



ULST Timisoara
**Multidisciplinary Conference on
 Sustainable Development**
 21-22 May 2026



STUDIES ON GRAZING BEHAVIOUR IN GOATS

**Ana-Gina ARMAŞ¹, Mihaela TOTH¹, Daniela VĂLUŞESCU¹, Iulia MUNTEANU¹,
 Loredana VĂDUVA^{2*}, Ioan PETROMAN¹**

¹ *Development Research Station for Raising Sheep and Goats, S.C.D.C.O.C. Caransebeş*

² *University of Life Sciences “King Mihai I”, Faculty of Management and Rural Tourism, Timisoara*

*Corresponding author’s e-mail: loredana_heber@yahoo.com

Abstract: Goats exhibit distinct feeding strategies compared to other domestic ruminants, characterized primarily by their browsing behaviour. Rather than relying mainly on grasses, goats preferentially select leaves, shrubs, and woody vegetation, demonstrating a high degree of dietary flexibility. This adaptive feeding pattern is influenced by a complex interaction of evolutionary history, anatomical traits, and environmental conditions. As highlighted in the literature, goat grazing behaviour is shaped by factors such as breed characteristics, habitats in which they evolved, grazing management systems, group dynamics, physiological stage, seasonal variation, and the nutritional properties of available forage or confined diets. A comprehensive understanding of these behavioural patterns is essential for improving herd management, optimizing productivity, and promoting sustainable use of pasture resources. Goats’ selective foraging can contribute positively to vegetation control and biodiversity when managed appropriately, but it may also lead to overbrowsing if not carefully monitored. Therefore, identifying the determinants of forage selection and intake is critical for balancing animal performance with ecosystem health. Recent technological advancements, including GPS tracking systems and accelerometers, have enhanced the ability to monitor grazing behaviour with greater precision and in real time. These tools provide detailed insights into movement patterns, feeding duration, and habitat use. This paper synthesizes research conducted between 1988 and 2026, focusing on the key drivers of goat feeding behaviour, their forage preferences, daily grazing rhythms, and the decision-making processes underlying forage selection. Through this integrative approach, the study aims to support more informed and efficient grazing management strategies.

• Introduction

Goat feeding / grazing behaviour is shaped by their anatomy, breed, environments they evolved in, grazing management practices, group size, instincts, properties of diets fed in confinement, stage of production, and type of season and vegetation. Unlike cattle or sheep, who are classic grazers, goats are browsers, i.e. they prefer leaves, shrubs, and woody plants over grasses, which makes their foraging patterns more exploratory, selective, and wide-ranging (Goetsch et al., 2009; Lu et al., 2025).

Understanding goat natural behaviour (determined by cognitive ability, feeding environment, physical environment, and social environment) matters because it improves goat management systems, while understanding goat grazing behaviour matters because it helps with:

- Improving productivity, because matching forage types to goat preferences increases milk yield and weight gain;
- Pasture management, because goats can control brush and invasive species;
- Sustainable land use, because mixed grazing with cattle or sheep improves pasture biodiversity and reduces competition.

The feeding behaviour of goats while feeding / grazing and while in confinement throughout the day can be characterized with tools such as accelerometers; automated feeding systems; equipment systems determining time spent eating, ruminating, and remaining idle from the pattern of jaw movement; global positioning systems (GPSs); heart rate monitors and leg activity monitors. Classification tree analysis, estimates of feed (drink, energy, feed) intake, measures of changes in body energy status and milk energy yield, and use of n-alkanes as internal markers to estimate digestibility are other methods that can help understanding of factors influencing the feeding behaviour of goats and the relationships with levels and efficiencies of production

• Material and method

The material used by the authors in this paper consists in articles on grazing behaviour in goats published between 1988 and 2026. The research method used is the bibliographical one.

• Results and discussion

Goats combine grazing (eating grasses) with browsing (eating leaves, shrubs, and vines), a behaviour influenced by: Adaptation to rugged terrain: having descended from wild goats living on rocky, steep landscapes, goats are comfortable climbing and reaching vegetation other animals cannot – from desert, to flatland and high altitudes; Anatomy: their narrow muzzle and split upper lip allow them to pick nutrient-dense small plant parts with precision; Curiosity and mobility: goats cover large areas, constantly exploring for new plants, which makes them more active foragers than cattle or sheep; High selectivity: goats choose the most nutritious buds, leaves, and shoots available, often ignoring coarse grasses. The components of ingestive behaviour in goats are shown in Figure 1 below.

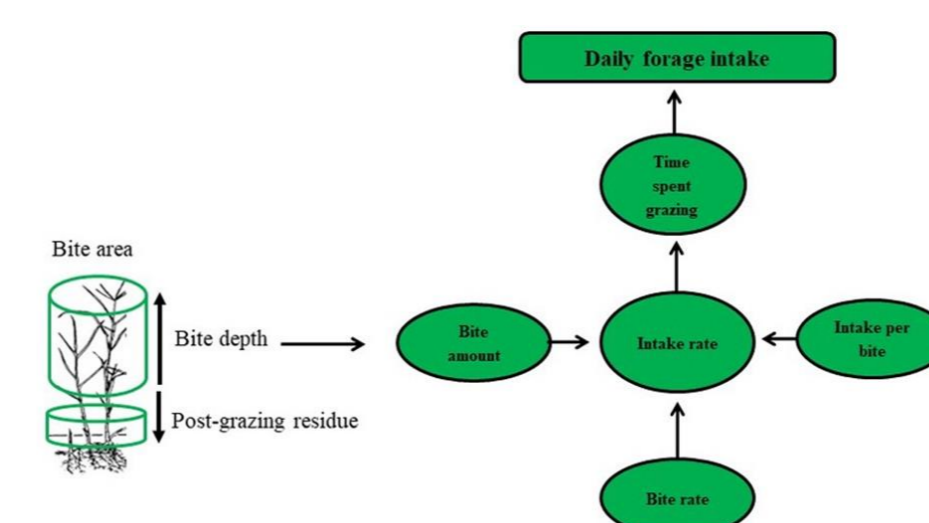


Figure 1. Components of feeding behaviour in goats

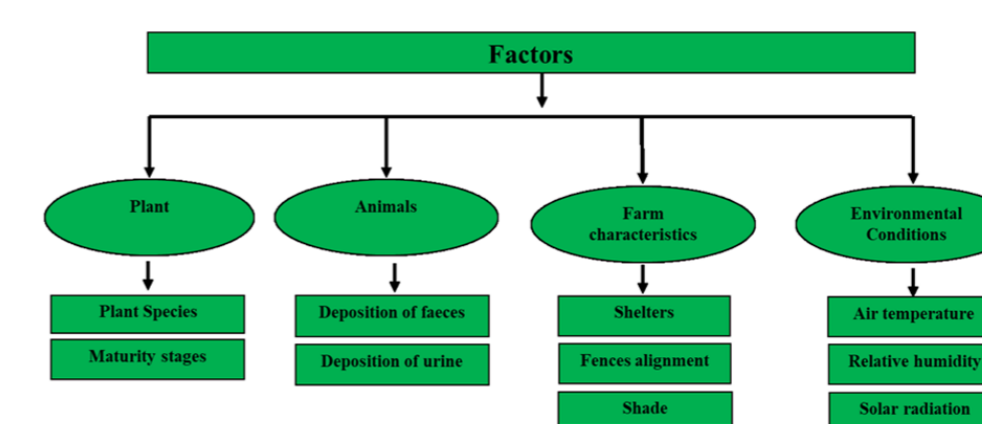


Figure 2. Factors influencing the feeding site selection in goats

• Conclusions

The following conclusions can be drawn from the analysis above: goat grazing behaviour is shaped by evolution, anatomy, and environment; understanding natural and grazing behaviour improves management and sustainability; modern monitoring technologies greatly enhance behavioural research; goats have strong and consistent feeding preferences; daily grazing behaviour follows a predictable pattern; and forage selection is driven by nutrition, accessibility, experience, and plant chemistry.