

Context

Large pastoral shrubby hillsides available for pastoral flocks in mediterranean areas



Objectives Identify criteria related to the relief and shrub cover which facilitate stabilized grazing activity when forage resources are scattered. Improve pastoral diagnosis of shrubby hillsides.

Major locations of pastoral flocks in south east of France													
Months	A	S	O	N	D	J	F	M	A	M	J	J	
Pasture													
Shrubby hillsides													
Mountain pasture													
Sheepfold													

Flock's percentage relative to the intensity of the colors

- < 30 %
- 30-60%
- > 60%

Materials and methods to build "Intense Grazing Bases" (IGB) and delineate their limits

Study sites and Animals

- Two pastoral sites (St Phalès and Mouriès) of 240 and 226 ha of shrubby hillsides used in winter
- Two shepherded flocks of 860 and 950 Mérinos fed exclusively on natural resources for 1 month

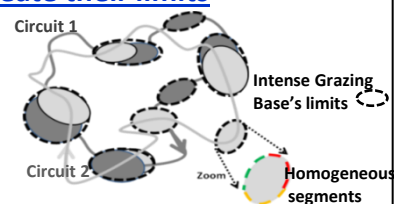
Flock behaviour' surveys

- Grazing activity and location of contours of the flock every 10 minutes during 7 daily circuits on St Phalès and 10 on Mouriès' sites.

- **Intense Grazing Activity = 80 % of the animals in grazing**

Description and analysis

- 54 Intense Grazing Bases
- 239 segments forming homogeneous limits

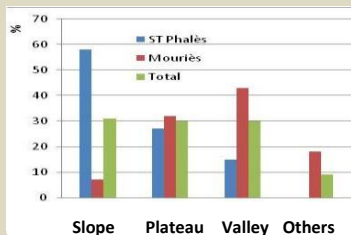


Results

Intense Grazing Base 's characteristics

IGB Surfaces

- Average area: 3ha
- Favourable reliefs:



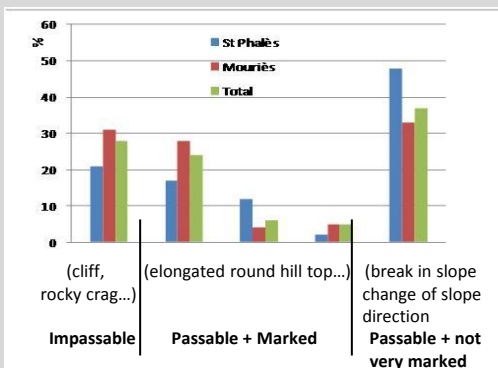
Accessibility of shrub areas:

Height (cm)	Cover rate (%)					
	0-20	20-40	40-60	60-80	80-100	
0-20						Very accessible
20-40						Accessible
40-60						Ac.conditionned to management + flock's abilities
60-80						Inaccessible

IGB Limits

- Relief form limits in 54 % of cases
- Relief + vegetation is limiting in 12 % of cases
- 1/3 of the limits is due to secondary reliefs, not very marked and easy to cross by the flock

Relief:



Conclusions

- Slopes, plateaus and valleys are chosen for **Intense Grazing Activity**. Experienced flocks perform into 40 up to 60 % of shrub cover if the shrubs' average height does not exceed 60 cm and until 60 up to 80 % of shrub cover if the shrubs' average height is <40 cm. The relief is more limiting **Intense Grazing Base** than shrub cover; If significant reliefs orientate the circuits of the flocks, slight reliefs make real limits.
- There are new criteria essential for identify areas which facilitates **Intense Grazing Activity**, for design new pastoral management and develop sustainable pastoral systems.

