ADAPTATION STRATEGIES OF SHEEP FARMING SYSTEMS TO AVAILABILITY OF DIFFERENT RESOURCES: CASE STUDIES

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OBJECTIVE

To analyze the relationships between technical, social and land use characteristics at the farm level.

Material and Methods

Technical and economical monitoring of representative sheep farms in Sierra de Guara Natural Park (Huesca, Spain)

Questionnaires 2000-01 (n=53) → Typification of farming systems *(Riedel et al., 2007)** → Selection of study cases → Technical and economical information 2005 → SWOT analysis

G1: intensive farms *(n=18)*	G1-A, G1-B, G1-C
G2: extensive farms, low dynamism and continuity *(20)*	G2-A, G2-B, G2-C
G3: extensive farms, high dynamism and continuity *(9)*	G3-A
G4: agricultural farms *(6)*	G4-A

* Riedel, J.L., Casasús, I., Bernués, A., 2007. Sheep farming intensification and utilization of natural resources in a Mediterranean pastoral agro-ecosystem. *Livestock Science* 111, 153–163.

Information on a 3-mo basis:
- grazing management
- indoor feeding
- reproduction
- lamb sales
- feed costs

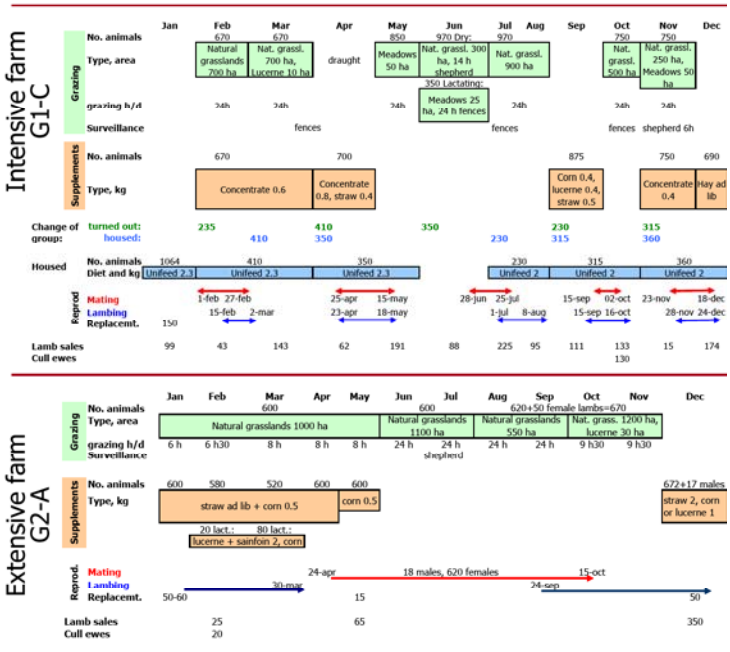
Additional questionnaire:
- social and family context
- recent farm dynamics

SWOT analysis
Strengths, Weaknesses, Opportunities, Threats

Factors of
- farm continuity
- environmental sustainability of the farming activity

Results

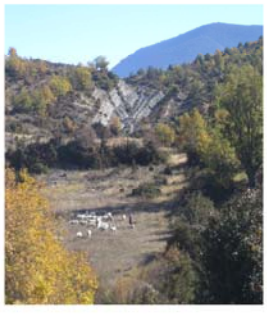
Flock management calendars *(examples)*



SWOT: *case-dependent, but general trends…*

Weaknesses:	Lack of farm succession	→	Low continuity in the short run
	Direct sale to fixed retailer		Low added value *(sometimes)*
	Low dynamism and self-esteem		Low technical innovation
	Intensive reproductive system G1		Dependence on external inputs or climatic hazard
	Lack of shepherds G2, G3		Intensification or disappearance
	Flock size limited by forage crop area G4		Dependence on external inputs
	Workforce involved in non-farming activities G4		Low use of natural pastures
Strengths:	Dynamism	→	Technical innovation
	Off-farm activity		Economic diversification
	Cooperative production or trade		Flexibility *(sometimes)*
	High self-esteem		Continuity in the medium run
	Use of fences and forage crops G1		Optimal use of available labour force
	Extensive reproduction system G2, G3		Low dependence on external inputs
	Extensive pasture use G2, G3		Environmental benefits

Threats: **Opportunities:**



CONCLUSIONS

Diversity of strategies to ensure medium-term continuity according to specific constraints:
- adaptation of available labour force to farm and family needs (and *viceversa*)
- combination of different degrees of reproductive intensification and use or farm conserved forage and grazing resources, which determine farm dependence on external inputs.

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