

# Is the behaviour of grazing cattle influenced by the presence of a hedge in the pasture?

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## Context and question



Hedges and woody strips are promoted in Wallonia agricultural landscapes thanks to European agri-environmental measures.

Does the access to a hedge influence the behaviour of grazing cattle?



## Methodology and results



- Experiment during the grazing season of 2013
- A ray-grass and white clover pasture bordered by a hedge composed by 10 temperate shrub and tree species (Table1)

- 12 dairy heifers divided in 2 groups:
  - **Experimental** group with free access to a hedge
  - **Control** without



- Animal behaviour measurements:
  - Grazing, browsing and other activities
  - 14h d<sup>-1</sup> : 6AM-8PM
  - 3 d per group
  - 3 periods: May, July, September

Table 1. Woody species of the hedge

<i>Crataegus monogyna</i> Jacq.	<i>Acer pseudoplatanus</i> L.
<i>Carpinus betulus</i> L.	<i>Fraxinus excelsior</i> L.
<i>Quercus robur</i> L.	<i>Corylus avellana</i> L.
<i>Cornus sanguinea</i> L.	<i>Populus nigra</i> L.
<i>Acer campestre</i> L.	<i>Sambucus nigra</i> L.

- Heifers **browsed** the woody forage during the **whole season** on pasture
- Browsing varied along the season (P<0.0001; Figure 1)

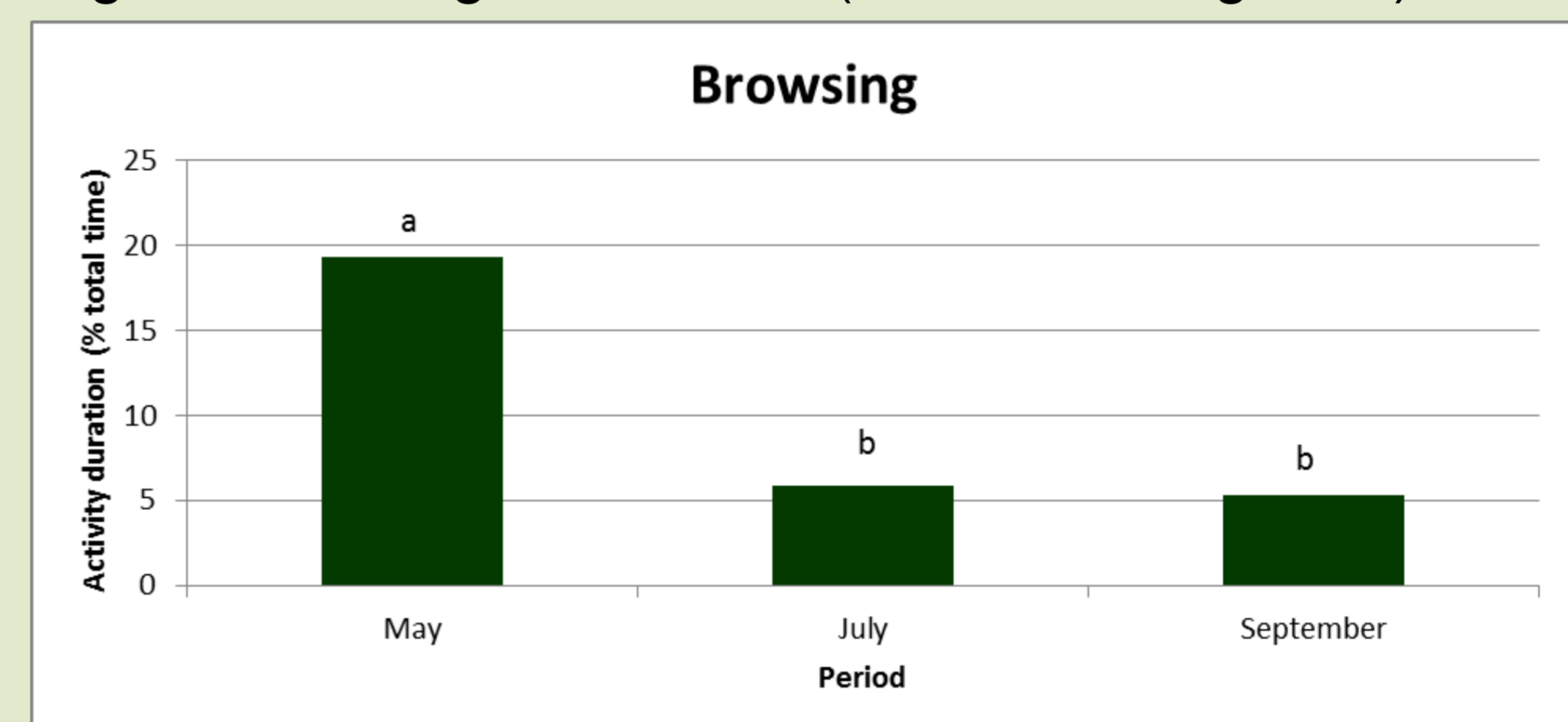


Figure 1: Evolution of browsing activity (%total time) according the period

- Grazing, resting and rumination were influenced by the presence of the hedge during each period (P<0.05) (Figure 2)
- Total ingestion (grazing and browsing) was different between the 2 meadows (P=0.0231) and the 3 seasons (P<0.0001). Heifers with an access to the hedge spent more time ingesting (53.2% vs 49.6%) and the ingestion was more important for both groups in September (56.6% in September, 50.0% in July and 47.5% in May).

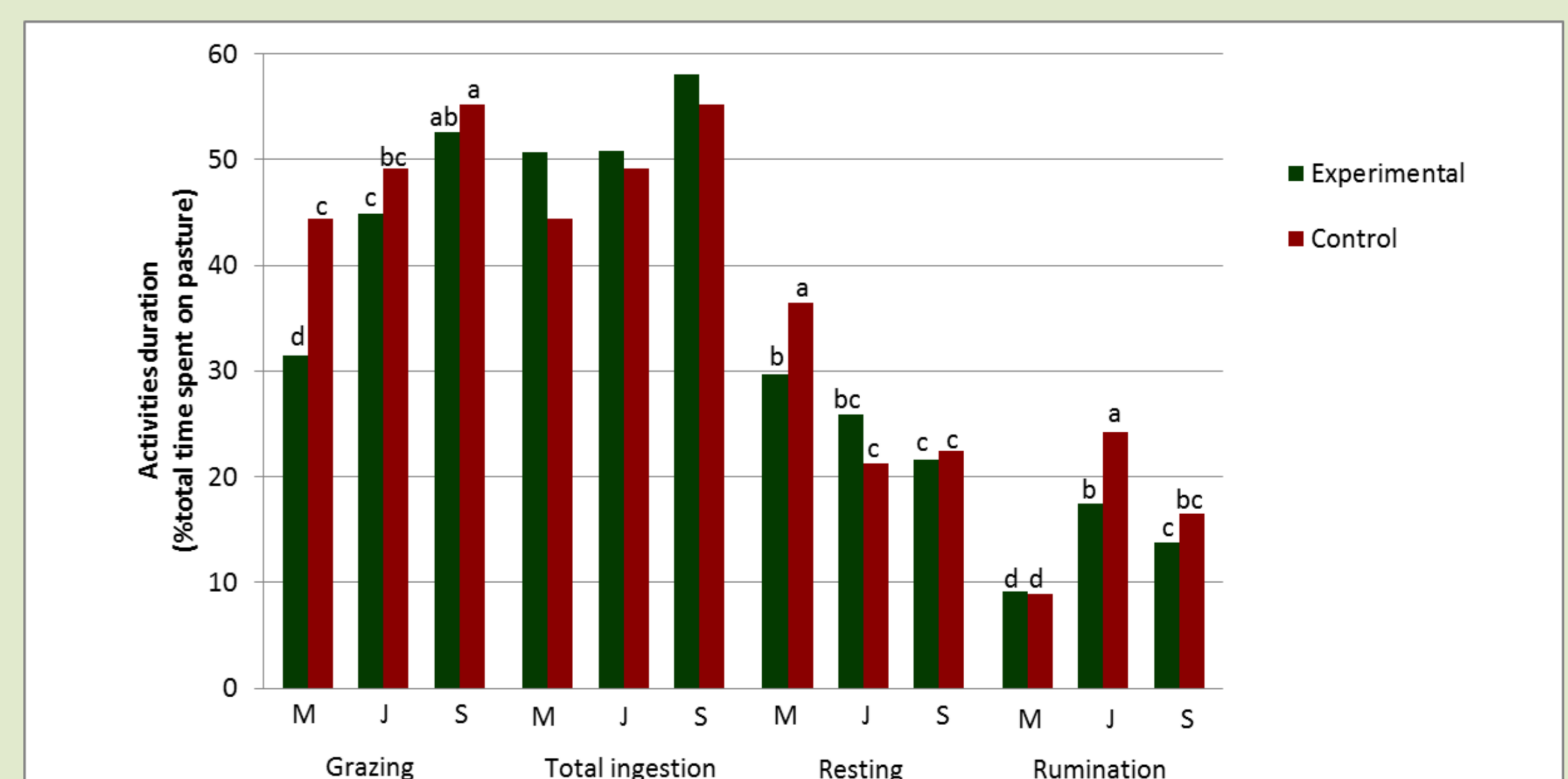


Figure 2: Duration of grazing, total ingestion, resting and rumination (%total time) according the group of heifers and the period (M, May; J, July; S, September)

## Conclusion

Yes, under the grazing conditions of Wallonia, browsing can be considered as a **complementary feeding** activity for cattle in pasture with hedges or woody strips. Feeding strategies should consider this fact as woody species have a wide range of plant secondary compounds potentially influencing parasitism and rumen fermentation.

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