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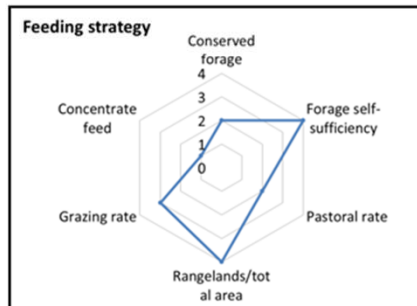
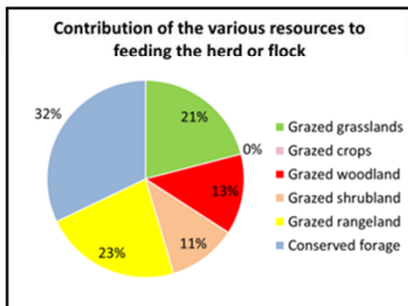
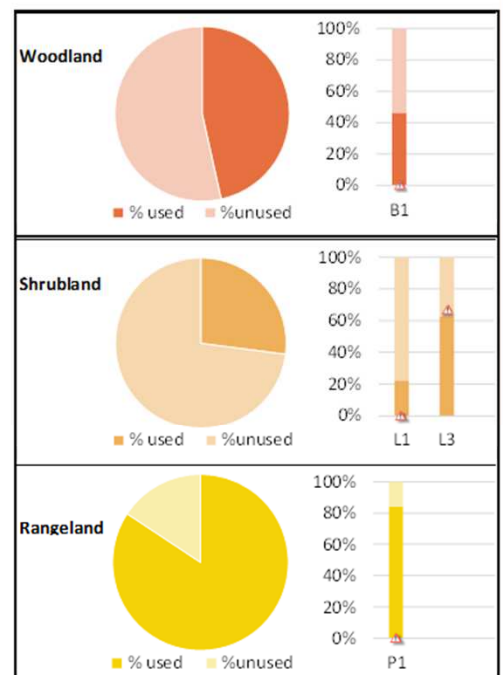
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Introduction

In rangeland-based farming systems, grazing management provides the adequate diversity of pastoral resources over time to each animal group, in a context where plants and animals are in constant adaptation to the highly seasonal and variable environment. To achieve this, farmers use their local ecological knowledge, which they enrich through direct observation of the agroecosystem and discussions with other farmers.

Methods

We developed a model of pastoral systems focussed on grazing management and supported by technical references about pastures and livestock. In the model, the amount and quality of pastoral resources depend both on vegetation type and on its utilization pattern; up to three animal groups can be simulated, with their production and body reserve dynamics and feeding management. A few examples of model outputs :



Results

The Rangeland Rummy is a « serious game » including a board, cards and a computer model. Intended for groups of pastoral farmers facing similar issues (start in the activity, climatic hazards, change in pastoral resources) assisted by an agricultural consultant, it provides useful information to design, evaluate and discuss pastoral strategies.

Conclusion and perspectives

The Rangeland Rummy is now ready to be distributed to farmers' associations and agricultural education. Originally intended for Mediterranean systems, it can easily be calibrated for other areas.

→ see demonstration

