Reproductive indicators in sheep farming systems in Europe and Turkey

INTRODUCTION

EU production
• mainly located in less favoured areas
• 84% self-sufficiency

Key production
• Sheep farming plays a significant role: economic, environmental, social.

Issue
• The number of producers have declined by 50% since 2000

SheepNet
• To enhance sustainable productivity in sheep meat and milk farming

The SheepNet project: **SH**aring **E**xpertise and **E**xperience towards sheep **P**roductivity through **NET**working

... A Network for the improvement of Sheep Productivity in EU and Turkey
INTRODUCTION

3 key factors affecting Sheep productivity

1 – Reproduction efficiency
   - Farmers
   - Predators
   - Diseases
   - Facilities
   - Nutrition
   - Animals
   - Knowledge/skills
   - Environment
   - Management

Sheep productivity

2 – Pregnancy success

3 – Lamb mortality

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement N° 727165.
OBJECTIVE

To assess the current situation of sheep farming in terms of reproductive and sheep productivity indicators, taking into account the wide diversity of conditions within the project member countries (FR, IR, IT, RO, SP, UK and Turkey):

- ewe genotype,
- Climate & environmental conditions (mountain areas, lowlands, etc.), production (meat, dairy or dual purpose),
- Level of intensification: reproduction and nutrition management
MATERIAL AND METHODS

A set of indicators was established for each one of the 3 project topics:

- 8 fertility rate,
- 3 pregnancy success,
- 4 lamb mortality
- 3 Indicators of productivity
- 47 indicators to characterize production systems.

The NF in each member country gathered the existing information and databases for the corresponding sheep farming system in order to characterise its current situation and recent evolution during the last 5 years.
MATERIAL AND METHODS

SCOTLAND
- Hills (1/year)
- Uplands (1/year)
- Lowlands (1/year)

IRELAND
- Hills (1/year)
- Lowlands (1/year)

SPAIN
- Mountain areas (Accelerated)
- Lowlands (Accelerated)
- Mountain areas (1/year)
- Lowlands (Accelerated)
- Indoors (Accelerated)

FRANCE
- Mountain areas
- Lowlands or grasslands
- Rayon de Roquefort (1/year)
- Pirinees Atlantiques (1/year)
- 1/year
- Accelerated

ROMANIA
- Dual purpose (1/year)

ITALY
- Sardinia island (1/year)

TURKEY
- Dual purpose (1/year)
REPRODUCTION RATES

FERTILITY – 1 lambing / year

RESULTS

83 to 95%

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REPRODUCTION RATES

FERTILITY – Accelerated reprod (> 1 lambing / year)

88 to 116%

RESULTS
PRODUCTIVITY

FLOCK PROLIFICACY

Lowlands: 1.40
Mount.: 1.33
1-lambing: 1.36
Accel: 1.48
LAMB MORTALITY

PERINATAL STILBIRTH

RESULTS
LAMB MORTALITY

LAMB MORTALITY AT WEANING

RESULTS

- best farms
- media
- max
PRODUCTIVITY

NUMERIC PRODUCTIVITY

RESULTS

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727895.
Main results and conclusions

- There is a lack of consistent and reliable data for fertility, abortion and lamb mortality hazards;
- Low utilisation of technologies available (oestrus synchronization, artificial insemination and scanning).
- The number of lambs produced per ewe joined to the ram is in general low (<1.5). Even, despite the higher complexity of management for accelerated reproductive strategies, the average litter size achieved (1.48) did not differ much from that obtained in systems following a 1-lambing-season-per-year pattern (1.36).
- In many farms, there is margin for improvement.
- The SheepNet network will try to propose solutions to increase sheep productivity.
Many Thanks!!

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