The role of woodlands in the small ruminant production in northeast Portugal

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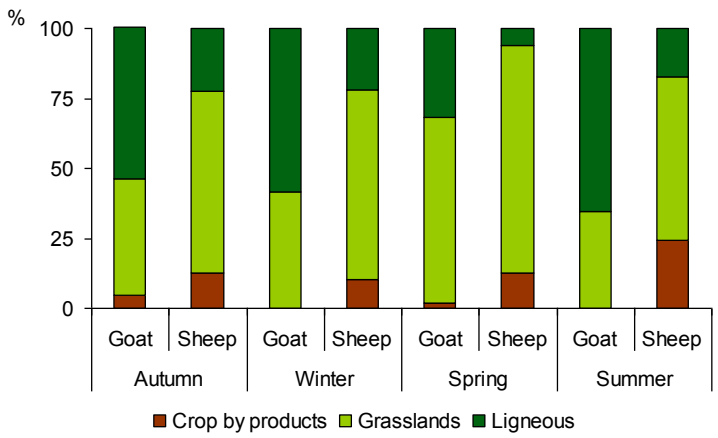
Introduction Small ruminant production is a very extensive activity in the northeast of Portugal, mainly based on use of spontaneous vegetation. Driven by shepherds, goat and sheep flocks use several daily itineraries, crossing over a highly diversified landscape; composed by a mosaic of diverse land uses (Forestlands, scrublands, pastures, and annual and perennial croplands).

Material and Methods

The present study is part of a research project which deals with vegetation-herbivore interaction of silvopastoral systems. Fieldwork was conducted over the territory of Morais village (52.16 km²) located near Bragança, (N41° 29' 23" W6° 46' 44"; 600m above sea level), northeast Portugal. Three herds of goats and three herds of sheep were monitored along their journeys every three months for a year in order to record the grazing circuits and diet composition. Diet composition was determined by direct observation method in pre-set intervals of 15 minutes during the day. For each observation point, herbaceous communities, shrubs and tree species consumed were recorded. Diet selection was estimated by Krueger's preference index and the degree of overlap between diets was estimated using the Kulczynsk is similarity index.

Results and Conclusions

Fig. 1: Goat and sheep flocks diet composition along the year.



The results showed that the diet of goats had a significantly higher content of shrubs (27% vs. 6%) and trees species (24% vs. 10%) than sheep. Sheep showed a higher content of herbaceous species in their diets (84% vs. 49%). The average of diets' overlap was higher during the winter and lower in summer.