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home **page** about **us** contact 

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Table of
Contents

IN PRESS

CJAS 2015

CJAS 2014

CJAS 2013

CJAS 2012

CJAS 2011

CJAS 2010

CJAS 2009

CJAS 2008

CJAS 2007

CJAS 2006

CJAS 2005

- [Authors Declaration](#)
 - [Instruction to Authors](#)
 - [Guide for Authors](#)
 - [Fees](#)
 - [Submission](#)
-

Czech Journal of Animal Science

Activity time budget patterns of sheep and goats co-grazing on semi-natural species-rich dry grassland

Pokorná P., Hejzmanová P., Hejzman M., Pavlů V.:

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[[fulltext](#)]

Activity time budget patterns and grazing response to sward and environmental conditions were investigated for paddocks of sheep and goats co-grazing for conservation purposes on a semi-natural

species-rich dry grassland community endangered by shrub and tall perennial plant encroachment in a protected nature reserve in South Moravia (Czech Republic). Grazing was conducted by a rotational stocking system for 14 weeks in late grazing season in 2008 with 60 dry ewes and 20 goats. Twelve ewes and four goats were observed; grazing, ruminating, idling and other activities (salt licking, social interactions, walking), along with topographical position in the paddock were recorded at 5-minute intervals within 14 hours of daylight. Sheep and goats did not differ in their principal activity time budgets, such as the average total daylight time spent grazing (sheep: 8.57 h, goats: 8.59 h), ruminating (sheep: 1.42 h, goats: 1.44 h), or idling (sheep: 3.23 h, goats: 3.18 h), the duration of bouts of each activity, or the number of bouts of grazing and ruminating. There was no pattern in activity time budgets indicating dynamics in progressing season, nor was there a response to daily average temperature or to paddock size. Sheep and goats showed similar responses to groundcover of particular plant functional types. The animals showed a positive trend in

response of total daylight grazing time to grass available biomass and a negative response of total daylight grazing time to herbaceous biomass for both sheep and goats. The total daylight grazing time was independent of availability of woody plants. Goats devoted more time (1.51 h) to other activities than sheep (1.34 h), especially to social interactions and salt licking. On the other hand, sheep spent proportionally more time walking. Both sheep and goats showed similar patterns in spatial use of paddocks on hill slopes, spending the most time in the middle part and the least time in the lower part of paddocks.

Keywords:

animal behaviour; activity pattern; small ruminant; mixed pasture; semi-natural grassland

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