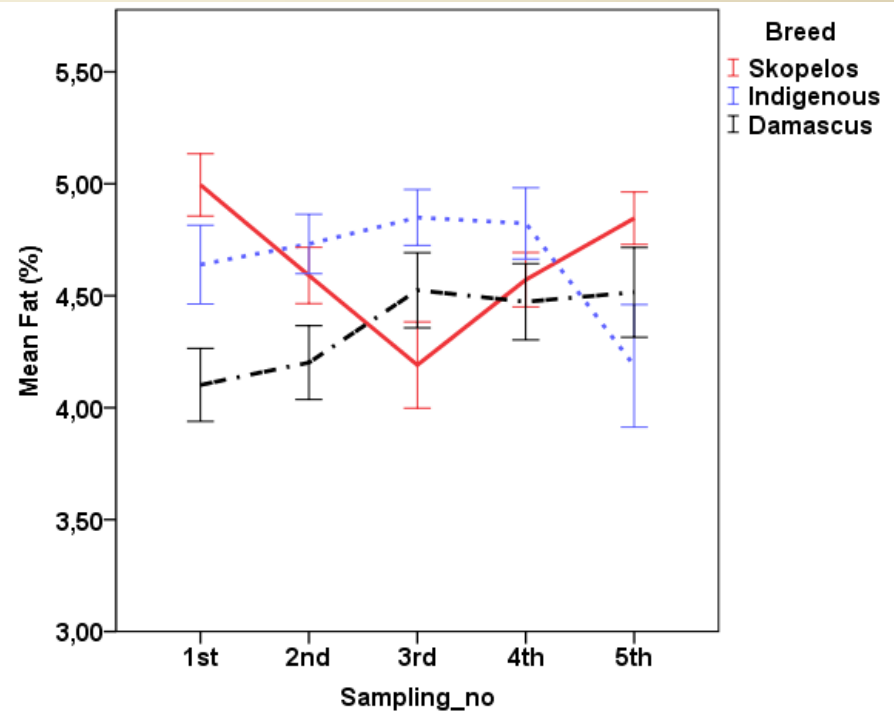
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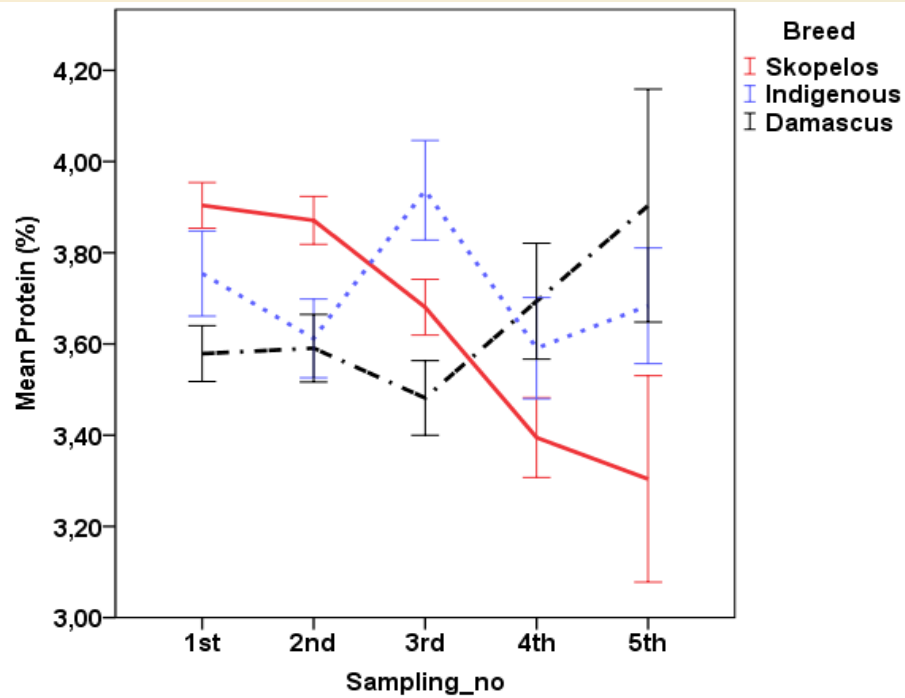
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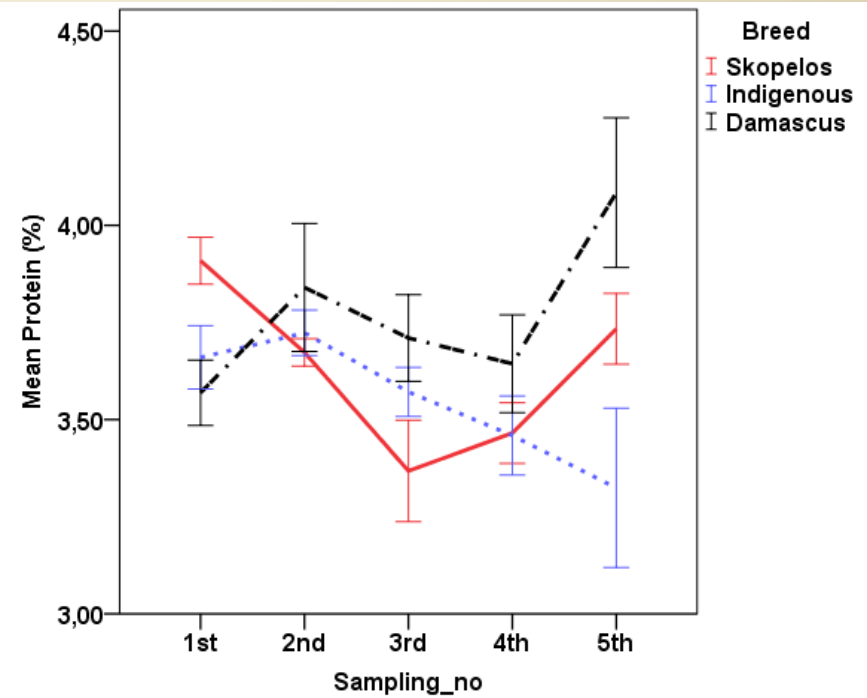
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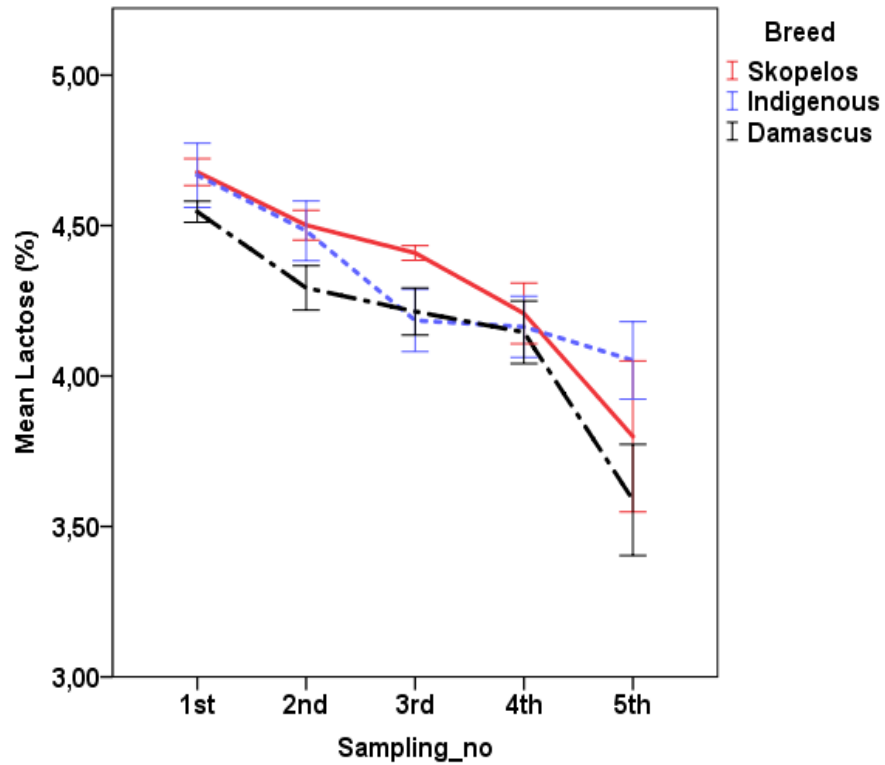
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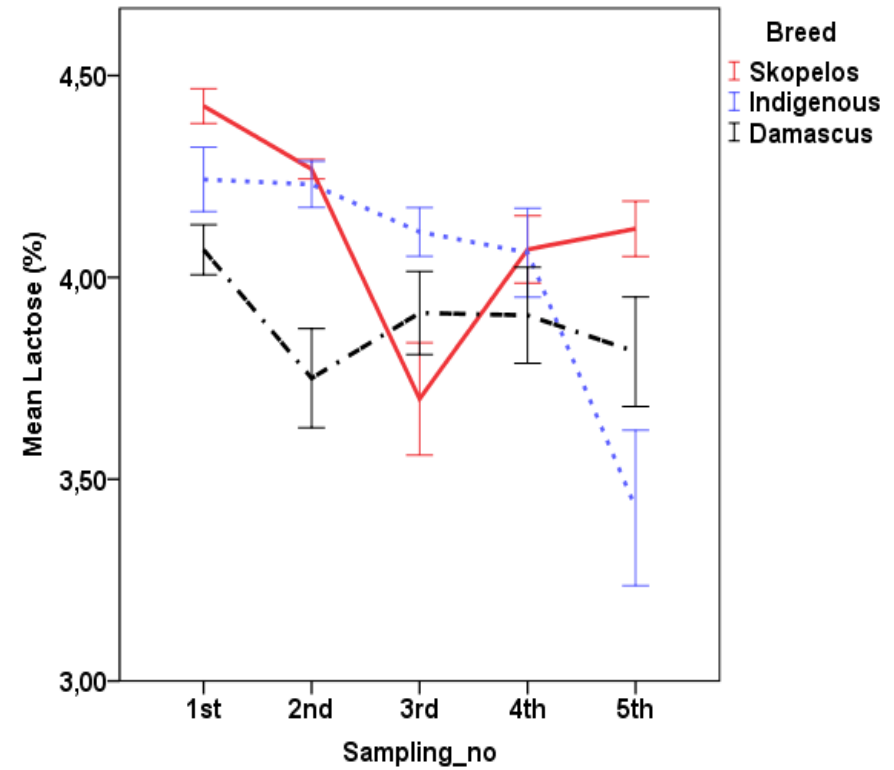
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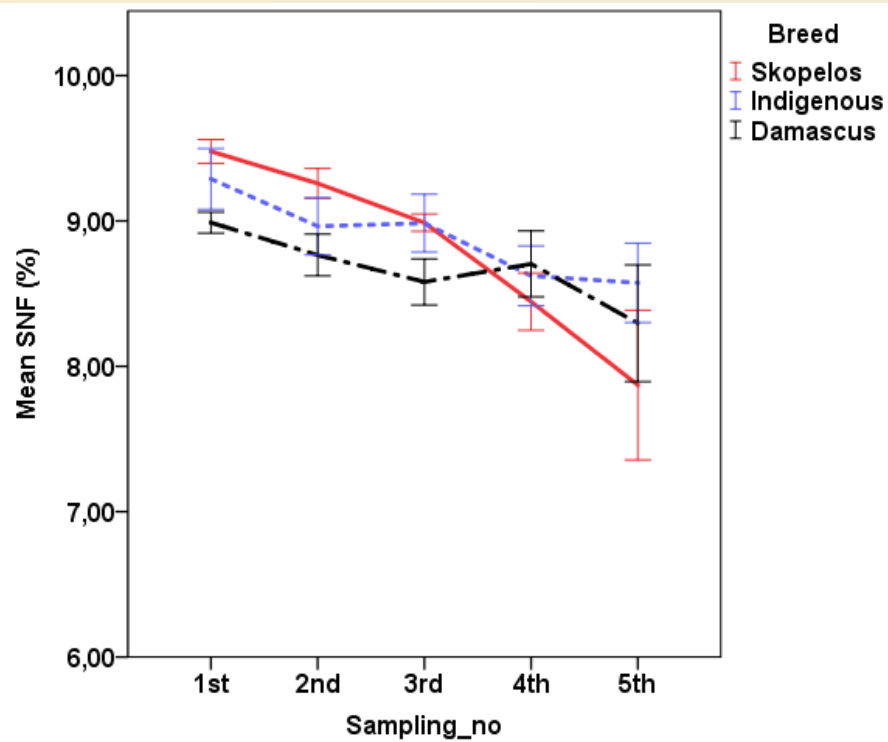
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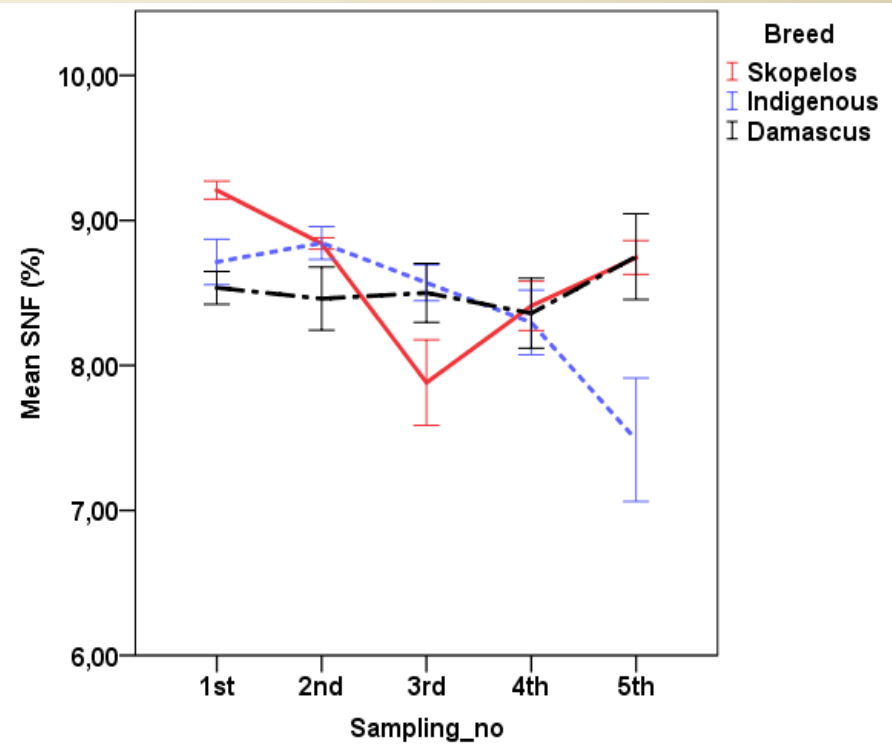
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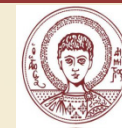
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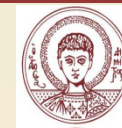
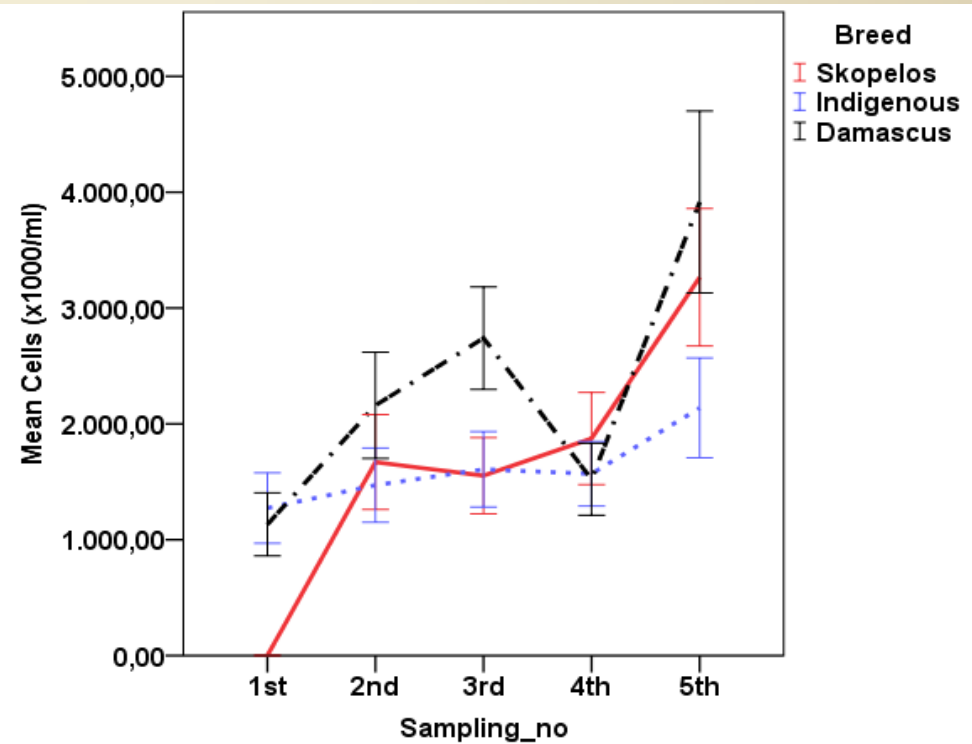
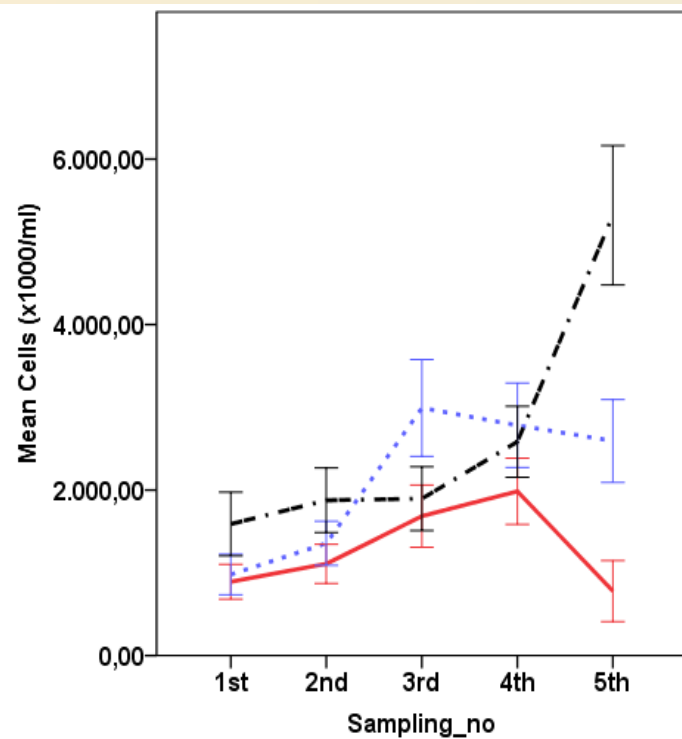
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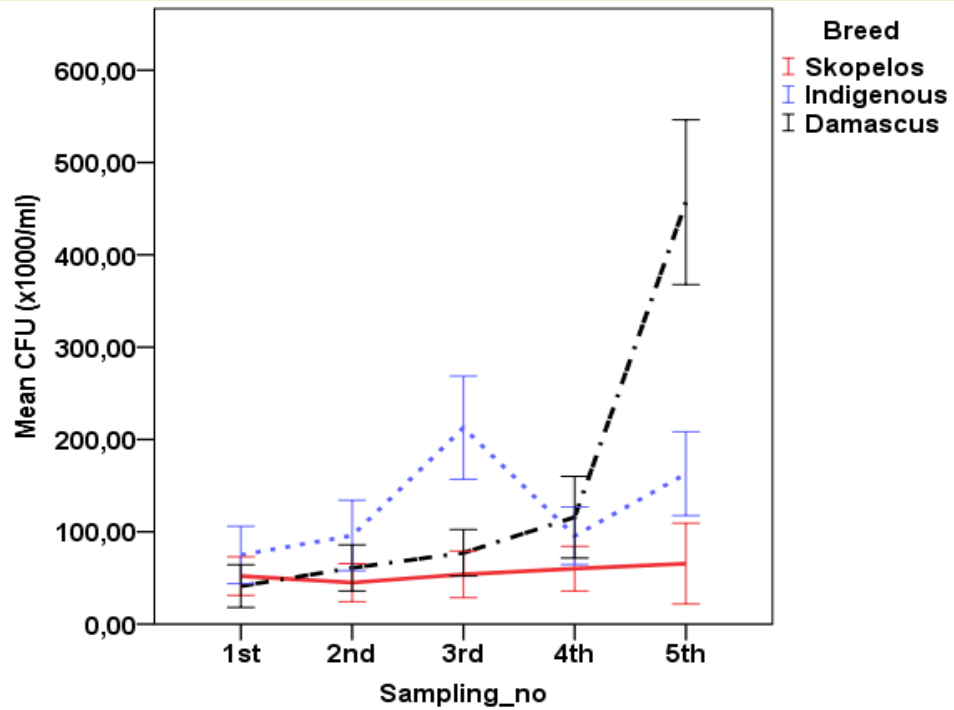
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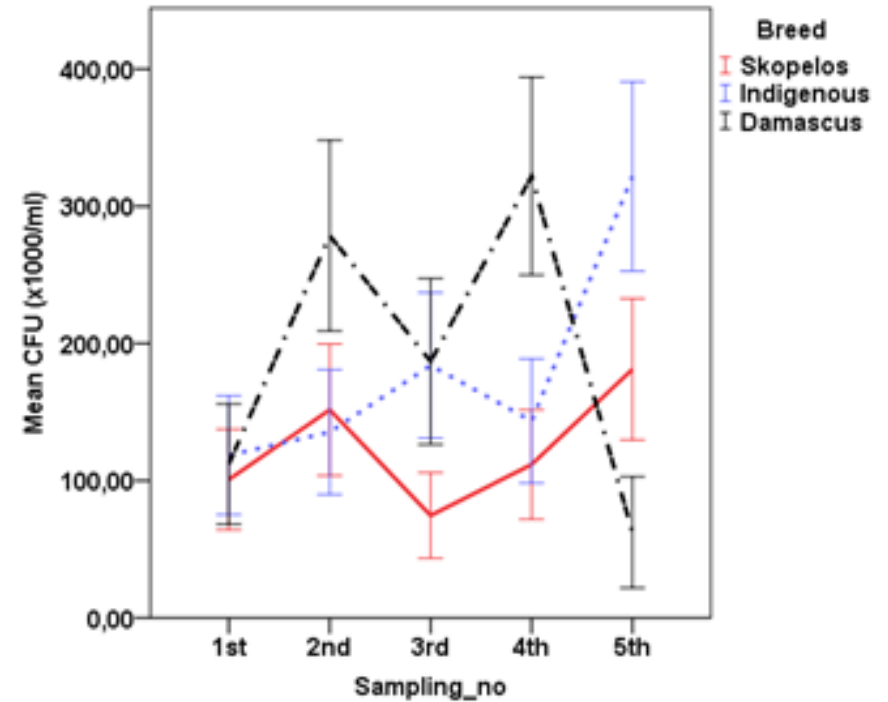
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# Results



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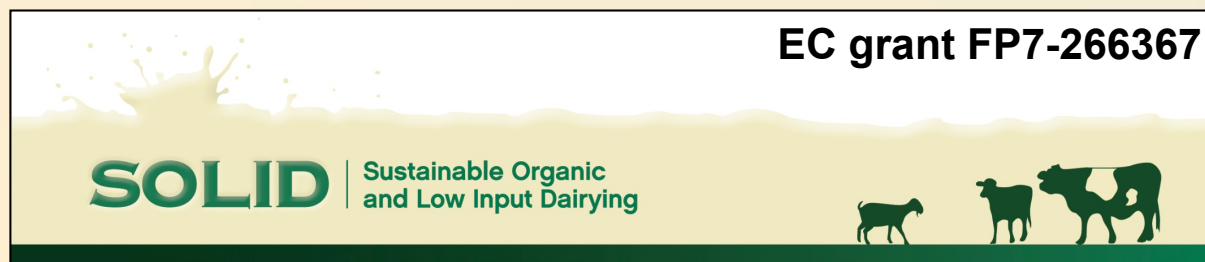






**Thank you  
for your attention**

## **Acknowledgements**



**Dairy Goat  
Farmers**



EAAP Annual Meeting 2014

