



## A modeling approach to evaluate the ability of dairy cows systems in mountain area to balance animal production and sustainable grassland utilizations

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### Objectives

Developing a dynamic model of relationships among dairy cattle, management and resources

⇒ Assessment of dairy farm ability to achieve forage self-sufficiency while preserving grassland floristic diversity and milk production

Poster n°15 - Session n°1



### Presentation of conceptual model:

- **bio-technical approach** focused on grassland use by animals
- three sub-systems (dairy cattle, resources, management)
- **Specific to mountain areas** (PDO constraints and mountain constraints)
- Adapted from **SEBIEN**, a whole farm system simulation model Jouven and Baumont, 2008

### Aim of this model:

➤ Assess the **ability of farming systems to deal with climatic events**

➤ **Test several scenarios** (changes in dairy / forage management (calving period, production parameters...))

➤ **Assess the impacts of these changes on the whole production systems** (forage calendar, forage self-sufficiency rate, amount and quality of produced milk...)

### Presentation of conceptual model with inputs and outputs

