Smarter

SMAll RuminanTs breeding for Efficiency and Resilience

“Presentation of the cases studies Livestock Farming System by countries” studied in SMARTER project

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How can resilience and efficiency traits impact system performances and modify farmers' breeding choices?

In the animal breeding process, the system level is very important because different aspects can be modified by the availability of new resilience and efficiency traits: economic results, environmental impacts, farmer choice and farming practices:

1. To propose new breeding strategies that use both R&E-related traits and trade-offs while balancing economic, social and environmental challenges.
2. To assess the social acceptance and economic, social and environmental benefits of breeding strategies that use R&E traits and genomic tools to achieve balanced breeding objectives.

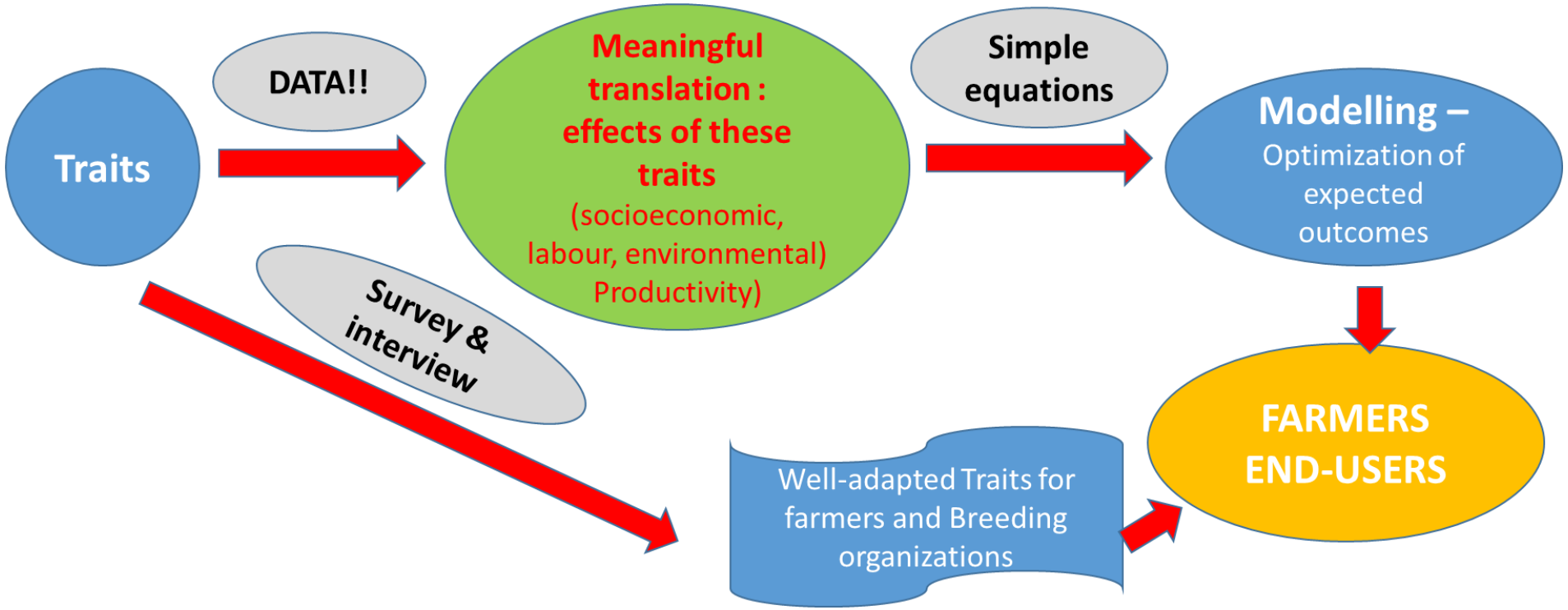
How can resilience and efficiency traits impact system performances and modify farmers' breeding choices?

This course module focuses on two different methods: modelling and surveys, with different approaches :

- Redesign of farming systems to switch towards more sustainable and resilient sheep and goat production using modelling
- Understand farmers' choice to use new breeding traits for more sustainable livestock production using surveys

Background information

- **How do new R&E traits perform at the life-time of the animal?**
- **What are the benefits at the farm type level (included diversity of production systems)**

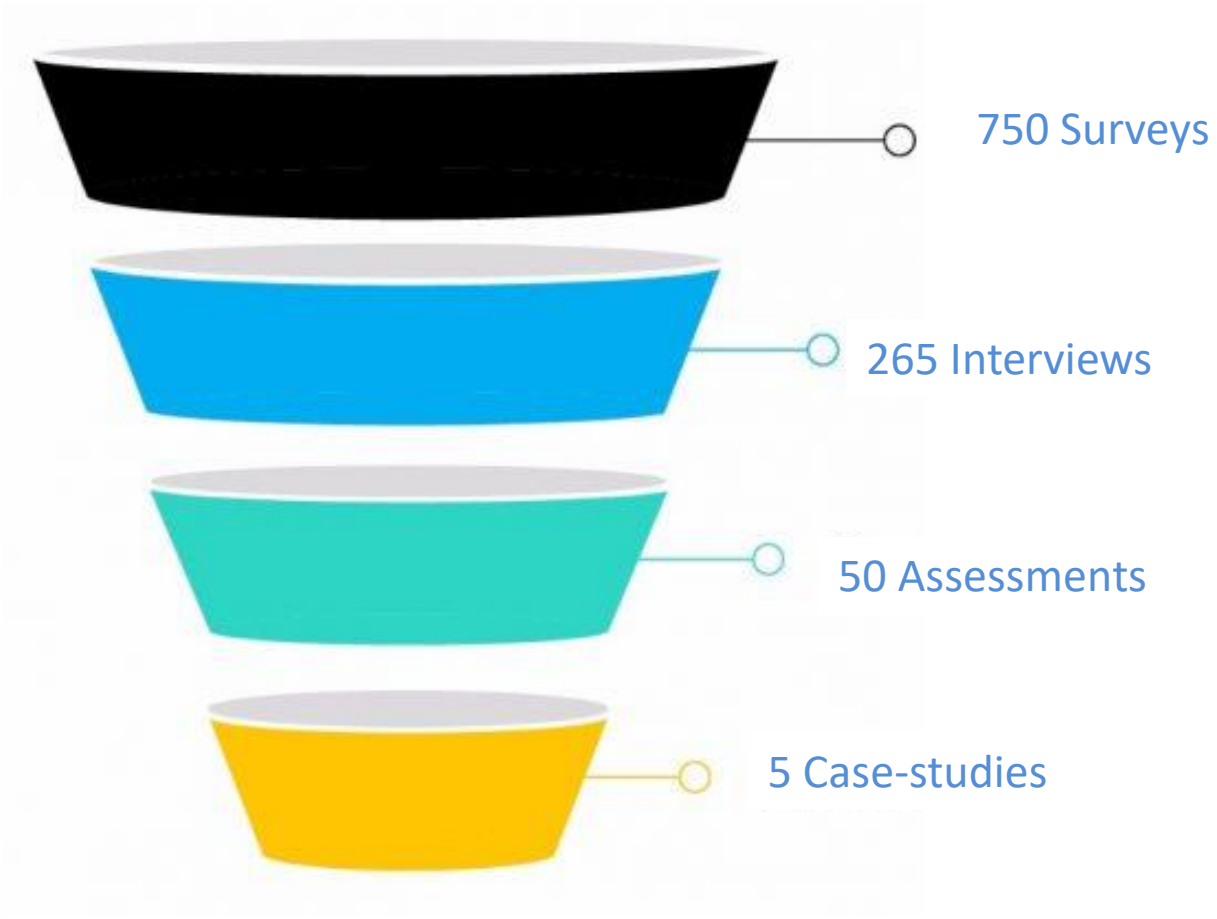


What is the diversity in the WP7:

- ✓ 5 different countries: Greece, France, Italy, Spain, Uruguay
- ✓ 15 breeds sheep & goat
- ✓ Different types of system: milk production, meat production, wool production, dual-purpose
- ✓ Different local conditions: Extensive, semi-intensive, intensive management

- Works with different levels of analysis.
- Needs many data, also all the methods could not implement for all the cases.
- Identify different systems/breed for each types of “models/methods”

Make links between tasks to have a common job



Identify different systems/breed

Goat production

Greece → **Italy**

Intensification in ressource use

SKOPELOS:
Extensive system

ALPIN or SAADEN:
Semi-intensive system

231.7 ha (*27-256*)
38.2 UGB goat

16 ha (*3-90*)
12 UGB goat

10.1 ha (*1-46*)
13.3 UGB goat

Identify different systems/breed

Milk sheep production

France | **Greece** | **Spain**

Intensification in ressource use

LACAUNE;
MANECH TETE ROUSSE:
Extensive & Semi-intensive system

111 ha (*20-714*)
69 UGB sheep

FRIZERTA; ASSAF;
LACAUNE; CHIOS:
Semi-intensive system

33 ha (*1-155*) - 27 UGB sheep

ASSAF:
Intensive system

111 ha (*3-900*)
109 UGB sheep

Identify different systems/breed

Meat sheep production with milk or wool

Urugay

MERINOS; CORRIEDALE:
Wool, Meat extensive system

1753 ha (*88-7300*) - 313 UGB sheep

Greece

BOUTSKO:
Milk &Meat
extensive system

135 ha (*70-200*) – 60 UGB sheep

France

CAUSSE du LOT; ROMANE;
Extensive & Semi-intensive system

272 ha (*25-1000*) - 101 UGB sheep

Intensification in ressource use

SMARTER PARTNERS

Thank you for your attention

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